J.M.WILLIAMS and ASSOCIATES, Inc.

STRUCTURAL ENGINEERING THAT'S RELIABLE

STRUCTURAL CALCULATIONS
for the

Ninebark Townhomes
Helical Pier Foundation

North Copper Crest
Eden, UT

July 21, 2017

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NORTH CAROLINA
OREGON
TEXAS
UTAH
VIRGINIA
WASHINGTON
WYOMING

PLAN REVIEW ACCEPTANCE

FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.

☐ BUILDING	☒ STRUCTURAL
☐ MECHANICAL	☐ PLUMBING
☐ ELECTRICAL	☐ ENERGY
☐ ACCESSIBILITY	☐ FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.

BY: MEM DATE: 08/30/17

WEST COAST CODE CONSULTANTS, INC.

Job # 2017.028

Concrete Beam

File = f:\Job\2017\2017~3.XXX\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.17, Ver:6.17.3.17

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

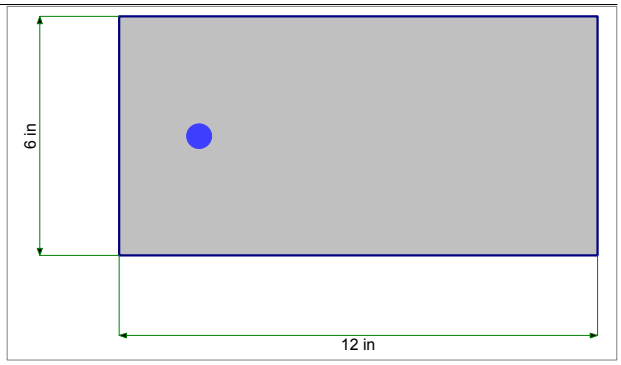
Description : typical unit suspended concrete slab at garage

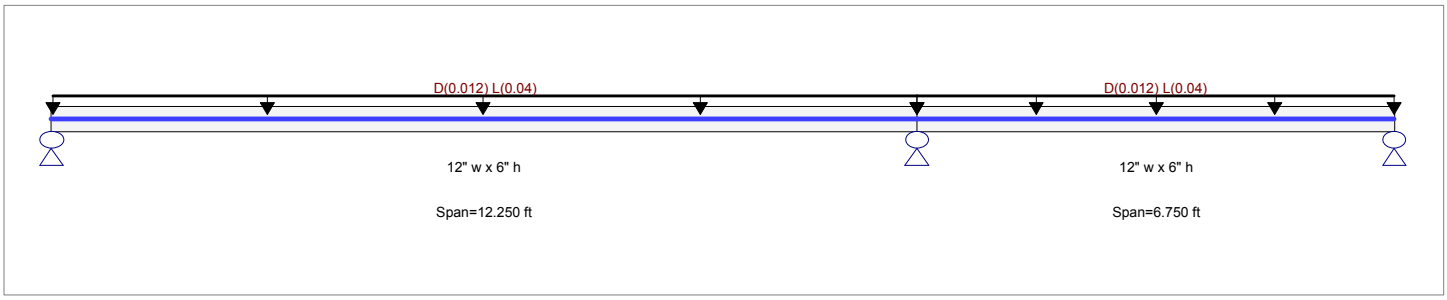
CODE REFERENCES

Calculations per ACI 318-14, IBC 2015, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	2.50 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c $^{1/2}$ * 7.50	=	375.0 psi		Shear :	0.750
Ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 6.0 in
Span #1 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 12.250 ft in this span
Span #2 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 6.750 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft
Load for Span Number 2
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.635** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	-2.335 k-ft	
Mn * Phi : Allowable	3.676 k-ft	
Location of maximum on span	0.000 ft	
Span # where maximum occurs	Span # 2	

Maximum Deflection

Max Downward Transient Deflection	0.019 in	Ratio =	7925 >=36
Max Upward Transient Deflection	-0.004 in	Ratio =	22384 >=36
Max Downward Total Deflection	0.054 in	Ratio =	2734 >=18
Max Upward Total Deflection	-0.007 in	Ratio =	11553 >=18

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	0.626	1.587	0.231
Overall MINimum	-0.007	0.154	0.037
+D+H	0.420	1.077	0.108
+D+L+H, LL Comb Run (*L)	0.414	1.230	0.231
+D+L+H, LL Comb Run (L*)	0.626	1.433	0.037
+D+L+H, LL Comb Run (LL)	0.619	1.587	0.160
+D+Lr+H, LL Comb Run (*L)	0.420	1.077	0.108
+D+Lr+H, LL Comb Run (L*)	0.420	1.077	0.108
+D+Lr+H, LL Comb Run (LL)	0.420	1.077	0.108

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Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
+D+S+H	0.420	1.077	0.108
+D+0.750Lr+0.750L+H, LL Comb Run (	0.415	1.192	0.201
+D+0.750Lr+0.750L+H, LL Comb Run (	0.574	1.344	0.055
+D+0.750Lr+0.750L+H, LL Comb Run (	0.569	1.459	0.147
+D+0.750L+0.750S+H, LL Comb Run (*	0.415	1.192	0.201
+D+0.750L+0.750S+H, LL Comb Run (L	0.574	1.344	0.055
+D+0.750L+0.750S+H, LL Comb Run (L	0.569	1.459	0.147
+D+0.60W+H	0.420	1.077	0.108
+D+0.70E+H	0.420	1.077	0.108
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.415	1.192	0.201
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.574	1.344	0.055
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.569	1.459	0.147
+D+0.750L+0.750S+0.450W+H, LL Comb	0.415	1.192	0.201
+D+0.750L+0.750S+0.450W+H, LL Comb	0.574	1.344	0.055
+D+0.750L+0.750S+0.450W+H, LL Comb	0.569	1.459	0.147
+D+0.750L+0.750S+0.5250E+H, LL Com	0.415	1.192	0.201
+D+0.750L+0.750S+0.5250E+H, LL Com	0.574	1.344	0.055
+D+0.750L+0.750S+0.5250E+H, LL Com	0.569	1.459	0.147
+0.60D+0.60W+0.60H	0.252	0.646	0.065
+0.60D+0.70E+0.60H	0.252	0.646	0.065
D Only	0.420	1.077	0.108
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.007	0.154	0.123
L Only, LL Comb Run (L*)	0.206	0.356	-0.072
L Only, LL Comb Run (LL)	0.199	0.510	0.051
S Only			
W Only			
E Only			
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.00	3.00	0.83	0.83	0.00	1.00	3.15	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.05	3.00	0.82	0.82	0.04	1.00	3.15	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.10	3.00	0.82	0.82	0.08	1.00	3.15	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.15	3.00	0.81	0.81	0.12	1.00	3.15	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.20	3.00	0.80	0.80	0.16	1.00	3.15	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.25	3.00	0.79	0.79	0.20	0.97	3.13	Vu < PhiVc/2	Not Reqd	9 3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.30	3.00	0.78	0.78	0.24	0.81	3.03	Vu < PhiVc/2	Not Reqd	9 3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.35	3.00	0.78	0.78	0.28	0.69	2.97	Vu < PhiVc/2	Not Reqd	9 3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.40	3.00	0.77	0.77	0.32	0.60	2.91	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.45	3.00	0.76	0.76	0.36	0.53	2.87	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.50	3.00	0.75	0.75	0.40	0.47	2.84	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.55	3.00	0.74	0.74	0.43	0.43	2.81	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.60	3.00	0.73	0.73	0.47	0.39	2.79	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.65	3.00	0.73	0.73	0.51	0.36	2.77	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.70	3.00	0.72	0.72	0.54	0.33	2.76	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.75	3.00	0.71	0.71	0.58	0.31	2.74	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.80	3.00	0.70	0.70	0.61	0.29	2.73	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.85	3.00	0.69	0.69	0.65	0.27	2.72	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.90	3.00	0.68	0.68	0.68	0.25	2.71	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.95	3.00	0.68	0.68	0.72	0.24	2.70	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.00	3.00	0.67	0.67	0.75	0.22	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.05	3.00	0.66	0.66	0.78	0.21	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.10	3.00	0.65	0.65	0.82	0.20	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0

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Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	1.15	3.00	0.64	0.64	0.85	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.20	3.00	0.63	0.63	0.88	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.25	3.00	0.63	0.63	0.91	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.30	3.00	0.62	0.62	0.94	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.35	3.00	0.61	0.61	0.97	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.40	3.00	0.60	0.60	1.00	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.45	3.00	0.59	0.59	1.03	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.50	3.00	0.58	0.58	1.06	0.14	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.55	3.00	0.58	0.58	1.09	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.60	3.00	0.57	0.57	1.12	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.65	3.00	0.56	0.56	1.15	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.70	3.00	0.55	0.55	1.18	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.75	3.00	0.54	0.54	1.20	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.80	3.00	0.54	0.54	1.23	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.85	3.00	0.53	0.53	1.26	0.10	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.90	3.00	0.52	0.52	1.28	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.95	3.00	0.51	0.51	1.31	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.00	3.00	0.50	0.50	1.34	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.05	3.00	0.49	0.49	1.36	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.10	3.00	0.49	0.49	1.38	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.15	3.00	0.48	0.48	1.41	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.20	3.00	0.47	0.47	1.43	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.25	3.00	0.46	0.46	1.46	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.30	3.00	0.45	0.45	1.48	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.35	3.00	0.44	0.44	1.50	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.40	3.00	0.44	0.44	1.52	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.45	3.00	0.43	0.43	1.54	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.50	3.00	0.42	0.42	1.57	0.07	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.55	3.00	0.41	0.41	1.59	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.60	3.00	0.40	0.40	1.61	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.65	3.00	0.39	0.39	1.63	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.70	3.00	0.39	0.39	1.65	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.75	3.00	0.38	0.38	1.67	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.80	3.00	0.37	0.37	1.68	0.05	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.85	3.00	0.36	0.36	1.70	0.05	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.90	3.00	0.35	0.35	1.72	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.95	3.00	0.35	0.35	1.74	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.00	3.00	0.34	0.34	1.75	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.05	3.00	0.33	0.33	1.77	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.10	3.00	0.32	0.32	1.79	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.15	3.00	0.31	0.31	1.80	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.20	3.00	0.30	0.30	1.82	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.25	3.00	0.30	0.30	1.83	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.30	3.00	0.29	0.29	1.85	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.35	3.00	0.28	0.28	1.86	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.40	3.00	0.27	0.27	1.88	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.45	3.00	0.26	0.26	1.89	0.03	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.50	3.00	0.25	0.25	1.90	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.55	3.00	0.25	0.25	1.92	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.60	3.00	0.24	0.24	1.93	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.65	3.00	0.23	0.23	1.94	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.70	3.00	0.22	0.22	1.95	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.75	3.00	0.21	0.21	1.96	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	3.80	3.00	0.20	0.20	1.97	0.03	2.58	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	1	3.85	3.00	0.20	0.20	1.98	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.90	3.00	0.19	0.19	1.99	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.95	3.00	0.18	0.18	2.00	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.00	3.00	0.17	0.17	2.01	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.05	3.00	0.16	0.16	2.02	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.10	3.00	0.15	0.15	2.03	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.15	3.00	0.15	0.15	2.03	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.20	3.00	0.14	0.14	2.04	0.02	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.25	3.00	0.13	0.13	2.05	0.02	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.30	3.00	0.12	0.12	2.05	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.35	3.00	0.11	0.11	2.06	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.40	3.00	0.11	0.11	2.06	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.45	3.00	0.10	0.10	2.07	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.50	3.00	0.09	0.09	2.07	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.55	3.00	0.08	0.08	2.08	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.60	3.00	0.07	0.07	2.08	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.65	3.00	0.06	0.06	2.09	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.70	3.00	0.06	0.06	2.09	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.75	3.00	0.05	0.05	2.09	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.80	3.00	0.04	0.04	2.09	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.85	3.00	0.03	0.03	2.09	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.90	3.00	0.02	0.02	2.10	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.95	3.00	0.01	0.01	2.10	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.00	3.00	-0.01	0.01	1.20	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.05	3.00	-0.02	0.02	1.20	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.10	3.00	-0.02	0.02	1.20	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.15	3.00	-0.03	0.03	2.04	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.20	3.00	-0.04	0.04	2.04	0.00	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.25	3.00	-0.05	0.05	2.04	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.30	3.00	-0.05	0.05	2.04	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.35	3.00	-0.06	0.06	2.03	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.40	3.00	-0.07	0.07	2.03	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.45	3.00	-0.08	0.08	2.03	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.50	3.00	-0.09	0.09	2.02	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.55	3.00	-0.10	0.10	2.02	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.60	3.00	-0.10	0.10	2.01	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.65	3.00	-0.11	0.11	2.01	0.01	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.70	3.00	-0.12	0.12	2.00	0.02	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.75	3.00	-0.13	0.13	1.99	0.02	2.57	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.80	3.00	-0.14	0.14	1.99	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.85	3.00	-0.15	0.15	1.98	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.90	3.00	-0.15	0.15	1.97	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.95	3.00	-0.16	0.16	1.97	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.00	3.00	-0.17	0.17	1.96	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.05	3.00	-0.18	0.18	1.95	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.10	3.00	-0.19	0.19	1.94	0.02	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.15	3.00	-0.19	0.19	1.93	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.20	3.00	-0.20	0.20	1.92	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.25	3.00	-0.21	0.21	1.91	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.30	3.00	-0.22	0.22	1.90	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.35	3.00	-0.23	0.23	1.89	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.40	3.00	-0.24	0.24	1.88	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.45	3.00	-0.24	0.24	1.86	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.50	3.00	-0.25	0.25	1.85	0.03	2.58	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	6.55	3.00	-0.26	0.26	1.84	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.60	3.00	-0.27	0.27	1.83	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.65	3.00	-0.28	0.28	1.81	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.70	3.00	-0.29	0.29	1.80	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.75	3.00	-0.29	0.29	1.78	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.80	3.00	-0.30	0.30	1.77	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.85	3.00	-0.31	0.31	1.75	0.04	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.90	3.00	-0.32	0.32	1.74	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	6.95	3.00	-0.33	0.33	1.72	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.00	3.00	-0.34	0.34	1.70	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.05	3.00	-0.34	0.34	1.69	0.05	2.59	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.10	3.00	-0.35	0.35	1.67	0.05	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.15	3.00	-0.36	0.36	1.65	0.05	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.20	3.00	-0.37	0.37	1.63	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.25	3.00	-0.38	0.38	1.62	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.30	3.00	-0.38	0.38	1.60	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.35	3.00	-0.39	0.39	1.58	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.40	3.00	-0.40	0.40	1.56	0.06	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.45	3.00	-0.41	0.41	1.54	0.07	2.60	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.50	3.00	-0.42	0.42	1.52	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.55	3.00	-0.43	0.43	1.50	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.60	3.00	-0.43	0.43	1.47	0.07	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.65	3.00	-0.44	0.44	1.45	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.70	3.00	-0.45	0.45	1.43	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.75	3.00	-0.46	0.46	1.41	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.80	3.00	-0.47	0.47	1.38	0.08	2.61	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.85	3.00	-0.48	0.48	1.36	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.90	3.00	-0.48	0.48	1.34	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.95	3.00	-0.49	0.49	1.31	0.09	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.00	3.00	-0.50	0.50	1.29	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.05	3.00	-0.51	0.51	1.26	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.10	3.00	-0.52	0.52	1.24	0.10	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.15	3.00	-0.53	0.53	1.21	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.20	3.00	-0.53	0.53	1.18	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.25	3.00	-0.54	0.54	1.16	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.30	3.00	-0.55	0.55	1.13	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.35	3.00	-0.56	0.56	1.10	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.40	3.00	-0.57	0.57	1.07	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.45	3.00	-0.58	0.58	1.04	0.14	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.50	3.00	-0.58	0.58	1.02	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.55	3.00	-0.59	0.59	0.99	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.60	3.00	-0.60	0.60	0.96	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.65	3.00	-0.61	0.61	0.93	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.70	3.00	-0.62	0.62	0.90	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.75	3.00	-0.62	0.62	0.86	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.80	3.00	-0.63	0.63	0.83	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.85	3.00	-0.64	0.64	0.80	0.20	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.90	3.00	-0.65	0.65	0.77	0.21	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	8.95	3.00	-0.66	0.66	0.74	0.22	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	9.00	3.00	-0.67	0.67	0.70	0.24	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	9.05	3.00	-0.67	0.67	0.67	0.25	2.71	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	9.10	3.00	-0.68	0.68	0.64	0.27	2.72	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	9.15	3.00	-0.69	0.69	0.60	0.29	2.73	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	9.20	3.00	-0.70	0.70	0.57	0.31	2.74	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	1	9.25	3.00	-0.71	0.71	0.53	0.33	2.76	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.30	3.00	-0.72	0.72	0.50	0.36	2.77	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.35	3.00	-0.72	0.72	0.46	0.39	2.79	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.40	3.00	-0.73	0.73	0.42	0.43	2.82	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.45	3.00	-0.74	0.74	0.39	0.48	2.84	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.50	3.00	-0.75	0.75	0.35	0.54	2.88	Vu < PhiVc/2	Not Reqd	9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.55	3.00	-0.76	0.76	0.31	0.61	2.92	Vu < PhiVc/2	Not Reqd	9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.60	3.00	-0.77	0.77	0.27	0.70	2.97	Vu < PhiVc/2	Not Reqd	9	3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.65	3.00	-0.77	0.77	0.24	0.82	3.04	Vu < PhiVc/2	Not Reqd	9	3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.70	3.00	-0.78	0.78	0.20	0.99	3.14	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.75	3.00	-0.79	0.79	0.16	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.80	3.00	-0.80	0.80	0.12	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.85	3.00	-0.81	0.81	0.08	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.90	3.00	-0.81	0.81	0.04	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	9.95	3.00	-0.82	0.82	0.00	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.00	3.00	-0.83	0.83	0.05	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.05	3.00	-0.84	0.84	0.09	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.10	3.00	-0.85	0.85	0.13	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.15	3.00	-0.86	0.86	0.17	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.20	3.00	-0.86	0.86	0.21	1.00	3.15	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.25	3.00	-0.87	0.87	0.26	0.84	3.06	Vu < PhiVc/2	Not Reqd	9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.30	3.00	-0.88	0.88	0.30	0.73	2.99	Vu < PhiVc/2	Not Reqd	9	3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.35	3.00	-0.89	0.89	0.35	0.64	2.94	Vu < PhiVc/2	Not Reqd	9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.40	3.00	-0.90	0.90	0.39	0.57	2.90	Vu < PhiVc/2	Not Reqd	9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.45	3.00	-0.91	0.91	0.44	0.52	2.87	Vu < PhiVc/2	Not Reqd	9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.50	3.00	-0.91	0.91	0.48	0.47	2.84	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.55	3.00	-0.92	0.92	0.53	0.44	2.82	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.60	3.00	-0.93	0.93	0.57	0.41	2.80	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.65	3.00	-0.94	0.94	0.62	0.38	2.78	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.70	3.00	-0.95	0.95	0.67	0.35	2.77	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.75	3.00	-0.96	0.96	0.72	0.33	2.76	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.80	3.00	-0.96	0.96	0.76	0.32	2.75	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.85	3.00	-0.97	0.97	0.81	0.30	2.74	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.90	3.00	-0.98	0.98	0.86	0.28	2.73	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	10.95	3.00	-0.99	0.99	0.91	0.27	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.00	3.00	-1.00	1.00	0.96	0.26	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.05	3.00	-1.01	1.01	1.01	0.25	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.10	3.00	-1.01	1.01	1.06	0.24	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.15	3.00	-1.02	1.02	1.11	0.23	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.20	3.00	-1.03	1.03	1.16	0.22	2.69	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.25	3.00	-1.04	1.04	1.21	0.21	2.69	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.30	3.00	-1.05	1.05	1.27	0.21	2.69	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.35	3.00	-1.05	1.05	1.32	0.20	2.68	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.40	3.00	-1.06	1.06	1.37	0.19	2.68	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.45	3.00	-1.07	1.07	1.42	0.19	2.67	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.50	3.00	-1.08	1.08	1.48	0.18	2.67	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.55	3.00	-1.09	1.09	1.53	0.18	2.67	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.60	3.00	-1.10	1.10	1.59	0.17	2.67	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.65	3.00	-1.10	1.10	1.64	0.17	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.70	3.00	-1.11	1.11	1.70	0.16	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.75	3.00	-1.12	1.12	1.75	0.16	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.80	3.00	-1.13	1.13	1.81	0.16	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.85	3.00	-1.14	1.14	1.87	0.15	2.65	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	11.90	3.00	-1.15	1.15	1.92	0.15	2.65	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	11.95	3.00	-1.15	1.15	1.98	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	12.00	3.00	-1.16	1.16	2.04	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	12.05	3.00	-1.17	1.17	2.10	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	12.10	3.00	-1.18	1.18	2.16	0.14	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	12.15	3.00	-1.19	1.19	2.22	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	12.20	3.00	-1.20	1.20	2.28	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.25	3.00	0.90	0.90	2.33	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.28	3.00	0.90	0.90	2.31	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.31	3.00	0.90	0.90	2.29	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.33	3.00	0.89	0.89	2.26	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.36	3.00	0.89	0.89	2.24	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.39	3.00	0.88	0.88	2.21	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.42	3.00	0.88	0.88	2.19	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.44	3.00	0.87	0.87	2.16	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.47	3.00	0.87	0.87	2.14	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.50	3.00	0.86	0.86	2.12	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.53	3.00	0.86	0.86	2.09	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.55	3.00	0.85	0.85	2.07	0.10	2.62	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.58	3.00	0.85	0.85	2.05	0.10	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.61	3.00	0.84	0.84	2.02	0.10	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.64	3.00	0.84	0.84	2.00	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.66	3.00	0.84	0.84	1.98	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.69	3.00	0.83	0.83	1.95	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.72	3.00	0.83	0.83	1.93	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.75	3.00	0.82	0.82	1.91	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.77	3.00	0.82	0.82	1.88	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.80	3.00	0.81	0.81	1.86	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.83	3.00	0.81	0.81	1.84	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.86	3.00	0.80	0.80	1.82	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.88	3.00	0.80	0.80	1.80	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.91	3.00	0.79	0.79	1.77	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.94	3.00	0.79	0.79	1.75	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.97	3.00	0.79	0.79	1.73	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.99	3.00	0.78	0.78	1.71	0.11	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.02	3.00	0.78	0.78	1.69	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.05	3.00	0.77	0.77	1.67	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.08	3.00	0.77	0.77	1.64	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.10	3.00	0.76	0.76	1.62	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.13	3.00	0.76	0.76	1.60	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.16	3.00	0.75	0.75	1.58	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.19	3.00	0.75	0.75	1.56	0.12	2.63	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.21	3.00	0.74	0.74	1.54	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.24	3.00	0.74	0.74	1.52	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.27	3.00	0.74	0.74	1.50	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.30	3.00	0.73	0.73	1.48	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.32	3.00	0.73	0.73	1.46	0.12	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.35	3.00	0.72	0.72	1.44	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.38	3.00	0.72	0.72	1.42	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.41	3.00	0.71	0.71	1.40	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.43	3.00	0.71	0.71	1.38	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.46	3.00	0.70	0.70	1.36	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.49	3.00	0.70	0.70	1.34	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.52	3.00	0.69	0.69	1.32	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.54	3.00	0.69	0.69	1.30	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	2	13.57	3.00	0.69	0.69	1.28	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.60	3.00	0.68	0.68	1.27	0.13	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.63	3.00	0.68	0.68	1.25	0.14	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.66	3.00	0.67	0.67	1.23	0.14	2.64	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.68	3.00	0.67	0.67	1.21	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.71	3.00	0.66	0.66	1.19	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.74	3.00	0.66	0.66	1.17	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.77	3.00	0.65	0.65	1.15	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.79	3.00	0.65	0.65	1.14	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.82	3.00	0.64	0.64	1.12	0.14	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.85	3.00	0.64	0.64	1.10	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.88	3.00	0.64	0.64	1.08	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.90	3.00	0.63	0.63	1.07	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.93	3.00	0.63	0.63	1.05	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.96	3.00	0.62	0.62	1.03	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.99	3.00	0.62	0.62	1.01	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.01	3.00	0.61	0.61	1.00	0.15	2.65	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.04	3.00	0.61	0.61	0.98	0.15	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.07	3.00	0.60	0.60	0.96	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.10	3.00	0.60	0.60	0.95	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.12	3.00	0.59	0.59	0.93	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.15	3.00	0.59	0.59	0.92	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.18	3.00	0.59	0.59	0.90	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.21	3.00	0.58	0.58	0.88	0.16	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.23	3.00	0.58	0.58	0.87	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.26	3.00	0.57	0.57	0.85	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.29	3.00	0.57	0.57	0.84	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.32	3.00	0.56	0.56	0.82	0.17	2.66	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.34	3.00	0.56	0.56	0.80	0.17	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.37	3.00	0.55	0.55	0.79	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.40	3.00	0.55	0.55	0.77	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.43	3.00	0.54	0.54	0.76	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.45	3.00	0.54	0.54	0.74	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.48	3.00	0.54	0.54	0.73	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.51	3.00	0.53	0.53	0.71	0.19	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.54	3.00	0.53	0.53	0.70	0.19	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.56	3.00	0.52	0.52	0.69	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.59	3.00	0.52	0.52	0.67	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.62	3.00	0.51	0.51	0.66	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.65	3.00	0.51	0.51	0.64	0.20	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.67	3.00	0.50	0.50	0.63	0.20	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.70	3.00	0.50	0.50	0.62	0.20	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.73	3.00	0.49	0.49	0.60	0.21	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.76	3.00	0.49	0.49	0.59	0.21	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.78	3.00	0.48	0.48	0.57	0.21	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.81	3.00	0.48	0.48	0.56	0.21	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.84	3.00	0.48	0.48	0.55	0.22	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.87	3.00	0.47	0.47	0.54	0.22	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.89	3.00	0.47	0.47	0.52	0.22	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.92	3.00	0.46	0.46	0.51	0.23	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.95	3.00	0.46	0.46	0.50	0.23	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	14.98	3.00	0.45	0.45	0.48	0.23	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.01	3.00	0.45	0.45	0.47	0.24	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.03	3.00	0.44	0.44	0.46	0.24	2.71	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	2	15.06	3.00	0.44	0.44	0.45	0.25	2.71	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.09	3.00	0.43	0.43	0.44	0.25	2.71	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.12	3.00	0.43	0.43	0.42	0.25	2.71	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.14	3.00	0.43	0.43	0.41	0.26	2.72	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.17	3.00	0.42	0.42	0.40	0.26	2.72	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.20	3.00	0.42	0.42	0.39	0.27	2.72	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.23	3.00	0.41	0.41	0.38	0.27	2.72	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.25	3.00	0.41	0.41	0.37	0.28	2.73	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.28	3.00	0.40	0.40	0.35	0.28	2.73	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.31	3.00	0.40	0.40	0.34	0.29	2.73	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.34	3.00	0.39	0.39	0.33	0.30	2.74	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.36	3.00	0.39	0.39	0.32	0.30	2.74	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.39	3.00	0.38	0.38	0.31	0.31	2.74	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.42	3.00	0.38	0.38	0.30	0.32	2.75	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.45	3.00	0.38	0.38	0.29	0.32	2.75	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.47	3.00	0.37	0.37	0.28	0.33	2.76	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.50	3.00	0.37	0.37	0.27	0.34	2.76	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.53	3.00	0.36	0.36	0.26	0.35	2.77	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.56	3.00	0.36	0.36	0.25	0.36	2.77	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.58	3.00	0.35	0.35	0.24	0.37	2.78	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.61	3.00	0.35	0.35	0.23	0.38	2.78	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.64	3.00	0.34	0.34	0.22	0.39	2.79	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.67	3.00	0.34	0.34	0.21	0.40	2.80	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.69	3.00	0.33	0.33	0.20	0.41	2.81	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.72	3.00	0.33	0.33	0.19	0.43	2.81	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.75	3.00	0.33	0.33	0.18	0.44	2.82	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.78	3.00	0.32	0.32	0.17	0.46	2.83	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.80	3.00	0.32	0.32	0.17	0.48	2.84	Vu < PhiVc/2	Not Reqd	9 2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.83	3.00	0.31	0.31	0.16	0.49	2.85	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.86	3.00	0.31	0.31	0.15	0.52	2.86	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.89	3.00	0.30	0.30	0.14	0.54	2.88	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.91	3.00	0.30	0.30	0.13	0.56	2.89	Vu < PhiVc/2	Not Reqd	9 2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.94	3.00	0.29	0.29	0.43	0.17	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	15.97	3.00	0.29	0.29	0.42	0.17	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.00	3.00	0.29	0.29	0.41	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.02	3.00	0.29	0.29	0.40	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.05	3.00	0.28	0.28	0.39	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.08	3.00	0.28	0.28	0.39	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.11	3.00	0.28	0.28	0.38	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.13	3.00	0.28	0.28	0.37	0.18	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.16	3.00	0.27	0.27	0.36	0.19	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.19	3.00	0.27	0.27	0.36	0.19	2.67	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.22	3.00	0.27	0.27	0.35	0.19	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.24	3.00	0.26	0.26	0.34	0.19	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.27	3.00	0.26	0.26	0.33	0.19	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.30	3.00	0.26	0.26	0.33	0.20	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.33	3.00	0.26	0.26	0.32	0.20	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.36	3.00	0.25	0.25	0.31	0.20	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.38	3.00	0.25	0.25	0.31	0.20	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.41	3.00	0.25	0.25	0.30	0.21	2.68	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.44	3.00	0.24	0.24	0.29	0.21	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.47	3.00	0.24	0.24	0.29	0.21	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.49	3.00	0.24	0.24	0.28	0.21	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.52	3.00	0.24	0.24	0.27	0.22	2.69	Vu < PhiVc/2	Not Reqd	9 2.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	2	16.55	3.00	0.23	0.23	0.27	0.22	2.69	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.58	3.00	0.23	0.23	0.26	0.22	2.69	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.60	3.00	0.23	0.23	0.25	0.22	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.63	3.00	0.22	0.22	0.25	0.23	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.66	3.00	0.22	0.22	0.24	0.23	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.69	3.00	0.22	0.22	0.24	0.23	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.71	3.00	0.22	0.22	0.23	0.24	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.74	3.00	0.21	0.21	0.22	0.24	2.70	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.77	3.00	0.21	0.21	0.22	0.24	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.80	3.00	0.21	0.21	0.21	0.25	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.82	3.00	0.21	0.21	0.21	0.25	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.85	3.00	0.20	0.20	0.20	0.25	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.88	3.00	0.20	0.20	0.20	0.26	2.71	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.91	3.00	0.20	0.20	0.19	0.26	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.93	3.00	0.19	0.19	0.18	0.26	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.96	3.00	0.19	0.19	0.18	0.27	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	16.99	3.00	0.19	0.19	0.17	0.27	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.02	3.00	0.19	0.19	0.17	0.27	2.72	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.04	3.00	0.18	0.18	0.16	0.28	2.73	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.07	3.00	0.18	0.18	0.16	0.28	2.73	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.10	3.00	0.18	0.18	0.15	0.29	2.73	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.13	3.00	0.17	0.17	0.15	0.29	2.74	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.15	3.00	0.17	0.17	0.14	0.30	2.74	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.18	3.00	0.17	0.17	0.14	0.30	2.74	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.21	3.00	0.17	0.17	0.13	0.31	2.74	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.24	3.00	0.16	0.16	0.13	0.31	2.75	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.26	3.00	0.16	0.16	0.13	0.32	2.75	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.29	3.00	0.16	0.16	0.12	0.32	2.75	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.32	3.00	0.15	0.15	0.12	0.33	2.76	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.35	3.00	0.15	0.15	0.11	0.34	2.76	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.37	3.00	0.15	0.15	0.11	0.34	2.76	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.40	3.00	0.15	0.15	0.10	0.35	2.77	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.43	3.00	0.14	0.14	0.10	0.36	2.77	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.46	3.00	0.14	0.14	0.10	0.36	2.78	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.48	3.00	0.14	0.14	0.09	0.37	2.78	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.51	3.00	0.14	0.14	0.09	0.38	2.79	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.54	3.00	0.13	0.13	0.09	0.39	2.79	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.57	3.00	0.13	0.13	0.08	0.40	2.80	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.59	3.00	0.13	0.13	0.08	0.41	2.80	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.62	3.00	0.12	0.12	0.07	0.41	2.81	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.65	3.00	0.12	0.12	0.07	0.42	2.81	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.68	3.00	0.12	0.12	0.07	0.43	2.82	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.71	3.00	0.12	0.12	0.06	0.45	2.82	Vu < PhiVc/2	Not Reqd	9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.73	3.00	-0.12	0.12	0.28	0.10	2.63	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.76	3.00	-0.12	0.12	0.28	0.11	2.63	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.79	3.00	-0.13	0.13	0.27	0.12	2.63	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.82	3.00	-0.13	0.13	0.27	0.12	2.64	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.84	3.00	-0.14	0.14	0.27	0.13	2.64	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.87	3.00	-0.14	0.14	0.26	0.13	2.64	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.90	3.00	-0.14	0.14	0.26	0.14	2.65	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.93	3.00	-0.15	0.15	0.26	0.15	2.65	Vu < PhiVc/2	Not Reqd	9	2.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.95	3.00	-0.15	0.15	0.25	0.15	2.65	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	17.98	3.00	-0.16	0.16	0.25	0.16	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	18.01	3.00	-0.16	0.16	0.24	0.17	2.66	Vu < PhiVc/2	Not Reqd	9	2.7	0.0	0.0

Concrete Beam

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Description : typical unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, L	2	18.04	3.00	-0.17	0.17	0.24	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.06	3.00	-0.17	0.17	0.23	0.18	2.67	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.09	3.00	-0.18	0.18	0.23	0.19	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.12	3.00	-0.18	0.18	0.22	0.20	2.68	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.15	3.00	-0.19	0.19	0.22	0.21	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.17	3.00	-0.19	0.19	0.21	0.22	2.69	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.20	3.00	-0.19	0.19	0.21	0.23	2.70	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.23	3.00	-0.20	0.20	0.20	0.25	2.71	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.26	3.00	-0.20	0.20	0.20	0.26	2.72	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.28	3.00	-0.21	0.21	0.19	0.27	2.72	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.31	3.00	-0.21	0.21	0.19	0.29	2.73	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.34	3.00	-0.22	0.22	0.18	0.30	2.74	Vu < PhiVc/2	Not Reqd 9	2.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.37	3.00	-0.22	0.22	0.17	0.32	2.75	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.39	3.00	-0.23	0.23	0.17	0.34	2.76	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.42	3.00	-0.23	0.23	0.16	0.36	2.77	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.45	3.00	-0.24	0.24	0.16	0.38	2.79	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.48	3.00	-0.24	0.24	0.15	0.40	2.80	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.50	3.00	-0.24	0.24	0.14	0.43	2.82	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.53	3.00	-0.25	0.25	0.13	0.46	2.83	Vu < PhiVc/2	Not Reqd 9	2.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.56	3.00	-0.25	0.25	0.13	0.50	2.85	Vu < PhiVc/2	Not Reqd 9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.59	3.00	-0.26	0.26	0.12	0.53	2.88	Vu < PhiVc/2	Not Reqd 9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.61	3.00	-0.26	0.26	0.11	0.58	2.90	Vu < PhiVc/2	Not Reqd 9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.64	3.00	-0.27	0.27	0.11	0.63	2.93	Vu < PhiVc/2	Not Reqd 9	2.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.67	3.00	-0.27	0.27	0.10	0.69	2.96	Vu < PhiVc/2	Not Reqd 9	3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.70	3.00	-0.28	0.28	0.09	0.76	3.00	Vu < PhiVc/2	Not Reqd 9	3.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.72	3.00	-0.28	0.28	0.08	0.84	3.05	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.75	3.00	-0.29	0.29	0.08	0.94	3.11	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.78	3.00	-0.29	0.29	0.07	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.81	3.00	-0.30	0.30	0.06	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.83	3.00	-0.30	0.30	0.05	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.86	3.00	-0.30	0.30	0.04	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.89	3.00	-0.31	0.31	0.04	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.92	3.00	-0.31	0.31	0.03	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.94	3.00	-0.32	0.32	0.02	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	18.97	3.00	-0.32	0.32	0.01	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, L	2	19.00	3.00	-0.33	0.33	0.00	1.00	3.15	Vu < PhiVc/2	Not Reqd 9	3.1	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	12.250	-2.28	3.68	0.62
Span # 2	2	6.750	-2.33	3.68	0.64
+1.40D+1.60H					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.45
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.52	3.68	0.41
Span # 2	2	6.750	-1.56	3.68	0.42
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-2.15	3.68	0.58
Span # 2	2	6.750	-2.21	3.68	0.60
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-2.28	3.68	0.62
Span # 2	2	6.750	-2.33	3.68	0.64
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.52	3.68	0.41
Span # 2	2	6.750	-1.56	3.68	0.42

Concrete Beam

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Description : typical unit suspended concrete slab at garage

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-2.15	3.68	0.58
Span # 2	2	6.750	-2.21	3.68	0.60
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-2.28	3.68	0.62
Span # 2	2	6.750	-2.33	3.68	0.64
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.44	3.68	0.39
Span # 2	2	6.750	-1.47	3.68	0.40
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.46
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.67	3.68	0.45
Span # 2	2	6.750	-1.71	3.68	0.47
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.39	3.68	0.38
Span # 2	2	6.750	-1.43	3.68	0.39
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.39	3.68	0.38
Span # 2	2	6.750	-1.43	3.68	0.39
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.39	3.68	0.38
Span # 2	2	6.750	-1.43	3.68	0.39
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.44	3.68	0.39
Span # 2	2	6.750	-1.47	3.68	0.40
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.67	3.68	0.45
Span # 2	2	6.750	-1.71	3.68	0.47
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	12.250	-1.39	3.68	0.38
Span # 2	2	6.750	-1.43	3.68	0.39
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.44	3.68	0.39
Span # 2	2	6.750	-1.47	3.68	0.40
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.46
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.67	3.68	0.45
Span # 2	2	6.750	-1.71	3.68	0.47
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.44	3.68	0.39
Span # 2	2	6.750	-1.47	3.68	0.40
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.46
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.67	3.68	0.45
Span # 2	2	6.750	-1.71	3.68	0.47
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	12.250	-1.44	3.68	0.39
Span # 2	2	6.750	-1.47	3.68	0.40
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					
Span # 1	1	12.250	-1.63	3.68	0.44
Span # 2	2	6.750	-1.67	3.68	0.46
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	12.250	-1.67	3.68	0.45
Span # 2	2	6.750	-1.71	3.68	0.47
+0.90D+W+0.90H					
Span # 1	1	12.250	-1.05	3.68	0.28
Span # 2	2	6.750	-1.07	3.68	0.29
+0.90D+E+0.90H					
Span # 1	1	12.250	-1.05	3.68	0.28
Span # 2	2	6.750	-1.07	3.68	0.29

Concrete Beam

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Licensee : JM WILLIAMS & ASSOCIATES INC

Description : typical unit suspended concrete slab at garage

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*)	1	0.0538	5.425	+D+L+H, LL Comb Run (L*)	-0.0006	12.346
+D+L+H, LL Comb Run (*L)	2	0.0000	6.750	+D+L+H, LL Comb Run (L*)	-0.0070	2.411

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

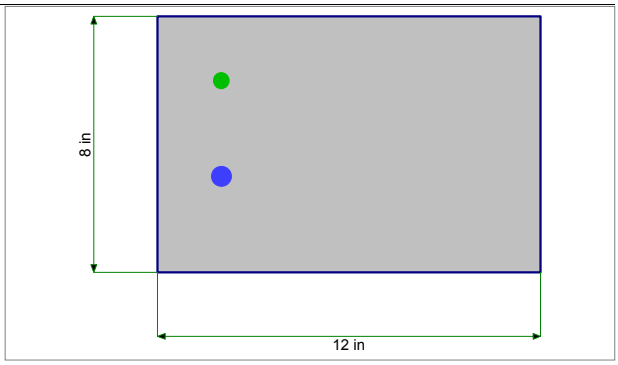
Description : lot 62R unit suspended concrete slab

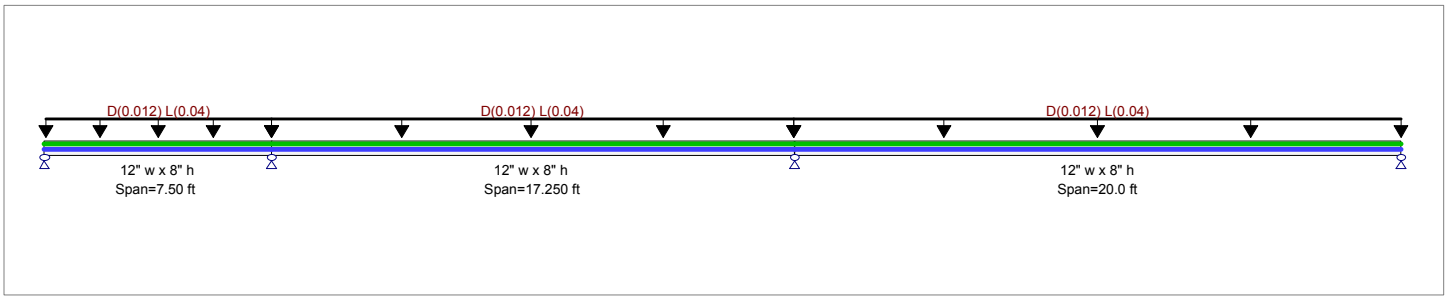
CODE REFERENCES

Calculations per ACI 318-14, IBC 2015, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	2.50 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c $^{1/2}$ * 7.50	=	375.0 psi		Shear :	0.750
Ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 8.0 in

Span #1 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 7.50 ft in this span
1-#4 at 2.0 in from Top, from 0.0 to 7.50 ft in this span

Span #2 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 17.250 ft in this span
1-#4 at 2.0 in from Top, from 0.0 to 17.250 ft in this span

Span #3 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 20.0 ft in this span
1-#4 at 2.0 in from Top, from 0.0 to 20.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft
Load for Span Number 2
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft
Load for Span Number 3
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.972** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	-7.980 k-ft	
Mn * Phi : Allowable	8.208 k-ft	
Location of maximum on span	0.000 ft	
Span # where maximum occurs	Span # 3	

Maximum Deflection

Max Downward Transient Deflection	0.059 in	Ratio =	4047 >=36
Max Upward Transient Deflection	-0.018 in	Ratio =	11535 >=36
Max Downward Total Deflection	0.282 in	Ratio =	851 >=18
Max Upward Total Deflection	-0.019 in	Ratio =	10655 >=18

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Overall MAXimum	0.398	2.052	3.221	1.218
Overall MINimum	0.022	0.023	-0.008	0.001
+D+H	0.207	1.376	2.414	0.865
+D+L+H, LL Comb Run (**L)	0.259	1.239	2.953	1.212
+D+L+H, LL Comb Run (*L*)	0.082	1.885	2.735	0.852

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
+D+L+H, LL Comb Run (*LL)	0.116	1.797	3.221	1.218
+D+L+H, LL Comb Run (L**)	0.345	1.545	2.407	0.866
+D+L+H, LL Comb Run (L*L)	0.398	1.404	2.949	1.211
+D+L+H, LL Comb Run (LL*)	0.220	2.052	2.729	0.852
+D+L+H, LL Comb Run (LLL)	0.255	1.963	3.218	1.218
+D+Lr+H, LL Comb Run (**L)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (*L*)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (*LL)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (L**)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (L*L)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (LL*)	0.207	1.376	2.414	0.865
+D+Lr+H, LL Comb Run (LLL)	0.207	1.376	2.414	0.865
+D+S+H	0.207	1.376	2.414	0.865
+D+0.750Lr+0.750L+H, LL Comb Run (	0.239	1.291	2.800	1.132
+D+0.750Lr+0.750L+H, LL Comb Run (	0.113	1.756	2.656	0.855
+D+0.750Lr+0.750L+H, LL Comb Run (	0.135	1.699	3.013	1.133
+D+0.750Lr+0.750L+H, LL Comb Run (	0.310	1.503	2.409	0.866
+D+0.750Lr+0.750L+H, LL Comb Run (	0.343	1.416	2.797	1.132
+D+0.750Lr+0.750L+H, LL Comb Run (	0.217	1.882	2.651	0.855
+D+0.750Lr+0.750L+H, LL Comb Run (	0.239	1.824	3.009	1.133
+D+0.750L+0.750S+H, LL Comb Run (*	0.239	1.291	2.800	1.132
+D+0.750L+0.750S+H, LL Comb Run (*	0.113	1.756	2.656	0.855
+D+0.750L+0.750S+H, LL Comb Run (*	0.135	1.699	3.013	1.133
+D+0.750L+0.750S+H, LL Comb Run (L	0.310	1.503	2.409	0.866
+D+0.750L+0.750S+H, LL Comb Run (L	0.343	1.416	2.797	1.132
+D+0.750L+0.750S+H, LL Comb Run (L	0.217	1.882	2.651	0.855
+D+0.750L+0.750S+H, LL Comb Run (L	0.239	1.824	3.009	1.133
+D+0.60W+H	0.207	1.376	2.414	0.865
+D+0.70E+H	0.207	1.376	2.414	0.865
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.239	1.291	2.800	1.132
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.113	1.756	2.656	0.855
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.135	1.699	3.013	1.133
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.310	1.503	2.409	0.866
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.343	1.416	2.797	1.132
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.217	1.882	2.651	0.855
+D+0.750Lr+0.750L+0.450W+H, LL Com	0.239	1.824	3.009	1.133
+D+0.750L+0.750S+0.450W+H, LL Comb	0.239	1.291	2.800	1.132
+D+0.750L+0.750S+0.450W+H, LL Comb	0.113	1.756	2.656	0.855
+D+0.750L+0.750S+0.450W+H, LL Comb	0.135	1.699	3.013	1.133
+D+0.750L+0.750S+0.450W+H, LL Comb	0.310	1.503	2.409	0.866
+D+0.750L+0.750S+0.450W+H, LL Comb	0.343	1.416	2.797	1.132
+D+0.750L+0.750S+0.450W+H, LL Comb	0.217	1.882	2.651	0.855
+D+0.750L+0.750S+0.450W+H, LL Comb	0.239	1.824	3.009	1.133
+D+0.750L+0.750S+0.5250E+H, LL Com	0.239	1.291	2.800	1.132
+D+0.750L+0.750S+0.5250E+H, LL Com	0.113	1.756	2.656	0.855
+D+0.750L+0.750S+0.5250E+H, LL Com	0.135	1.699	3.013	1.133
+D+0.750L+0.750S+0.5250E+H, LL Com	0.310	1.503	2.409	0.866
+D+0.750L+0.750S+0.5250E+H, LL Com	0.343	1.416	2.797	1.132
+D+0.750L+0.750S+0.5250E+H, LL Com	0.217	1.882	2.651	0.855
+D+0.750L+0.750S+0.5250E+H, LL Com	0.239	1.824	3.009	1.133
+0.60D+0.60W+0.60H	0.124	0.825	1.450	0.519
+0.60D+0.70E+0.60H	0.124	0.825	1.450	0.519
D Only	0.207	1.376	2.414	0.865
Lr Only, LL Comb Run (**L)				
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.054	-0.146	0.550	0.342
L Only, LL Comb Run (*L*)	-0.116	0.483	0.347	-0.024
L Only, LL Comb Run (*LL)	-0.061	0.337	0.897	0.317
L Only, LL Comb Run (L**)	0.138	0.169	-0.008	0.001
L Only, LL Comb Run (L*L)	0.192	0.023	0.542	0.343
L Only, LL Comb Run (LL*)	0.022	0.651	0.340	-0.023
L Only, LL Comb Run (LLL)	0.076	0.506	0.889	0.318
S Only				
W Only				
E Only				
H Only				

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.00	5.00	0.56	0.56	0.00	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.05	5.00	0.55	0.55	0.03	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.10	5.00	0.54	0.54	0.05	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.15	5.00	0.53	0.53	0.08	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.20	5.00	0.52	0.52	0.11	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.25	5.00	0.51	0.51	0.13	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.30	5.00	0.50	0.50	0.16	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.35	5.00	0.49	0.49	0.18	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.40	5.00	0.48	0.48	0.21	0.96	4.83	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.45	5.00	0.47	0.47	0.23	0.85	4.77	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.50	5.00	0.46	0.46	0.25	0.75	4.71	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.55	5.00	0.45	0.45	0.28	0.68	4.67	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.60	5.00	0.44	0.44	0.30	0.61	4.63	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.65	5.00	0.43	0.43	0.32	0.56	4.60	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.70	5.00	0.42	0.42	0.34	0.51	4.57	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.75	5.00	0.41	0.41	0.36	0.47	4.55	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.80	5.00	0.40	0.40	0.38	0.44	4.53	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.85	5.00	0.39	0.39	0.40	0.40	4.51	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.90	5.00	0.38	0.38	0.42	0.38	4.49	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.95	5.00	0.37	0.37	0.44	0.35	4.48	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.00	5.00	0.36	0.36	0.46	0.33	4.47	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.05	5.00	0.35	0.35	0.48	0.31	4.45	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.10	5.00	0.34	0.34	0.49	0.29	4.44	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.15	5.00	0.33	0.33	0.51	0.27	4.43	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.20	5.00	0.32	0.32	0.53	0.26	4.42	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.25	5.00	0.31	0.31	0.54	0.24	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.30	5.00	0.30	0.30	0.56	0.23	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.35	5.00	0.29	0.29	0.57	0.21	4.40	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.40	5.00	0.28	0.28	0.59	0.20	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.45	5.00	0.27	0.27	0.60	0.19	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.50	5.00	0.26	0.26	0.62	0.18	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.55	5.00	0.25	0.25	0.63	0.17	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.60	5.00	0.24	0.24	0.64	0.16	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.65	5.00	0.24	0.24	0.65	0.15	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.70	5.00	0.23	0.23	0.66	0.14	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.75	5.00	0.22	0.22	0.68	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.80	5.00	0.21	0.21	0.69	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.85	5.00	0.20	0.20	0.70	0.12	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.90	5.00	0.19	0.19	0.71	0.11	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.95	6.00	-0.19	0.19	0.12	0.77	5.87	Vu < PhiVc/2	Not Reqd	9 5.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	1	2.00	6.00	-0.20	0.20	0.13	0.74	5.84	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.05	6.00	-0.20	0.20	0.14	0.71	5.81	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.10	6.00	-0.21	0.21	0.15	0.68	5.78	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.15	6.00	-0.22	0.22	0.16	0.66	5.76	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.20	6.00	-0.22	0.22	0.17	0.64	5.74	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.25	6.00	-0.23	0.23	0.19	0.62	5.72	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.30	6.00	-0.24	0.24	0.20	0.60	5.70	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.35	6.00	-0.24	0.24	0.21	0.58	5.68	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.40	6.00	-0.25	0.25	0.22	0.56	5.67	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.45	6.00	-0.26	0.26	0.23	0.54	5.65	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.50	6.00	-0.26	0.26	0.25	0.53	5.64	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.55	6.00	-0.27	0.27	0.26	0.51	5.62	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.60	6.00	-0.28	0.28	0.27	0.50	5.61	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.65	6.00	-0.28	0.28	0.29	0.49	5.60	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.70	6.00	-0.29	0.29	0.30	0.48	5.59	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.75	6.00	-0.29	0.29	0.32	0.46	5.57	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.80	6.00	-0.30	0.30	0.33	0.45	5.56	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.85	6.00	-0.31	0.31	0.35	0.44	5.55	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.90	6.00	-0.31	0.31	0.36	0.43	5.54	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	2.95	6.00	-0.32	0.32	0.38	0.42	5.53	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.00	6.00	-0.33	0.33	0.39	0.41	5.53	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.05	6.00	-0.33	0.33	0.41	0.41	5.52	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.10	6.00	-0.34	0.34	0.43	0.40	5.51	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.15	6.00	-0.35	0.35	0.45	0.39	5.50	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.20	6.00	-0.35	0.35	0.46	0.38	5.49	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.25	6.00	-0.36	0.36	0.48	0.37	5.49	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.30	6.00	-0.37	0.37	0.50	0.37	5.48	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.35	6.00	-0.37	0.37	0.52	0.36	5.47	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.40	6.00	-0.38	0.38	0.54	0.35	5.47	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.45	6.00	-0.39	0.39	0.18	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.50	6.00	-0.40	0.40	0.20	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.55	6.00	-0.41	0.41	0.22	0.94	6.03	Vu < PhiVc/2	Not Reqd	9 6.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.60	6.00	-0.42	0.42	0.24	0.88	5.97	Vu < PhiVc/2	Not Reqd	9 6.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.65	6.00	-0.43	0.43	0.26	0.83	5.92	Vu < PhiVc/2	Not Reqd	9 5.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.70	6.00	-0.44	0.44	0.28	0.78	5.88	Vu < PhiVc/2	Not Reqd	9 5.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.75	6.00	-0.44	0.44	0.30	0.74	5.84	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.80	6.00	-0.45	0.45	0.32	0.70	5.80	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.85	6.00	-0.46	0.46	0.35	0.67	5.77	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.90	6.00	-0.47	0.47	0.37	0.64	5.74	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	3.95	6.00	-0.48	0.48	0.39	0.61	5.72	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.00	6.00	-0.49	0.49	0.42	0.59	5.69	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.05	6.00	-0.50	0.50	0.44	0.57	5.67	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.10	6.00	-0.51	0.51	0.47	0.55	5.65	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.15	6.00	-0.52	0.52	0.49	0.53	5.64	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.20	6.00	-0.53	0.53	0.52	0.51	5.62	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.25	6.00	-0.54	0.54	0.55	0.49	5.60	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.30	6.00	-0.55	0.55	0.58	0.48	5.59	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.35	6.00	-0.56	0.56	0.60	0.47	5.58	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.40	6.00	-0.57	0.57	0.63	0.45	5.56	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.45	6.00	-0.58	0.58	0.66	0.44	5.55	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.50	6.00	-0.59	0.59	0.69	0.43	5.54	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.55	6.00	-0.60	0.60	0.72	0.42	5.53	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.60	6.00	-0.61	0.61	0.75	0.41	5.52	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.65	6.00	-0.62	0.62	0.78	0.40	5.51	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	1	4.70	6.00	-0.63	0.63	0.81	0.39	5.50	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.75	6.00	-0.64	0.64	0.84	0.38	5.49	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.80	6.00	-0.65	0.65	0.88	0.37	5.48	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.85	6.00	-0.66	0.66	0.91	0.36	5.48	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.90	6.00	-0.67	0.67	0.94	0.36	5.47	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	4.95	6.00	-0.68	0.68	0.97	0.35	5.46	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.00	6.00	-0.69	0.69	1.01	0.34	5.46	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.05	6.00	-0.70	0.70	1.04	0.33	5.45	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.10	6.00	-0.71	0.71	1.08	0.33	5.44	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.15	6.00	-0.72	0.72	1.11	0.32	5.44	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.20	6.00	-0.73	0.73	1.15	0.32	5.43	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.25	6.00	-0.74	0.74	1.19	0.31	5.43	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.30	6.00	-0.75	0.75	1.22	0.30	5.42	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.35	6.00	-0.76	0.76	1.26	0.30	5.42	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.40	6.00	-0.77	0.77	1.30	0.29	5.41	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.45	6.00	-0.78	0.78	1.34	0.29	5.41	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.50	6.00	-0.79	0.79	1.38	0.28	5.40	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.55	6.00	-0.79	0.79	1.42	0.28	5.40	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.60	6.00	-0.80	0.80	1.46	0.28	5.39	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.65	6.00	-0.81	0.81	1.50	0.27	5.39	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.70	6.00	-0.82	0.82	1.54	0.27	5.39	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.75	6.00	-0.83	0.83	1.58	0.26	5.38	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.80	6.00	-0.84	0.84	1.62	0.26	5.38	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.85	6.00	-0.85	0.85	1.66	0.26	5.38	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.90	6.00	-0.86	0.86	1.71	0.25	5.37	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	5.95	6.00	-0.87	0.87	1.75	0.25	5.37	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.00	6.00	-0.88	0.88	1.79	0.25	5.37	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.05	6.00	-0.89	0.89	1.84	0.24	5.36	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.10	6.00	-0.90	0.90	1.88	0.24	5.36	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.15	6.00	-0.91	0.91	1.93	0.24	5.36	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.20	6.00	-0.92	0.92	1.97	0.23	5.35	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.25	6.00	-0.93	0.93	2.02	0.23	5.35	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.30	6.00	-0.94	0.94	2.07	0.23	5.35	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.35	6.00	-0.95	0.95	2.11	0.22	5.34	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.40	6.00	-0.96	0.96	2.16	0.22	5.34	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.45	6.00	-0.97	0.97	2.21	0.22	5.34	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.50	6.00	-0.98	0.98	2.26	0.22	5.34	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.55	6.00	-0.99	0.99	2.31	0.21	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.60	6.00	-1.00	1.00	2.36	0.21	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.65	6.00	-1.01	1.01	2.41	0.21	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.70	6.00	-1.02	1.02	2.46	0.21	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.75	6.00	-1.03	1.03	2.51	0.20	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.80	6.00	-1.04	1.04	2.56	0.20	5.32	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.85	6.00	-1.05	1.05	2.61	0.20	5.32	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.90	6.00	-1.06	1.06	2.67	0.20	5.32	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	6.95	6.00	-1.07	1.07	2.72	0.20	5.32	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.00	6.00	-1.08	1.08	2.77	0.19	5.32	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.05	6.00	-1.09	1.09	2.83	0.19	5.31	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.10	6.00	-1.10	1.10	2.88	0.19	5.31	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.15	6.00	-1.11	1.11	2.94	0.19	5.31	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.20	6.00	-1.12	1.12	2.99	0.19	5.31	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.25	6.00	-1.13	1.13	3.05	0.18	5.31	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.30	6.00	-1.13	1.13	3.11	0.18	5.30	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	1	7.35	6.00	-1.14	1.14	3.16	0.18	5.30	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	7.40	6.00	-1.15	1.15	3.22	0.18	5.30	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	7.45	6.00	-1.16	1.16	3.28	0.18	5.30	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	7.50	6.00	1.52	1.52	3.34	0.23	5.35	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	7.62	6.00	1.50	1.50	3.16	0.24	5.36	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	7.73	6.00	1.47	1.47	2.99	0.25	5.37	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	7.85	6.00	1.45	1.45	2.82	0.26	5.38	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	7.96	6.00	1.43	1.43	2.66	0.27	5.39	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.08	6.00	1.41	1.41	2.50	0.28	5.40	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.19	6.00	1.38	1.38	2.34	0.30	5.41	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.31	6.00	1.36	1.36	2.18	0.31	5.43	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.42	6.00	1.34	1.34	2.02	0.33	5.45	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.54	6.00	1.32	1.32	1.87	0.35	5.47	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.65	6.00	1.29	1.29	1.72	0.38	5.49	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.77	6.00	1.27	1.27	1.57	0.40	5.52	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	8.88	6.00	1.25	1.25	1.43	0.44	5.55	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.00	6.00	1.23	1.23	1.28	0.48	5.59	Vu < PhiVc/2	Not Reqd 9	5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.11	6.00	1.20	1.20	1.14	0.53	5.63	Vu < PhiVc/2	Not Reqd 9	5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.23	6.00	1.18	1.18	1.01	0.59	5.69	Vu < PhiVc/2	Not Reqd 9	5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.34	6.00	1.16	1.16	0.87	0.66	5.77	Vu < PhiVc/2	Not Reqd 9	5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.46	6.00	1.14	1.14	0.74	0.77	5.86	Vu < PhiVc/2	Not Reqd 9	5.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.57	6.00	1.12	1.12	0.61	0.91	6.00	Vu < PhiVc/2	Not Reqd 9	6.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.69	6.00	1.09	1.09	0.48	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.80	6.00	1.07	1.07	0.36	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.92	6.00	1.05	1.05	0.24	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.03	6.00	1.03	1.03	0.12	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.15	6.00	1.00	1.00	0.00	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.26	5.00	0.98	0.98	0.11	1.00	4.86	Vu < PhiVc/2	Not Reqd 9	4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.38	5.00	0.96	0.96	0.22	1.00	4.86	Vu < PhiVc/2	Not Reqd 9	4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.49	5.00	0.94	0.94	0.33	1.00	4.86	Vu < PhiVc/2	Not Reqd 9	4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.61	5.00	0.91	0.91	0.44	0.87	4.78	Vu < PhiVc/2	Not Reqd 9	4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.72	5.00	0.89	0.89	0.54	0.68	4.67	Vu < PhiVc/2	Not Reqd 9	4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.84	5.00	0.87	0.87	0.64	0.56	4.60	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	10.95	5.00	0.85	0.85	0.74	0.47	4.55	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.07	5.00	0.82	0.82	0.84	0.41	4.51	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.18	5.00	0.80	0.80	0.93	0.36	4.48	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.30	5.00	0.78	0.78	1.02	0.32	4.46	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.41	5.00	0.76	0.76	1.11	0.28	4.44	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.53	5.00	0.74	0.74	1.20	0.26	4.42	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.64	5.00	0.71	0.71	1.28	0.23	4.41	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.76	5.00	0.69	0.69	1.36	0.21	4.40	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.87	5.00	0.67	0.67	1.44	0.19	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.99	5.00	0.65	0.65	1.52	0.18	4.38	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.10	5.00	0.62	0.62	1.59	0.16	4.37	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.22	5.00	0.60	0.60	1.66	0.15	4.36	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.33	5.00	0.58	0.58	1.73	0.14	4.36	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.45	5.00	0.56	0.56	1.79	0.13	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.56	5.00	0.53	0.53	1.86	0.12	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.68	5.00	0.51	0.51	1.92	0.11	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.79	5.00	0.49	0.49	1.97	0.10	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.91	5.00	0.47	0.47	2.03	0.10	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.02	5.00	0.44	0.44	2.08	0.09	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.14	5.00	0.42	0.42	2.13	0.08	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.25	5.00	0.40	0.40	2.18	0.08	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.37	5.00	0.38	0.38	2.22	0.07	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	2	13.48	5.00	0.36	0.36	2.26	0.07	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	13.60	5.00	0.33	0.33	2.30	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	13.71	5.00	0.31	0.31	2.34	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	13.83	5.00	0.29	0.29	2.38	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	13.94	5.00	0.27	0.27	2.41	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.06	5.00	0.24	0.24	2.44	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.17	5.00	0.22	0.22	2.46	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.29	5.00	0.20	0.20	2.49	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.40	5.00	0.18	0.18	2.51	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.52	5.00	0.15	0.15	2.53	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.63	5.00	-0.16	0.16	1.05	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.75	5.00	-0.17	0.17	1.04	0.07	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.86	5.00	-0.19	0.19	1.02	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	14.98	5.00	-0.20	0.20	0.99	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.09	5.00	-0.22	0.22	0.97	0.09	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.21	5.00	-0.23	0.23	0.94	0.10	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.32	5.00	-0.25	0.25	0.92	0.11	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.44	5.00	-0.26	0.26	0.89	0.12	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.55	5.00	-0.28	0.28	0.86	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.67	5.00	-0.29	0.29	0.82	0.15	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.78	5.00	-0.31	0.31	0.79	0.16	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	15.90	5.00	-0.32	0.32	0.75	0.18	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.01	5.00	-0.34	0.34	0.72	0.20	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.13	5.00	-0.35	0.35	0.68	0.22	4.40	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.24	5.00	-0.37	0.37	0.63	0.24	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.36	5.00	-0.38	0.38	0.59	0.27	4.43	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.47	5.00	-0.40	0.40	0.55	0.30	4.45	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.59	5.00	-0.41	0.41	0.50	0.34	4.47	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.70	5.00	-0.43	0.43	1.76	0.10	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.82	5.00	-0.45	0.45	1.71	0.11	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	16.93	5.00	-0.47	0.47	1.66	0.12	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.05	5.00	-0.49	0.49	1.60	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.16	5.00	-0.52	0.52	1.54	0.14	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.28	5.00	-0.54	0.54	1.48	0.15	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.39	5.00	-0.56	0.56	1.42	0.17	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.51	5.00	-0.58	0.58	1.35	0.18	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.62	5.00	-0.61	0.61	1.28	0.20	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.74	5.00	-0.63	0.63	1.21	0.22	4.40	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.85	5.00	-0.65	0.65	1.14	0.24	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	17.97	5.00	-0.67	0.67	1.06	0.26	4.43	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.08	5.00	-0.70	0.70	0.98	0.29	4.45	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.20	5.00	-0.72	0.72	0.90	0.33	4.47	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.31	5.00	-0.74	0.74	0.82	0.38	4.49	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.43	5.00	-0.76	0.76	0.73	0.43	4.53	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.54	5.00	-0.79	0.79	0.64	0.51	4.57	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.66	5.00	-0.81	0.81	0.55	0.61	4.63	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.77	5.00	-0.83	0.83	0.46	0.76	4.71	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	18.89	5.00	-0.85	0.85	0.36	0.98	4.85	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.00	5.00	-0.87	0.87	0.26	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.12	5.00	-0.90	0.90	0.16	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.23	5.00	-0.92	0.92	0.06	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.35	6.00	-0.94	0.94	0.05	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.46	6.00	-0.96	0.96	0.16	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	2	19.58	6.00	-0.99	0.99	0.27	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	2	19.69	6.00	-1.01	1.01	0.39	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	19.81	6.00	-1.03	1.03	0.51	1.00	6.09	Vu < PhiVc/2	Not Reqd 9	6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	19.92	6.00	-1.05	1.05	0.62	0.84	5.94	Vu < PhiVc/2	Not Reqd 9	5.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.04	6.00	-1.08	1.08	0.75	0.72	5.82	Vu < PhiVc/2	Not Reqd 9	5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.15	6.00	-1.10	1.10	0.87	0.63	5.73	Vu < PhiVc/2	Not Reqd 9	5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.27	6.00	-1.12	1.12	1.00	0.56	5.67	Vu < PhiVc/2	Not Reqd 9	5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.38	6.00	-1.14	1.14	1.13	0.51	5.61	Vu < PhiVc/2	Not Reqd 9	5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.50	6.00	-1.17	1.17	1.26	0.46	5.57	Vu < PhiVc/2	Not Reqd 9	5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.61	6.00	-1.19	1.19	1.40	0.42	5.54	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.73	6.00	-1.21	1.21	1.54	0.39	5.51	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.84	6.00	-1.23	1.23	1.68	0.37	5.48	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	20.96	6.00	-1.25	1.25	1.82	0.34	5.46	Vu < PhiVc/2	Not Reqd 9	5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.07	6.00	-1.28	1.28	1.96	0.32	5.44	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.19	6.00	-1.30	1.30	2.11	0.31	5.42	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.30	6.00	-1.32	1.32	2.26	0.29	5.41	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.42	6.00	-1.34	1.34	2.42	0.28	5.40	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.53	6.00	-1.37	1.37	2.57	0.27	5.38	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.65	6.00	-1.39	1.39	2.73	0.25	5.37	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.76	6.00	-1.41	1.41	2.89	0.24	5.36	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.88	6.00	-1.43	1.43	3.06	0.23	5.35	Vu < PhiVc/2	Not Reqd 9	5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	21.99	6.00	-1.46	1.46	3.22	0.23	5.35	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.11	6.00	-1.48	1.48	3.39	0.22	5.34	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.22	6.00	-1.50	1.50	3.56	0.21	5.33	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.34	6.00	-1.52	1.52	3.74	0.20	5.32	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.45	6.00	-1.55	1.55	3.91	0.20	5.32	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.57	6.00	-1.57	1.57	4.09	0.19	5.31	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.68	6.00	-1.59	1.59	4.27	0.19	5.31	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.80	6.00	-1.61	1.61	4.46	0.18	5.30	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	22.91	6.00	-1.63	1.63	4.64	0.18	5.30	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.03	6.00	-1.66	1.66	4.83	0.17	5.29	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.14	6.00	-1.68	1.68	5.02	0.17	5.29	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.26	6.00	-1.70	1.70	5.22	0.16	5.29	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.37	6.00	-1.72	1.72	5.42	0.16	5.28	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.49	6.00	-1.75	1.75	5.62	0.16	5.28	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.60	6.00	-1.77	1.77	5.82	0.15	5.28	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.72	6.00	-1.79	1.79	6.02	0.15	5.27	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.83	6.00	-1.81	1.81	6.23	0.15	5.27	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	23.95	6.00	-1.84	1.84	6.44	0.14	5.27	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.06	6.00	-1.86	1.86	6.65	0.14	5.26	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.18	6.00	-1.88	1.88	6.87	0.14	5.26	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.29	6.00	-1.90	1.90	7.08	0.13	5.26	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.41	6.00	-1.93	1.93	7.30	0.13	5.26	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.52	6.00	-1.95	1.95	7.53	0.13	5.25	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	24.64	6.00	-1.97	1.97	7.75	0.13	5.25	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	24.75	6.00	2.34	2.34	7.98	0.15	5.27	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	24.88	6.00	2.32	2.32	7.67	0.15	5.27	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.02	6.00	2.29	2.29	7.36	0.16	5.28	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.15	6.00	2.27	2.27	7.06	0.16	5.28	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.28	6.00	2.24	2.24	6.76	0.17	5.29	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.42	6.00	2.21	2.21	6.46	0.17	5.29	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.55	6.00	2.19	2.19	6.17	0.18	5.30	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.68	6.00	2.16	2.16	5.88	0.18	5.31	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.82	6.00	2.14	2.14	5.59	0.19	5.31	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	25.95	6.00	2.11	2.11	5.31	0.20	5.32	Vu < PhiVc/2	Not Reqd 9	5.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	3	26.08	6.00	2.08	2.08	5.03	0.21	5.33	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.22	6.00	2.06	2.06	4.75	0.22	5.34	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.35	6.00	2.03	2.03	4.48	0.23	5.35	Vu < PhiVc/2	Not Reqd	9 5.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.48	6.00	2.01	2.01	4.21	0.24	5.36	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.62	6.00	1.98	1.98	3.95	0.25	5.37	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.75	6.00	1.95	1.95	3.68	0.27	5.38	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	26.88	6.00	1.93	1.93	3.42	0.28	5.40	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.02	6.00	1.90	1.90	3.17	0.30	5.42	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.15	6.00	1.88	1.88	2.92	0.32	5.44	Vu < PhiVc/2	Not Reqd	9 5.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.28	6.00	1.85	1.85	2.67	0.35	5.46	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.42	6.00	1.82	1.82	2.42	0.38	5.49	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.55	6.00	1.80	1.80	2.18	0.41	5.52	Vu < PhiVc/2	Not Reqd	9 5.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.68	6.00	1.77	1.77	1.94	0.46	5.57	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.82	6.00	1.75	1.75	1.71	0.51	5.62	Vu < PhiVc/2	Not Reqd	9 5.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	27.95	6.00	1.72	1.72	1.48	0.58	5.69	Vu < PhiVc/2	Not Reqd	9 5.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.08	6.00	1.69	1.69	1.25	0.68	5.78	Vu < PhiVc/2	Not Reqd	9 5.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.22	6.00	1.67	1.67	1.03	0.81	5.91	Vu < PhiVc/2	Not Reqd	9 5.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.35	6.00	1.64	1.64	0.80	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.48	6.00	1.62	1.62	0.59	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.62	6.00	1.59	1.59	0.37	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.75	6.00	1.57	1.57	0.16	1.00	6.09	Vu < PhiVc/2	Not Reqd	9 6.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	28.88	5.00	1.54	1.54	0.04	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.02	5.00	1.51	1.51	0.25	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.15	5.00	1.49	1.49	0.45	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.28	5.00	1.46	1.46	0.64	0.95	4.82	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.42	5.00	1.44	1.44	0.84	0.71	4.69	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.55	5.00	1.41	1.41	1.03	0.57	4.61	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.68	5.00	1.38	1.38	1.21	0.48	4.55	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.82	5.00	1.36	1.36	1.40	0.41	4.51	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	29.95	5.00	1.33	1.33	1.58	0.35	4.48	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.08	5.00	1.31	1.31	1.75	0.31	4.46	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.22	5.00	1.28	1.28	1.92	0.28	4.44	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.35	5.00	1.25	1.25	2.09	0.25	4.42	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.48	5.00	1.23	1.23	2.26	0.23	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.62	5.00	1.20	1.20	2.42	0.21	4.40	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.75	5.00	1.18	1.18	2.58	0.19	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	30.88	5.00	1.15	1.15	2.73	0.18	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.02	5.00	1.12	1.12	2.89	0.16	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.15	5.00	1.10	1.10	3.03	0.15	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.28	5.00	1.07	1.07	3.18	0.14	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.42	5.00	1.05	1.05	3.32	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.55	5.00	1.02	1.02	3.46	0.12	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.68	5.00	1.00	1.00	3.59	0.12	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.82	5.00	0.97	0.97	3.72	0.11	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	31.95	5.00	0.94	0.94	3.85	0.10	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.08	5.00	0.92	0.92	3.97	0.10	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.22	5.00	0.89	0.89	4.10	0.09	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.35	5.00	0.87	0.87	4.21	0.09	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.48	5.00	0.84	0.84	4.33	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.62	5.00	0.81	0.81	4.44	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.75	5.00	0.79	0.79	4.54	0.07	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	32.88	5.00	0.76	0.76	4.65	0.07	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	33.02	5.00	0.74	0.74	4.75	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	33.15	5.00	0.71	0.71	4.84	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, l	3	33.28	5.00	0.68	0.68	4.94	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	33.42	5.00	0.66	0.66	5.03	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	33.55	5.00	0.63	0.63	5.11	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	33.68	5.00	0.61	0.61	5.19	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	33.82	5.00	0.58	0.58	5.27	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	33.95	5.00	0.55	0.55	5.35	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.08	5.00	0.53	0.53	5.42	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.22	5.00	0.50	0.50	5.49	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.35	5.00	0.48	0.48	5.55	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.48	5.00	0.45	0.45	5.62	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.62	5.00	0.42	0.42	5.68	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.75	5.00	0.40	0.40	5.73	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	34.88	5.00	0.37	0.37	5.78	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.02	5.00	0.35	0.35	5.83	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.15	5.00	0.32	0.32	5.87	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.28	5.00	0.30	0.30	5.92	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.42	5.00	0.27	0.27	5.95	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.55	5.00	0.24	0.24	5.99	0.02	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.68	5.00	0.22	0.22	6.02	0.02	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.82	5.00	0.19	0.19	6.05	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	35.95	5.00	0.17	0.17	6.07	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.08	5.00	0.14	0.14	6.09	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.22	5.00	0.11	0.11	3.77	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.35	5.00	0.10	0.10	3.79	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.48	5.00	0.08	0.08	3.80	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.62	5.00	0.06	0.06	3.81	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.75	5.00	0.04	0.04	3.81	0.00	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	36.88	5.00	-0.06	0.06	6.46	0.00	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.02	5.00	-0.08	0.08	6.45	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.15	5.00	-0.11	0.11	6.44	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.28	5.00	-0.13	0.13	6.42	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.42	5.00	-0.16	0.16	6.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.55	5.00	-0.19	0.19	6.38	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.68	5.00	-0.21	0.21	6.35	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.82	5.00	-0.24	0.24	6.32	0.02	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	37.95	5.00	-0.26	0.26	6.29	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.08	5.00	-0.29	0.29	6.25	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.22	5.00	-0.32	0.32	6.21	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.35	5.00	-0.34	0.34	6.17	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.48	5.00	-0.37	0.37	6.12	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.62	5.00	-0.39	0.39	6.07	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.75	5.00	-0.42	0.42	6.02	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	38.88	5.00	-0.45	0.45	5.96	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.02	5.00	-0.47	0.47	5.90	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.15	5.00	-0.50	0.50	5.83	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.28	5.00	-0.52	0.52	5.76	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.42	5.00	-0.55	0.55	5.69	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.55	5.00	-0.57	0.57	5.62	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.68	5.00	-0.60	0.60	5.54	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.82	5.00	-0.63	0.63	5.46	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	39.95	5.00	-0.65	0.65	5.37	0.05	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	40.08	5.00	-0.68	0.68	5.28	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	40.22	5.00	-0.70	0.70	5.19	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, l	3	40.35	5.00	-0.73	0.73	5.10	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	3	40.48	5.00	-0.76	0.76	5.00	0.06	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	40.62	5.00	-0.78	0.78	4.89	0.07	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	40.75	5.00	-0.81	0.81	4.79	0.07	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	40.88	5.00	-0.83	0.83	4.68	0.07	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.02	5.00	-0.86	0.86	4.57	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.15	5.00	-0.89	0.89	4.45	0.08	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.28	5.00	-0.91	0.91	4.33	0.09	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.42	5.00	-0.94	0.94	4.21	0.09	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.55	5.00	-0.96	0.96	4.08	0.10	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.68	5.00	-0.99	0.99	3.95	0.10	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.82	5.00	-1.02	1.02	3.82	0.11	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	41.95	5.00	-1.04	1.04	3.68	0.12	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.08	5.00	-1.07	1.07	3.54	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.22	5.00	-1.09	1.09	3.39	0.13	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.35	5.00	-1.12	1.12	3.25	0.14	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.48	5.00	-1.15	1.15	3.10	0.15	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.62	5.00	-1.17	1.17	2.94	0.17	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.75	5.00	-1.20	1.20	2.78	0.18	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	42.88	5.00	-1.22	1.22	2.62	0.19	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.02	5.00	-1.25	1.25	2.46	0.21	4.40	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.15	5.00	-1.27	1.27	2.29	0.23	4.41	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.28	5.00	-1.30	1.30	2.12	0.26	4.42	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.42	5.00	-1.33	1.33	1.94	0.28	4.44	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.55	5.00	-1.35	1.35	1.76	0.32	4.46	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.68	5.00	-1.38	1.38	1.58	0.36	4.49	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.82	5.00	-1.40	1.40	1.40	0.42	4.52	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	43.95	5.00	-1.43	1.43	1.21	0.49	4.56	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.08	5.00	-1.46	1.46	1.01	0.60	4.62	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.22	5.00	-1.48	1.48	0.82	0.75	4.71	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.35	5.00	-1.51	1.51	0.62	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.48	5.00	-1.53	1.53	0.42	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.62	5.00	-1.56	1.56	0.21	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	44.75	5.00	-1.59	1.59	0.00	1.00	4.86	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.500	-3.28	8.21	0.40
Span # 2	2	17.250	-7.75	8.21	0.94
Span # 3	3	20.000	-7.98	8.21	0.97
+1.40D+1.60H					
Span # 1	1	7.500	-2.06	8.21	0.25
Span # 2	2	17.250	-6.04	8.21	0.74
Span # 3	3	20.000	-6.22	8.21	0.76
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.12	8.21	0.14
Span # 2	2	17.250	-7.03	8.21	0.86
Span # 3	3	20.000	6.45	7.24	0.89
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-3.14	8.21	0.38
Span # 2	2	17.250	-5.90	8.21	0.72
Span # 3	3	20.000	-6.11	8.21	0.74
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-2.50	8.21	0.30
Span # 2	2	17.250	-7.75	8.21	0.94
Span # 3	3	20.000	-7.98	8.21	0.97
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.90	8.21	0.23

Description : lot 62R unit suspended concrete slab

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	17.250	-5.14	8.21	0.63
Span # 3	3	20.000	-5.30	8.21	0.65
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.25	8.21	0.15
Span # 2	2	17.250	-7.00	8.21	0.85
Span # 3	3	20.000	6.47	7.24	0.89
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-3.28	8.21	0.40
Span # 2	2	17.250	-5.87	8.21	0.71
Span # 3	3	20.000	-6.08	8.21	0.74
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.63	8.21	0.32
Span # 2	2	17.250	-7.72	8.21	0.94
Span # 3	3	20.000	-7.95	8.21	0.97
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.12	8.21	0.14
Span # 2	2	17.250	-7.03	8.21	0.86
Span # 3	3	20.000	6.45	7.24	0.89
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-3.14	8.21	0.38
Span # 2	2	17.250	-5.90	8.21	0.72
Span # 3	3	20.000	-6.11	8.21	0.74
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-2.50	8.21	0.30
Span # 2	2	17.250	-7.75	8.21	0.94
Span # 3	3	20.000	-7.98	8.21	0.97
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.90	8.21	0.23
Span # 2	2	17.250	-5.14	8.21	0.63
Span # 3	3	20.000	-5.30	8.21	0.65
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.25	8.21	0.15
Span # 2	2	17.250	-7.00	8.21	0.85
Span # 3	3	20.000	6.47	7.24	0.89
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-3.28	8.21	0.40
Span # 2	2	17.250	-5.87	8.21	0.71
Span # 3	3	20.000	-6.08	8.21	0.74
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.63	8.21	0.32
Span # 2	2	17.250	-7.72	8.21	0.94
Span # 3	3	20.000	-7.95	8.21	0.97
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.56	8.21	0.19
Span # 2	2	17.250	-5.76	8.21	0.70
Span # 3	3	20.000	-5.91	8.21	0.72
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-2.20	8.21	0.27
Span # 2	2	17.250	-5.40	8.21	0.66
Span # 3	3	20.000	-5.57	8.21	0.68
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-1.99	8.21	0.24
Span # 2	2	17.250	-5.98	8.21	0.73
Span # 3	3	20.000	-6.16	8.21	0.75
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.81	8.21	0.22
Span # 2	2	17.250	-5.17	8.21	0.63
Span # 3	3	20.000	-5.32	8.21	0.65
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.60	8.21	0.20
Span # 2	2	17.250	-5.75	8.21	0.70
Span # 3	3	20.000	-5.90	8.21	0.72
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-2.24	8.21	0.27
Span # 2	2	17.250	-5.39	8.21	0.66
Span # 3	3	20.000	-5.56	8.21	0.68
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.04	8.21	0.25
Span # 2	2	17.250	-5.97	8.21	0.73

Description : lot 62R unit suspended concrete slab

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	20.000	-6.15	8.21	0.75
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.56	8.21	0.19
Span # 2	2	17.250	-5.76	8.21	0.70
Span # 3	3	20.000	-5.91	8.21	0.72
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-2.20	8.21	0.27
Span # 2	2	17.250	-5.40	8.21	0.66
Span # 3	3	20.000	-5.57	8.21	0.68
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-1.99	8.21	0.24
Span # 2	2	17.250	-5.98	8.21	0.73
Span # 3	3	20.000	-6.16	8.21	0.75
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.81	8.21	0.22
Span # 2	2	17.250	-5.17	8.21	0.63
Span # 3	3	20.000	-5.32	8.21	0.65
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.60	8.21	0.20
Span # 2	2	17.250	-5.75	8.21	0.70
Span # 3	3	20.000	-5.90	8.21	0.72
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-2.24	8.21	0.27
Span # 2	2	17.250	-5.39	8.21	0.66
Span # 3	3	20.000	-5.56	8.21	0.68
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.04	8.21	0.25
Span # 2	2	17.250	-5.97	8.21	0.73
Span # 3	3	20.000	-6.15	8.21	0.75
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.500	-1.76	8.21	0.21
Span # 2	2	17.250	-5.18	8.21	0.63
Span # 3	3	20.000	-5.33	8.21	0.65
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.500	-1.56	8.21	0.19
Span # 2	2	17.250	-5.76	8.21	0.70
Span # 3	3	20.000	-5.91	8.21	0.72
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.500	-2.20	8.21	0.27
Span # 2	2	17.250	-5.40	8.21	0.66
Span # 3	3	20.000	-5.57	8.21	0.68

Description : lot 62R unit suspended concrete slab

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.500	-1.99	8.21	0.24
Span # 2	2	17.250	-5.98	8.21	0.73
Span # 3	3	20.000	-6.16	8.21	0.75
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.500	-1.81	8.21	0.22
Span # 2	2	17.250	-5.17	8.21	0.63
Span # 3	3	20.000	-5.32	8.21	0.65
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.500	-1.60	8.21	0.20
Span # 2	2	17.250	-5.75	8.21	0.70
Span # 3	3	20.000	-5.90	8.21	0.72
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.500	-2.24	8.21	0.27
Span # 2	2	17.250	-5.39	8.21	0.66
Span # 3	3	20.000	-5.56	8.21	0.68
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.500	-2.04	8.21	0.25
Span # 2	2	17.250	-5.97	8.21	0.73
Span # 3	3	20.000	-6.15	8.21	0.75
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.56	8.21	0.19
Span # 2	2	17.250	-5.76	8.21	0.70
Span # 3	3	20.000	-5.91	8.21	0.72
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-2.20	8.21	0.27
Span # 2	2	17.250	-5.40	8.21	0.66
Span # 3	3	20.000	-5.57	8.21	0.68
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-1.99	8.21	0.24
Span # 2	2	17.250	-5.98	8.21	0.73
Span # 3	3	20.000	-6.16	8.21	0.75
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.81	8.21	0.22
Span # 2	2	17.250	-5.17	8.21	0.63
Span # 3	3	20.000	-5.32	8.21	0.65
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.60	8.21	0.20
Span # 2	2	17.250	-5.75	8.21	0.70
Span # 3	3	20.000	-5.90	8.21	0.72
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.500	-2.24	8.21	0.27
Span # 2	2	17.250	-5.39	8.21	0.66
Span # 3	3	20.000	-5.56	8.21	0.68
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.04	8.21	0.25
Span # 2	2	17.250	-5.97	8.21	0.73
Span # 3	3	20.000	-6.15	8.21	0.75
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	7.500	-1.56	8.21	0.19
Span # 2	2	17.250	-5.76	8.21	0.70
Span # 3	3	20.000	-5.91	8.21	0.72
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.500	-2.20	8.21	0.27
Span # 2	2	17.250	-5.40	8.21	0.66
Span # 3	3	20.000	-5.57	8.21	0.68
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.500	-1.99	8.21	0.24
Span # 2	2	17.250	-5.98	8.21	0.73
Span # 3	3	20.000	-6.16	8.21	0.75
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	7.500	-1.81	8.21	0.22
Span # 2	2	17.250	-5.17	8.21	0.63
Span # 3	3	20.000	-5.32	8.21	0.65
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.500	-1.60	8.21	0.20
Span # 2	2	17.250	-5.75	8.21	0.70
Span # 3	3	20.000	-5.90	8.21	0.72
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					

Concrete Beam

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Description : lot 62R unit suspended concrete slab

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.500	-2.24	8.21	0.27
Span # 2	2	17.250	-5.39	8.21	0.66
Span # 3	3	20.000	-5.56	8.21	0.68
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.500	-2.04	8.21	0.25
Span # 2	2	17.250	-5.97	8.21	0.73
Span # 3	3	20.000	-6.15	8.21	0.75
+0.90D+W+0.90H					
Span # 1	1	7.500	-1.32	8.21	0.16
Span # 2	2	17.250	-3.88	8.21	0.47
Span # 3	3	20.000	-4.00	8.21	0.49
+0.90D+E+0.90H					
Span # 1	1	7.500	-1.32	8.21	0.16
Span # 2	2	17.250	-3.88	8.21	0.47
Span # 3	3	20.000	-4.00	8.21	0.49

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (*L*)	1	0.0018	7.845	+D+L+H, LL Comb Run (*L*)	-0.0050	4.950
+D+L+H, LL Comb Run (*L*)	2	0.0420	7.935	+D+L+H, LL Comb Run (L*L)	-0.0194	14.145
+D+L+H, LL Comb Run (L*L)	3	0.2818	11.600		0.0000	14.145

Concrete Beam

File = f:\Job\2017\2017~3.XXX\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.17, Ver:6.17.3.17

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

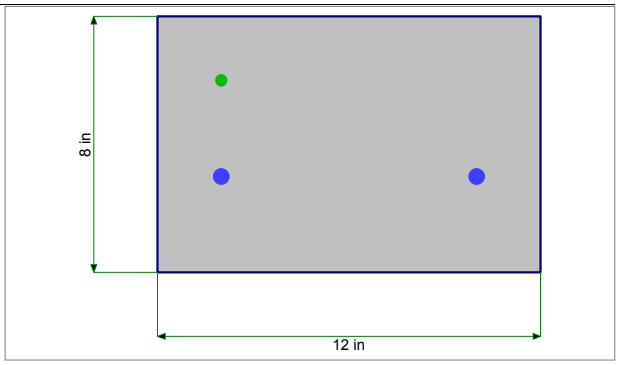
Description : lot 62R unit suspended concrete slab at garage

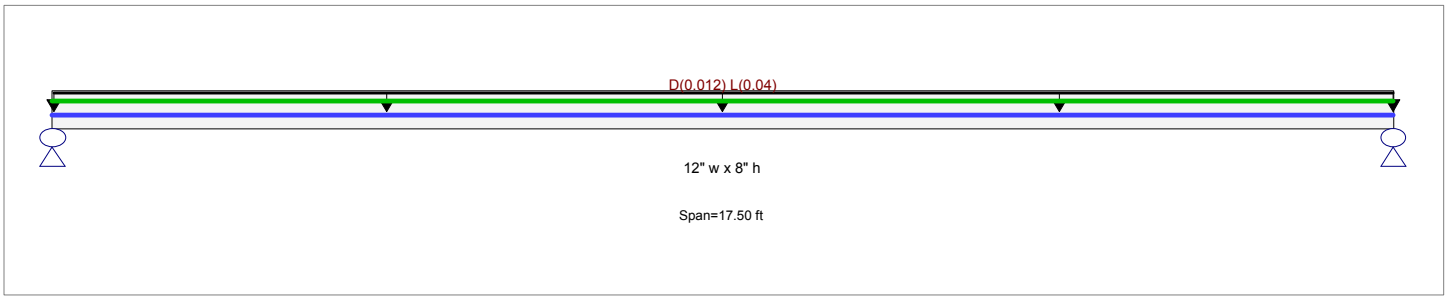
CODE REFERENCES

Calculations per ACI 318-14, IBC 2015, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	2.50 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c $^{1/2}$ * 7.50	=	375.0 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 8.0 in
Span #1 Reinforcing....
2-#4 at 3.0 in from Bottom, from 0.0 to 17.50 ft in this span
1-#3 at 2.0 in from Top, from 0.0 to 17.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.875** : 1	Maximum Deflection				
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.053 in	Ratio =	3978	>=360
Mu : Applied	7.442 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Mn * Phi : Allowable	8.502 k-ft	Max Downward Total Deflection	0.449 in	Ratio =	467	>=18
Location of maximum on span	8.766 ft	Max Upward Total Deflection	0.000 in	Ratio =	999	<180
Span # where maximum occurs	Span # 1					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	1.301	1.301
Overall MINimum	0.350	0.350
+D+H	0.951	0.951
+D+L+H	1.301	1.301
+D+Lr+H	0.951	0.951
+D+S+H	0.951	0.951
+D+0.750Lr+0.750L+H	1.213	1.213
+D+0.750L+0.750S+H	1.213	1.213
+D+0.60W+H	0.951	0.951
+D+0.70E+H	0.951	0.951
+D+0.750Lr+0.750L+0.450W+H	1.213	1.213
+D+0.750L+0.750S+0.450W+H	1.213	1.213
+D+0.750L+0.750S+0.5250E+H	1.213	1.213

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+0.60D+0.60W+0.60H	0.570	0.570
+0.60D+0.70E+0.60H	0.570	0.570
D Only	0.951	0.951
Lr Only		
L Only	0.350	0.350
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	5.00	1.70	1.70	0.00	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	5.00	1.69	1.69	0.05	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.06	5.00	1.69	1.69	0.11	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	5.00	1.68	1.68	0.16	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.13	5.00	1.68	1.68	0.22	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.16	5.00	1.67	1.67	0.27	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	5.00	1.66	1.66	0.32	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	5.00	1.66	1.66	0.37	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	5.00	1.65	1.65	0.43	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	5.00	1.65	1.65	0.48	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.32	5.00	1.64	1.64	0.53	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.35	5.00	1.63	1.63	0.58	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	5.00	1.63	1.63	0.64	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	5.00	1.62	1.62	0.69	0.98	5.01	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	5.00	1.61	1.61	0.74	0.91	4.96	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	5.00	1.61	1.61	0.79	0.85	4.91	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.51	5.00	1.60	1.60	0.84	0.79	4.87	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	5.00	1.60	1.60	0.89	0.74	4.83	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	5.00	1.59	1.59	0.94	0.70	4.80	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	5.00	1.58	1.58	0.99	0.66	4.77	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	5.00	1.58	1.58	1.04	0.63	4.75	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	5.00	1.57	1.57	1.10	0.60	4.72	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	5.00	1.56	1.56	1.15	0.57	4.70	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.73	5.00	1.56	1.56	1.19	0.54	4.68	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	5.00	1.55	1.55	1.24	0.52	4.66	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.80	5.00	1.55	1.55	1.29	0.50	4.65	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	5.00	1.54	1.54	1.34	0.48	4.63	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	5.00	1.53	1.53	1.39	0.46	4.62	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	5.00	1.53	1.53	1.44	0.44	4.61	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	5.00	1.52	1.52	1.49	0.43	4.59	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	5.00	1.52	1.52	1.54	0.41	4.58	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	5.00	1.51	1.51	1.59	0.40	4.57	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	5.00	1.50	1.50	1.63	0.38	4.56	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	5.00	1.50	1.50	1.68	0.37	4.55	Vu < PhiVc/2	Not Reqd	9 4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	5.00	1.49	1.49	1.73	0.36	4.54	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	5.00	1.48	1.48	1.78	0.35	4.54	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	5.00	1.48	1.48	1.82	0.34	4.53	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	5.00	1.47	1.47	1.87	0.33	4.52	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.21	5.00	1.47	1.47	1.92	0.32	4.51	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	5.00	1.46	1.46	1.96	0.31	4.51	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	5.00	1.45	1.45	2.01	0.30	4.50	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	5.00	1.45	1.45	2.06	0.29	4.49	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	5.00	1.44	1.44	2.10	0.29	4.49	Vu < PhiVc/2	Not Reqd	9 4.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.37	5.00	1.43	1.43	2.15	0.28	4.48	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	5.00	1.43	1.43	2.19	0.27	4.48	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	5.00	1.42	1.42	2.24	0.26	4.47	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	5.00	1.42	1.42	2.29	0.26	4.47	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	5.00	1.41	1.41	2.33	0.25	4.46	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.53	5.00	1.40	1.40	2.38	0.25	4.46	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	5.00	1.40	1.40	2.42	0.24	4.46	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.59	5.00	1.39	1.39	2.46	0.24	4.45	Vu < PhiVc/2	Not Reqd	9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	5.00	1.38	1.38	2.51	0.23	4.45	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.66	5.00	1.38	1.38	2.55	0.23	4.44	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	5.00	1.37	1.37	2.60	0.22	4.44	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	5.00	1.37	1.37	2.64	0.22	4.44	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	5.00	1.36	1.36	2.68	0.21	4.43	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	5.00	1.35	1.35	2.73	0.21	4.43	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	5.00	1.35	1.35	2.77	0.20	4.43	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.85	5.00	1.34	1.34	2.81	0.20	4.42	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.88	5.00	1.34	1.34	2.86	0.19	4.42	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	5.00	1.33	1.33	2.90	0.19	4.42	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	5.00	1.32	1.32	2.94	0.19	4.42	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	5.00	1.32	1.32	2.98	0.18	4.41	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	5.00	1.31	1.31	3.02	0.18	4.41	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	5.00	1.30	1.30	3.07	0.18	4.41	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.07	5.00	1.30	1.30	3.11	0.17	4.41	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	5.00	1.29	1.29	3.15	0.17	4.40	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	5.00	1.29	1.29	3.19	0.17	4.40	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	5.00	1.28	1.28	3.23	0.17	4.40	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	5.00	1.27	1.27	3.27	0.16	4.40	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	5.00	1.27	1.27	3.31	0.16	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.26	5.00	1.26	1.26	3.35	0.16	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	5.00	1.25	1.25	3.39	0.15	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.33	5.00	1.25	1.25	3.43	0.15	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	5.00	1.24	1.24	3.47	0.15	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	5.00	1.24	1.24	3.51	0.15	4.39	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	5.00	1.23	1.23	3.55	0.14	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.45	5.00	1.22	1.22	3.59	0.14	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	5.00	1.22	1.22	3.63	0.14	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.52	5.00	1.21	1.21	3.67	0.14	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	5.00	1.21	1.21	3.71	0.14	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	5.00	1.20	1.20	3.74	0.13	4.38	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	5.00	1.19	1.19	3.78	0.13	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	5.00	1.19	1.19	3.82	0.13	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	5.00	1.18	1.18	3.86	0.13	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.71	5.00	1.17	1.17	3.90	0.13	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.74	5.00	1.17	1.17	3.93	0.12	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	5.00	1.16	1.16	3.97	0.12	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.81	5.00	1.16	1.16	4.01	0.12	4.37	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	5.00	1.15	1.15	4.04	0.12	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	5.00	1.14	1.14	4.08	0.12	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	5.00	1.14	1.14	4.12	0.12	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.93	5.00	1.13	1.13	4.15	0.11	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	5.00	1.12	1.12	4.19	0.11	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.00	5.00	1.12	1.12	4.22	0.11	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	5.00	1.11	1.11	4.26	0.11	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	5.00	1.11	1.11	4.30	0.11	4.36	Vu < PhiVc/2	Not Reqd	9	4.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.09	5.00	1.10	1.10	4.33	0.11	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.12	5.00	1.09	1.09	4.37	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	5.00	1.09	1.09	4.40	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.19	5.00	1.08	1.08	4.43	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	5.00	1.08	1.08	4.47	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	5.00	1.07	1.07	4.50	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	5.00	1.06	1.06	4.54	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	5.00	1.06	1.06	4.57	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.35	5.00	1.05	1.05	4.60	0.10	4.35	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.38	5.00	1.04	1.04	4.64	0.09	4.35	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.41	5.00	1.04	1.04	4.67	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	5.00	1.03	1.03	4.70	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	5.00	1.03	1.03	4.74	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	5.00	1.02	1.02	4.77	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	5.00	1.01	1.01	4.80	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.57	5.00	1.01	1.01	4.83	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.60	5.00	1.00	1.00	4.87	0.09	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.63	5.00	0.99	0.99	4.90	0.08	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.67	5.00	0.99	0.99	4.93	0.08	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.70	5.00	0.98	0.98	4.96	0.08	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.73	5.00	0.98	0.98	4.99	0.08	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.76	5.00	0.97	0.97	5.02	0.08	4.34	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.79	5.00	0.96	0.96	5.05	0.08	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.83	5.00	0.96	0.96	5.08	0.08	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.86	5.00	0.95	0.95	5.11	0.08	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	5.00	0.94	0.94	5.14	0.08	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	5.00	0.94	0.94	5.18	0.08	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	5.00	0.93	0.93	5.20	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.98	5.00	0.93	0.93	5.23	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	5.00	0.92	0.92	5.26	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.05	5.00	0.91	0.91	5.29	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	5.00	0.91	0.91	5.32	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.11	5.00	0.90	0.90	5.35	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.14	5.00	0.90	0.90	5.38	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.18	5.00	0.89	0.89	5.41	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.21	5.00	0.88	0.88	5.44	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.24	5.00	0.88	0.88	5.46	0.07	4.33	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.27	5.00	0.87	0.87	5.49	0.07	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	5.00	0.86	0.86	5.52	0.07	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.34	5.00	0.86	0.86	5.55	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	5.00	0.85	0.85	5.57	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	5.00	0.85	0.85	5.60	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	5.00	0.84	0.84	5.63	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.46	5.00	0.83	0.83	5.66	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.49	5.00	0.83	0.83	5.68	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.53	5.00	0.82	0.82	5.71	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.56	5.00	0.81	0.81	5.73	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.59	5.00	0.81	0.81	5.76	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	5.00	0.80	0.80	5.79	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.65	5.00	0.80	0.80	5.81	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.69	5.00	0.79	0.79	5.84	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.72	5.00	0.78	0.78	5.86	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.75	5.00	0.78	0.78	5.89	0.06	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	5.00	0.77	0.77	5.91	0.05	4.32	Vu < PhiVc/2	Not Reqd 9	4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.81	5.00	0.77	0.77	5.94	0.05	4.32	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	5.00	0.76	0.76	5.96	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	5.00	0.75	0.75	5.98	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.91	5.00	0.75	0.75	6.01	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.94	5.00	0.74	0.74	6.03	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.97	5.00	0.73	0.73	6.06	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.00	5.00	0.73	0.73	6.08	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	5.00	0.72	0.72	6.10	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	5.00	0.72	0.72	6.12	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.10	5.00	0.71	0.71	6.15	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.13	5.00	0.70	0.70	6.17	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	5.00	0.70	0.70	6.19	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.20	5.00	0.69	0.69	6.21	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	5.00	0.68	0.68	6.24	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	5.00	0.68	0.68	6.26	0.05	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	5.00	0.67	0.67	6.28	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.32	5.00	0.67	0.67	6.30	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	5.00	0.66	0.66	6.32	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.39	5.00	0.65	0.65	6.34	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.42	5.00	0.65	0.65	6.36	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.45	5.00	0.64	0.64	6.38	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.48	5.00	0.64	0.64	6.40	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.51	5.00	0.63	0.63	6.42	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.55	5.00	0.62	0.62	6.44	0.04	4.31	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.58	5.00	0.62	0.62	6.46	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.61	5.00	0.61	0.61	6.48	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	5.00	0.60	0.60	6.50	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	5.00	0.60	0.60	6.52	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	5.00	0.59	0.59	6.54	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	5.00	0.59	0.59	6.56	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.77	5.00	0.58	0.58	6.58	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.80	5.00	0.57	0.57	6.60	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	5.00	0.57	0.57	6.61	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.87	5.00	0.56	0.56	6.63	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	5.00	0.55	0.55	6.65	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.93	5.00	0.55	0.55	6.67	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.96	5.00	0.54	0.54	6.69	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.99	5.00	0.54	0.54	6.70	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	5.00	0.53	0.53	6.72	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.06	5.00	0.52	0.52	6.74	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	5.00	0.52	0.52	6.75	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	5.00	0.51	0.51	6.77	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	5.00	0.51	0.51	6.79	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.18	5.00	0.50	0.50	6.80	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	5.00	0.49	0.49	6.82	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.25	5.00	0.49	0.49	6.83	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.28	5.00	0.48	0.48	6.85	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.31	5.00	0.47	0.47	6.86	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.34	5.00	0.47	0.47	6.88	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.38	5.00	0.46	0.46	6.89	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.41	5.00	0.46	0.46	6.91	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.44	5.00	0.45	0.45	6.92	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.47	5.00	0.44	0.44	6.94	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	5.00	0.44	0.44	6.95	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.53	5.00	0.43	0.43	6.96	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	5.00	0.42	0.42	6.98	0.03	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	5.00	0.42	0.42	6.99	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.63	5.00	0.41	0.41	7.01	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.66	5.00	0.41	0.41	7.02	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.69	5.00	0.40	0.40	7.03	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.73	5.00	0.39	0.39	7.04	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.76	5.00	0.39	0.39	7.06	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.79	5.00	0.38	0.38	7.07	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.82	5.00	0.37	0.37	7.08	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.85	5.00	0.37	0.37	7.09	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.89	5.00	0.36	0.36	7.10	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.92	5.00	0.36	0.36	7.12	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.95	5.00	0.35	0.35	7.13	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	5.00	0.34	0.34	7.14	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	5.00	0.34	0.34	7.15	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.04	5.00	0.33	0.33	7.16	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	5.00	0.33	0.33	7.17	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.11	5.00	0.32	0.32	7.18	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.14	5.00	0.31	0.31	7.19	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.17	5.00	0.31	0.31	7.20	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.20	5.00	0.30	0.30	7.21	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.24	5.00	0.29	0.29	7.22	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.27	5.00	0.29	0.29	7.23	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.30	5.00	0.28	0.28	7.24	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.33	5.00	0.28	0.28	7.25	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	5.00	0.27	0.27	7.25	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.40	5.00	0.26	0.26	7.26	0.02	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	5.00	0.26	0.26	7.27	0.01	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	5.00	0.25	0.25	7.28	0.01	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	5.00	0.24	0.24	7.29	0.01	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.52	5.00	0.24	0.24	7.30	0.01	4.29	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.55	5.00	0.23	0.23	7.30	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.59	5.00	0.23	0.23	7.31	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.62	5.00	0.22	0.22	7.32	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.65	5.00	0.21	0.21	7.32	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.68	5.00	0.21	0.21	7.33	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.71	5.00	0.20	0.20	7.34	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.75	5.00	0.20	0.20	7.34	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.78	5.00	0.19	0.19	7.35	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.81	5.00	0.18	0.18	7.36	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	5.00	0.18	0.18	7.36	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	5.00	0.17	0.17	7.37	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	5.00	0.16	0.16	7.37	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	5.00	0.16	0.16	7.38	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.97	5.00	0.15	0.15	7.38	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.00	5.00	0.15	0.15	7.39	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.03	5.00	0.14	0.14	7.39	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.06	5.00	0.13	0.13	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.10	5.00	0.13	0.13	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.13	5.00	0.12	0.12	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.16	5.00	0.11	0.11	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.19	5.00	0.11	0.11	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.22	5.00	0.10	0.10	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	8.26	5.00	0.10	0.10	7.42	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.29	5.00	0.09	0.09	7.42	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.32	5.00	0.08	0.08	7.42	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.35	5.00	0.08	0.08	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.38	5.00	0.07	0.07	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.42	5.00	0.07	0.07	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.45	5.00	0.06	0.06	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.48	5.00	0.05	0.05	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.51	5.00	0.05	0.05	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.54	5.00	0.04	0.04	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.57	5.00	0.03	0.03	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.61	5.00	0.03	0.03	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.64	5.00	0.02	0.02	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.67	5.00	0.02	0.02	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.70	5.00	0.01	0.01	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.73	5.00	0.00	0.00	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.77	5.00	-0.00	0.00	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.80	5.00	-0.01	0.01	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.83	5.00	-0.02	0.02	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.86	5.00	-0.02	0.02	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.89	5.00	-0.03	0.03	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.93	5.00	-0.03	0.03	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.96	5.00	-0.04	0.04	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.99	5.00	-0.05	0.05	7.44	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.02	5.00	-0.05	0.05	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.05	5.00	-0.06	0.06	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.08	5.00	-0.07	0.07	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.12	5.00	-0.07	0.07	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.15	5.00	-0.08	0.08	7.43	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.18	5.00	-0.08	0.08	7.42	0.00	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.21	5.00	-0.09	0.09	7.42	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.24	5.00	-0.10	0.10	7.42	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.28	5.00	-0.10	0.10	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.31	5.00	-0.11	0.11	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.34	5.00	-0.11	0.11	7.41	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.37	5.00	-0.12	0.12	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.40	5.00	-0.13	0.13	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.44	5.00	-0.13	0.13	7.40	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.47	5.00	-0.14	0.14	7.39	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.50	5.00	-0.15	0.15	7.39	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.53	5.00	-0.15	0.15	7.38	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.56	5.00	-0.16	0.16	7.38	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.59	5.00	-0.16	0.16	7.37	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.63	5.00	-0.17	0.17	7.37	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.66	5.00	-0.18	0.18	7.36	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.69	5.00	-0.18	0.18	7.36	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.72	5.00	-0.19	0.19	7.35	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.75	5.00	-0.20	0.20	7.34	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.79	5.00	-0.20	0.20	7.34	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.82	5.00	-0.21	0.21	7.33	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.85	5.00	-0.21	0.21	7.32	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.88	5.00	-0.22	0.22	7.32	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.91	5.00	-0.23	0.23	7.31	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.95	5.00	-0.23	0.23	7.30	0.01	4.28	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	9.98	5.00	-0.24	0.24	7.30	0.01	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.01	5.00	-0.24	0.24	7.29	0.01	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.04	5.00	-0.25	0.25	7.28	0.01	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.07	5.00	-0.26	0.26	7.27	0.01	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.10	5.00	-0.26	0.26	7.26	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.14	5.00	-0.27	0.27	7.25	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.17	5.00	-0.28	0.28	7.25	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.20	5.00	-0.28	0.28	7.24	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.23	5.00	-0.29	0.29	7.23	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.26	5.00	-0.29	0.29	7.22	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.30	5.00	-0.30	0.30	7.21	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.33	5.00	-0.31	0.31	7.20	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.36	5.00	-0.31	0.31	7.19	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.39	5.00	-0.32	0.32	7.18	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.42	5.00	-0.33	0.33	7.17	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.46	5.00	-0.33	0.33	7.16	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.49	5.00	-0.34	0.34	7.15	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.52	5.00	-0.34	0.34	7.14	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.55	5.00	-0.35	0.35	7.13	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.58	5.00	-0.36	0.36	7.12	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.61	5.00	-0.36	0.36	7.10	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.65	5.00	-0.37	0.37	7.09	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.68	5.00	-0.37	0.37	7.08	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.71	5.00	-0.38	0.38	7.07	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.74	5.00	-0.39	0.39	7.06	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.77	5.00	-0.39	0.39	7.04	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.81	5.00	-0.40	0.40	7.03	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.84	5.00	-0.41	0.41	7.02	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.87	5.00	-0.41	0.41	7.01	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.90	5.00	-0.42	0.42	6.99	0.02	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.93	5.00	-0.42	0.42	6.98	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.97	5.00	-0.43	0.43	6.96	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.00	5.00	-0.44	0.44	6.95	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.03	5.00	-0.44	0.44	6.94	0.03	4.29	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.06	5.00	-0.45	0.45	6.92	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.09	5.00	-0.46	0.46	6.91	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.12	5.00	-0.46	0.46	6.89	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.16	5.00	-0.47	0.47	6.88	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.19	5.00	-0.47	0.47	6.86	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.22	5.00	-0.48	0.48	6.85	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.25	5.00	-0.49	0.49	6.83	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.28	5.00	-0.49	0.49	6.82	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.32	5.00	-0.50	0.50	6.80	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.35	5.00	-0.51	0.51	6.79	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.38	5.00	-0.51	0.51	6.77	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.41	5.00	-0.52	0.52	6.75	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.44	5.00	-0.52	0.52	6.74	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.48	5.00	-0.53	0.53	6.72	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.51	5.00	-0.54	0.54	6.70	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.54	5.00	-0.54	0.54	6.69	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.57	5.00	-0.55	0.55	6.67	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.60	5.00	-0.55	0.55	6.65	0.03	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.63	5.00	-0.56	0.56	6.63	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.67	5.00	-0.57	0.57	6.61	0.04	4.30	Vu < PhiVc/2	Not Reqd	9	4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	11.70	5.00	-0.57	0.57	6.60	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.73	5.00	-0.58	0.58	6.58	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.76	5.00	-0.59	0.59	6.56	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.79	5.00	-0.59	0.59	6.54	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.83	5.00	-0.60	0.60	6.52	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.86	5.00	-0.60	0.60	6.50	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.89	5.00	-0.61	0.61	6.48	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.92	5.00	-0.62	0.62	6.46	0.04	4.30	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.95	5.00	-0.62	0.62	6.44	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.99	5.00	-0.63	0.63	6.42	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.02	5.00	-0.64	0.64	6.40	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.05	5.00	-0.64	0.64	6.38	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.08	5.00	-0.65	0.65	6.36	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.11	5.00	-0.65	0.65	6.34	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.14	5.00	-0.66	0.66	6.32	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.18	5.00	-0.67	0.67	6.30	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.21	5.00	-0.67	0.67	6.28	0.04	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.24	5.00	-0.68	0.68	6.26	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.27	5.00	-0.68	0.68	6.24	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.30	5.00	-0.69	0.69	6.21	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.34	5.00	-0.70	0.70	6.19	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.37	5.00	-0.70	0.70	6.17	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.40	5.00	-0.71	0.71	6.15	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.43	5.00	-0.72	0.72	6.12	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.46	5.00	-0.72	0.72	6.10	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.50	5.00	-0.73	0.73	6.08	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.53	5.00	-0.73	0.73	6.06	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.56	5.00	-0.74	0.74	6.03	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.59	5.00	-0.75	0.75	6.01	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.62	5.00	-0.75	0.75	5.98	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.65	5.00	-0.76	0.76	5.96	0.05	4.31	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.69	5.00	-0.77	0.77	5.94	0.05	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.72	5.00	-0.77	0.77	5.91	0.05	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.75	5.00	-0.78	0.78	5.89	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.78	5.00	-0.78	0.78	5.86	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.81	5.00	-0.79	0.79	5.84	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.85	5.00	-0.80	0.80	5.81	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.88	5.00	-0.80	0.80	5.79	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.91	5.00	-0.81	0.81	5.76	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.94	5.00	-0.81	0.81	5.73	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.97	5.00	-0.82	0.82	5.71	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.01	5.00	-0.83	0.83	5.68	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.04	5.00	-0.83	0.83	5.66	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.07	5.00	-0.84	0.84	5.63	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.10	5.00	-0.85	0.85	5.60	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.13	5.00	-0.85	0.85	5.57	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.16	5.00	-0.86	0.86	5.55	0.06	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.20	5.00	-0.86	0.86	5.52	0.07	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.23	5.00	-0.87	0.87	5.49	0.07	4.32	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.26	5.00	-0.88	0.88	5.46	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.29	5.00	-0.88	0.88	5.44	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.32	5.00	-0.89	0.89	5.41	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.36	5.00	-0.90	0.90	5.38	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.39	5.00	-0.90	0.90	5.35	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	13.42	5.00	-0.91	0.91	5.32	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.45	5.00	-0.91	0.91	5.29	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.48	5.00	-0.92	0.92	5.26	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.52	5.00	-0.93	0.93	5.23	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.55	5.00	-0.93	0.93	5.20	0.07	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.58	5.00	-0.94	0.94	5.18	0.08	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.61	5.00	-0.94	0.94	5.14	0.08	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.64	5.00	-0.95	0.95	5.11	0.08	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.67	5.00	-0.96	0.96	5.08	0.08	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.71	5.00	-0.96	0.96	5.05	0.08	4.33	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.74	5.00	-0.97	0.97	5.02	0.08	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.77	5.00	-0.98	0.98	4.99	0.08	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.80	5.00	-0.98	0.98	4.96	0.08	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.83	5.00	-0.99	0.99	4.93	0.08	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.87	5.00	-0.99	0.99	4.90	0.08	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.90	5.00	-1.00	1.00	4.87	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.93	5.00	-1.01	1.01	4.83	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.96	5.00	-1.01	1.01	4.80	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.99	5.00	-1.02	1.02	4.77	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.03	5.00	-1.03	1.03	4.74	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.06	5.00	-1.03	1.03	4.70	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.09	5.00	-1.04	1.04	4.67	0.09	4.34	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.12	5.00	-1.04	1.04	4.64	0.09	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.15	5.00	-1.05	1.05	4.60	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.18	5.00	-1.06	1.06	4.57	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.22	5.00	-1.06	1.06	4.54	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.25	5.00	-1.07	1.07	4.50	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.28	5.00	-1.08	1.08	4.47	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.31	5.00	-1.08	1.08	4.43	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.34	5.00	-1.09	1.09	4.40	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.38	5.00	-1.09	1.09	4.37	0.10	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.41	5.00	-1.10	1.10	4.33	0.11	4.35	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.44	5.00	-1.11	1.11	4.30	0.11	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.47	5.00	-1.11	1.11	4.26	0.11	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.50	5.00	-1.12	1.12	4.22	0.11	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.54	5.00	-1.12	1.12	4.19	0.11	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.57	5.00	-1.13	1.13	4.15	0.11	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.60	5.00	-1.14	1.14	4.12	0.12	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.63	5.00	-1.14	1.14	4.08	0.12	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.66	5.00	-1.15	1.15	4.04	0.12	4.36	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.69	5.00	-1.16	1.16	4.01	0.12	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.73	5.00	-1.16	1.16	3.97	0.12	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.76	5.00	-1.17	1.17	3.93	0.12	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.79	5.00	-1.17	1.17	3.90	0.13	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.82	5.00	-1.18	1.18	3.86	0.13	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.85	5.00	-1.19	1.19	3.82	0.13	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.89	5.00	-1.19	1.19	3.78	0.13	4.37	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.92	5.00	-1.20	1.20	3.74	0.13	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.95	5.00	-1.21	1.21	3.71	0.14	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.98	5.00	-1.21	1.21	3.67	0.14	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.01	5.00	-1.22	1.22	3.63	0.14	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.05	5.00	-1.22	1.22	3.59	0.14	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.08	5.00	-1.23	1.23	3.55	0.14	4.38	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.11	5.00	-1.24	1.24	3.51	0.15	4.39	Vu < PhiVc/2	Not Reqd	9 4.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	15.14	5.00	-1.24	1.24	3.47	0.15	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.17	5.00	-1.25	1.25	3.43	0.15	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.20	5.00	-1.25	1.25	3.39	0.15	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.24	5.00	-1.26	1.26	3.35	0.16	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.27	5.00	-1.27	1.27	3.31	0.16	4.39	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.30	5.00	-1.27	1.27	3.27	0.16	4.40	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.33	5.00	-1.28	1.28	3.23	0.17	4.40	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.36	5.00	-1.29	1.29	3.19	0.17	4.40	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.40	5.00	-1.29	1.29	3.15	0.17	4.40	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.43	5.00	-1.30	1.30	3.11	0.17	4.41	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.46	5.00	-1.30	1.30	3.07	0.18	4.41	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.49	5.00	-1.31	1.31	3.02	0.18	4.41	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.52	5.00	-1.32	1.32	2.98	0.18	4.41	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.56	5.00	-1.32	1.32	2.94	0.19	4.42	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.59	5.00	-1.33	1.33	2.90	0.19	4.42	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.62	5.00	-1.34	1.34	2.86	0.19	4.42	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.65	5.00	-1.34	1.34	2.81	0.20	4.42	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.68	5.00	-1.35	1.35	2.77	0.20	4.43	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.71	5.00	-1.35	1.35	2.73	0.21	4.43	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.75	5.00	-1.36	1.36	2.68	0.21	4.43	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.78	5.00	-1.37	1.37	2.64	0.22	4.44	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.81	5.00	-1.37	1.37	2.60	0.22	4.44	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.84	5.00	-1.38	1.38	2.55	0.23	4.44	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.87	5.00	-1.38	1.38	2.51	0.23	4.45	Vu < PhiVc/2	Not Reqd 9	4.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.91	5.00	-1.39	1.39	2.46	0.24	4.45	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.94	5.00	-1.40	1.40	2.42	0.24	4.46	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.97	5.00	-1.40	1.40	2.38	0.25	4.46	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.00	5.00	-1.41	1.41	2.33	0.25	4.46	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.03	5.00	-1.42	1.42	2.29	0.26	4.47	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.07	5.00	-1.42	1.42	2.24	0.26	4.47	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.10	5.00	-1.43	1.43	2.19	0.27	4.48	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.13	5.00	-1.43	1.43	2.15	0.28	4.48	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.16	5.00	-1.44	1.44	2.10	0.29	4.49	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.19	5.00	-1.45	1.45	2.06	0.29	4.49	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.22	5.00	-1.45	1.45	2.01	0.30	4.50	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.26	5.00	-1.46	1.46	1.96	0.31	4.51	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.29	5.00	-1.47	1.47	1.92	0.32	4.51	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.32	5.00	-1.47	1.47	1.87	0.33	4.52	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.35	5.00	-1.48	1.48	1.82	0.34	4.53	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.38	5.00	-1.48	1.48	1.78	0.35	4.54	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.42	5.00	-1.49	1.49	1.73	0.36	4.54	Vu < PhiVc/2	Not Reqd 9	4.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.45	5.00	-1.50	1.50	1.68	0.37	4.55	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.48	5.00	-1.50	1.50	1.63	0.38	4.56	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.51	5.00	-1.51	1.51	1.59	0.40	4.57	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.54	5.00	-1.52	1.52	1.54	0.41	4.58	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.58	5.00	-1.52	1.52	1.49	0.43	4.59	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.61	5.00	-1.53	1.53	1.44	0.44	4.61	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.64	5.00	-1.53	1.53	1.39	0.46	4.62	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.67	5.00	-1.54	1.54	1.34	0.48	4.63	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.70	5.00	-1.55	1.55	1.29	0.50	4.65	Vu < PhiVc/2	Not Reqd 9	4.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.73	5.00	-1.55	1.55	1.24	0.52	4.66	Vu < PhiVc/2	Not Reqd 9	4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.77	5.00	-1.56	1.56	1.19	0.54	4.68	Vu < PhiVc/2	Not Reqd 9	4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.80	5.00	-1.56	1.56	1.15	0.57	4.70	Vu < PhiVc/2	Not Reqd 9	4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.83	5.00	-1.57	1.57	1.10	0.60	4.72	Vu < PhiVc/2	Not Reqd 9	4.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : lot 62R unit suspended concrete slab at garage

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	16.86	5.00	-1.58	1.58	1.04	0.63	4.75	Vu < PhiVc/2	Not Reqd	9 4.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.89	5.00	-1.58	1.58	0.99	0.66	4.77	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.93	5.00	-1.59	1.59	0.94	0.70	4.80	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.96	5.00	-1.60	1.60	0.89	0.74	4.83	Vu < PhiVc/2	Not Reqd	9 4.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.99	5.00	-1.60	1.60	0.84	0.79	4.87	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.02	5.00	-1.61	1.61	0.79	0.85	4.91	Vu < PhiVc/2	Not Reqd	9 4.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.05	5.00	-1.61	1.61	0.74	0.91	4.96	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.09	5.00	-1.62	1.62	0.69	0.98	5.01	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.12	5.00	-1.63	1.63	0.64	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.15	5.00	-1.63	1.63	0.58	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.18	5.00	-1.64	1.64	0.53	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.21	5.00	-1.65	1.65	0.48	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.24	5.00	-1.65	1.65	0.43	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.28	5.00	-1.66	1.66	0.37	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.31	5.00	-1.66	1.66	0.32	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.34	5.00	-1.67	1.67	0.27	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.37	5.00	-1.68	1.68	0.22	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.40	5.00	-1.68	1.68	0.16	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.44	5.00	-1.69	1.69	0.11	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.47	5.00	-1.69	1.69	0.05	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.50	5.00	-1.70	1.70	0.00	1.00	5.03	Vu < PhiVc/2	Not Reqd	9 5.0	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	17.500	7.44	8.50	0.88
+1.40D+1.60H					
Span # 1	1	17.500	5.82	8.50	0.69
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	17.500	7.44	8.50	0.88
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	17.500	7.44	8.50	0.88
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	17.500	5.76	8.50	0.68
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	17.500	4.99	8.50	0.59
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	17.500	5.76	8.50	0.68
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	17.500	4.99	8.50	0.59
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	17.500	5.76	8.50	0.68
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	17.500	5.76	8.50	0.68
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	17.500	5.76	8.50	0.68
+0.90D+W+0.90H					
Span # 1	1	17.500	3.74	8.50	0.44
+0.90D+E+0.90H					
Span # 1	1	17.500	3.74	8.50	0.44

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.4487	8.750		0.0000	0.000

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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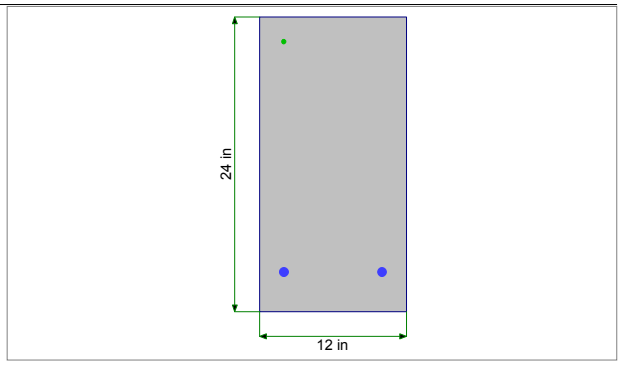
Description : SLAB AT RETAINING WALL J-62R

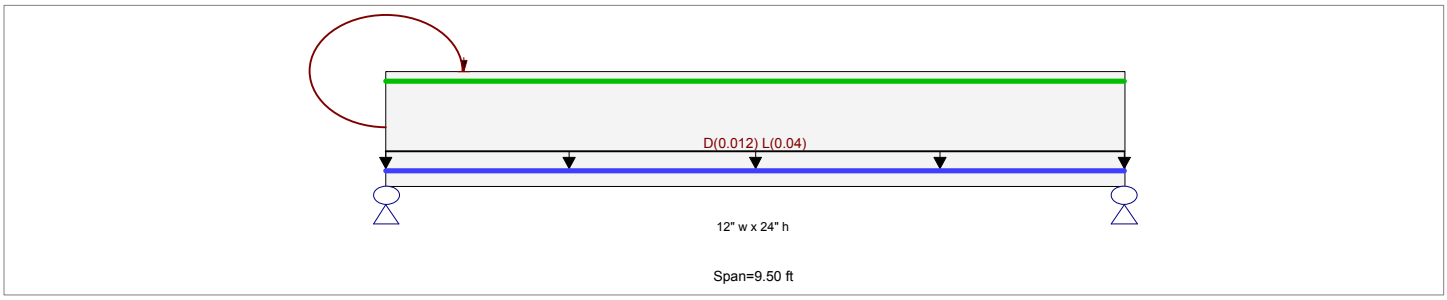
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c^1/2 * 7.50	=	474.342 psi		Shear :	0.750
Ψ Density	=	145.0 pcf	β 1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 24.0 in
Span #1 Reinforcing....
2-#6 at 3.250 in from Bottom, from 0.0 to 9.50 ft in this span
1-#3 at 2.0 in from Top, from 0.0 to 9.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.0120, L = 0.040 k/ft, Tributary Width = 1.0 ft
Moment : L = 18.40, H = 8.880 k-ft, Location = 0.0 ft from left end of this span

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.547** : 1
Section used for this span **Typical Section**
Mu : Applied 43.603 k-ft
Mn * Phi : Allowable 79.732 k-ft
Location of maximum on span 0.017 ft
Span # where maximum occurs Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.004 in	Ratio =	25746 >=36
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.008 in	Ratio =	14729 >=18
Max Upward Total Deflection	0.000 in	Ratio =	999 <180

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	-1.747	4.496
Overall MINimum	0.300	0.935
+D+H	0.500	2.369
+D+L+H	-1.247	4.496
+D+Lr+H	0.500	2.369
+D+S+H	0.500	2.369
+D+0.750Lr+0.750L+H	-0.810	3.964
+D+0.750L+0.750S+H	-0.810	3.964
+D+0.60W+H	0.500	2.369
+D+0.70E+H	0.500	2.369
+D+0.750Lr+0.750L+0.450W+H	-0.810	3.964
+D+0.750L+0.750S+0.450W+H	-0.810	3.964

Title Block Line 1
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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 9:39PM

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.750L+0.750S+0.5250E+H	-0.810	3.964
+0.60D+0.60W+0.60H	0.300	1.422
+0.60D+0.70E+0.60H	0.300	1.422
D Only	1.434	1.434
Lr Only		
L Only	-1.747	2.127
S Only		
W Only		
E Only		
H Only	-0.935	0.935

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.75	-2.57	2.57	0.00	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.02	20.75	-2.58	2.58	43.60	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	20.75	-2.58	2.58	43.56	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	20.75	-2.59	2.59	43.51	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	20.75	-2.60	2.60	43.47	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.09	20.75	-2.61	2.61	43.42	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.75	-2.61	2.61	43.38	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	20.75	-2.62	2.62	43.33	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	20.75	-2.63	2.63	43.29	0.10	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.16	20.75	-2.64	2.64	43.24	0.11	22.61	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	20.75	-2.64	2.64	43.20	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	20.75	-2.65	2.65	43.15	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	20.75	-2.66	2.66	43.11	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	20.75	-2.67	2.67	43.06	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	20.75	-2.67	2.67	43.01	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	20.75	-2.68	2.68	42.97	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	20.75	-2.69	2.69	42.92	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	20.75	-2.69	2.69	42.87	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	20.75	-2.70	2.70	42.83	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	20.75	-2.71	2.71	42.78	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.35	20.75	-2.72	2.72	42.73	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	20.75	-2.72	2.72	42.69	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	20.75	-2.73	2.73	42.64	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	20.75	-2.74	2.74	42.59	0.11	22.62	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.42	20.75	-2.75	2.75	42.54	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.43	20.75	-2.75	2.75	42.50	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	20.75	-2.76	2.76	42.45	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.47	20.75	-2.77	2.77	42.40	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.75	-2.78	2.78	42.35	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.50	20.75	-2.78	2.78	42.31	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	20.75	-2.79	2.79	42.26	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	20.75	-2.80	2.80	42.21	0.11	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	20.75	-2.81	2.81	42.16	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	20.75	-2.81	2.81	42.11	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	20.75	-2.82	2.82	42.06	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	20.75	-2.83	2.83	42.01	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	20.75	-2.83	2.83	41.96	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	20.75	-2.84	2.84	41.92	0.12	22.63	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	20.75	-2.85	2.85	41.87	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	20.75	-2.86	2.86	41.82	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	20.75	-2.86	2.86	41.77	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	20.75	-2.87	2.87	41.72	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0

Title Block Line 1
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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 9:39PM

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.73	20.75	-2.88	2.88	41.67	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	20.75	-2.89	2.89	41.62	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	20.75	-2.89	2.89	41.57	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	20.75	-2.90	2.90	41.52	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.80	20.75	-2.91	2.91	41.47	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	20.75	-2.92	2.92	41.42	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	20.75	-2.92	2.92	41.37	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	20.75	-2.93	2.93	41.32	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.87	20.75	-2.94	2.94	41.27	0.12	22.64	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.88	20.75	-2.95	2.95	41.21	0.12	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.90	20.75	-2.95	2.95	41.16	0.12	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	20.75	-2.96	2.96	41.11	0.12	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	20.75	-2.97	2.97	41.06	0.12	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.95	20.75	-2.97	2.97	41.01	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.97	20.75	-2.98	2.98	40.96	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	20.75	-2.99	2.99	40.91	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	20.75	-3.00	3.00	40.85	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	20.75	-3.00	3.00	40.80	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	20.75	-3.01	3.01	40.75	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.06	20.75	-3.02	3.02	40.70	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	20.75	-3.03	3.03	40.65	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.09	20.75	-3.03	3.03	40.59	0.13	22.65	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	20.75	-3.04	3.04	40.54	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	20.75	-3.05	3.05	40.49	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.14	20.75	-3.06	3.06	40.44	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	20.75	-3.06	3.06	40.38	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	20.75	-3.07	3.07	40.33	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.19	20.75	-3.08	3.08	40.28	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.21	20.75	-3.09	3.09	40.22	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	20.75	-3.09	3.09	40.17	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.25	20.75	-3.10	3.10	40.12	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	20.75	-3.11	3.11	40.06	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	20.75	-3.12	3.12	40.01	0.13	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	20.75	-3.12	3.12	39.95	0.14	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.32	20.75	-3.13	3.13	39.90	0.14	22.66	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	20.75	-3.14	3.14	39.85	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	20.75	-3.14	3.14	39.79	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	20.75	-3.15	3.15	39.74	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	20.75	-3.16	3.16	39.68	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	20.75	-3.17	3.17	39.63	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.42	20.75	-3.17	3.17	39.57	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	20.75	-3.18	3.18	39.52	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	20.75	-3.19	3.19	39.46	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	20.75	-3.20	3.20	39.41	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	20.75	-3.20	3.20	39.35	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	20.75	-3.21	3.21	39.30	0.14	22.67	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	20.75	-3.22	3.22	39.24	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	20.75	-3.23	3.23	39.19	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	20.75	-3.23	3.23	39.13	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	20.75	-3.24	3.24	39.07	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.59	20.75	-3.25	3.25	39.02	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.61	20.75	-3.26	3.26	38.96	0.14	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	20.75	-3.26	3.26	38.90	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.64	20.75	-3.27	3.27	38.85	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.66	20.75	-3.28	3.28	38.79	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	20.75	-3.28	3.28	38.74	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.70	20.75	-3.29	3.29	38.68	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.71	20.75	-3.30	3.30	38.62	0.15	22.68	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	20.75	-3.31	3.31	38.56	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	20.75	-3.31	3.31	38.51	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.77	20.75	-3.32	3.32	38.45	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.78	20.75	-3.33	3.33	38.39	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	20.75	-3.34	3.34	38.33	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	20.75	-3.34	3.34	38.28	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.83	20.75	-3.35	3.35	38.22	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.85	20.75	-3.36	3.36	38.16	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	20.75	-3.37	3.37	38.10	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	20.75	-3.37	3.37	38.04	0.15	22.69	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.90	20.75	-3.38	3.38	37.99	0.15	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	20.75	-3.39	3.39	37.93	0.15	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	20.75	-3.40	3.40	37.87	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	20.75	-3.40	3.40	37.81	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	20.75	-3.41	3.41	37.75	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	20.75	-3.42	3.42	37.69	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	20.75	-3.43	3.43	37.63	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	20.75	-3.43	3.43	37.57	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	20.75	-3.44	3.44	37.51	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	20.75	-3.45	3.45	37.45	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	20.75	-3.45	3.45	37.39	0.16	22.70	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.09	20.75	-3.46	3.46	37.33	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.11	20.75	-3.47	3.47	37.27	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	20.75	-3.48	3.48	37.21	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.15	20.75	-3.48	3.48	37.15	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.16	20.75	-3.49	3.49	37.09	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.18	20.75	-3.50	3.50	37.03	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	20.75	-3.51	3.51	36.97	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	20.75	-3.51	3.51	36.91	0.16	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	20.75	-3.52	3.52	36.85	0.17	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	20.75	-3.53	3.53	36.79	0.17	22.71	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	20.75	-3.54	3.54	36.73	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.28	20.75	-3.54	3.54	36.67	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	20.75	-3.55	3.55	36.61	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	20.75	-3.56	3.56	36.54	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	20.75	-3.57	3.57	36.48	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.35	20.75	-3.57	3.57	36.42	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	20.75	-3.58	3.58	36.36	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	20.75	-3.59	3.59	36.30	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.75	-3.59	3.59	36.24	0.17	22.72	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	20.75	-3.60	3.60	36.17	0.17	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	20.75	-3.61	3.61	36.11	0.17	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	20.75	-3.62	3.62	36.05	0.17	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	20.75	-3.62	3.62	35.99	0.17	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	20.75	-3.63	3.63	35.92	0.17	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.75	-3.64	3.64	35.86	0.18	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	20.75	-3.65	3.65	35.80	0.18	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	20.75	-3.65	3.65	35.73	0.18	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.56	20.75	-3.66	3.66	35.67	0.18	22.73	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	20.75	-3.67	3.67	35.61	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.60	20.75	-3.68	3.68	35.54	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.75	-3.68	3.68	35.48	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.63	20.75	-3.69	3.69	35.42	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	20.75	-3.70	3.70	35.35	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	20.75	-3.71	3.71	35.29	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	20.75	-3.71	3.71	35.22	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	20.75	-3.72	3.72	35.16	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	20.75	-3.73	3.73	35.09	0.18	22.74	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	20.75	-3.73	3.73	35.03	0.18	22.75	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	20.75	-3.74	3.74	34.97	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	20.75	-3.75	3.75	34.90	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.79	20.75	-3.76	3.76	34.84	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	20.75	-3.76	3.76	34.77	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	20.75	-3.77	3.77	34.71	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	20.75	-3.78	3.78	34.64	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.86	20.75	-3.79	3.79	34.57	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	20.75	-3.79	3.79	34.51	0.19	22.75	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.75	-3.80	3.80	34.44	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	20.75	-3.81	3.81	34.38	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	20.75	-3.82	3.82	34.31	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	20.75	-3.82	3.82	34.25	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	20.75	-3.83	3.83	34.18	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	20.75	-3.84	3.84	34.11	0.19	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.75	-3.85	3.85	34.05	0.20	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	20.75	-3.85	3.85	33.98	0.20	22.76	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	20.75	-3.86	3.86	33.91	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	20.75	-3.87	3.87	33.85	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	20.75	-3.88	3.88	33.78	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.08	20.75	-3.88	3.88	33.71	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	20.75	-3.89	3.89	33.64	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	20.75	-3.90	3.90	33.58	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	20.75	-3.90	3.90	33.51	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.15	20.75	-3.91	3.91	33.44	0.20	22.77	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	20.75	-3.92	3.92	33.37	0.20	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	20.75	-3.93	3.93	33.31	0.20	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	20.75	-3.93	3.93	33.24	0.20	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	20.75	-3.94	3.94	33.17	0.21	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	20.75	-3.95	3.95	33.10	0.21	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	20.75	-3.96	3.96	33.03	0.21	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	20.75	-3.96	3.96	32.97	0.21	22.78	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.29	20.75	-3.97	3.97	32.90	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.31	20.75	-3.98	3.98	32.83	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	20.75	-3.99	3.99	32.76	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.34	20.75	-3.99	3.99	32.69	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.36	20.75	-4.00	4.00	32.62	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	20.75	-4.01	4.01	32.55	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	20.75	-4.02	4.02	32.48	0.21	22.79	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.41	20.75	-4.02	4.02	32.41	0.21	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.43	20.75	-4.03	4.03	32.34	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	20.75	-4.04	4.04	32.27	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.46	20.75	-4.04	4.04	32.20	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.48	20.75	-4.05	4.05	32.13	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.50	20.75	-4.06	4.06	32.06	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	20.75	-4.07	4.07	31.99	0.22	22.80	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.53	20.75	-4.07	4.07	31.92	0.22	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.55	20.75	-4.08	4.08	31.85	0.22	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.56	20.75	-4.09	4.09	31.78	0.22	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	20.75	-4.10	4.10	31.71	0.22	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.60	20.75	-4.10	4.10	31.64	0.22	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.62	20.75	-4.11	4.11	31.57	0.23	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.63	20.75	-4.12	4.12	31.50	0.23	22.81	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.65	20.75	-4.13	4.13	31.43	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.67	20.75	-4.13	4.13	31.35	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.69	20.75	-4.14	4.14	31.28	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.70	20.75	-4.15	4.15	31.21	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.72	20.75	-4.16	4.16	31.14	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.74	20.75	-4.16	4.16	31.07	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.76	20.75	-4.17	4.17	30.99	0.23	22.82	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.77	20.75	-4.18	4.18	30.92	0.23	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.79	20.75	-4.19	4.19	30.85	0.23	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.81	20.75	-4.19	4.19	30.78	0.24	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	20.75	-4.20	4.20	30.71	0.24	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.84	20.75	-4.21	4.21	30.63	0.24	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.86	20.75	-4.21	4.21	30.56	0.24	22.83	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.88	20.75	-4.22	4.22	30.49	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	20.75	-4.23	4.23	30.41	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.91	20.75	-4.24	4.24	30.34	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.93	20.75	-4.24	4.24	30.27	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	20.75	-4.25	4.25	30.19	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.96	20.75	-4.26	4.26	30.12	0.24	22.84	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.98	20.75	-4.27	4.27	30.05	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.00	20.75	-4.27	4.27	29.97	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.01	20.75	-4.28	4.28	29.90	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.03	20.75	-4.29	4.29	29.82	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.05	20.75	-4.30	4.30	29.75	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.07	20.75	-4.30	4.30	29.68	0.25	22.85	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	20.75	-4.31	4.31	29.60	0.25	22.86	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.10	20.75	-4.32	4.32	29.53	0.25	22.86	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.12	20.75	-4.33	4.33	29.45	0.25	22.86	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.14	20.75	-4.33	4.33	29.38	0.26	22.86	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.15	20.75	-4.34	4.34	29.30	0.26	22.86	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.17	20.75	-4.35	4.35	29.23	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	20.75	-4.35	4.35	29.15	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.20	20.75	-4.36	4.36	29.08	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.22	20.75	-4.37	4.37	29.00	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.24	20.75	-4.38	4.38	28.92	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	20.75	-4.38	4.38	28.85	0.26	22.87	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.27	20.75	-4.39	4.39	28.77	0.26	22.88	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.29	20.75	-4.40	4.40	28.70	0.27	22.88	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.31	20.75	-4.41	4.41	28.62	0.27	22.88	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	20.75	-4.41	4.41	28.54	0.27	22.88	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.34	20.75	-4.42	4.42	28.47	0.27	22.88	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.36	20.75	-4.43	4.43	28.39	0.27	22.89	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.38	20.75	-4.44	4.44	28.31	0.27	22.89	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	20.75	-4.44	4.44	28.24	0.27	22.89	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.41	20.75	-4.45	4.45	28.16	0.27	22.89	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	20.75	-4.46	4.46	28.08	0.27	22.89	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.45	20.75	-4.47	4.47	28.01	0.28	22.90	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.46	20.75	-4.47	4.47	27.93	0.28	22.90	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.48	20.75	-4.48	4.48	27.85	0.28	22.90	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	20.75	-4.49	4.49	27.77	0.28	22.90	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.52	20.75	-4.49	4.49	27.70	0.28	22.90	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.53	20.75	-4.50	4.50	27.62	0.28	22.91	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.55	20.75	-4.51	4.51	27.54	0.28	22.91	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	20.75	-4.52	4.52	27.46	0.28	22.91	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.59	20.75	-4.52	4.52	27.38	0.29	22.91	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.60	20.75	-4.53	4.53	27.31	0.29	22.91	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	20.75	-4.54	4.54	27.23	0.29	22.92	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	20.75	-4.55	4.55	27.15	0.29	22.92	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.65	20.75	-4.55	4.55	27.07	0.29	22.92	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.67	20.75	-4.56	4.56	26.99	0.29	22.92	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.69	20.75	-4.57	4.57	26.91	0.29	22.93	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	20.75	-4.58	4.58	26.83	0.29	22.93	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.72	20.75	-4.58	4.58	26.75	0.30	22.93	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	20.75	-4.59	4.59	26.67	0.30	22.93	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.76	20.75	-4.60	4.60	26.59	0.30	22.93	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	20.75	-4.61	4.61	26.51	0.30	22.94	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.79	20.75	-4.61	4.61	26.44	0.30	22.94	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	20.75	-4.62	4.62	26.36	0.30	22.94	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.83	20.75	-4.63	4.63	26.28	0.30	22.94	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	20.75	-4.64	4.64	26.20	0.31	22.95	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.86	20.75	-4.64	4.64	26.11	0.31	22.95	Vu < PhiVc/2	Not Reqd 1	22.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	20.75	-4.65	4.65	26.03	0.31	22.95	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.90	20.75	-4.66	4.66	25.95	0.31	22.95	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.91	20.75	-4.66	4.66	25.87	0.31	22.96	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.93	20.75	-4.67	4.67	25.79	0.31	22.96	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	20.75	-4.68	4.68	25.71	0.31	22.96	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.97	20.75	-4.69	4.69	25.63	0.32	22.96	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.98	20.75	-4.69	4.69	25.55	0.32	22.97	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.00	20.75	-4.70	4.70	25.47	0.32	22.97	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.75	-4.71	4.71	25.39	0.32	22.97	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	20.75	-4.72	4.72	25.31	0.32	22.97	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.05	20.75	-4.72	4.72	25.22	0.32	22.98	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	20.75	-4.73	4.73	25.14	0.33	22.98	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	20.75	-4.74	4.74	25.06	0.33	22.98	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.10	20.75	-4.75	4.75	24.98	0.33	22.98	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	20.75	-4.75	4.75	24.90	0.33	22.99	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.14	20.75	-4.76	4.76	24.81	0.33	22.99	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	20.75	-4.77	4.77	24.73	0.33	22.99	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.17	20.75	-4.78	4.78	24.65	0.34	22.99	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	20.75	-4.78	4.78	24.57	0.34	23.00	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.21	20.75	-4.79	4.79	24.48	0.34	23.00	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	20.75	-4.80	4.80	24.40	0.34	23.00	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.24	20.75	-4.80	4.80	24.32	0.34	23.00	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	20.75	-4.81	4.81	24.23	0.34	23.01	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.28	20.75	-4.82	4.82	24.15	0.35	23.01	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.30	20.75	-4.83	4.83	24.07	0.35	23.01	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.31	20.75	-4.83	4.83	23.98	0.35	23.02	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	20.75	-4.84	4.84	23.90	0.35	23.02	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.35	20.75	-4.85	4.85	23.82	0.35	23.02	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	20.75	-4.86	4.86	23.73	0.35	23.02	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.38	20.75	-4.86	4.86	23.65	0.36	23.03	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0

Concrete Beam

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.75	-4.87	4.87	23.56	0.36	23.03	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.42	20.75	-4.88	4.88	23.48	0.36	23.03	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	20.75	-4.89	4.89	23.39	0.36	23.04	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.45	20.75	-4.89	4.89	23.31	0.36	23.04	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	20.75	-4.90	4.90	23.22	0.36	23.04	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.49	20.75	-4.91	4.91	23.14	0.37	23.05	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.75	-4.92	4.92	23.06	0.37	23.05	Vu < PhiVc/2	Not Reqd 1	23.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.52	20.75	-4.92	4.92	22.97	0.37	23.05	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	20.75	-4.93	4.93	22.88	0.37	23.06	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.55	20.75	-4.94	4.94	22.80	0.37	23.06	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	20.75	-4.95	4.95	22.71	0.38	23.06	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.59	20.75	-4.95	4.95	22.63	0.38	23.07	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.61	20.75	-4.96	4.96	22.54	0.38	23.07	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.62	20.75	-4.97	4.97	22.46	0.38	23.07	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	20.75	-4.97	4.97	22.37	0.38	23.08	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.66	20.75	-4.98	4.98	22.28	0.39	23.08	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.68	20.75	-4.99	4.99	22.20	0.39	23.08	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.69	20.75	-5.00	5.00	22.11	0.39	23.09	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	20.75	-5.00	5.00	22.03	0.39	23.09	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.73	20.75	-5.01	5.01	21.94	0.39	23.09	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	20.75	-5.02	5.02	21.85	0.40	23.10	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.76	20.75	-5.03	5.03	21.76	0.40	23.10	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	20.75	-5.03	5.03	21.68	0.40	23.10	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.80	20.75	-5.04	5.04	21.59	0.40	23.11	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	20.75	-5.05	5.05	21.50	0.41	23.11	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	20.75	-5.06	5.06	21.42	0.41	23.11	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.85	20.75	-5.06	5.06	21.33	0.41	23.12	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.87	20.75	-5.07	5.07	21.24	0.41	23.12	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	20.75	-5.08	5.08	21.15	0.42	23.13	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	20.75	-5.09	5.09	21.06	0.42	23.13	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.92	20.75	-5.09	5.09	20.98	0.42	23.13	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.94	20.75	-5.10	5.10	20.89	0.42	23.14	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	20.75	-5.11	5.11	20.80	0.42	23.14	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.97	20.75	-5.11	5.11	20.71	0.43	23.15	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.99	20.75	-5.12	5.12	20.62	0.43	23.15	Vu < PhiVc/2	Not Reqd 1	23.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.00	20.75	-5.13	5.13	20.53	0.43	23.15	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	20.75	-5.14	5.14	20.45	0.43	23.16	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.04	20.75	-5.14	5.14	20.36	0.44	23.16	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.06	20.75	-5.15	5.15	20.27	0.44	23.17	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.07	20.75	-5.16	5.16	20.18	0.44	23.17	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	20.75	-5.17	5.17	20.09	0.44	23.17	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.11	20.75	-5.17	5.17	20.00	0.45	23.18	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.13	20.75	-5.18	5.18	19.91	0.45	23.18	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.14	20.75	-5.19	5.19	19.82	0.45	23.19	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.16	20.75	-5.20	5.20	19.73	0.46	23.19	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.18	20.75	-5.20	5.20	19.64	0.46	23.20	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	20.75	-5.21	5.21	19.55	0.46	23.20	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.21	20.75	-5.22	5.22	19.46	0.46	23.21	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.23	20.75	-5.23	5.23	19.37	0.47	23.21	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.25	20.75	-5.23	5.23	19.28	0.47	23.22	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	20.75	-5.24	5.24	19.19	0.47	23.22	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.28	20.75	-5.25	5.25	19.10	0.48	23.23	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.30	20.75	-5.25	5.25	19.01	0.48	23.23	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.32	20.75	-5.26	5.26	18.92	0.48	23.23	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0

Concrete Beam

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.33	20.75	-5.27	5.27	18.83	0.48	23.24	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.35	20.75	-5.28	5.28	18.73	0.49	23.24	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.37	20.75	-5.28	5.28	18.64	0.49	23.25	Vu < PhiVc/2	Not Reqd 1	23.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	20.75	-5.29	5.29	18.55	0.49	23.25	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.40	20.75	-5.30	5.30	18.46	0.50	23.26	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.42	20.75	-5.31	5.31	18.37	0.50	23.27	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.44	20.75	-5.31	5.31	18.28	0.50	23.27	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.45	20.75	-5.32	5.32	18.18	0.51	23.28	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.47	20.75	-5.33	5.33	18.09	0.51	23.28	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.49	20.75	-5.34	5.34	18.00	0.51	23.29	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.51	20.75	-5.34	5.34	17.91	0.52	23.29	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.52	20.75	-5.35	5.35	17.81	0.52	23.30	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.54	20.75	-5.36	5.36	17.72	0.52	23.30	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.56	20.75	-5.37	5.37	17.63	0.53	23.31	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.58	20.75	-5.37	5.37	17.54	0.53	23.32	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.59	20.75	-5.38	5.38	17.44	0.53	23.32	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.61	20.75	-5.39	5.39	17.35	0.54	23.33	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.63	20.75	-5.40	5.40	17.26	0.54	23.33	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	20.75	-5.40	5.40	17.16	0.54	23.34	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.66	20.75	-5.41	5.41	17.07	0.55	23.35	Vu < PhiVc/2	Not Reqd 1	23.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.68	20.75	-5.42	5.42	16.98	0.55	23.35	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.70	20.75	-5.42	5.42	16.88	0.56	23.36	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.71	20.75	-5.43	5.43	16.79	0.56	23.36	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.73	20.75	-5.44	5.44	16.69	0.56	23.37	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.75	20.75	-5.45	5.45	16.60	0.57	23.38	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.77	20.75	-5.45	5.45	16.51	0.57	23.38	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.78	20.75	-5.46	5.46	16.41	0.58	23.39	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.80	20.75	-5.47	5.47	16.32	0.58	23.40	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.82	20.75	-5.48	5.48	16.22	0.58	23.40	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	20.75	-5.48	5.48	16.13	0.59	23.41	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.85	20.75	-5.49	5.49	16.03	0.59	23.42	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.87	20.75	-5.50	5.50	15.94	0.60	23.43	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.89	20.75	-5.51	5.51	15.84	0.60	23.43	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.90	20.75	-5.51	5.51	15.75	0.61	23.44	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.92	20.75	-5.52	5.52	15.65	0.61	23.45	Vu < PhiVc/2	Not Reqd 1	23.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	20.75	-5.53	5.53	15.56	0.61	23.46	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.96	20.75	-5.54	5.54	15.46	0.62	23.46	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.97	20.75	-5.54	5.54	15.36	0.62	23.47	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.99	20.75	-5.55	5.55	15.27	0.63	23.48	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	20.75	-5.56	5.56	15.17	0.63	23.49	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.03	20.75	-5.56	5.56	15.08	0.64	23.49	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.04	20.75	-5.57	5.57	14.98	0.64	23.50	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.06	20.75	-5.58	5.58	14.88	0.65	23.51	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	20.75	-5.59	5.59	14.79	0.65	23.52	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.09	20.75	-5.59	5.59	14.69	0.66	23.53	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.11	20.75	-5.60	5.60	14.59	0.66	23.54	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.13	20.75	-5.61	5.61	14.50	0.67	23.55	Vu < PhiVc/2	Not Reqd 1	23.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.15	20.75	-5.62	5.62	14.40	0.67	23.55	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.16	20.75	-5.62	5.62	14.30	0.68	23.56	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.18	20.75	-5.63	5.63	14.20	0.69	23.57	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.20	20.75	-5.64	5.64	14.11	0.69	23.58	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.22	20.75	-5.65	5.65	14.01	0.70	23.59	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.23	20.75	-5.65	5.65	13.91	0.70	23.60	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	20.75	-5.66	5.66	13.81	0.71	23.61	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	7.27	20.75	-5.67	5.67	13.71	0.71	23.62	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.29	20.75	-5.68	5.68	13.62	0.72	23.63	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.30	20.75	-5.68	5.68	13.52	0.73	23.64	Vu < PhiVc/2	Not Reqd 1	23.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	20.75	-5.69	5.69	13.42	0.73	23.65	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.34	20.75	-5.70	5.70	13.32	0.74	23.66	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.35	20.75	-5.70	5.70	13.22	0.75	23.67	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.37	20.75	-5.71	5.71	13.12	0.75	23.68	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	20.75	-5.72	5.72	13.03	0.76	23.69	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.41	20.75	-5.73	5.73	12.93	0.77	23.71	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.42	20.75	-5.73	5.73	12.83	0.77	23.72	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.44	20.75	-5.74	5.74	12.73	0.78	23.73	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	20.75	-5.75	5.75	12.63	0.79	23.74	Vu < PhiVc/2	Not Reqd 1	23.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.48	20.75	-5.76	5.76	12.53	0.79	23.75	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	20.75	-5.76	5.76	12.43	0.80	23.76	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.51	20.75	-5.77	5.77	12.33	0.81	23.78	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.53	20.75	-5.78	5.78	12.23	0.82	23.79	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.54	20.75	-5.79	5.79	12.13	0.82	23.80	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.56	20.75	-5.79	5.79	12.03	0.83	23.82	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.58	20.75	-5.80	5.80	11.93	0.84	23.83	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.60	20.75	-5.81	5.81	11.83	0.85	23.84	Vu < PhiVc/2	Not Reqd 1	23.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.61	20.75	-5.82	5.82	11.73	0.86	23.86	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.63	20.75	-5.82	5.82	11.63	0.87	23.87	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.65	20.75	-5.83	5.83	11.53	0.87	23.88	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.67	20.75	-5.84	5.84	11.43	0.88	23.90	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.68	20.75	-5.85	5.85	11.32	0.89	23.91	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.70	20.75	-5.85	5.85	11.22	0.90	23.93	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.72	20.75	-5.86	5.86	11.12	0.91	23.94	Vu < PhiVc/2	Not Reqd 1	23.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.73	20.75	-5.87	5.87	11.02	0.92	23.96	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.75	20.75	-5.87	5.87	10.92	0.93	23.98	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.77	20.75	-5.88	5.88	10.82	0.94	23.99	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.79	20.75	-5.89	5.89	10.72	0.95	24.01	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.80	20.75	-5.90	5.90	10.61	0.96	24.03	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.82	20.75	-5.90	5.90	10.51	0.97	24.04	Vu < PhiVc/2	Not Reqd 1	24.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	20.75	-5.91	5.91	10.41	0.98	24.06	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.86	20.75	-5.92	5.92	10.31	0.99	24.08	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	20.75	-5.93	5.93	10.20	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.89	20.75	-5.93	5.93	10.10	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	20.75	-5.94	5.94	10.00	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.93	20.75	-5.95	5.95	9.90	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	20.75	-5.96	5.96	9.79	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.96	20.75	-5.96	5.96	9.69	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.98	20.75	-5.97	5.97	9.59	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.99	20.75	-5.98	5.98	9.48	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.01	20.75	-5.99	5.99	9.38	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.03	20.75	-5.99	5.99	9.28	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.05	20.75	-6.00	6.00	9.17	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.06	20.75	-6.01	6.01	9.07	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.08	20.75	-6.01	6.01	8.96	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.10	20.75	-6.02	6.02	8.86	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.12	20.75	-6.03	6.03	8.76	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.13	20.75	-6.04	6.04	8.65	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.15	20.75	-6.04	6.04	8.55	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.17	20.75	-6.05	6.05	8.44	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.18	20.75	-6.06	6.06	8.34	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0

Title Block Line 1
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using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 9:39PM

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	8.20	20.75	-6.07	6.07	8.23	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.22	20.75	-6.07	6.07	8.13	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.24	20.75	-6.08	6.08	8.02	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.25	20.75	-6.09	6.09	7.92	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.27	20.75	-6.10	6.10	7.81	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.29	20.75	-6.10	6.10	7.71	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.31	20.75	-6.11	6.11	7.60	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.32	20.75	-6.12	6.12	7.49	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.34	20.75	-6.13	6.13	7.39	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.36	20.75	-6.13	6.13	7.28	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.38	20.75	-6.14	6.14	7.18	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.39	20.75	-6.15	6.15	7.07	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.41	20.75	-6.16	6.16	6.96	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.43	20.75	-6.16	6.16	6.86	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.44	20.75	-6.17	6.17	6.75	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.46	20.75	-6.18	6.18	6.64	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.48	20.75	-6.18	6.18	6.54	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.50	20.75	-6.19	6.19	6.43	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.51	20.75	-6.20	6.20	6.32	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.53	20.75	-6.21	6.21	6.21	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.55	20.75	-6.21	6.21	6.11	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.57	20.75	-6.22	6.22	6.00	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.58	20.75	-6.23	6.23	5.89	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.60	20.75	-6.24	6.24	5.78	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.62	20.75	-6.24	6.24	5.68	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.63	20.75	-6.25	6.25	5.57	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.65	20.75	-6.26	6.26	5.46	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.67	20.75	-6.27	6.27	5.35	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.69	20.75	-6.27	6.27	5.24	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.70	20.75	-6.28	6.28	5.13	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.72	20.75	-6.29	6.29	5.03	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.74	20.75	-6.30	6.30	4.92	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.76	20.75	-6.30	6.30	4.81	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.77	20.75	-6.31	6.31	4.70	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.79	20.75	-6.32	6.32	4.59	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.81	20.75	-6.32	6.32	4.48	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.83	20.75	-6.33	6.33	4.37	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.84	20.75	-6.34	6.34	4.26	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.86	20.75	-6.35	6.35	4.15	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.88	20.75	-6.35	6.35	4.04	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.89	20.75	-6.36	6.36	3.93	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.91	20.75	-6.37	6.37	3.82	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.93	20.75	-6.38	6.38	3.71	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.95	20.75	-6.38	6.38	3.60	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.96	20.75	-6.39	6.39	3.49	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.98	20.75	-6.40	6.40	3.38	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.00	20.75	-6.41	6.41	3.27	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.02	20.75	-6.41	6.41	3.16	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.03	20.75	-6.42	6.42	3.05	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.05	20.75	-6.43	6.43	2.94	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.07	20.75	-6.44	6.44	2.82	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.08	20.75	-6.44	6.44	2.71	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.10	20.75	-6.45	6.45	2.60	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.12	20.75	-6.46	6.46	2.49	1.00	24.09	Vu < PhiVc/2	Not Reqd	1 24.1	0.0	0.0

Title Block Line 1
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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : SLAB AT RETAINING WALL J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	9.14	20.75	-6.46	6.46	2.38	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.15	20.75	-6.47	6.47	2.27	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.17	20.75	-6.48	6.48	2.15	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.19	20.75	-6.49	6.49	2.04	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.21	20.75	-6.49	6.49	1.93	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.22	20.75	-6.50	6.50	1.82	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.24	20.75	-6.51	6.51	1.70	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.26	20.75	-6.52	6.52	1.59	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.28	20.75	-6.52	6.52	1.48	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.29	20.75	-6.53	6.53	1.37	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.31	20.75	-6.54	6.54	1.25	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.33	20.75	-6.55	6.55	1.14	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.34	20.75	-6.55	6.55	1.03	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.36	20.75	-6.56	6.56	0.91	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.38	20.75	-6.57	6.57	0.80	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.40	20.75	-6.58	6.58	0.69	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.41	20.75	-6.58	6.58	0.57	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.43	20.75	-6.59	6.59	0.46	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.45	20.75	-6.60	6.60	0.34	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.47	20.75	-6.61	6.61	0.23	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.48	20.75	-6.61	6.61	0.11	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.50	20.75	-6.62	6.62	0.00	1.00	24.09	Vu < PhiVc/2	Not Reqd 1	24.1	0.0	0.0

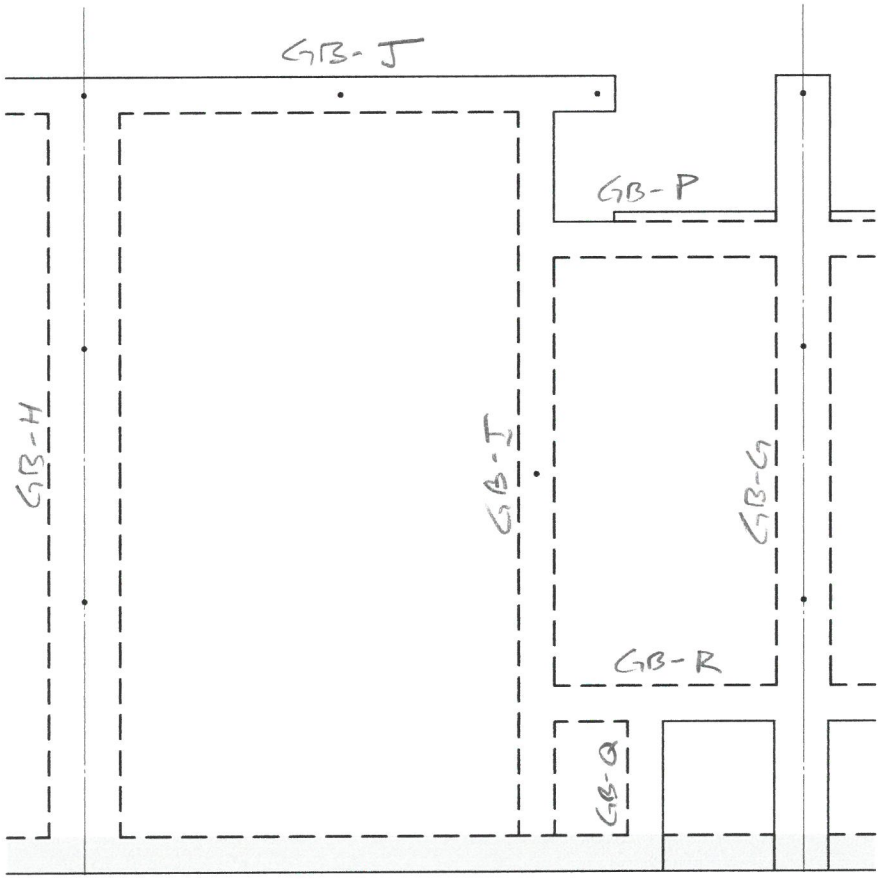
Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	9.500	43.60	79.73	0.55
+1.40D+1.60H					
Span # 1	1	9.500	14.52	79.73	0.18
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	9.500	43.60	79.73	0.55
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	9.500	43.60	79.73	0.55
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	9.500	23.40	79.73	0.29
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	9.500	14.28	79.73	0.18
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	9.500	23.40	79.73	0.29
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	9.500	14.28	79.73	0.18
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	9.500	23.40	79.73	0.29
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	9.500	23.40	79.73	0.29
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	9.500	23.40	79.73	0.29
+0.90D+W+0.90H					
Span # 1	1	9.500	8.36	79.73	0.10
+0.90D+E+0.90H					
Span # 1	1	9.500	8.36	79.73	0.10

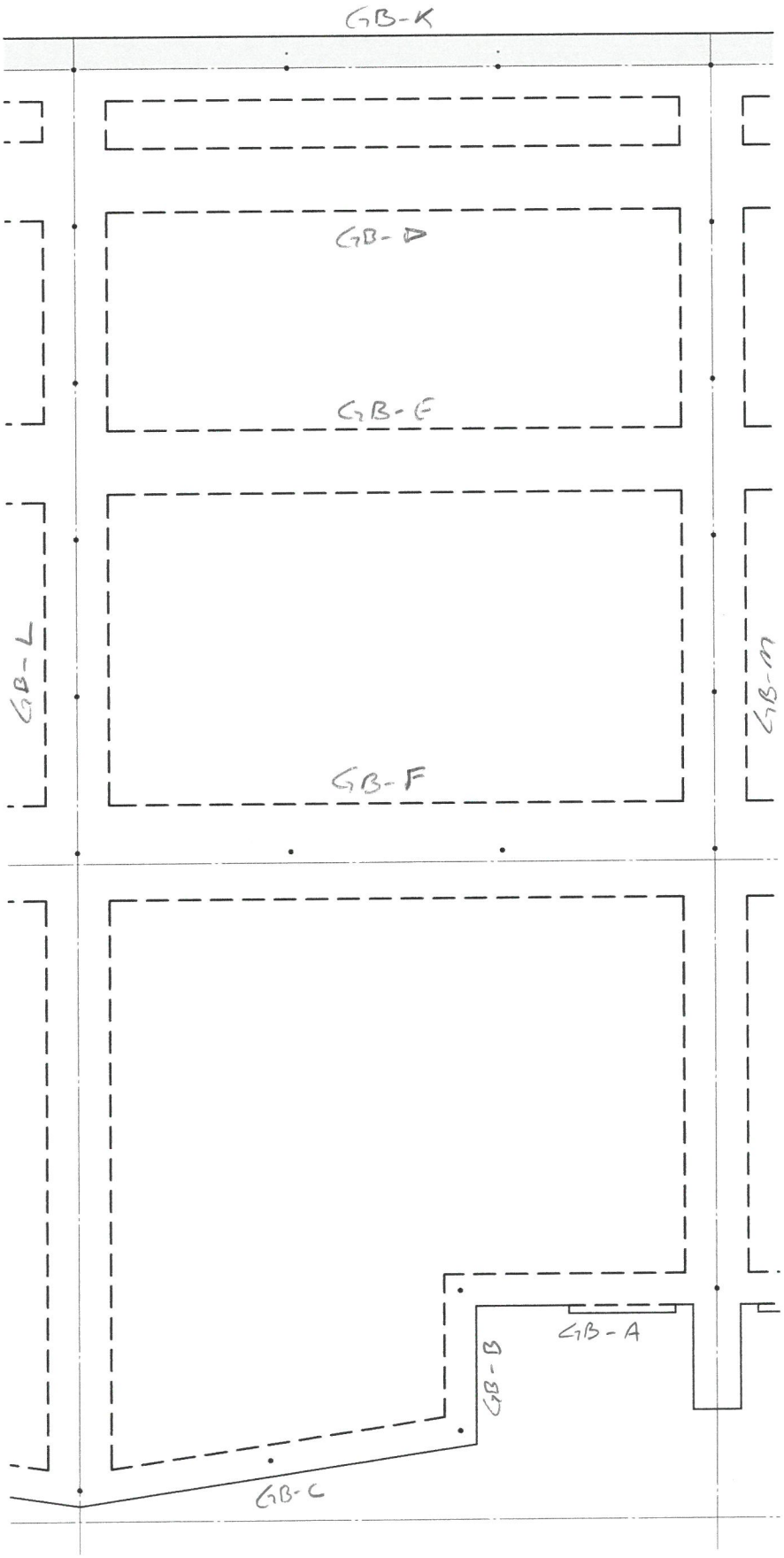
Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0077	4.127	L Only	-0.0000	0.000

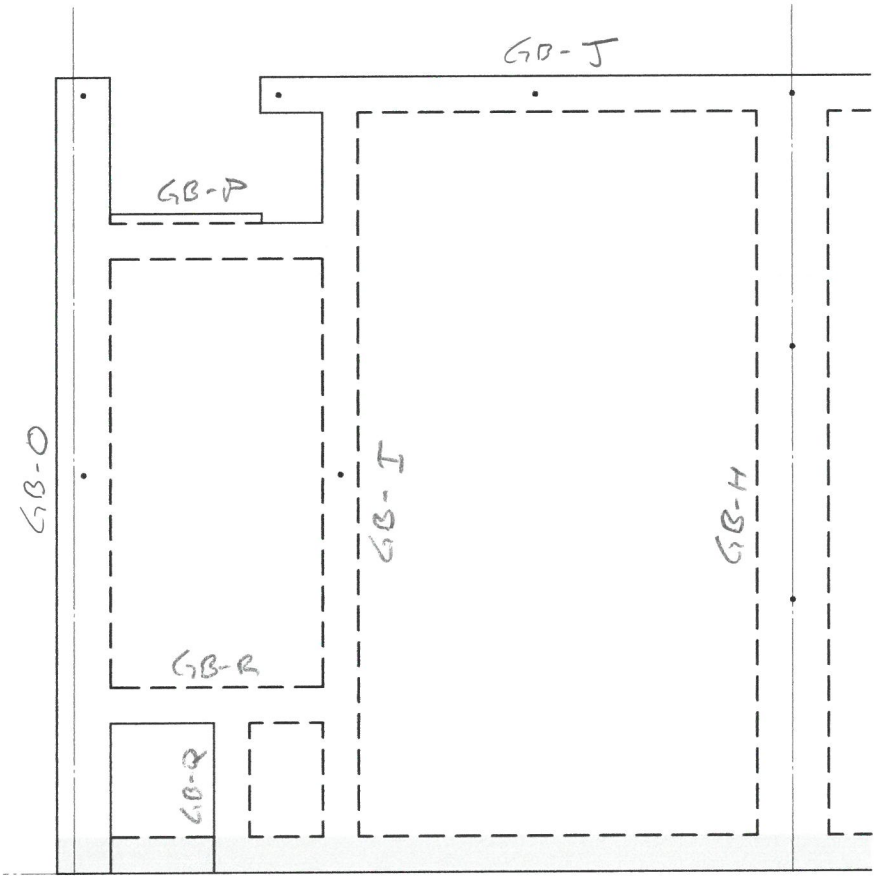
TYPICAL UNIT UPPER GRADE BEAM KEY PLAN



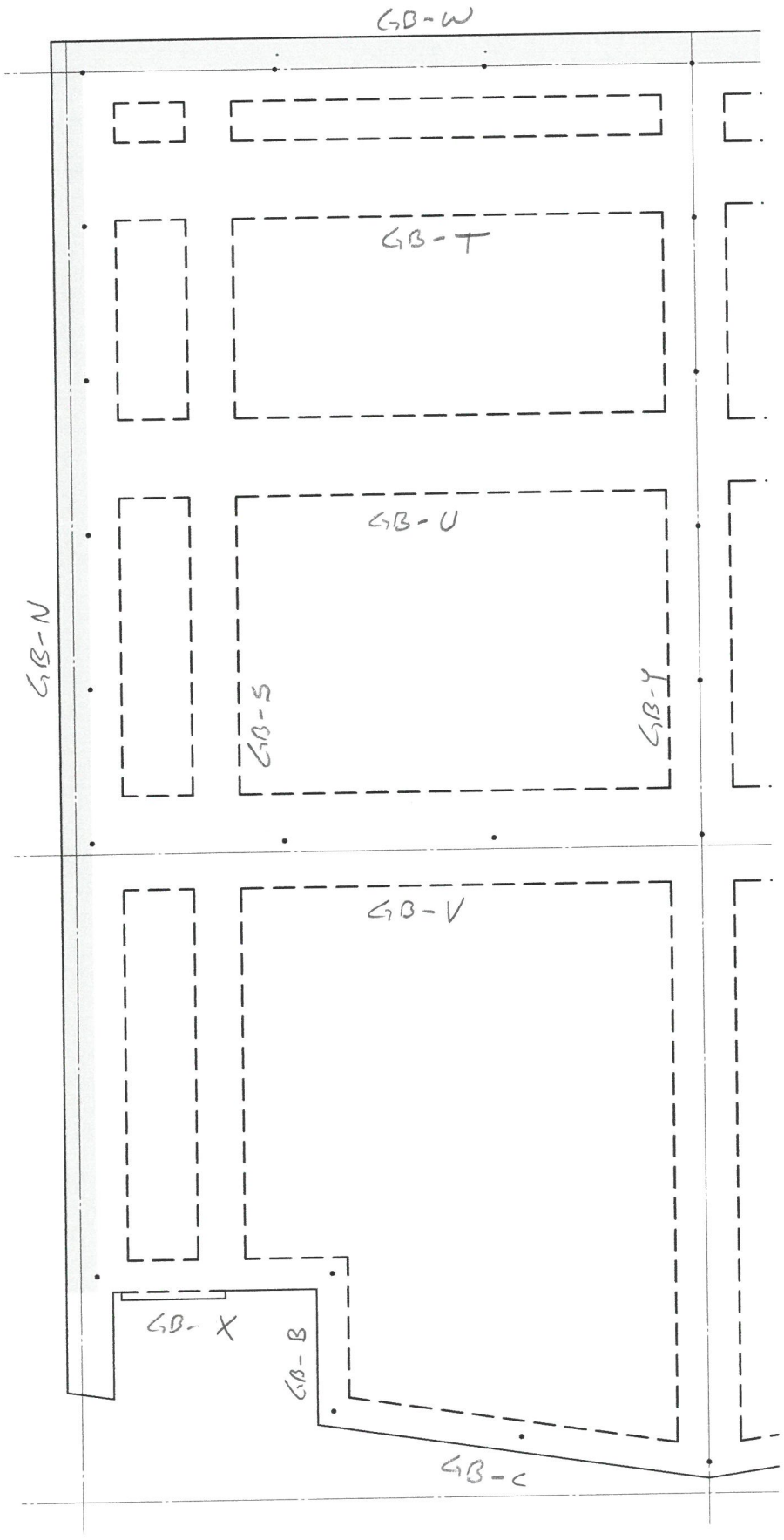
TYPICAL UNIT LOWER GRADE BEAM KEY PLAN



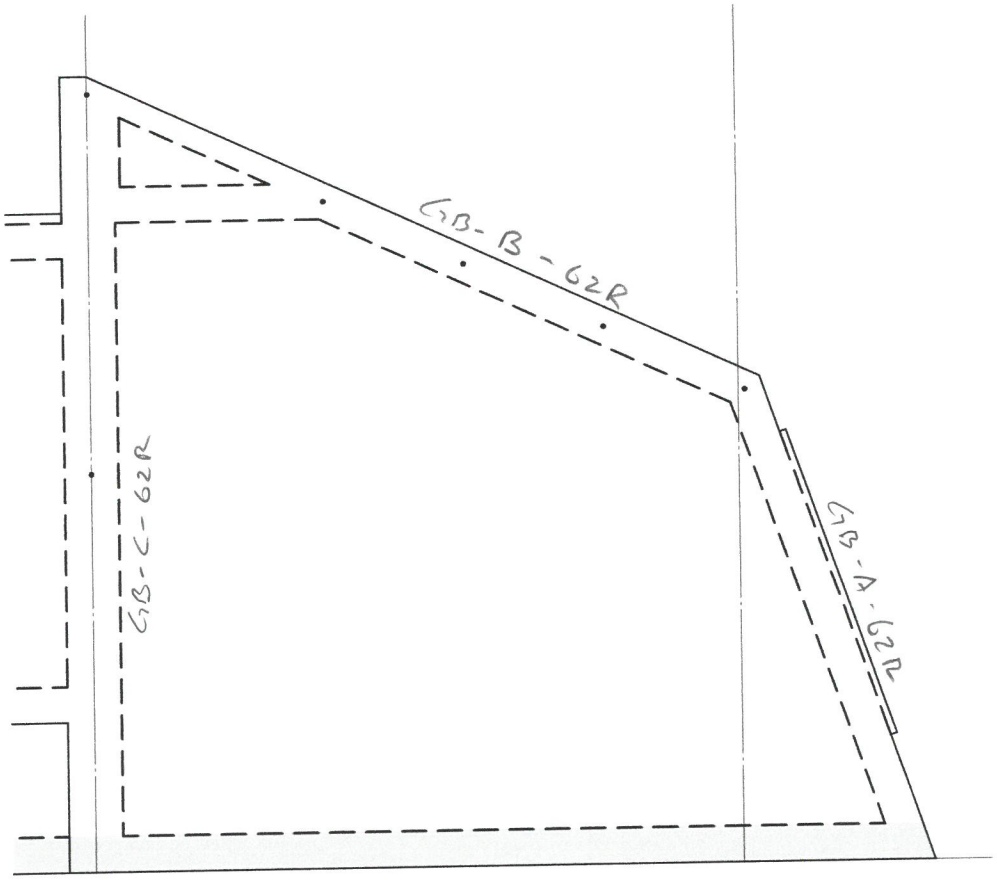
END UNIT UPPER GRADE BEAM KEY PLAN



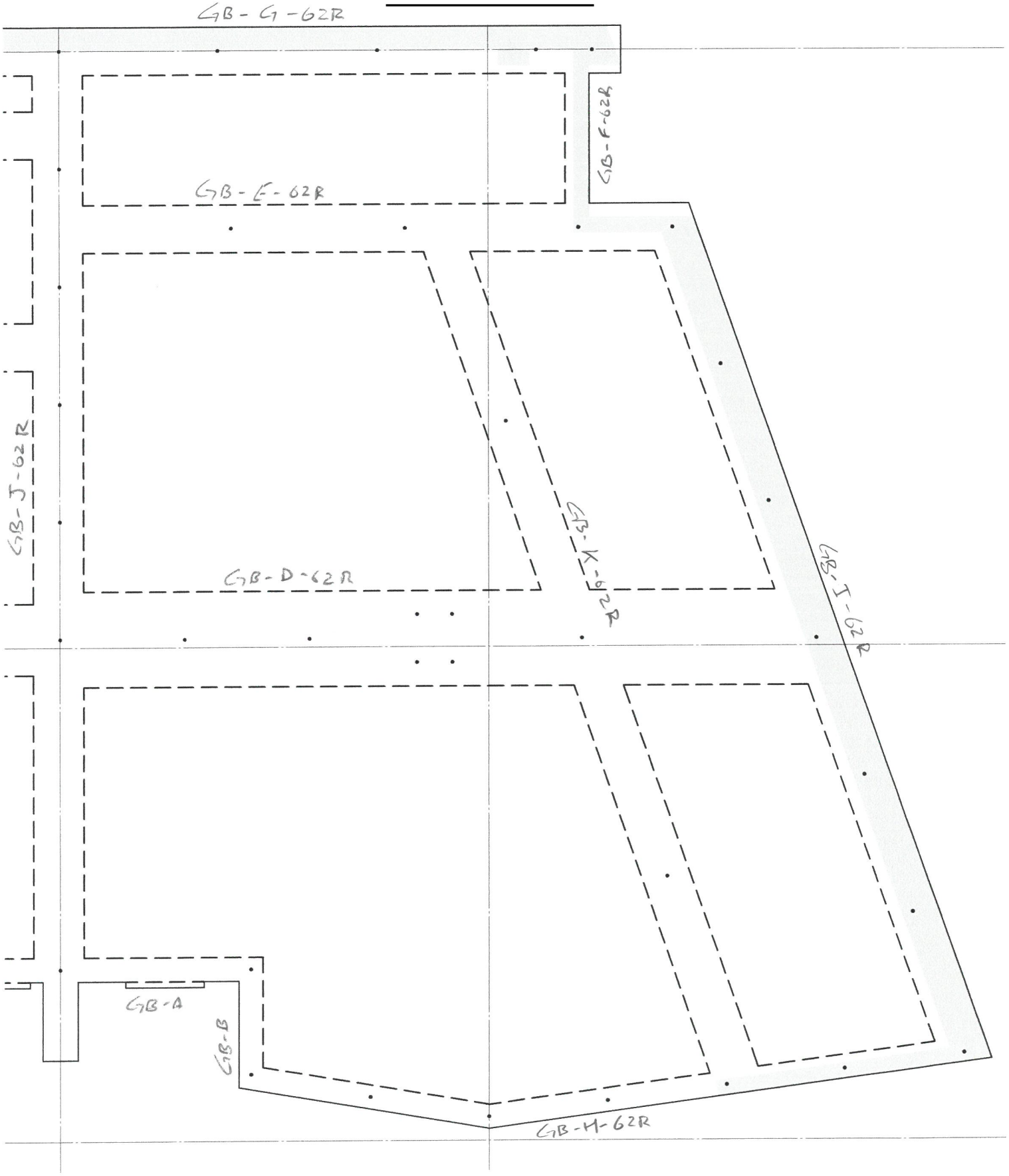
END UNIT LOWER GRADE BEAM KEY PLAN



UNIT 62R UPPER GRADE BEAM
KEY PLAN



UNIT 62R LOWER GRADE BEAM KEY PLAN



Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

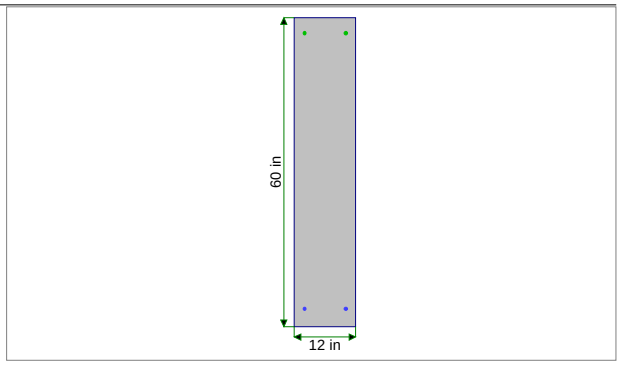
Description : GB-A

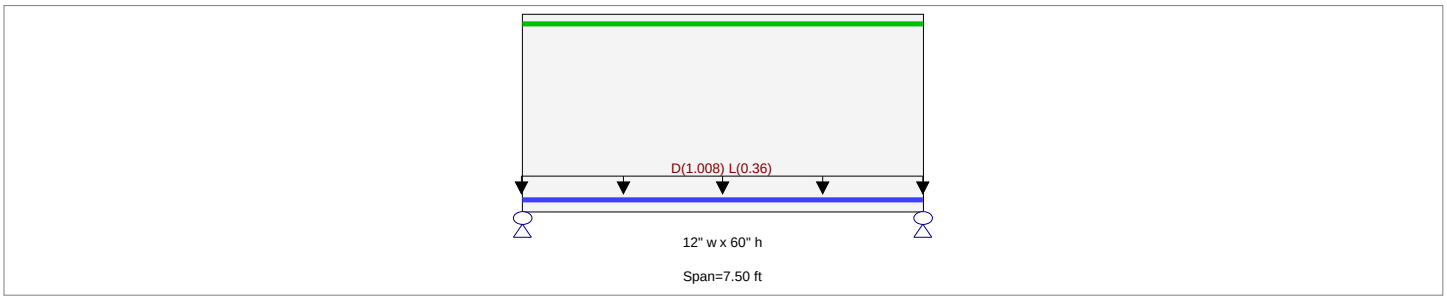
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 60.0 in
Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.50 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 9.0 ft, (slab weight)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.117** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	18.672 k-ft	
Mn * Phi : Allowable	160.215 k-ft	
Location of maximum on span	3.743 ft	
Span # where maximum occurs	Span # 1	

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	7.849	7.849
Overall MINimum	1.350	1.350
+D+H	6.499	6.499
+D+L+H	7.849	7.849
+D+Lr+H	6.499	6.499
+D+S+H	6.499	6.499
+D+0.750Lr+0.750L+H	7.511	7.511
+D+0.750L+0.750S+H	7.511	7.511
+D+0.60W+H	6.499	6.499
+D+0.70E+H	6.499	6.499
+D+0.750Lr+0.750L+0.450W+H	7.511	7.511
+D+0.750L+0.750S+0.450W+H	7.511	7.511
+D+0.750L+0.750S+0.5250E+H	7.511	7.511

Concrete Beam

Description : GB-A

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+0.60D+0.60W+0.60H	3.899	3.899
+0.60D+0.70E+0.60H	3.899	3.899
D Only	6.499	6.499
Lr Only		
L Only	1.350	1.350
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	56.50	9.96	9.96	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.01	56.50	9.92	9.92	0.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	56.50	9.89	9.89	0.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	56.50	9.85	9.85	0.41	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	56.50	9.81	9.81	0.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	56.50	9.78	9.78	0.67	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.08	56.50	9.74	9.74	0.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	56.50	9.70	9.70	0.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	56.50	9.67	9.67	1.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	56.50	9.63	9.63	1.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	56.50	9.60	9.60	1.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	56.50	9.56	9.56	1.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.16	56.50	9.52	9.52	1.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	56.50	9.49	9.49	1.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	56.50	9.45	9.45	1.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	56.50	9.41	9.41	1.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	56.50	9.38	9.38	2.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.23	56.50	9.34	9.34	2.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.25	56.50	9.31	9.31	2.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	56.50	9.27	9.27	2.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	56.50	9.23	9.23	2.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	56.50	9.20	9.20	2.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	56.50	9.16	9.16	2.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	56.50	9.12	9.12	3.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	56.50	9.09	9.09	3.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	56.50	9.05	9.05	3.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	56.50	9.02	9.02	3.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	56.50	8.98	8.98	3.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	56.50	8.94	8.94	3.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	56.50	8.91	8.91	3.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	56.50	8.87	8.87	3.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.42	56.50	8.83	8.83	3.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	56.50	8.80	8.80	4.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	56.50	8.76	8.76	4.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.46	56.50	8.73	8.73	4.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	56.50	8.69	8.69	4.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	56.50	8.65	8.65	4.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.51	56.50	8.62	8.62	4.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	56.50	8.58	8.58	4.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.53	56.50	8.54	8.54	4.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	56.50	8.51	8.51	5.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.56	56.50	8.47	8.47	5.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	56.50	8.43	8.43	5.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.59	56.50	8.40	8.40	5.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.60	56.50	8.36	8.36	5.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	56.50	8.33	8.33	5.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	56.50	8.29	8.29	5.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	56.50	8.25	8.25	5.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	56.50	8.22	8.22	5.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	56.50	8.18	8.18	6.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.68	56.50	8.14	8.14	6.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	56.50	8.11	8.11	6.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	56.50	8.07	8.07	6.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	56.50	8.04	8.04	6.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	56.50	8.00	8.00	6.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.75	56.50	7.96	7.96	6.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	56.50	7.93	7.93	6.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	56.50	7.89	7.89	6.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	56.50	7.85	7.85	7.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	56.50	7.82	7.82	7.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.82	56.50	7.78	7.78	7.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	56.50	7.75	7.75	7.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	56.50	7.71	7.71	7.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	56.50	7.67	7.67	7.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.87	56.50	7.64	7.64	7.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	56.50	7.60	7.60	7.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.90	56.50	7.56	7.56	7.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	56.50	7.53	7.53	8.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	56.50	7.49	7.49	8.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.94	56.50	7.46	7.46	8.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	56.50	7.42	7.42	8.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.97	56.50	7.38	7.38	8.41	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	56.50	7.35	7.35	8.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	56.50	7.31	7.31	8.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	56.50	7.27	7.27	8.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	56.50	7.24	7.24	8.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	56.50	7.20	7.20	8.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	56.50	7.17	7.17	9.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	56.50	7.13	7.13	9.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	56.50	7.09	7.09	9.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.09	56.50	7.06	7.06	9.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	56.50	7.02	7.02	9.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	56.50	6.98	6.98	9.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	56.50	6.95	6.95	9.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	56.50	6.91	6.91	9.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	56.50	6.87	6.87	9.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	56.50	6.84	6.84	9.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.19	56.50	6.80	6.80	9.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	56.50	6.77	6.77	10.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.22	56.50	6.73	6.73	10.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	56.50	6.69	6.69	10.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	56.50	6.66	6.66	10.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	56.50	6.62	6.62	10.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	56.50	6.58	6.58	10.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	56.50	6.55	6.55	10.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	56.50	6.51	6.51	10.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	56.50	6.48	6.48	10.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.33	56.50	6.44	6.44	10.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	56.50	6.40	6.40	10.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	56.50	6.37	6.37	11.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	56.50	6.33	6.33	11.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	56.50	6.29	6.29	11.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.39	56.50	6.26	6.26	11.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	56.50	6.22	6.22	11.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.42	56.50	6.19	6.19	11.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	56.50	6.15	6.15	11.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	56.50	6.11	6.11	11.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.46	56.50	6.08	6.08	11.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	56.50	6.04	6.04	11.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	56.50	6.00	6.00	11.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	56.50	5.97	5.97	11.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	56.50	5.93	5.93	12.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.53	56.50	5.90	5.90	12.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	56.50	5.86	5.86	12.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	56.50	5.82	5.82	12.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	56.50	5.79	5.79	12.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	56.50	5.75	5.75	12.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	56.50	5.71	5.71	12.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.61	56.50	5.68	5.68	12.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	56.50	5.64	5.64	12.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.64	56.50	5.61	5.61	12.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	56.50	5.57	5.57	12.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.67	56.50	5.53	5.53	12.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	56.50	5.50	5.50	12.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	56.50	5.46	5.46	13.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.71	56.50	5.42	5.42	13.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	56.50	5.39	5.39	13.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	56.50	5.35	5.35	13.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	56.50	5.31	5.31	13.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.76	56.50	5.28	5.28	13.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.78	56.50	5.24	5.24	13.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	56.50	5.21	5.21	13.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	56.50	5.17	5.17	13.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	56.50	5.13	5.13	13.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.83	56.50	5.10	5.10	13.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	56.50	5.06	5.06	13.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	56.50	5.02	5.02	13.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	56.50	4.99	4.99	13.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	56.50	4.95	4.95	14.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.90	56.50	4.92	4.92	14.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	56.50	4.88	4.88	14.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	56.50	4.84	4.84	14.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	56.50	4.81	4.81	14.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	56.50	4.77	4.77	14.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	56.50	4.73	4.73	14.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	56.50	4.70	4.70	14.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	56.50	4.66	4.66	14.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	56.50	4.63	4.63	14.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	56.50	4.59	4.59	14.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	56.50	4.55	4.55	14.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.05	56.50	4.52	4.52	14.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.06	56.50	4.48	4.48	14.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	56.50	4.44	4.44	14.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.09	56.50	4.41	4.41	15.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	56.50	4.37	4.37	15.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.12	56.50	4.34	4.34	15.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	56.50	4.30	4.30	15.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	56.50	4.26	4.26	15.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.16	56.50	4.23	4.23	15.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	56.50	4.19	4.19	15.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.19	56.50	4.15	4.15	15.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	56.50	4.12	4.12	15.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	56.50	4.08	4.08	15.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	56.50	4.05	4.05	15.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	56.50	4.01	4.01	15.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	56.50	3.97	3.97	15.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	56.50	3.94	3.94	15.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.28	56.50	3.90	3.90	15.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	56.50	3.86	3.86	15.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	56.50	3.83	3.83	15.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	56.50	3.79	3.79	15.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	56.50	3.75	3.75	16.02	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.35	56.50	3.72	3.72	16.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	56.50	3.68	3.68	16.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.38	56.50	3.65	3.65	16.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	56.50	3.61	3.61	16.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.40	56.50	3.57	3.57	16.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	56.50	3.54	3.54	16.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	56.50	3.50	3.50	16.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.45	56.50	3.46	3.46	16.41	0.99	62.26	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	56.50	3.43	3.43	16.46	0.98	62.24	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	56.50	3.39	3.39	16.51	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	56.50	3.36	3.36	16.55	0.95	62.21	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.50	56.50	3.32	3.32	16.60	0.94	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	56.50	3.28	3.28	16.64	0.93	62.18	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	56.50	3.25	3.25	16.69	0.92	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	56.50	3.21	3.21	16.73	0.90	62.16	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	56.50	3.17	3.17	16.77	0.89	62.14	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.57	56.50	3.14	3.14	16.82	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	56.50	3.10	3.10	16.86	0.87	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.60	56.50	3.07	3.07	16.90	0.85	62.10	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	56.50	3.03	3.03	16.94	0.84	62.08	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	56.50	2.99	2.99	16.99	0.83	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.64	56.50	2.96	2.96	17.03	0.82	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	56.50	2.92	2.92	17.07	0.81	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	56.50	2.88	2.88	17.11	0.79	62.03	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	56.50	2.85	2.85	17.15	0.78	62.01	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	56.50	2.81	2.81	17.18	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	56.50	2.78	2.78	17.22	0.76	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	56.50	2.74	2.74	17.26	0.75	61.97	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	56.50	2.70	2.70	17.30	0.74	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	56.50	2.67	2.67	17.33	0.72	61.95	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	56.50	2.63	2.63	17.37	0.71	61.93	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	56.50	2.59	2.59	17.41	0.70	61.92	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.79	56.50	2.56	2.56	17.44	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.80	56.50	2.52	2.52	17.48	0.68	61.89	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.81	56.50	2.49	2.49	17.51	0.67	61.88	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.83	56.50	2.45	2.45	17.54	0.66	61.87	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	56.50	2.41	2.41	17.58	0.65	61.86	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.86	56.50	2.38	2.38	17.61	0.64	61.84	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	56.50	2.34	2.34	17.64	0.62	61.83	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	56.50	2.30	2.30	17.67	0.61	61.82	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	56.50	2.27	2.27	17.70	0.60	61.81	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	56.50	2.23	2.23	17.73	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	56.50	2.19	2.19	17.77	0.58	61.78	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	56.50	2.16	2.16	17.79	0.57	61.77	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	56.50	2.12	2.12	17.82	0.56	61.76	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	56.50	2.09	2.09	17.85	0.55	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	56.50	2.05	2.05	17.88	0.54	61.73	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	56.50	2.01	2.01	17.91	0.53	61.72	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	56.50	1.98	1.98	17.94	0.52	61.71	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	56.50	1.94	1.94	17.96	0.51	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	56.50	1.90	1.90	17.99	0.50	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	56.50	1.87	1.87	18.01	0.49	61.67	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	56.50	1.83	1.83	18.04	0.48	61.66	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	56.50	1.80	1.80	18.07	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	56.50	1.76	1.76	18.09	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	56.50	1.72	1.72	18.11	0.45	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	56.50	1.69	1.69	18.14	0.44	61.61	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	56.50	1.65	1.65	18.16	0.43	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.14	56.50	1.61	1.61	18.18	0.42	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	56.50	1.58	1.58	18.20	0.41	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	56.50	1.54	1.54	18.22	0.40	61.57	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	56.50	1.51	1.51	18.25	0.39	61.56	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	56.50	1.47	1.47	18.27	0.38	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	56.50	1.43	1.43	18.29	0.37	61.53	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	56.50	1.40	1.40	18.30	0.36	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	56.50	1.36	1.36	18.32	0.35	61.51	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	56.50	1.32	1.32	18.34	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	56.50	1.29	1.29	18.36	0.33	61.49	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	56.50	1.25	1.25	18.38	0.32	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.29	56.50	1.22	1.22	18.39	0.31	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.31	56.50	1.18	1.18	18.41	0.30	61.46	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	56.50	1.14	1.14	18.43	0.29	61.44	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	56.50	1.11	1.11	18.44	0.28	61.43	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.35	56.50	1.07	1.07	18.46	0.27	61.42	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.36	56.50	1.03	1.03	18.47	0.26	61.41	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	56.50	1.00	1.00	18.48	0.25	61.40	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	56.50	0.96	0.96	18.50	0.24	61.39	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	56.50	0.93	0.93	18.51	0.24	61.38	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.42	56.50	0.89	0.89	18.52	0.23	61.37	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.43	56.50	0.85	0.85	18.54	0.22	61.36	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	56.50	0.82	0.82	18.55	0.21	61.35	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.46	56.50	0.78	0.78	18.56	0.20	61.33	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	56.50	0.74	0.74	18.57	0.19	61.32	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.48	56.50	0.71	0.71	18.58	0.18	61.31	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.50	56.50	0.67	0.67	18.59	0.17	61.30	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	56.50	0.63	0.63	18.60	0.16	61.29	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.52	56.50	0.60	0.60	18.60	0.15	61.28	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.54	56.50	0.56	0.56	18.61	0.14	61.27	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.55	56.50	0.53	0.53	18.62	0.13	61.26	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.57	56.50	0.49	0.49	18.63	0.12	61.25	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	56.50	0.45	0.45	18.63	0.11	61.24	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.59	56.50	0.42	0.42	18.64	0.11	61.23	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	56.50	0.38	0.38	18.64	0.10	61.22	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.62	56.50	0.34	0.34	18.65	0.09	61.21	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.63	56.50	0.31	0.31	18.65	0.08	61.20	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.65	56.50	0.27	0.27	18.66	0.07	61.18	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.66	56.50	0.24	0.24	18.66	0.06	61.17	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.67	56.50	0.20	0.20	18.66	0.05	61.16	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.69	56.50	0.16	0.16	18.67	0.04	61.15	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.70	56.50	0.13	0.13	18.67	0.03	61.14	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.72	56.50	0.09	0.09	18.67	0.02	61.13	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.73	56.50	0.05	0.05	18.67	0.01	61.12	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.74	56.50	0.02	0.02	18.67	0.00	61.11	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.76	56.50	-0.02	0.02	18.67	0.00	61.11	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.77	56.50	-0.05	0.05	18.67	0.01	61.12	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	56.50	-0.09	0.09	18.67	0.02	61.13	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.80	56.50	-0.13	0.13	18.67	0.03	61.14	Vu < PhiVc/2	Not Reqd 1	61.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.81	56.50	-0.16	0.16	18.67	0.04	61.15	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.83	56.50	-0.20	0.20	18.66	0.05	61.16	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.84	56.50	-0.24	0.24	18.66	0.06	61.17	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	56.50	-0.27	0.27	18.66	0.07	61.18	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.87	56.50	-0.31	0.31	18.65	0.08	61.20	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.88	56.50	-0.34	0.34	18.65	0.09	61.21	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	56.50	-0.38	0.38	18.64	0.10	61.22	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.91	56.50	-0.42	0.42	18.64	0.11	61.23	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	56.50	-0.45	0.45	18.63	0.11	61.24	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.93	56.50	-0.49	0.49	18.63	0.12	61.25	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	56.50	-0.53	0.53	18.62	0.13	61.26	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.96	56.50	-0.56	0.56	18.61	0.14	61.27	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.98	56.50	-0.60	0.60	18.60	0.15	61.28	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	56.50	-0.63	0.63	18.60	0.16	61.29	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.00	56.50	-0.67	0.67	18.59	0.17	61.30	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	56.50	-0.71	0.71	18.58	0.18	61.31	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.03	56.50	-0.74	0.74	18.57	0.19	61.32	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.04	56.50	-0.78	0.78	18.56	0.20	61.33	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	56.50	-0.82	0.82	18.55	0.21	61.35	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.07	56.50	-0.85	0.85	18.54	0.22	61.36	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	56.50	-0.89	0.89	18.52	0.23	61.37	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.10	56.50	-0.93	0.93	18.51	0.24	61.38	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.11	56.50	-0.96	0.96	18.50	0.24	61.39	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	56.50	-1.00	1.00	18.48	0.25	61.40	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.14	56.50	-1.03	1.03	18.47	0.26	61.41	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.15	56.50	-1.07	1.07	18.46	0.27	61.42	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.17	56.50	-1.11	1.11	18.44	0.28	61.43	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.18	56.50	-1.14	1.14	18.43	0.29	61.44	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	56.50	-1.18	1.18	18.41	0.30	61.46	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.21	56.50	-1.22	1.22	18.39	0.31	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.22	56.50	-1.25	1.25	18.38	0.32	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	56.50	-1.29	1.29	18.36	0.33	61.49	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.25	56.50	-1.32	1.32	18.34	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	56.50	-1.36	1.36	18.32	0.35	61.51	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.28	56.50	-1.40	1.40	18.30	0.36	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.29	56.50	-1.43	1.43	18.29	0.37	61.53	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	56.50	-1.47	1.47	18.27	0.38	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.32	56.50	-1.51	1.51	18.25	0.39	61.56	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	56.50	-1.54	1.54	18.22	0.40	61.57	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.34	56.50	-1.58	1.58	18.20	0.41	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.36	56.50	-1.61	1.61	18.18	0.42	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	56.50	-1.65	1.65	18.16	0.43	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.39	56.50	-1.69	1.69	18.14	0.44	61.61	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	56.50	-1.72	1.72	18.11	0.45	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.41	56.50	-1.76	1.76	18.09	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	56.50	-1.80	1.80	18.07	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	56.50	-1.83	1.83	18.04	0.48	61.66	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.45	56.50	-1.87	1.87	18.01	0.49	61.67	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	56.50	-1.90	1.90	17.99	0.50	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.48	56.50	-1.94	1.94	17.96	0.51	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.49	56.50	-1.98	1.98	17.94	0.52	61.71	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.51	56.50	-2.01	2.01	17.91	0.53	61.72	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.52	56.50	-2.05	2.05	17.88	0.54	61.73	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	56.50	-2.09	2.09	17.85	0.55	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.55	56.50	-2.12	2.12	17.82	0.56	61.76	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.56	56.50	-2.16	2.16	17.79	0.57	61.77	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.58	56.50	-2.19	2.19	17.77	0.58	61.78	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.59	56.50	-2.23	2.23	17.73	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.60	56.50	-2.27	2.27	17.70	0.60	61.81	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	56.50	-2.30	2.30	17.67	0.61	61.82	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.63	56.50	-2.34	2.34	17.64	0.62	61.83	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	56.50	-2.38	2.38	17.61	0.64	61.84	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.66	56.50	-2.41	2.41	17.58	0.65	61.86	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.67	56.50	-2.45	2.45	17.54	0.66	61.87	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.69	56.50	-2.49	2.49	17.51	0.67	61.88	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.70	56.50	-2.52	2.52	17.48	0.68	61.89	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	56.50	-2.56	2.56	17.44	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.73	56.50	-2.59	2.59	17.41	0.70	61.92	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	56.50	-2.63	2.63	17.37	0.71	61.93	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.75	56.50	-2.67	2.67	17.33	0.72	61.95	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.77	56.50	-2.70	2.70	17.30	0.74	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	56.50	-2.74	2.74	17.26	0.75	61.97	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.80	56.50	-2.78	2.78	17.22	0.76	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	56.50	-2.81	2.81	17.18	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.82	56.50	-2.85	2.85	17.15	0.78	62.01	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.84	56.50	-2.88	2.88	17.11	0.79	62.03	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	56.50	-2.92	2.92	17.07	0.81	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.86	56.50	-2.96	2.96	17.03	0.82	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	56.50	-2.99	2.99	16.99	0.83	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.89	56.50	-3.03	3.03	16.94	0.84	62.08	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.90	56.50	-3.07	3.07	16.90	0.85	62.10	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	56.50	-3.10	3.10	16.86	0.87	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.93	56.50	-3.14	3.14	16.82	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	56.50	-3.17	3.17	16.77	0.89	62.14	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.96	56.50	-3.21	3.21	16.73	0.90	62.16	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.97	56.50	-3.25	3.25	16.69	0.92	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	56.50	-3.28	3.28	16.64	0.93	62.18	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.00	56.50	-3.32	3.32	16.60	0.94	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.01	56.50	-3.36	3.36	16.55	0.95	62.21	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.03	56.50	-3.39	3.39	16.51	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	56.50	-3.43	3.43	16.46	0.98	62.24	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.05	56.50	-3.46	3.46	16.41	0.99	62.26	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	56.50	-3.50	3.50	16.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.08	56.50	-3.54	3.54	16.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.10	56.50	-3.57	3.57	16.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.11	56.50	-3.61	3.61	16.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	56.50	-3.65	3.65	16.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.14	56.50	-3.68	3.68	16.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.15	56.50	-3.72	3.72	16.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	56.50	-3.75	3.75	16.02	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.18	56.50	-3.79	3.79	15.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	56.50	-3.83	3.83	15.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.20	56.50	-3.86	3.86	15.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.22	56.50	-3.90	3.90	15.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	56.50	-3.94	3.94	15.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.25	56.50	-3.97	3.97	15.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	56.50	-4.01	4.01	15.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.27	56.50	-4.05	4.05	15.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	56.50	-4.08	4.08	15.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.30	56.50	-4.12	4.12	15.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.31	56.50	-4.15	4.15	15.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	56.50	-4.19	4.19	15.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.34	56.50	-4.23	4.23	15.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	56.50	-4.26	4.26	15.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.37	56.50	-4.30	4.30	15.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.38	56.50	-4.34	4.34	15.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	56.50	-4.37	4.37	15.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.41	56.50	-4.41	4.41	15.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.42	56.50	-4.44	4.44	14.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.44	56.50	-4.48	4.48	14.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.45	56.50	-4.52	4.52	14.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.46	56.50	-4.55	4.55	14.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.48	56.50	-4.59	4.59	14.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.49	56.50	-4.63	4.63	14.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.51	56.50	-4.66	4.66	14.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.52	56.50	-4.70	4.70	14.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.53	56.50	-4.73	4.73	14.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.55	56.50	-4.77	4.77	14.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.56	56.50	-4.81	4.81	14.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	56.50	-4.84	4.84	14.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.59	56.50	-4.88	4.88	14.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	56.50	-4.92	4.92	14.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.61	56.50	-4.95	4.95	14.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.63	56.50	-4.99	4.99	13.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	56.50	-5.02	5.02	13.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.66	56.50	-5.06	5.06	13.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	56.50	-5.10	5.10	13.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.68	56.50	-5.13	5.13	13.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.70	56.50	-5.17	5.17	13.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	56.50	-5.21	5.21	13.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.72	56.50	-5.24	5.24	13.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	56.50	-5.28	5.28	13.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.75	56.50	-5.31	5.31	13.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.77	56.50	-5.35	5.35	13.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	56.50	-5.39	5.39	13.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.79	56.50	-5.42	5.42	13.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	56.50	-5.46	5.46	13.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.82	56.50	-5.50	5.50	12.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	56.50	-5.53	5.53	12.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.85	56.50	-5.57	5.57	12.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.86	56.50	-5.61	5.61	12.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.87	56.50	-5.64	5.64	12.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.89	56.50	-5.68	5.68	12.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	56.50	-5.71	5.71	12.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.92	56.50	-5.75	5.75	12.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.93	56.50	-5.79	5.79	12.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.94	56.50	-5.82	5.82	12.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.96	56.50	-5.86	5.86	12.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.97	56.50	-5.90	5.90	12.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	56.50	-5.93	5.93	12.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.00	56.50	-5.97	5.97	11.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.01	56.50	-6.00	6.00	11.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	56.50	-6.04	6.04	11.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.04	56.50	-6.08	6.08	11.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	56.50	-6.11	6.11	11.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.07	56.50	-6.15	6.15	11.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.08	56.50	-6.19	6.19	11.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	56.50	-6.22	6.22	11.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.11	56.50	-6.26	6.26	11.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	56.50	-6.29	6.29	11.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.13	56.50	-6.33	6.33	11.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	56.50	-6.37	6.37	11.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.16	56.50	-6.40	6.40	10.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.17	56.50	-6.44	6.44	10.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	56.50	-6.48	6.48	10.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.20	56.50	-6.51	6.51	10.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	56.50	-6.55	6.55	10.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.23	56.50	-6.58	6.58	10.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.24	56.50	-6.62	6.62	10.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	56.50	-6.66	6.66	10.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.27	56.50	-6.69	6.69	10.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.28	56.50	-6.73	6.73	10.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.30	56.50	-6.77	6.77	10.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.31	56.50	-6.80	6.80	9.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	56.50	-6.84	6.84	9.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.34	56.50	-6.87	6.87	9.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.35	56.50	-6.91	6.91	9.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.37	56.50	-6.95	6.95	9.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.38	56.50	-6.98	6.98	9.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	56.50	-7.02	7.02	9.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.41	56.50	-7.06	7.06	9.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.42	56.50	-7.09	7.09	9.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	56.50	-7.13	7.13	9.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.45	56.50	-7.17	7.17	9.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	56.50	-7.20	7.20	8.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.48	56.50	-7.24	7.24	8.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.49	56.50	-7.27	7.27	8.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	56.50	-7.31	7.31	8.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.52	56.50	-7.35	7.35	8.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.53	56.50	-7.38	7.38	8.41	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.54	56.50	-7.42	7.42	8.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.56	56.50	-7.46	7.46	8.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	56.50	-7.49	7.49	8.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.58	56.50	-7.53	7.53	8.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	56.50	-7.56	7.56	7.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.61	56.50	-7.60	7.60	7.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.63	56.50	-7.64	7.64	7.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	56.50	-7.67	7.67	7.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.65	56.50	-7.71	7.71	7.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.67	56.50	-7.75	7.75	7.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.68	56.50	-7.78	7.78	7.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.69	56.50	-7.82	7.82	7.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.71	56.50	-7.85	7.85	7.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.72	56.50	-7.89	7.89	6.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.73	56.50	-7.93	7.93	6.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.75	56.50	-7.96	7.96	6.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.76	56.50	-8.00	8.00	6.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.78	56.50	-8.04	8.04	6.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.79	56.50	-8.07	8.07	6.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.80	56.50	-8.11	8.11	6.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.82	56.50	-8.14	8.14	6.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.83	56.50	-8.18	8.18	6.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	56.50	-8.22	8.22	5.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.86	56.50	-8.25	8.25	5.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.87	56.50	-8.29	8.29	5.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.89	56.50	-8.33	8.33	5.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.90	56.50	-8.36	8.36	5.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.91	56.50	-8.40	8.40	5.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.93	56.50	-8.43	8.43	5.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	56.50	-8.47	8.47	5.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.95	56.50	-8.51	8.51	5.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.97	56.50	-8.54	8.54	4.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	56.50	-8.58	8.58	4.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.99	56.50	-8.62	8.62	4.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	56.50	-8.65	8.65	4.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.02	56.50	-8.69	8.69	4.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.04	56.50	-8.73	8.73	4.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.05	56.50	-8.76	8.76	4.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.06	56.50	-8.80	8.80	4.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	56.50	-8.83	8.83	3.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.09	56.50	-8.87	8.87	3.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.10	56.50	-8.91	8.91	3.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.12	56.50	-8.94	8.94	3.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.13	56.50	-8.98	8.98	3.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.14	56.50	-9.02	9.02	3.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.16	56.50	-9.05	9.05	3.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.17	56.50	-9.09	9.09	3.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.19	56.50	-9.12	9.12	3.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.20	56.50	-9.16	9.16	2.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.21	56.50	-9.20	9.20	2.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	7.23	56.50	-9.23	9.23	2.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.24	56.50	-9.27	9.27	2.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	56.50	-9.31	9.31	2.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.27	56.50	-9.34	9.34	2.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.28	56.50	-9.38	9.38	2.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.30	56.50	-9.41	9.41	1.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.31	56.50	-9.45	9.45	1.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	56.50	-9.49	9.49	1.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.34	56.50	-9.52	9.52	1.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.35	56.50	-9.56	9.56	1.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	56.50	-9.60	9.60	1.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.38	56.50	-9.63	9.63	1.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	56.50	-9.67	9.67	1.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.40	56.50	-9.70	9.70	0.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.42	56.50	-9.74	9.74	0.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	56.50	-9.78	9.78	0.67	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.45	56.50	-9.81	9.81	0.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	56.50	-9.85	9.85	0.41	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.47	56.50	-9.89	9.89	0.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	56.50	-9.92	9.92	0.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.50	56.50	-9.96	9.96	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.500	18.67	160.21	0.12
+1.40D+1.60H					
Span # 1	1	7.500	17.06	160.21	0.11
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	7.500	18.67	160.21	0.12
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	7.500	18.67	160.21	0.12
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	7.500	15.89	160.21	0.10
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	7.500	14.62	160.21	0.09
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	7.500	15.89	160.21	0.10
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.500	14.62	160.21	0.09
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	7.500	15.89	160.21	0.10
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	7.500	15.89	160.21	0.10
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	7.500	15.89	160.21	0.10
+0.90D+W+0.90H					
Span # 1	1	7.500	10.97	160.21	0.07
+0.90D+E+0.90H					
Span # 1	1	7.500	10.97	160.21	0.07

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0002	3.750		0.0000	0.000

Concrete Beam

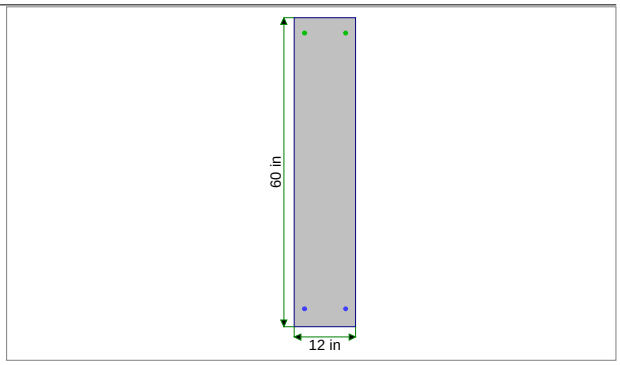
Description : GB-B

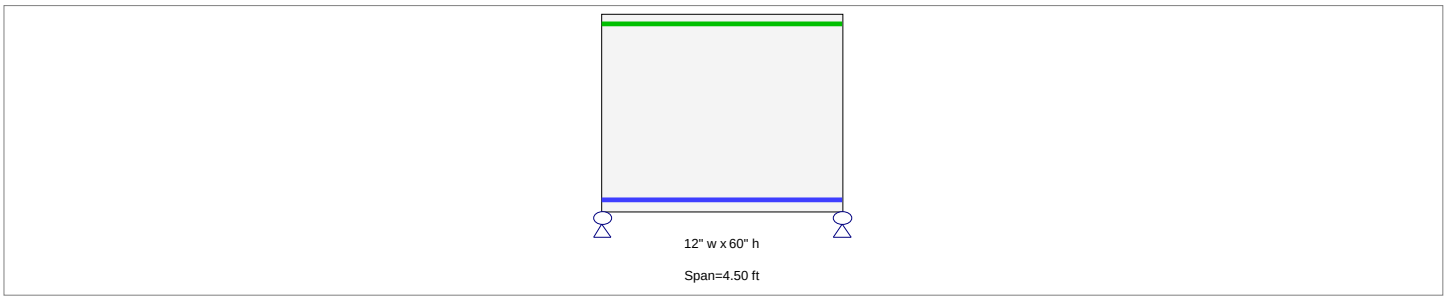
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 60.0 in
Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 4.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 4.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.
Beam self weight calculated and added to loads

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.011** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied		2.569 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable		223.831 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Location of maximum on span		2.246 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 1				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	1.631	1.631
Overall MINimum	0.979	0.979
+D+H	1.631	1.631
+D+L+H	1.631	1.631
+D+Lr+H	1.631	1.631
+D+S+H	1.631	1.631
+D+0.750Lr+0.750L+H	1.631	1.631
+D+0.750L+0.750S+H	1.631	1.631
+D+0.60W+H	1.631	1.631
+D+0.70E+H	1.631	1.631
+D+0.750Lr+0.750L+0.450W+H	1.631	1.631
+D+0.750L+0.750S+0.450W+H	1.631	1.631
+D+0.750L+0.750S+0.5250E+H	1.631	1.631
+0.60D+0.60W+0.60H	0.979	0.979
+0.60D+0.70E+0.60H	0.979	0.979

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
D Only	1.631	1.631
Lr Only		
L Only		
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	0.00	56.50	2.28	2.28	0.00	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.01	56.50	2.28	2.28	0.02	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.02	56.50	2.27	2.27	0.04	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.02	56.50	2.26	2.26	0.06	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.03	56.50	2.25	2.25	0.07	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.04	56.50	2.24	2.24	0.09	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.05	56.50	2.23	2.23	0.11	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.06	56.50	2.23	2.23	0.13	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.07	56.50	2.22	2.22	0.15	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.07	56.50	2.21	2.21	0.17	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.08	56.50	2.20	2.20	0.18	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.09	56.50	2.19	2.19	0.20	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.10	56.50	2.18	2.18	0.22	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.11	56.50	2.18	2.18	0.24	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.11	56.50	2.17	2.17	0.26	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.12	56.50	2.16	2.16	0.27	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.13	56.50	2.15	2.15	0.29	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.14	56.50	2.14	2.14	0.31	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.15	56.50	2.13	2.13	0.33	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.16	56.50	2.13	2.13	0.34	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.16	56.50	2.12	2.12	0.36	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.17	56.50	2.11	2.11	0.38	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.18	56.50	2.10	2.10	0.40	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.19	56.50	2.09	2.09	0.41	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.20	56.50	2.08	2.08	0.43	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.20	56.50	2.08	2.08	0.45	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.21	56.50	2.07	2.07	0.46	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.22	56.50	2.06	2.06	0.48	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.23	56.50	2.05	2.05	0.50	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.24	56.50	2.04	2.04	0.51	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.25	56.50	2.03	2.03	0.53	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.25	56.50	2.03	2.03	0.55	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.26	56.50	2.02	2.02	0.56	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.27	56.50	2.01	2.01	0.58	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.28	56.50	2.00	2.00	0.60	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.29	56.50	1.99	1.99	0.61	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.30	56.50	1.98	1.98	0.63	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.30	56.50	1.98	1.98	0.65	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.31	56.50	1.97	1.97	0.66	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.32	56.50	1.96	1.96	0.68	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.33	56.50	1.95	1.95	0.69	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.34	56.50	1.94	1.94	0.71	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.34	56.50	1.93	1.93	0.73	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.35	56.50	1.93	1.93	0.74	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.40D+1.60H	1	0.36	56.50	1.92	1.92	0.76	1.00	62.75	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	0.37	56.50	1.91	1.91	0.77	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.38	56.50	1.90	1.90	0.79	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.39	56.50	1.89	1.89	0.80	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.39	56.50	1.88	1.88	0.82	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.40	56.50	1.88	1.88	0.84	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.41	56.50	1.87	1.87	0.85	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.42	56.50	1.86	1.86	0.87	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.43	56.50	1.85	1.85	0.88	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.43	56.50	1.84	1.84	0.90	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.44	56.50	1.83	1.83	0.91	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.45	56.50	1.83	1.83	0.93	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.46	56.50	1.82	1.82	0.94	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.47	56.50	1.81	1.81	0.96	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.48	56.50	1.80	1.80	0.97	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.48	56.50	1.79	1.79	0.99	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.49	56.50	1.78	1.78	1.00	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.50	56.50	1.78	1.78	1.02	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.51	56.50	1.77	1.77	1.03	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.52	56.50	1.76	1.76	1.04	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.52	56.50	1.75	1.75	1.06	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.53	56.50	1.74	1.74	1.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.54	56.50	1.73	1.73	1.09	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.55	56.50	1.73	1.73	1.10	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.56	56.50	1.72	1.72	1.12	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.57	56.50	1.71	1.71	1.13	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.57	56.50	1.70	1.70	1.14	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.58	56.50	1.69	1.69	1.16	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.59	56.50	1.68	1.68	1.17	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.60	56.50	1.68	1.68	1.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.61	56.50	1.67	1.67	1.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.61	56.50	1.66	1.66	1.21	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.62	56.50	1.65	1.65	1.23	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.63	56.50	1.64	1.64	1.24	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.64	56.50	1.63	1.63	1.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.65	56.50	1.63	1.63	1.27	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.66	56.50	1.62	1.62	1.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.66	56.50	1.61	1.61	1.29	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.67	56.50	1.60	1.60	1.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.68	56.50	1.59	1.59	1.32	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.69	56.50	1.58	1.58	1.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.70	56.50	1.58	1.58	1.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.70	56.50	1.57	1.57	1.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.71	56.50	1.56	1.56	1.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.72	56.50	1.55	1.55	1.38	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.73	56.50	1.54	1.54	1.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.74	56.50	1.53	1.53	1.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.75	56.50	1.53	1.53	1.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.75	56.50	1.52	1.52	1.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.76	56.50	1.51	1.51	1.45	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.77	56.50	1.50	1.50	1.46	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.78	56.50	1.49	1.49	1.47	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.79	56.50	1.49	1.49	1.48	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.80	56.50	1.48	1.48	1.49	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.80	56.50	1.47	1.47	1.51	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	0.81	56.50	1.46	1.46	1.52	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.82	56.50	1.45	1.45	1.53	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.83	56.50	1.44	1.44	1.54	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.84	56.50	1.44	1.44	1.55	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.84	56.50	1.43	1.43	1.57	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.85	56.50	1.42	1.42	1.58	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.86	56.50	1.41	1.41	1.59	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.87	56.50	1.40	1.40	1.60	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.88	56.50	1.39	1.39	1.61	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.89	56.50	1.39	1.39	1.62	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.89	56.50	1.38	1.38	1.64	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.90	56.50	1.37	1.37	1.65	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.91	56.50	1.36	1.36	1.66	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.92	56.50	1.35	1.35	1.67	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.93	56.50	1.34	1.34	1.68	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.93	56.50	1.34	1.34	1.69	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.94	56.50	1.33	1.33	1.70	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.95	56.50	1.32	1.32	1.71	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.96	56.50	1.31	1.31	1.72	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.97	56.50	1.30	1.30	1.73	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.98	56.50	1.29	1.29	1.74	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.98	56.50	1.29	1.29	1.76	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	0.99	56.50	1.28	1.28	1.77	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.00	56.50	1.27	1.27	1.78	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.01	56.50	1.26	1.26	1.79	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.02	56.50	1.25	1.25	1.80	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.02	56.50	1.24	1.24	1.81	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.03	56.50	1.24	1.24	1.82	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.04	56.50	1.23	1.23	1.83	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.05	56.50	1.22	1.22	1.84	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.06	56.50	1.21	1.21	1.85	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.07	56.50	1.20	1.20	1.86	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.07	56.50	1.19	1.19	1.87	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.08	56.50	1.19	1.19	1.88	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.09	56.50	1.18	1.18	1.89	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.10	56.50	1.17	1.17	1.90	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.11	56.50	1.16	1.16	1.91	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.11	56.50	1.15	1.15	1.92	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.12	56.50	1.14	1.14	1.92	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.13	56.50	1.14	1.14	1.93	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.14	56.50	1.13	1.13	1.94	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.15	56.50	1.12	1.12	1.95	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.16	56.50	1.11	1.11	1.96	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.16	56.50	1.10	1.10	1.97	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.17	56.50	1.09	1.09	1.98	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.18	56.50	1.09	1.09	1.99	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.19	56.50	1.08	1.08	2.00	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.20	56.50	1.07	1.07	2.01	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.20	56.50	1.06	1.06	2.01	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.21	56.50	1.05	1.05	2.02	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.22	56.50	1.04	1.04	2.03	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.23	56.50	1.04	1.04	2.04	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.24	56.50	1.03	1.03	2.05	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.25	56.50	1.02	1.02	2.06	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.25	56.50	1.01	1.01	2.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.26	56.50	1.00	1.00	2.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.27	56.50	0.99	0.99	2.08	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.28	56.50	0.99	0.99	2.09	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.29	56.50	0.98	0.98	2.10	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.30	56.50	0.97	0.97	2.11	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.30	56.50	0.96	0.96	2.11	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.31	56.50	0.95	0.95	2.12	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.32	56.50	0.94	0.94	2.13	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.33	56.50	0.94	0.94	2.14	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.34	56.50	0.93	0.93	2.15	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.34	56.50	0.92	0.92	2.15	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.35	56.50	0.91	0.91	2.16	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.36	56.50	0.90	0.90	2.17	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.37	56.50	0.89	0.89	2.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.38	56.50	0.89	0.89	2.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.39	56.50	0.88	0.88	2.19	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.39	56.50	0.87	0.87	2.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.40	56.50	0.86	0.86	2.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.41	56.50	0.85	0.85	2.21	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.42	56.50	0.84	0.84	2.22	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.43	56.50	0.84	0.84	2.22	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.43	56.50	0.83	0.83	2.23	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.44	56.50	0.82	0.82	2.24	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.45	56.50	0.81	0.81	2.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.46	56.50	0.80	0.80	2.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.47	56.50	0.79	0.79	2.26	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.48	56.50	0.79	0.79	2.26	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.48	56.50	0.78	0.78	2.27	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.49	56.50	0.77	0.77	2.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.50	56.50	0.76	0.76	2.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.51	56.50	0.75	0.75	2.29	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.52	56.50	0.74	0.74	2.30	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.52	56.50	0.74	0.74	2.30	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.53	56.50	0.73	0.73	2.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.54	56.50	0.72	0.72	2.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.55	56.50	0.71	0.71	2.32	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.56	56.50	0.70	0.70	2.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.57	56.50	0.69	0.69	2.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.57	56.50	0.69	0.69	2.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.58	56.50	0.68	0.68	2.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.59	56.50	0.67	0.67	2.35	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.60	56.50	0.66	0.66	2.35	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.61	56.50	0.65	0.65	2.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.61	56.50	0.64	0.64	2.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.62	56.50	0.64	0.64	2.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.63	56.50	0.63	0.63	2.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.64	56.50	0.62	0.62	2.38	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.65	56.50	0.61	0.61	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.66	56.50	0.60	0.60	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.66	56.50	0.59	0.59	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.67	56.50	0.59	0.59	2.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.68	56.50	0.58	0.58	2.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.69	56.50	0.57	0.57	2.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.70	56.50	0.56	0.56	2.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.70	56.50	0.55	0.55	2.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.71	56.50	0.54	0.54	2.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.72	56.50	0.54	0.54	2.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.73	56.50	0.53	0.53	2.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.74	56.50	0.52	0.52	2.44	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	1.75	56.50	0.51	0.51	2.44	0.99	62.73	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	1.75	56.50	0.50	0.50	2.44	0.97	62.70	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	1.76	56.50	0.50	0.50	2.45	0.95	62.68	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	1.77	56.50	0.49	0.49	2.45	0.93	62.65	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	1.78	56.50	0.48	0.48	2.46	0.92	62.62	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	1.79	56.50	0.47	0.47	2.46	0.90	62.59	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	1.80	56.50	0.46	0.46	2.46	0.88	62.56	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	1.80	56.50	0.45	0.45	2.47	0.87	62.53	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	1.81	56.50	0.45	0.45	2.47	0.85	62.50	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	1.82	56.50	0.44	0.44	2.48	0.83	62.48	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	1.83	56.50	0.43	0.43	2.48	0.81	62.45	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	1.84	56.50	0.42	0.42	2.48	0.80	62.42	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	1.84	56.50	0.41	0.41	2.49	0.78	62.39	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	1.85	56.50	0.40	0.40	2.49	0.76	62.36	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	1.86	56.50	0.40	0.40	2.49	0.75	62.34	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	1.87	56.50	0.39	0.39	2.50	0.73	62.31	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	1.88	56.50	0.38	0.38	2.50	0.71	62.28	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	1.89	56.50	0.37	0.37	2.50	0.70	62.25	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	1.89	56.50	0.36	0.36	2.50	0.68	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	1.90	56.50	0.35	0.35	2.51	0.66	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	1.91	56.50	0.35	0.35	2.51	0.65	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	1.92	56.50	0.34	0.34	2.51	0.63	62.15	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.40D+1.60H	1	1.93	56.50	0.33	0.33	2.52	0.61	62.12	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.40D+1.60H	1	1.93	56.50	0.32	0.32	2.52	0.60	62.09	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.40D+1.60H	1	1.94	56.50	0.31	0.31	2.52	0.58	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.40D+1.60H	1	1.95	56.50	0.30	0.30	2.52	0.57	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.40D+1.60H	1	1.96	56.50	0.30	0.30	2.53	0.55	62.01	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.40D+1.60H	1	1.97	56.50	0.29	0.29	2.53	0.53	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.40D+1.60H	1	1.98	56.50	0.28	0.28	2.53	0.52	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.40D+1.60H	1	1.98	56.50	0.27	0.27	2.53	0.50	61.93	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.40D+1.60H	1	1.99	56.50	0.26	0.26	2.54	0.49	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.40D+1.60H	1	2.00	56.50	0.25	0.25	2.54	0.47	61.88	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.40D+1.60H	1	2.01	56.50	0.25	0.25	2.54	0.46	61.86	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.40D+1.60H	1	2.02	56.50	0.24	0.24	2.54	0.44	61.83	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.40D+1.60H	1	2.02	56.50	0.23	0.23	2.54	0.42	61.80	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.40D+1.60H	1	2.03	56.50	0.22	0.22	2.55	0.41	61.78	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.40D+1.60H	1	2.04	56.50	0.21	0.21	2.55	0.39	61.75	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.40D+1.60H	1	2.05	56.50	0.20	0.20	2.55	0.38	61.73	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.40D+1.60H	1	2.06	56.50	0.20	0.20	2.55	0.36	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.40D+1.60H	1	2.07	56.50	0.19	0.19	2.55	0.35	61.67	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.40D+1.60H	1	2.07	56.50	0.18	0.18	2.55	0.33	61.65	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.40D+1.60H	1	2.08	56.50	0.17	0.17	2.55	0.31	61.62	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.40D+1.60H	1	2.09	56.50	0.16	0.16	2.56	0.30	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.40D+1.60H	1	2.10	56.50	0.15	0.15	2.56	0.28	61.57	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.40D+1.60H	1	2.11	56.50	0.15	0.15	2.56	0.27	61.55	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	2.11	56.50	0.14	0.14	2.56	0.25	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	2.12	56.50	0.13	0.13	2.56	0.24	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	2.13	56.50	0.12	0.12	2.56	0.22	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	2.14	56.50	0.11	0.11	2.56	0.21	61.45	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.15	56.50	0.10	0.10	2.56	0.19	61.42	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.16	56.50	0.10	0.10	2.56	0.18	61.39	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.16	56.50	0.09	0.09	2.57	0.16	61.37	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.17	56.50	0.08	0.08	2.57	0.15	61.34	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.18	56.50	0.07	0.07	2.57	0.13	61.32	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.19	56.50	0.06	0.06	2.57	0.11	61.29	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.20	56.50	0.05	0.05	2.57	0.10	61.27	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.20	56.50	0.05	0.05	2.57	0.08	61.24	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.21	56.50	0.04	0.04	2.57	0.07	61.22	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.22	56.50	0.03	0.03	2.57	0.05	61.19	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.23	56.50	0.02	0.02	2.57	0.04	61.17	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.24	56.50	0.01	0.01	2.57	0.02	61.14	Vu < PhiVc/2	Not Reqd	1 61.1	0.0	0.0
+1.40D+1.60H	1	2.25	56.50	0.00	0.00	2.57	0.01	61.12	Vu < PhiVc/2	Not Reqd	1 61.1	0.0	0.0
+1.40D+1.60H	1	2.25	56.50	-0.00	0.00	2.57	0.01	61.12	Vu < PhiVc/2	Not Reqd	1 61.1	0.0	0.0
+1.40D+1.60H	1	2.26	56.50	-0.01	0.01	2.57	0.02	61.14	Vu < PhiVc/2	Not Reqd	1 61.1	0.0	0.0
+1.40D+1.60H	1	2.27	56.50	-0.02	0.02	2.57	0.04	61.17	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.28	56.50	-0.03	0.03	2.57	0.05	61.19	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.29	56.50	-0.04	0.04	2.57	0.07	61.22	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.30	56.50	-0.05	0.05	2.57	0.08	61.24	Vu < PhiVc/2	Not Reqd	1 61.2	0.0	0.0
+1.40D+1.60H	1	2.30	56.50	-0.05	0.05	2.57	0.10	61.27	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.31	56.50	-0.06	0.06	2.57	0.11	61.29	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.32	56.50	-0.07	0.07	2.57	0.13	61.32	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.33	56.50	-0.08	0.08	2.57	0.15	61.34	Vu < PhiVc/2	Not Reqd	1 61.3	0.0	0.0
+1.40D+1.60H	1	2.34	56.50	-0.09	0.09	2.57	0.16	61.37	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.34	56.50	-0.10	0.10	2.56	0.18	61.39	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.35	56.50	-0.10	0.10	2.56	0.19	61.42	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.36	56.50	-0.11	0.11	2.56	0.21	61.45	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.40D+1.60H	1	2.37	56.50	-0.12	0.12	2.56	0.22	61.47	Vu < PhiVc/2	Not Reqd	1 61.5	0.0	0.0
+1.40D+1.60H	1	2.38	56.50	-0.13	0.13	2.56	0.24	61.50	Vu < PhiVc/2	Not Reqd	1 61.5	0.0	0.0
+1.40D+1.60H	1	2.39	56.50	-0.14	0.14	2.56	0.25	61.52	Vu < PhiVc/2	Not Reqd	1 61.5	0.0	0.0
+1.40D+1.60H	1	2.39	56.50	-0.15	0.15	2.56	0.27	61.55	Vu < PhiVc/2	Not Reqd	1 61.5	0.0	0.0
+1.40D+1.60H	1	2.40	56.50	-0.15	0.15	2.56	0.28	61.57	Vu < PhiVc/2	Not Reqd	1 61.6	0.0	0.0
+1.40D+1.60H	1	2.41	56.50	-0.16	0.16	2.56	0.30	61.60	Vu < PhiVc/2	Not Reqd	1 61.6	0.0	0.0
+1.40D+1.60H	1	2.42	56.50	-0.17	0.17	2.55	0.31	61.62	Vu < PhiVc/2	Not Reqd	1 61.6	0.0	0.0
+1.40D+1.60H	1	2.43	56.50	-0.18	0.18	2.55	0.33	61.65	Vu < PhiVc/2	Not Reqd	1 61.6	0.0	0.0
+1.40D+1.60H	1	2.43	56.50	-0.19	0.19	2.55	0.35	61.67	Vu < PhiVc/2	Not Reqd	1 61.7	0.0	0.0
+1.40D+1.60H	1	2.44	56.50	-0.20	0.20	2.55	0.36	61.70	Vu < PhiVc/2	Not Reqd	1 61.7	0.0	0.0
+1.40D+1.60H	1	2.45	56.50	-0.20	0.20	2.55	0.38	61.73	Vu < PhiVc/2	Not Reqd	1 61.7	0.0	0.0
+1.40D+1.60H	1	2.46	56.50	-0.21	0.21	2.55	0.39	61.75	Vu < PhiVc/2	Not Reqd	1 61.8	0.0	0.0
+1.40D+1.60H	1	2.47	56.50	-0.22	0.22	2.55	0.41	61.78	Vu < PhiVc/2	Not Reqd	1 61.8	0.0	0.0
+1.40D+1.60H	1	2.48	56.50	-0.23	0.23	2.54	0.42	61.80	Vu < PhiVc/2	Not Reqd	1 61.8	0.0	0.0
+1.40D+1.60H	1	2.48	56.50	-0.24	0.24	2.54	0.44	61.83	Vu < PhiVc/2	Not Reqd	1 61.8	0.0	0.0
+1.40D+1.60H	1	2.49	56.50	-0.25	0.25	2.54	0.46	61.86	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.40D+1.60H	1	2.50	56.50	-0.25	0.25	2.54	0.47	61.88	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.40D+1.60H	1	2.51	56.50	-0.26	0.26	2.54	0.49	61.91	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.40D+1.60H	1	2.52	56.50	-0.27	0.27	2.53	0.50	61.93	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.40D+1.60H	1	2.52	56.50	-0.28	0.28	2.53	0.52	61.96	Vu < PhiVc/2	Not Reqd	1 62.0	0.0	0.0
+1.40D+1.60H	1	2.53	56.50	-0.29	0.29	2.53	0.53	61.99	Vu < PhiVc/2	Not Reqd	1 62.0	0.0	0.0
+1.40D+1.60H	1	2.54	56.50	-0.30	0.30	2.53	0.55	62.01	Vu < PhiVc/2	Not Reqd	1 62.0	0.0	0.0
+1.40D+1.60H	1	2.55	56.50	-0.30	0.30	2.52	0.57	62.04	Vu < PhiVc/2	Not Reqd	1 62.0	0.0	0.0
+1.40D+1.60H	1	2.56	56.50	-0.31	0.31	2.52	0.58	62.07	Vu < PhiVc/2	Not Reqd	1 62.1	0.0	0.0
+1.40D+1.60H	1	2.57	56.50	-0.32	0.32	2.52	0.60	62.09	Vu < PhiVc/2	Not Reqd	1 62.1	0.0	0.0
+1.40D+1.60H	1	2.57	56.50	-0.33	0.33	2.52	0.61	62.12	Vu < PhiVc/2	Not Reqd	1 62.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	2.58	56.50	-0.34	0.34	2.51	0.63	62.15	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.40D+1.60H	1	2.59	56.50	-0.35	0.35	2.51	0.65	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	2.60	56.50	-0.35	0.35	2.51	0.66	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	2.61	56.50	-0.36	0.36	2.50	0.68	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.40D+1.60H	1	2.61	56.50	-0.37	0.37	2.50	0.70	62.25	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	2.62	56.50	-0.38	0.38	2.50	0.71	62.28	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	2.63	56.50	-0.39	0.39	2.50	0.73	62.31	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	2.64	56.50	-0.40	0.40	2.49	0.75	62.34	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.40D+1.60H	1	2.65	56.50	-0.40	0.40	2.49	0.76	62.36	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	2.66	56.50	-0.41	0.41	2.49	0.78	62.39	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	2.66	56.50	-0.42	0.42	2.48	0.80	62.42	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	2.67	56.50	-0.43	0.43	2.48	0.81	62.45	Vu < PhiVc/2	Not Reqd 1	62.4	0.0	0.0
+1.40D+1.60H	1	2.68	56.50	-0.44	0.44	2.48	0.83	62.48	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	2.69	56.50	-0.45	0.45	2.47	0.85	62.50	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	2.70	56.50	-0.45	0.45	2.47	0.87	62.53	Vu < PhiVc/2	Not Reqd 1	62.5	0.0	0.0
+1.40D+1.60H	1	2.70	56.50	-0.46	0.46	2.46	0.88	62.56	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	2.71	56.50	-0.47	0.47	2.46	0.90	62.59	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	2.72	56.50	-0.48	0.48	2.46	0.92	62.62	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	2.73	56.50	-0.49	0.49	2.45	0.93	62.65	Vu < PhiVc/2	Not Reqd 1	62.6	0.0	0.0
+1.40D+1.60H	1	2.74	56.50	-0.50	0.50	2.45	0.95	62.68	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	2.75	56.50	-0.50	0.50	2.44	0.97	62.70	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	2.75	56.50	-0.51	0.51	2.44	0.99	62.73	Vu < PhiVc/2	Not Reqd 1	62.7	0.0	0.0
+1.40D+1.60H	1	2.76	56.50	-0.52	0.52	2.44	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.77	56.50	-0.53	0.53	2.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.78	56.50	-0.54	0.54	2.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.79	56.50	-0.54	0.54	2.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.80	56.50	-0.55	0.55	2.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.80	56.50	-0.56	0.56	2.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.81	56.50	-0.57	0.57	2.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.82	56.50	-0.58	0.58	2.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.83	56.50	-0.59	0.59	2.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.84	56.50	-0.59	0.59	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.84	56.50	-0.60	0.60	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.85	56.50	-0.61	0.61	2.39	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.86	56.50	-0.62	0.62	2.38	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.87	56.50	-0.63	0.63	2.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.88	56.50	-0.64	0.64	2.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.89	56.50	-0.64	0.64	2.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.89	56.50	-0.65	0.65	2.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.90	56.50	-0.66	0.66	2.35	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.91	56.50	-0.67	0.67	2.35	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.92	56.50	-0.68	0.68	2.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.93	56.50	-0.69	0.69	2.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.93	56.50	-0.69	0.69	2.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.94	56.50	-0.70	0.70	2.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.95	56.50	-0.71	0.71	2.32	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.96	56.50	-0.72	0.72	2.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.97	56.50	-0.73	0.73	2.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.98	56.50	-0.74	0.74	2.30	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.98	56.50	-0.74	0.74	2.30	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	2.99	56.50	-0.75	0.75	2.29	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.00	56.50	-0.76	0.76	2.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.01	56.50	-0.77	0.77	2.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.02	56.50	-0.78	0.78	2.27	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.02	56.50	-0.79	0.79	2.26	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.03	56.50	-0.79	0.79	2.26	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.04	56.50	-0.80	0.80	2.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.05	56.50	-0.81	0.81	2.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.06	56.50	-0.82	0.82	2.24	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.07	56.50	-0.83	0.83	2.23	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.07	56.50	-0.84	0.84	2.22	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.08	56.50	-0.84	0.84	2.22	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.09	56.50	-0.85	0.85	2.21	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.10	56.50	-0.86	0.86	2.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.11	56.50	-0.87	0.87	2.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.11	56.50	-0.88	0.88	2.19	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.12	56.50	-0.89	0.89	2.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.13	56.50	-0.89	0.89	2.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.14	56.50	-0.90	0.90	2.17	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.15	56.50	-0.91	0.91	2.16	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.16	56.50	-0.92	0.92	2.15	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.16	56.50	-0.93	0.93	2.15	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.17	56.50	-0.94	0.94	2.14	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.18	56.50	-0.94	0.94	2.13	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.19	56.50	-0.95	0.95	2.12	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.20	56.50	-0.96	0.96	2.11	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.20	56.50	-0.97	0.97	2.11	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.21	56.50	-0.98	0.98	2.10	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.22	56.50	-0.99	0.99	2.09	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.23	56.50	-0.99	0.99	2.08	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.24	56.50	-1.00	1.00	2.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.25	56.50	-1.01	1.01	2.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.25	56.50	-1.02	1.02	2.06	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.26	56.50	-1.03	1.03	2.05	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.27	56.50	-1.04	1.04	2.04	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.28	56.50	-1.04	1.04	2.03	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.29	56.50	-1.05	1.05	2.02	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.30	56.50	-1.06	1.06	2.01	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.30	56.50	-1.07	1.07	2.01	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.31	56.50	-1.08	1.08	2.00	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.32	56.50	-1.09	1.09	1.99	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.33	56.50	-1.09	1.09	1.98	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.34	56.50	-1.10	1.10	1.97	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.34	56.50	-1.11	1.11	1.96	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.35	56.50	-1.12	1.12	1.95	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.36	56.50	-1.13	1.13	1.94	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.37	56.50	-1.14	1.14	1.93	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.38	56.50	-1.14	1.14	1.92	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.39	56.50	-1.15	1.15	1.92	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.39	56.50	-1.16	1.16	1.91	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.40	56.50	-1.17	1.17	1.90	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.41	56.50	-1.18	1.18	1.89	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.42	56.50	-1.19	1.19	1.88	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.43	56.50	-1.19	1.19	1.87	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.43	56.50	-1.20	1.20	1.86	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.44	56.50	-1.21	1.21	1.85	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.45	56.50	-1.22	1.22	1.84	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.46	56.50	-1.23	1.23	1.83	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.47	56.50	-1.24	1.24	1.82	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.48	56.50	-1.24	1.24	1.81	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.48	56.50	-1.25	1.25	1.80	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.49	56.50	-1.26	1.26	1.79	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.50	56.50	-1.27	1.27	1.78	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.51	56.50	-1.28	1.28	1.77	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.52	56.50	-1.29	1.29	1.76	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.52	56.50	-1.29	1.29	1.74	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.53	56.50	-1.30	1.30	1.73	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.54	56.50	-1.31	1.31	1.72	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.55	56.50	-1.32	1.32	1.71	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.56	56.50	-1.33	1.33	1.70	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.57	56.50	-1.34	1.34	1.69	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.57	56.50	-1.34	1.34	1.68	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.58	56.50	-1.35	1.35	1.67	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.59	56.50	-1.36	1.36	1.66	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.60	56.50	-1.37	1.37	1.65	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.61	56.50	-1.38	1.38	1.64	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.61	56.50	-1.39	1.39	1.62	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.62	56.50	-1.39	1.39	1.61	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.63	56.50	-1.40	1.40	1.60	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.64	56.50	-1.41	1.41	1.59	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.65	56.50	-1.42	1.42	1.58	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.66	56.50	-1.43	1.43	1.57	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.66	56.50	-1.44	1.44	1.55	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.67	56.50	-1.44	1.44	1.54	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.68	56.50	-1.45	1.45	1.53	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.69	56.50	-1.46	1.46	1.52	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.70	56.50	-1.47	1.47	1.51	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.70	56.50	-1.48	1.48	1.49	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.71	56.50	-1.49	1.49	1.48	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.72	56.50	-1.49	1.49	1.47	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.73	56.50	-1.50	1.50	1.46	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.74	56.50	-1.51	1.51	1.45	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.75	56.50	-1.52	1.52	1.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.75	56.50	-1.53	1.53	1.42	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.76	56.50	-1.53	1.53	1.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.77	56.50	-1.54	1.54	1.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.78	56.50	-1.55	1.55	1.38	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.79	56.50	-1.56	1.56	1.37	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.80	56.50	-1.57	1.57	1.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.80	56.50	-1.58	1.58	1.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.81	56.50	-1.58	1.58	1.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.82	56.50	-1.59	1.59	1.32	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.83	56.50	-1.60	1.60	1.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.84	56.50	-1.61	1.61	1.29	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.84	56.50	-1.62	1.62	1.28	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.85	56.50	-1.63	1.63	1.27	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.86	56.50	-1.63	1.63	1.25	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.87	56.50	-1.64	1.64	1.24	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.88	56.50	-1.65	1.65	1.23	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.89	56.50	-1.66	1.66	1.21	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.89	56.50	-1.67	1.67	1.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.90	56.50	-1.68	1.68	1.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.91	56.50	-1.68	1.68	1.17	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.92	56.50	-1.69	1.69	1.16	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.93	56.50	-1.70	1.70	1.14	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.93	56.50	-1.71	1.71	1.13	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.94	56.50	-1.72	1.72	1.12	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.95	56.50	-1.73	1.73	1.10	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.96	56.50	-1.73	1.73	1.09	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.97	56.50	-1.74	1.74	1.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.98	56.50	-1.75	1.75	1.06	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.98	56.50	-1.76	1.76	1.04	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	3.99	56.50	-1.77	1.77	1.03	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.00	56.50	-1.78	1.78	1.01	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.01	56.50	-1.78	1.78	1.00	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.02	56.50	-1.79	1.79	0.99	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.02	56.50	-1.80	1.80	0.97	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.03	56.50	-1.81	1.81	0.96	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.04	56.50	-1.82	1.82	0.94	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.05	56.50	-1.83	1.83	0.93	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.06	56.50	-1.83	1.83	0.91	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.07	56.50	-1.84	1.84	0.90	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.07	56.50	-1.85	1.85	0.88	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.08	56.50	-1.86	1.86	0.87	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.09	56.50	-1.87	1.87	0.85	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.10	56.50	-1.88	1.88	0.84	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.11	56.50	-1.88	1.88	0.82	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.11	56.50	-1.89	1.89	0.80	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.12	56.50	-1.90	1.90	0.79	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.13	56.50	-1.91	1.91	0.77	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.14	56.50	-1.92	1.92	0.76	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.15	56.50	-1.93	1.93	0.74	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.16	56.50	-1.93	1.93	0.73	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.16	56.50	-1.94	1.94	0.71	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.17	56.50	-1.95	1.95	0.69	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.18	56.50	-1.96	1.96	0.68	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.19	56.50	-1.97	1.97	0.66	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.20	56.50	-1.98	1.98	0.65	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.20	56.50	-1.98	1.98	0.63	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.21	56.50	-1.99	1.99	0.61	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.22	56.50	-2.00	2.00	0.60	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.23	56.50	-2.01	2.01	0.58	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.24	56.50	-2.02	2.02	0.56	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.25	56.50	-2.03	2.03	0.55	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.25	56.50	-2.03	2.03	0.53	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.26	56.50	-2.04	2.04	0.51	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.27	56.50	-2.05	2.05	0.50	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.28	56.50	-2.06	2.06	0.48	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.29	56.50	-2.07	2.07	0.46	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.30	56.50	-2.08	2.08	0.45	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.30	56.50	-2.08	2.08	0.43	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.31	56.50	-2.09	2.09	0.41	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.32	56.50	-2.10	2.10	0.40	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.33	56.50	-2.11	2.11	0.38	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.34	56.50	-2.12	2.12	0.36	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.34	56.50	-2.13	2.13	0.34	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

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Description : GB-B

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	4.35	56.50	-2.13	2.13	0.33	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.36	56.50	-2.14	2.14	0.31	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.37	56.50	-2.15	2.15	0.29	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.38	56.50	-2.16	2.16	0.27	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.39	56.50	-2.17	2.17	0.26	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.39	56.50	-2.18	2.18	0.24	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.40	56.50	-2.18	2.18	0.22	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.41	56.50	-2.19	2.19	0.20	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.42	56.50	-2.20	2.20	0.18	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.43	56.50	-2.21	2.21	0.17	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.43	56.50	-2.22	2.22	0.15	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.44	56.50	-2.23	2.23	0.13	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.45	56.50	-2.23	2.23	0.11	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.46	56.50	-2.24	2.24	0.09	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.47	56.50	-2.25	2.25	0.07	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.48	56.50	-2.26	2.26	0.06	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.48	56.50	-2.27	2.27	0.04	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.49	56.50	-2.28	2.28	0.02	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.40D+1.60H	1	4.50	56.50	-2.28	2.28	0.00	1.00	62.75	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	4.500	2.57	223.83	0.01
+1.40D+1.60H					
Span # 1	1	4.500	2.57	223.83	0.01
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	4.500	2.20	223.83	0.01
+0.90D+W+0.90H					
Span # 1	1	4.500	1.65	223.83	0.01
+0.90D+E+0.90H					
Span # 1	1	4.500	1.65	223.83	0.01

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D Only	1	0.0000	2.250		0.0000	0.000

Concrete Beam

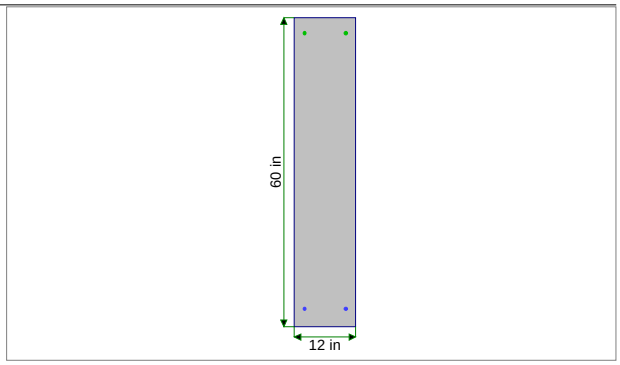
Description : GB-C

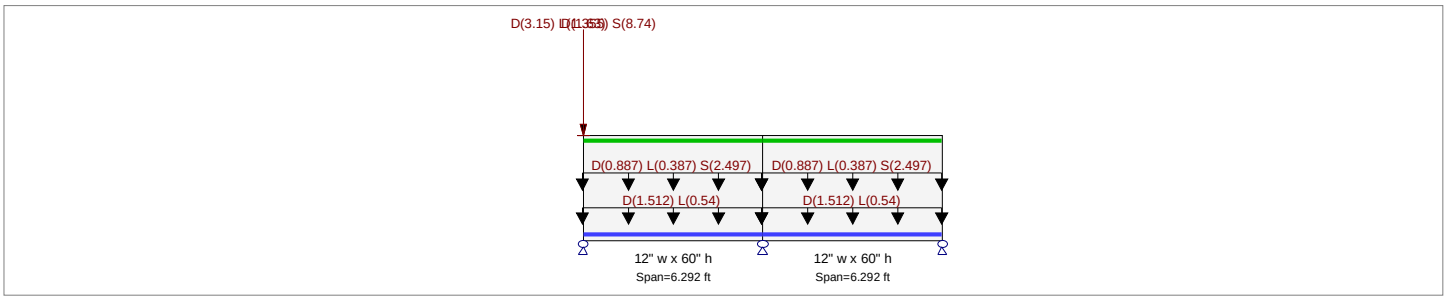
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 60.0 in

Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 6.292 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 6.292 ft in this span

Span #2 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 6.292 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 6.292 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 13.50 ft, (slab weight)
Uniform Load : D = 0.8870, L = 0.3870, S = 2.497 k/ft, Tributary Width = 1.0 ft, (wall load)
Point Load : D = 3.150, L = 1.355, S = 8.740 k @ 0.0 ft, (point load)
Point Load : D = 1.630 k @ 0.0 ft, (GB-B reaction)
Load for Span Number 2
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 13.50 ft, (slab weight)
Uniform Load : D = 0.8870, L = 0.3870, S = 2.497 k/ft, Tributary Width = 1.0 ft, (wall load)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.248** : 1	Maximum Deflection				
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0	<360
Mu : Applied	-40.614 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Mn * Phi : Allowable	163.527 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999	<240
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999	<240
Span # where maximum occurs	Span # 2					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	26.779	44.766	13.702
Overall MINimum	-0.365	3.645	-0.365
+D+H	12.150	24.569	7.370
+D+L+H, LL Comb Run (*L)	11.785	28.214	9.922
+D+L+H, LL Comb Run (L*)	16.056	28.215	7.006

Concrete Beam

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Description : GB-C

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
+D+L+H, LL Comb Run (LL)	15.692	31.860	9.557
+D+Lr+H, LL Comb Run (*L)	12.150	24.569	7.370
+D+Lr+H, LL Comb Run (L*)	12.150	24.569	7.370
+D+Lr+H, LL Comb Run (LL)	12.150	24.569	7.370
+D+S+H	26.779	44.208	13.261
+D+0.750Lr+0.750L+H, LL Comb Run (	11.876	27.303	9.284
+D+0.750Lr+0.750L+H, LL Comb Run (	15.079	27.303	7.097
+D+0.750Lr+0.750L+H, LL Comb Run (	14.806	30.037	9.011
+D+0.750L+0.750S+H, LL Comb Run (*	22.849	42.032	13.702
+D+0.750L+0.750S+H, LL Comb Run (L	26.052	42.033	11.515
+D+0.750L+0.750S+H, LL Comb Run (L	25.778	44.766	13.429
+D+0.60W+H	12.150	24.569	7.370
+D+0.70E+H	12.150	24.569	7.370
+D+0.750Lr+0.750L+0.450W+H, LL Com	11.876	27.303	9.284
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.079	27.303	7.097
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.806	30.037	9.011
+D+0.750L+0.750S+0.450W+H, LL Comb	22.849	42.032	13.702
+D+0.750L+0.750S+0.450W+H, LL Comb	26.052	42.033	11.515
+D+0.750L+0.750S+0.450W+H, LL Comb	25.778	44.766	13.429
+D+0.750L+0.750S+0.5250E+H, LL Com	22.849	42.032	13.702
+D+0.750L+0.750S+0.5250E+H, LL Com	26.052	42.033	11.515
+D+0.750L+0.750S+0.5250E+H, LL Com	25.778	44.766	13.429
+0.60D+0.60W+0.60H	7.290	14.742	4.422
+0.60D+0.70E+0.60H	7.290	14.742	4.422
D Only	12.150	24.569	7.370
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.365	3.645	2.552
L Only, LL Comb Run (L*)	3.906	3.645	-0.365
L Only, LL Comb Run (LL)	3.542	7.291	2.187
S Only	14.630	19.639	5.891
W Only			
E Only			
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H, I	1	0.00	56.50	39.94	39.94	0.00	1.00	62.27	PhiVc/2 < Vu <=	Min 11.5.6	88.9	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.03	56.50	19.33	19.33	0.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.05	56.50	19.12	19.12	1.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.08	56.50	18.91	18.91	1.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.10	56.50	18.70	18.70	1.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.13	56.50	18.49	18.49	2.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.15	56.50	18.28	18.28	2.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.18	56.50	18.07	18.07	3.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.21	56.50	17.86	17.86	3.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.23	56.50	17.65	17.65	4.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.26	56.50	17.44	17.44	4.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.28	56.50	17.22	17.22	5.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.31	56.50	17.01	17.01	5.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.33	56.50	16.80	16.80	6.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.36	56.50	16.59	16.59	6.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.39	56.50	16.38	16.38	6.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.41	56.50	16.17	16.17	7.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.44	56.50	15.96	15.96	7.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.46	56.50	15.75	15.75	8.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.49	56.50	15.54	15.54	8.58	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.51	56.50	15.33	15.33	8.97	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.54	56.50	15.12	15.12	9.36	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.56	56.50	14.91	14.91	9.75	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.59	56.50	14.70	14.70	10.13	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.62	56.50	14.48	14.48	10.50	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.64	56.50	14.27	14.27	10.87	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.67	56.50	14.06	14.06	11.24	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.69	56.50	13.85	13.85	11.59	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.72	56.50	13.64	13.64	11.95	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.74	56.50	13.43	13.43	12.29	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.77	56.50	13.22	13.22	12.64	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	56.50	13.01	13.01	12.97	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.82	56.50	12.80	12.80	13.31	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.85	56.50	12.59	12.59	13.63	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.87	56.50	12.38	12.38	13.95	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.90	56.50	12.17	12.17	14.27	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.92	56.50	11.96	11.96	14.58	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.95	56.50	11.74	11.74	14.88	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.98	56.50	11.53	11.53	15.18	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.00	56.50	11.32	11.32	15.47	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.03	56.50	11.11	11.11	15.76	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.05	56.50	10.90	10.90	16.04	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.08	56.50	10.69	10.69	16.32	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.10	56.50	10.48	10.48	16.59	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.13	56.50	10.27	10.27	16.86	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.16	56.50	10.06	10.06	17.12	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.18	56.50	9.85	9.85	17.38	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.21	56.50	9.64	9.64	17.63	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.23	56.50	9.43	9.43	17.87	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.26	56.50	9.22	9.22	18.11	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.28	56.50	9.00	9.00	18.34	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.31	56.50	8.79	8.79	18.57	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.34	56.50	8.58	8.58	18.80	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	56.50	8.37	8.37	19.01	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.39	56.50	8.16	8.16	19.23	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.41	56.50	7.95	7.95	19.43	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.44	56.50	7.74	7.74	19.63	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.46	56.50	7.53	7.53	19.83	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.49	56.50	7.32	7.32	20.02	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.52	56.50	7.11	7.11	20.21	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.54	56.50	6.90	6.90	20.39	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.57	56.50	6.69	6.69	20.56	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	56.50	6.48	6.48	20.73	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.62	56.50	6.26	6.26	20.89	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.64	56.50	6.05	6.05	21.05	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.67	56.50	5.84	5.84	21.20	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.69	56.50	5.63	5.63	21.35	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.72	56.50	5.42	5.42	21.49	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.75	56.50	5.21	5.21	21.63	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.77	56.50	5.00	5.00	21.76	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.80	56.50	4.79	4.79	21.89	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.82	56.50	4.58	4.58	22.01	0.98	62.24	Vu < PhiVc/2	Not Reqd	1 62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.85	56.50	4.37	4.37	22.12	0.93	62.19	Vu < PhiVc/2	Not Reqd	1 62.2	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	1.87	56.50	4.16	4.16	22.23	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.90	56.50	3.95	3.95	22.34	0.83	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.93	56.50	3.74	3.74	22.43	0.78	62.02	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.95	56.50	3.52	3.52	22.53	0.74	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.98	56.50	3.31	3.31	22.61	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.00	56.50	3.10	3.10	22.70	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.03	56.50	2.89	2.89	22.77	0.60	61.80	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.05	56.50	2.68	2.68	22.85	0.55	61.75	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.08	56.50	2.47	2.47	22.91	0.51	61.69	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.11	56.50	2.26	2.26	22.97	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.13	56.50	2.06	2.06	19.12	0.51	61.69	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.16	56.50	1.89	1.89	19.17	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.18	56.50	1.73	1.73	19.21	0.42	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.21	56.50	1.56	1.56	19.26	0.38	61.55	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.23	56.50	1.39	1.39	19.29	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.26	56.50	1.23	1.23	19.33	0.30	61.45	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.29	56.50	1.06	1.06	19.36	0.26	61.40	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.31	56.50	0.89	0.89	19.38	0.22	61.36	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.34	56.50	0.73	0.73	19.40	0.18	61.31	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.36	56.50	-0.60	0.60	12.53	0.23	61.37	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.39	56.50	-0.73	0.73	12.52	0.27	61.42	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.41	56.50	-0.86	0.86	12.50	0.32	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.44	56.50	-0.99	0.99	12.47	0.37	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.47	56.50	-1.11	1.11	12.45	0.42	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.49	56.50	-1.24	1.24	12.42	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.52	56.50	-1.40	1.40	21.01	0.31	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.54	56.50	-1.60	1.60	20.97	0.36	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.57	56.50	-1.80	1.80	20.92	0.41	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.59	56.50	-2.00	2.00	20.88	0.45	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.62	56.50	-2.20	2.20	20.82	0.50	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.64	56.50	-2.40	2.40	20.76	0.54	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.67	56.50	-2.60	2.60	20.70	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.70	56.50	-2.80	2.80	20.63	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.72	56.50	-2.99	2.99	20.55	0.69	61.90	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.75	56.50	-3.19	3.19	20.48	0.73	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.77	56.50	-3.40	3.40	22.15	0.72	61.95	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.80	56.50	-3.61	3.61	22.06	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.82	56.50	-3.82	3.82	21.96	0.82	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.85	56.50	-4.03	4.03	21.86	0.87	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.88	56.50	-4.25	4.25	21.75	0.92	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.90	56.50	-4.46	4.46	21.64	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.93	56.50	-4.67	4.67	21.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	56.50	-4.88	4.88	21.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.98	56.50	-5.09	5.09	21.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.00	56.50	-5.30	5.30	21.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.03	56.50	-5.51	5.51	21.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.06	56.50	-5.72	5.72	20.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.08	56.50	-5.93	5.93	20.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.11	56.50	-6.14	6.14	20.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.13	56.50	-6.35	6.35	20.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.16	56.50	-6.56	6.56	20.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	56.50	-6.77	6.77	20.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.21	56.50	-6.98	6.98	19.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.24	56.50	-7.20	7.20	19.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	3.26	56.50	-7.41	7.41	19.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.29	56.50	-7.62	7.62	19.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.31	56.50	-7.83	7.83	19.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.34	56.50	-8.04	8.04	18.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.36	56.50	-8.25	8.25	18.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.39	56.50	-8.46	8.46	18.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.42	56.50	-8.67	8.67	18.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.44	56.50	-8.88	8.88	18.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.47	56.50	-9.09	9.09	17.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.49	56.50	-9.30	9.30	17.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	56.50	-9.51	9.51	17.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.54	56.50	-9.72	9.72	17.09	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.57	56.50	-9.94	9.94	16.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.60	56.50	-10.15	10.15	16.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.62	56.50	-10.36	10.36	16.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.65	56.50	-10.57	10.57	16.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.67	56.50	-10.78	10.78	15.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.70	56.50	-10.99	10.99	15.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.72	56.50	-11.20	11.20	15.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	56.50	-11.41	11.41	14.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.77	56.50	-11.62	11.62	14.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.80	56.50	-11.83	11.83	14.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.83	56.50	-12.04	12.04	14.02	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.85	56.50	-12.25	12.25	13.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.88	56.50	-12.46	12.46	13.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.90	56.50	-12.68	12.68	13.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.93	56.50	-12.89	12.89	12.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.95	56.50	-13.10	13.10	12.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	56.50	-13.31	13.31	12.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.01	56.50	-13.52	13.52	11.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.03	56.50	-13.73	13.73	11.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.06	56.50	-13.94	13.94	11.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.08	56.50	-14.15	14.15	10.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.11	56.50	-14.36	14.36	10.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.13	56.50	-14.57	14.57	9.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.16	56.50	-14.78	14.78	9.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.19	56.50	-14.99	14.99	9.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.21	56.50	-15.20	15.20	8.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.24	56.50	-15.42	15.42	8.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.26	56.50	-15.63	15.63	7.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.29	56.50	-15.84	15.84	7.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.31	56.50	-16.05	16.05	7.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.34	56.50	-16.26	16.26	6.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.37	56.50	-16.47	16.47	6.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.39	56.50	-16.68	16.68	5.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.42	56.50	-16.89	16.89	5.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.44	56.50	-17.10	17.10	5.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.47	56.50	-17.31	17.31	4.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.49	56.50	-17.52	17.52	4.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.52	56.50	-17.73	17.73	3.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	56.50	-17.94	17.94	3.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.57	56.50	-18.16	18.16	2.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.60	56.50	-18.37	18.37	2.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.62	56.50	-18.58	18.58	1.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	4.65	56.50	-18.79	18.79	1.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.67	56.50	-19.00	19.00	0.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.70	56.50	-19.21	19.21	0.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.73	57.00	-19.42	19.42	0.12	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.75	57.00	-19.63	19.63	0.62	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.78	57.00	-19.84	19.84	1.13	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.80	57.00	-20.05	20.05	1.64	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.83	57.00	-20.26	20.26	2.16	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.85	57.00	-20.47	20.47	2.68	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.88	57.00	-20.68	20.68	3.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.90	57.00	-20.90	20.90	3.75	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.93	57.00	-21.11	21.11	4.29	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.96	57.00	-21.32	21.32	4.83	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.98	57.00	-21.53	21.53	5.38	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.01	57.00	-21.74	21.74	5.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.03	57.00	-21.95	21.95	6.50	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.06	57.00	-22.16	22.16	7.06	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.08	57.00	-22.37	22.37	7.64	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.11	57.00	-22.58	22.58	8.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.14	57.00	-22.79	22.79	8.80	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.16	57.00	-23.00	23.00	9.38	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.19	57.00	-23.21	23.21	9.98	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.21	57.00	-23.42	23.42	10.58	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.24	57.00	-23.64	23.64	11.18	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.26	57.00	-23.85	23.85	11.79	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.29	57.00	-24.06	24.06	12.40	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.32	57.00	-24.27	24.27	13.03	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.34	57.00	-24.48	24.48	13.65	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.37	57.00	-24.69	24.69	14.28	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.39	57.00	-24.90	24.90	14.92	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.42	57.00	-25.11	25.11	15.56	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.44	57.00	-25.32	25.32	16.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.47	57.00	-25.53	25.53	16.86	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.50	57.00	-25.74	25.74	17.52	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.52	57.00	-25.95	25.95	18.18	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.55	57.00	-26.16	26.16	18.85	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.57	57.00	-26.38	26.38	19.53	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.60	57.00	-26.59	26.59	20.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.62	57.00	-26.80	26.80	20.89	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.65	57.00	-27.01	27.01	21.58	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.68	57.00	-27.22	27.22	22.28	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.70	57.00	-27.43	27.43	22.98	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.73	57.00	-27.64	27.64	23.69	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.75	57.00	-27.85	27.85	24.40	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.78	57.00	-28.06	28.06	25.12	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.80	57.00	-28.27	28.27	25.84	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.83	57.00	-28.48	28.48	26.57	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.85	57.00	-28.69	28.69	27.31	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.88	57.00	-28.90	28.90	28.04	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.91	57.00	-29.12	29.12	28.79	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.93	57.00	-29.33	29.33	29.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.96	57.00	-29.54	29.54	30.30	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.98	57.00	-29.75	29.75	31.06	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.01	57.00	-29.96	29.96	31.82	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	6.03	57.00	-30.17	30.17	32.60	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.06	57.00	-30.38	30.38	33.37	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.09	57.00	-30.59	30.59	34.16	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.11	57.00	-30.80	30.80	34.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.14	57.00	-31.01	31.01	35.74	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.16	57.00	-31.22	31.22	36.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.19	57.00	-31.43	31.43	37.34	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	6.21	57.00	-31.64	31.64	38.15	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	6.24	57.00	-31.86	31.86	38.97	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	6.27	57.00	-32.07	32.07	39.79	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.29	57.00	32.27	32.27	40.61	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.32	57.00	32.06	32.06	39.79	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.34	57.00	31.85	31.85	38.97	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.37	57.00	31.64	31.64	38.15	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.39	57.00	31.43	31.43	37.34	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	6.42	57.00	31.22	31.22	36.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.45	57.00	31.01	31.01	35.74	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.47	57.00	30.80	30.80	34.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.50	57.00	30.59	30.59	34.16	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.52	57.00	30.38	30.38	33.37	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.55	57.00	30.17	30.17	32.60	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.57	57.00	29.96	29.96	31.82	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.60	57.00	29.74	29.74	31.06	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.63	57.00	29.53	29.53	30.30	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.65	57.00	29.32	29.32	29.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.68	57.00	29.11	29.11	28.79	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	57.00	28.90	28.90	28.05	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.73	57.00	28.69	28.69	27.31	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.75	57.00	28.48	28.48	26.57	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.78	57.00	28.27	28.27	25.84	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.81	57.00	28.06	28.06	25.12	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.83	57.00	27.85	27.85	24.40	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.86	57.00	27.64	27.64	23.69	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.88	57.00	27.43	27.43	22.98	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.91	57.00	27.22	27.22	22.28	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	57.00	27.00	27.00	21.59	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.96	57.00	26.79	26.79	20.89	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.98	57.00	26.58	26.58	20.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.01	57.00	26.37	26.37	19.53	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.04	57.00	26.16	26.16	18.86	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.06	57.00	25.95	25.95	18.19	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.09	57.00	25.74	25.74	17.52	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.11	57.00	25.53	25.53	16.86	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.14	57.00	25.32	25.32	16.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	57.00	25.11	25.11	15.56	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.19	57.00	24.90	24.90	14.92	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.22	57.00	24.69	24.69	14.28	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.24	57.00	24.48	24.48	13.65	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	57.00	24.27	24.27	13.03	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.29	57.00	24.05	24.05	12.41	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.32	57.00	23.84	23.84	11.79	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.34	57.00	23.63	23.63	11.18	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.37	57.00	23.42	23.42	10.58	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.40	57.00	23.21	23.21	9.98	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	7.42	57.00	23.00	23.00	9.39	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.45	57.00	22.79	22.79	8.80	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.47	57.00	22.58	22.58	8.22	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.50	57.00	22.37	22.37	7.64	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.52	57.00	22.16	22.16	7.07	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.55	57.00	21.95	21.95	6.50	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.58	57.00	21.74	21.74	5.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.60	57.00	21.53	21.53	5.38	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.63	57.00	21.31	21.31	4.83	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.65	57.00	21.10	21.10	4.29	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.68	57.00	20.89	20.89	3.75	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.70	57.00	20.68	20.68	3.22	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.73	57.00	20.47	20.47	2.69	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.76	57.00	20.26	20.26	2.17	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.78	57.00	20.05	20.05	1.65	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.81	57.00	19.84	19.84	1.14	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.83	57.00	19.63	19.63	0.63	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.86	57.00	19.42	19.42	0.13	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.88	56.50	19.21	19.21	0.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.91	56.50	19.00	19.00	0.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.93	56.50	18.79	18.79	1.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.96	56.50	18.57	18.57	1.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.99	56.50	18.36	18.36	2.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.01	56.50	18.15	18.15	2.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.04	56.50	17.94	17.94	3.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.06	56.50	17.73	17.73	3.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.09	56.50	17.52	17.52	4.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.11	56.50	17.31	17.31	4.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.14	56.50	17.10	17.10	5.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.17	56.50	16.89	16.89	5.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.19	56.50	16.68	16.68	5.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.22	56.50	16.47	16.47	6.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.24	56.50	16.26	16.26	6.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.27	56.50	16.05	16.05	7.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.29	56.50	15.83	15.83	7.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.32	56.50	15.62	15.62	7.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.35	56.50	15.41	15.41	8.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.37	56.50	15.20	15.20	8.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.40	56.50	14.99	14.99	9.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.42	56.50	14.78	14.78	9.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.45	56.50	14.57	14.57	9.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.47	56.50	14.36	14.36	10.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.50	56.50	14.15	14.15	10.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.53	56.50	13.94	13.94	11.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.55	56.50	13.73	13.73	11.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.58	56.50	13.52	13.52	11.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.60	56.50	13.31	13.31	12.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.63	56.50	13.09	13.09	12.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.65	56.50	12.88	12.88	12.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.68	56.50	12.67	12.67	13.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.71	56.50	12.46	12.46	13.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.73	56.50	12.25	12.25	13.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.76	56.50	12.04	12.04	14.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.78	56.50	11.83	11.83	14.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	8.81	56.50	11.62	11.62	14.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.83	56.50	11.41	11.41	14.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	56.50	11.20	11.20	15.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.89	56.50	10.99	10.99	15.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.91	56.50	10.78	10.78	15.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.94	56.50	10.57	10.57	16.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.96	56.50	10.35	10.35	16.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.99	56.50	10.14	10.14	16.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.01	56.50	9.93	9.93	16.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.04	56.50	9.72	9.72	17.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.06	56.50	9.51	9.51	17.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	56.50	9.30	9.30	17.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.12	56.50	9.09	9.09	17.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.14	56.50	8.88	8.88	18.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.17	56.50	8.67	8.67	18.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	56.50	8.46	8.46	18.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.22	56.50	8.25	8.25	18.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.24	56.50	8.04	8.04	18.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.27	56.50	7.83	7.83	19.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.30	56.50	7.61	7.61	19.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	56.50	7.40	7.40	19.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.35	56.50	7.19	7.19	19.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.37	56.50	6.98	6.98	19.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.40	56.50	6.77	6.77	20.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.42	56.50	6.56	6.56	20.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.45	56.50	6.35	6.35	20.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.48	56.50	6.14	6.14	20.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.50	56.50	5.93	5.93	20.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.53	56.50	5.72	5.72	20.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	56.50	5.51	5.51	20.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.58	56.50	5.30	5.30	21.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.60	56.50	5.09	5.09	21.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.63	56.50	4.87	4.87	21.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	56.50	4.66	4.66	21.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.68	56.50	4.45	4.45	21.63	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.71	56.50	4.24	4.24	21.74	0.92	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.73	56.50	4.03	4.03	21.85	0.87	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.76	56.50	3.82	3.82	21.95	0.82	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.78	56.50	3.61	3.61	22.05	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.81	56.50	3.40	3.40	22.14	0.72	61.95	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.84	56.50	3.19	3.19	20.47	0.73	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.86	56.50	2.99	2.99	20.55	0.69	61.90	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	56.50	2.79	2.79	20.62	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.91	56.50	2.59	2.59	20.69	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	56.50	2.40	2.40	20.75	0.54	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.96	56.50	2.20	2.20	20.81	0.50	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.99	56.50	2.00	2.00	20.87	0.45	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.02	56.50	1.80	1.80	20.91	0.40	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.04	56.50	1.60	1.60	20.96	0.36	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.07	56.50	1.40	1.40	21.00	0.31	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.09	56.50	1.24	1.24	12.41	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.12	56.50	1.11	1.11	12.44	0.42	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.14	56.50	0.98	0.98	12.47	0.37	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.17	56.50	0.86	0.86	12.49	0.32	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	10.19	56.50	0.73	0.73	12.51	0.27	61.42	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.22	56.50	0.60	0.60	12.53	0.23	61.37	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.25	56.50	-0.73	0.73	19.40	0.18	61.31	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.27	56.50	-0.89	0.89	19.38	0.22	61.36	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.30	56.50	-1.06	1.06	19.35	0.26	61.40	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.32	56.50	-1.23	1.23	19.32	0.30	61.45	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.35	56.50	-1.39	1.39	19.29	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.37	56.50	-1.56	1.56	19.25	0.38	61.55	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.40	56.50	-1.73	1.73	19.21	0.42	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.43	56.50	-1.89	1.89	19.16	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.45	56.50	-2.06	2.06	19.11	0.51	61.69	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.48	56.50	-2.26	2.26	22.96	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	56.50	-2.47	2.47	22.90	0.51	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.53	56.50	-2.68	2.68	22.83	0.55	61.75	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.55	56.50	-2.90	2.90	22.76	0.60	61.80	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.58	56.50	-3.11	3.11	22.69	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.61	56.50	-3.32	3.32	22.60	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.63	56.50	-3.53	3.53	22.52	0.74	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.66	56.50	-3.74	3.74	22.42	0.78	62.02	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.68	56.50	-3.95	3.95	22.32	0.83	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.71	56.50	-4.16	4.16	22.22	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.73	56.50	-4.37	4.37	22.11	0.93	62.19	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.76	56.50	-4.58	4.58	21.99	0.98	62.24	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.79	56.50	-4.79	4.79	21.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.81	56.50	-5.00	5.00	21.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.84	56.50	-5.21	5.21	21.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.86	56.50	-5.42	5.42	21.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.89	56.50	-5.64	5.64	21.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.91	56.50	-5.85	5.85	21.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.94	56.50	-6.06	6.06	21.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	56.50	-6.27	6.27	20.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.99	56.50	-6.48	6.48	20.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.02	56.50	-6.69	6.69	20.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.04	56.50	-6.90	6.90	20.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.07	56.50	-7.11	7.11	20.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.09	56.50	-7.32	7.32	20.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.12	56.50	-7.53	7.53	19.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.14	56.50	-7.74	7.74	19.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.17	56.50	-7.95	7.95	19.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.20	56.50	-8.16	8.16	19.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.22	56.50	-8.38	8.38	19.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.25	56.50	-8.59	8.59	18.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.27	56.50	-8.80	8.80	18.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.30	56.50	-9.01	9.01	18.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.32	56.50	-9.22	9.22	18.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.35	56.50	-9.43	9.43	17.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.38	56.50	-9.64	9.64	17.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.40	56.50	-9.85	9.85	17.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.43	56.50	-10.06	10.06	17.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.45	56.50	-10.27	10.27	16.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.48	56.50	-10.48	10.48	16.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.50	56.50	-10.69	10.69	16.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	56.50	-10.90	10.90	16.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.56	56.50	-11.12	11.12	15.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	11.58	56.50	-11.33	11.33	15.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.61	56.50	-11.54	11.54	15.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.63	56.50	-11.75	11.75	14.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.66	56.50	-11.96	11.96	14.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.68	56.50	-12.17	12.17	14.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.71	56.50	-12.38	12.38	13.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.74	56.50	-12.59	12.59	13.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.76	56.50	-12.80	12.80	13.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.79	56.50	-13.01	13.01	12.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.81	56.50	-13.22	13.22	12.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.84	56.50	-13.43	13.43	12.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.86	56.50	-13.64	13.64	11.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.89	56.50	-13.86	13.86	11.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.92	56.50	-14.07	14.07	11.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.94	56.50	-14.28	14.28	10.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.97	56.50	-14.49	14.49	10.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.99	56.50	-14.70	14.70	10.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.02	56.50	-14.91	14.91	9.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	56.50	-15.12	15.12	9.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.07	56.50	-15.33	15.33	8.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.10	56.50	-15.54	15.54	8.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.12	56.50	-15.75	15.75	8.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.15	56.50	-15.96	15.96	7.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.17	56.50	-16.17	16.17	7.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.20	56.50	-16.38	16.38	6.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.22	56.50	-16.59	16.59	6.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.25	56.50	-16.81	16.81	6.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.27	56.50	-17.02	17.02	5.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.30	56.50	-17.23	17.23	5.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.33	56.50	-17.44	17.44	4.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.35	56.50	-17.65	17.65	4.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.38	56.50	-17.86	17.86	3.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.40	56.50	-18.07	18.07	3.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.43	56.50	-18.28	18.28	2.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.45	56.50	-18.49	18.49	2.44	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.48	56.50	-18.70	18.70	1.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	56.50	-18.91	18.91	1.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.53	56.50	-19.12	19.12	0.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.56	56.50	-19.33	19.33	0.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.58	56.50	-19.55	19.55	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.292	-39.79	163.53	0.24
Span # 2	2	6.292	-40.61	163.53	0.25
+1.40D+1.60H					
Span # 1	1	6.292	-21.20	163.53	0.13
Span # 2	2	6.292	-21.64	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-21.83	163.53	0.13
Span # 2	2	6.292	-22.22	163.53	0.14
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-21.71	163.53	0.13
Span # 2	2	6.292	-22.22	163.53	0.14
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.292	-25.36	163.53	0.16
Span # 2	2	6.292	-25.89	163.53	0.16
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-27.88	163.53	0.17
Span # 2	2	6.292	-28.40	163.53	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-27.76	163.53	0.17
Span # 2	2	6.292	-28.40	163.53	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-31.41	163.53	0.19
Span # 2	2	6.292	-32.07	163.53	0.20
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-19.31	163.53	0.12
Span # 2	2	6.292	-19.70	163.53	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-19.28	163.53	0.12
Span # 2	2	6.292	-19.70	163.53	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-20.42	163.53	0.12
Span # 2	2	6.292	-20.84	163.53	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-18.17	163.53	0.11
Span # 2	2	6.292	-18.55	163.53	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-18.17	163.53	0.11
Span # 2	2	6.292	-18.55	163.53	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-18.17	163.53	0.11
Span # 2	2	6.292	-18.55	163.53	0.11
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-38.68	163.53	0.24
Span # 2	2	6.292	-39.47	163.53	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-38.65	163.53	0.24
Span # 2	2	6.292	-39.47	163.53	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-39.79	163.53	0.24
Span # 2	2	6.292	-40.61	163.53	0.25
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.292	-37.54	163.53	0.23
Span # 2	2	6.292	-38.32	163.53	0.23
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-19.31	163.53	0.12
Span # 2	2	6.292	-19.70	163.53	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-19.28	163.53	0.12
Span # 2	2	6.292	-19.70	163.53	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-20.42	163.53	0.12
Span # 2	2	6.292	-20.84	163.53	0.13
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-25.37	163.53	0.16
Span # 2	2	6.292	-25.87	163.53	0.16
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-25.33	163.53	0.15
Span # 2	2	6.292	-25.87	163.53	0.16
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-26.47	163.53	0.16
Span # 2	2	6.292	-27.02	163.53	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	6.292	-27.79	163.53	0.17
Span # 2	2	6.292	-28.35	163.53	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					
Span # 1	1	6.292	-27.75	163.53	0.17
Span # 2	2	6.292	-28.35	163.53	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	6.292	-28.89	163.53	0.18
Span # 2	2	6.292	-29.49	163.53	0.18
+0.90D+W+0.90H					

Concrete Beam

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Description : GB-C

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.292	-13.63	163.53	0.08
Span # 2	2	6.292	-13.91	163.53	0.09
+0.90D+E+0.90H					
Span # 1	1	6.292	-13.63	163.53	0.08
Span # 2	2	6.292	-13.91	163.53	0.09

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0001	2.786		0.0000	0.000
+D+0.750L+0.750S+0.5250E+H, LL C	2	0.0001	3.505		0.0000	0.000

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

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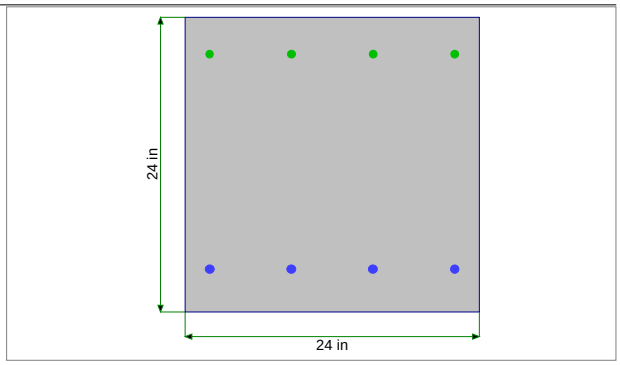
Description : GB-D - ALTERNATE

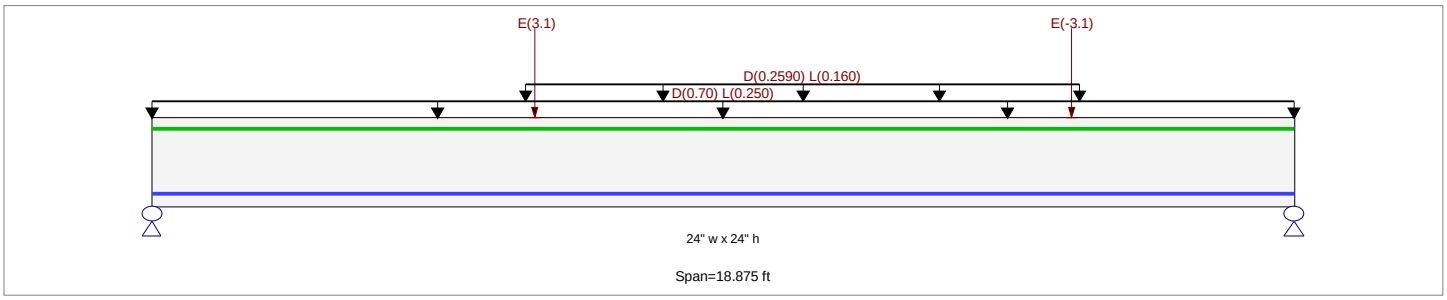
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in
Span #1 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 18.875 ft in this span
4-#5 at 3.0 in from Top, from 0.0 to 18.875 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 0.1120, L = 0.040
Uniform Load on ALL spans : D = 0.1120, L = 0.040 ksf, Tributary Width = 6.250 ft
Partial Length Uniform Load : D = 0.2590, L = 0.160 k/ft, Extent = 6.167 -->> 15.333 ft
Point Load : E = 3.10 k @ 6.333 ft
Point Load : E = -3.10 k @ 15.208 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.644** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	104.315 k-ft	
Mn * Phi : Allowable	161.895 k-ft	
Location of maximum on span	9.592 ft	
Span # where maximum occurs	Span # 1	

Maximum Deflection

Max Downward Transient Deflection	0.012 in	Ratio =	19092 >=36
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.060 in	Ratio =	3774 >=24
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	16.110	16.626
Overall MINimum	1.458	-1.458
+D+H	13.102	13.432
+D+L+H	16.092	16.626
+D+Lr+H	13.102	13.432
+D+S+H	13.102	13.432
+D+0.750Lr+0.750L+H	15.345	15.828
+D+0.750L+0.750S+H	15.345	15.828
+D+0.60W+H	13.102	13.432

Concrete Beam

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Description : GB-D - ALTERNATE

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.70E+H	14.122	12.411
+D+0.750Lr+0.750L+0.450W+H	15.345	15.828
+D+0.750L+0.750S+0.450W+H	15.345	15.828
+D+0.750L+0.750S+0.5250E+H	16.110	15.062
+0.60D+0.60W+0.60H	7.861	8.059
+0.60D+0.70E+0.60H	8.881	7.039
D Only	13.102	13.432
Lr Only		
L Only	2.991	3.195
S Only		
W Only		
E Only	1.458	-1.458
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.50	20.51	20.51	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	20.50	20.44	20.44	0.70	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	20.50	20.37	20.37	1.41	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.50	20.31	20.31	2.10	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	20.50	20.24	20.24	2.80	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	20.50	20.17	20.17	3.50	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	20.50	20.11	20.11	4.19	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	20.50	20.04	20.04	4.88	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	20.50	19.97	19.97	5.57	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	20.50	19.91	19.91	6.25	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	20.50	19.84	19.84	6.94	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	20.50	19.77	19.77	7.62	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	20.50	19.71	19.71	8.30	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	20.50	19.64	19.64	8.97	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.50	19.57	19.57	9.65	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	20.50	19.51	19.51	10.32	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	20.50	19.44	19.44	10.99	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	20.50	19.38	19.38	11.65	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	20.50	19.31	19.31	12.32	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	20.50	19.24	19.24	12.98	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	20.50	19.18	19.18	13.64	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	20.50	19.11	19.11	14.30	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	20.50	19.04	19.04	14.96	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	20.50	18.98	18.98	15.61	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	20.50	18.91	18.91	16.26	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	20.50	18.84	18.84	16.91	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	20.50	18.78	18.78	17.56	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	20.50	18.71	18.71	18.20	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	20.50	18.64	18.64	18.84	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	20.50	18.58	18.58	19.48	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	20.50	18.51	18.51	20.12	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	20.50	18.44	18.44	20.76	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	20.50	18.38	18.38	21.39	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	20.50	18.31	18.31	22.02	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	20.50	18.24	18.24	22.65	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	20.50	18.18	18.18	23.27	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	20.50	18.11	18.11	23.90	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	20.50	18.04	18.04	24.52	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	20.50	17.98	17.98	25.14	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0

Concrete Beam

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Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.34	20.50	17.91	17.91	25.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	20.50	17.84	17.84	26.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	20.50	17.78	17.78	26.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	20.50	17.71	17.71	27.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	20.50	17.64	17.64	28.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	20.50	17.58	17.58	28.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	20.50	17.51	17.51	29.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	20.50	17.45	17.45	30.01	0.99	47.62	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	20.50	17.38	17.38	30.61	0.97	47.54	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	20.50	17.31	17.31	31.20	0.95	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	20.50	17.25	17.25	31.80	0.93	47.40	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	20.50	17.18	17.18	32.39	0.91	47.33	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	20.50	17.11	17.11	32.98	0.89	47.27	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	20.50	17.05	17.05	33.57	0.87	47.20	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	20.50	16.98	16.98	34.15	0.85	47.14	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	20.50	16.91	16.91	34.73	0.83	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	20.50	16.85	16.85	35.32	0.81	47.03	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	20.50	16.78	16.78	35.89	0.80	46.98	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	20.50	16.71	16.71	36.47	0.78	46.93	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	20.50	16.65	16.65	37.04	0.77	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	20.50	16.58	16.58	37.61	0.75	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	20.50	16.51	16.51	38.18	0.74	46.78	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	20.50	16.45	16.45	38.75	0.73	46.73	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	20.50	16.38	16.38	39.31	0.71	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	20.50	16.31	16.31	39.88	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	20.50	16.25	16.25	40.43	0.69	46.61	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	20.50	16.18	16.18	40.99	0.67	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	20.50	16.11	16.11	41.55	0.66	46.53	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	20.50	16.05	16.05	42.10	0.65	46.49	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	20.50	15.98	15.98	42.65	0.64	46.45	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	20.50	15.91	15.91	43.20	0.63	46.42	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.50	15.85	15.85	43.75	0.62	46.38	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	20.50	15.78	15.78	44.29	0.61	46.35	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	20.50	15.71	15.71	44.83	0.60	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.50	15.65	15.65	45.37	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	20.50	15.58	15.58	45.91	0.58	46.25	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	20.50	15.51	15.51	46.44	0.57	46.22	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.50	15.45	15.45	46.97	0.56	46.20	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	20.50	15.38	15.38	47.50	0.55	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	20.50	15.32	15.32	48.03	0.54	46.14	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	20.50	15.25	15.25	48.56	0.54	46.11	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	20.50	15.18	15.18	49.08	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	20.50	15.12	15.12	49.60	0.52	46.06	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	20.50	15.05	15.05	50.12	0.51	46.03	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	20.50	14.98	14.98	50.63	0.51	46.01	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.50	14.92	14.92	51.15	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	20.50	14.85	14.85	51.66	0.49	45.96	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	20.50	14.78	14.78	52.17	0.48	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.50	14.72	14.72	52.68	0.48	45.92	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	20.50	14.65	14.65	53.18	0.47	45.89	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	20.50	14.58	14.58	53.68	0.46	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	20.50	14.52	14.52	54.18	0.46	45.85	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	20.50	14.45	14.45	54.68	0.45	45.83	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	20.50	14.38	14.38	55.18	0.45	45.81	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.20	20.50	14.32	14.32	55.67	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	20.50	14.25	14.25	56.16	0.43	45.77	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	20.50	14.18	14.18	56.65	0.43	45.75	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	20.50	14.12	14.12	57.14	0.42	45.73	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	20.50	14.05	14.05	57.62	0.42	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	20.50	13.98	13.98	58.10	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	20.50	13.92	13.92	58.58	0.41	45.68	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	20.50	13.85	13.85	59.06	0.40	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	20.50	13.78	13.78	59.54	0.40	45.65	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	20.50	13.72	13.72	60.01	0.39	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	20.50	13.65	13.65	60.48	0.39	45.61	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	20.50	13.58	13.58	60.95	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	20.50	13.52	13.52	61.41	0.38	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.64	20.50	13.45	13.45	61.88	0.37	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.68	20.50	13.38	13.38	62.34	0.37	45.55	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	20.50	13.32	13.32	62.80	0.36	45.54	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.75	20.50	13.25	13.25	63.25	0.36	45.52	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	20.50	13.19	13.19	63.71	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	20.50	13.12	13.12	64.16	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	20.50	13.05	13.05	64.61	0.35	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.88	20.50	12.99	12.99	65.06	0.34	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	20.50	12.92	12.92	65.50	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	20.50	12.85	12.85	65.95	0.33	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	20.50	12.79	12.79	66.39	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	20.50	12.72	12.72	66.83	0.33	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	20.50	12.65	12.65	67.26	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.09	20.50	12.59	12.59	67.70	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	20.50	12.52	12.52	68.13	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	20.50	12.45	12.45	68.56	0.31	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	20.50	12.39	12.39	68.98	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	20.50	12.32	12.32	69.41	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	20.50	12.25	12.25	69.83	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	20.50	12.19	12.19	70.25	0.30	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	20.50	12.12	12.12	70.67	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	20.50	12.05	12.05	71.08	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	20.50	11.99	11.99	71.50	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	20.50	11.92	11.92	71.91	0.28	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	20.50	11.85	11.85	72.32	0.28	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	20.50	11.79	11.79	72.72	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	20.50	11.72	11.72	73.13	0.27	45.25	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	20.50	11.65	11.65	73.53	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.61	20.50	11.59	11.59	73.93	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	20.50	11.52	11.52	74.33	0.26	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.68	20.50	11.45	11.45	74.72	0.26	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	20.50	11.39	11.39	75.11	0.26	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	20.50	11.32	11.32	75.50	0.26	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	20.50	11.26	11.26	75.89	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	20.50	11.19	11.19	76.28	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	20.50	11.12	11.12	76.66	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	20.50	11.06	11.06	77.04	0.25	45.15	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	20.50	10.99	10.99	77.42	0.24	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	20.50	10.92	10.92	77.80	0.24	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	20.50	10.86	10.86	78.17	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.50	10.79	10.79	78.54	0.23	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.05	20.50	10.72	10.72	78.91	0.23	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	20.50	10.66	10.66	79.28	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	20.50	10.59	10.59	79.65	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	20.50	10.52	10.52	80.01	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	20.50	10.46	10.46	80.37	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	20.50	10.39	10.39	80.73	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	20.50	10.32	10.32	81.08	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	20.50	10.26	10.26	81.44	0.22	45.05	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	20.50	10.19	10.19	81.79	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	20.50	10.12	10.12	82.14	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.50	10.06	10.06	82.49	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	20.50	9.99	9.99	82.83	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	20.50	9.92	9.92	83.17	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.50	9.86	9.86	83.51	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	20.50	9.79	9.79	83.85	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	20.50	9.72	9.72	84.19	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	20.50	9.66	9.66	84.52	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	20.50	9.59	9.59	84.85	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	20.50	9.52	9.52	85.18	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	20.50	9.46	9.46	85.51	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	20.50	9.39	9.39	85.83	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	20.50	9.32	9.32	86.15	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	20.50	9.26	9.26	86.47	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.84	20.50	9.19	9.19	86.79	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	20.50	9.13	9.13	87.10	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.91	20.50	9.06	9.06	87.42	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	20.50	8.99	8.99	87.73	0.18	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	20.50	8.93	8.93	88.03	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	20.50	8.86	8.86	88.34	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	20.50	8.79	8.79	88.64	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	20.50	8.73	8.73	88.94	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	20.50	8.66	8.66	89.24	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	20.50	8.59	8.59	89.54	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	20.50	8.51	8.51	89.83	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	20.50	8.43	8.43	90.12	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	20.50	8.34	8.34	90.41	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.29	20.50	8.26	8.26	90.70	0.16	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	20.50	8.17	8.17	90.98	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.36	20.50	8.22	8.22	66.72	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.39	20.50	8.15	8.15	67.00	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.43	20.50	8.08	8.08	67.28	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.46	20.50	8.01	8.01	67.55	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.50	20.50	7.94	7.94	67.83	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.53	20.50	7.87	7.87	68.10	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.57	20.50	7.80	7.80	68.37	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.60	20.50	7.73	7.73	68.63	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.64	20.50	7.66	7.66	68.90	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.67	20.50	7.58	7.58	69.16	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.70	20.50	7.51	7.51	69.42	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.74	20.50	7.44	7.44	69.68	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.77	20.50	7.37	7.37	69.93	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.81	20.50	7.30	7.30	70.18	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.84	20.50	7.23	7.23	70.43	0.18	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.88	20.50	7.16	7.16	70.68	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	1	6.91	20.50	7.09	7.09	70.93	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.94	20.50	7.02	7.02	71.17	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	6.98	20.50	6.95	6.95	71.41	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.01	20.50	6.88	6.88	71.65	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.05	20.50	6.81	6.81	71.88	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.08	20.50	6.74	6.74	72.12	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.12	20.50	6.67	6.67	72.35	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.15	20.50	6.60	6.60	72.57	0.16	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.19	20.50	6.53	6.53	72.80	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.22	20.50	6.46	6.46	73.02	0.15	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.25	20.50	6.39	6.39	73.24	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.29	20.50	6.32	6.32	73.46	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.32	20.50	6.24	6.24	73.68	0.14	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.36	20.50	6.17	6.17	73.89	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.39	20.50	6.10	6.10	74.10	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.43	20.50	6.03	6.03	74.31	0.14	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.46	20.50	5.96	5.96	74.52	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.49	20.50	5.89	5.89	74.72	0.13	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.53	20.50	5.82	5.82	74.92	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.56	20.50	5.75	5.75	75.12	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.60	20.50	5.68	5.68	75.32	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.63	20.50	5.61	5.61	75.51	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.67	20.50	5.54	5.54	75.70	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.70	20.50	5.47	5.47	75.89	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.74	20.50	5.40	5.40	76.08	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.77	20.50	5.33	5.33	76.26	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.80	20.50	5.26	5.26	76.45	0.12	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.84	20.50	5.19	5.19	76.62	0.12	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.87	20.50	5.12	5.12	76.80	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.91	20.50	5.05	5.05	76.98	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.94	20.50	4.97	4.97	77.15	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	7.98	20.50	4.90	4.90	77.32	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.01	20.50	4.83	4.83	77.49	0.11	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.04	20.50	4.76	4.76	77.65	0.10	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.08	20.50	4.69	4.69	77.81	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.11	20.50	4.62	4.62	77.97	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.15	20.50	4.55	4.55	78.13	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.18	20.50	4.48	4.48	78.29	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.22	20.50	4.41	4.41	78.44	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.25	20.50	4.34	4.34	78.59	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.29	20.50	4.27	4.27	78.74	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.32	20.50	4.20	4.20	78.88	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.35	20.50	4.13	4.13	79.03	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.39	20.50	4.06	4.06	79.17	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.42	20.50	3.99	3.99	79.31	0.09	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.46	20.50	3.92	3.92	79.44	0.08	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.49	20.50	3.85	3.85	79.57	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.53	20.50	3.78	3.78	79.71	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.56	20.50	3.71	3.71	79.83	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.59	20.50	3.63	3.63	79.96	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.63	20.50	3.56	3.56	80.08	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.66	20.50	3.49	3.49	80.21	0.07	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.70	20.50	3.42	3.42	80.32	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.73	20.50	3.35	3.35	80.44	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S-E+1.60H	1	8.77	20.50	3.28	3.28	80.56	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.80	20.50	3.21	3.21	80.67	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.84	20.50	3.14	3.14	80.78	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.87	20.50	3.07	3.07	80.88	0.06	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.90	20.50	3.00	3.00	80.99	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.94	20.50	2.93	2.93	81.09	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.97	20.50	2.86	2.86	81.19	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.01	20.50	2.79	2.79	81.29	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.04	20.50	2.72	2.72	81.38	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.08	20.50	2.65	2.65	81.47	0.06	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.11	20.50	2.58	2.58	81.56	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.15	20.50	2.51	2.51	81.65	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.18	20.50	2.44	2.44	81.73	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.21	20.50	2.36	2.36	81.82	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.25	20.50	2.29	2.29	81.90	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.28	20.50	2.22	2.22	81.97	0.05	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.32	20.50	2.15	2.15	82.05	0.04	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.35	20.50	2.08	2.08	82.12	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.39	20.50	2.01	2.01	82.19	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.42	20.50	1.94	1.94	82.26	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.45	20.50	1.87	1.87	82.33	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.49	20.50	1.80	1.80	82.39	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.52	20.50	1.73	1.73	82.45	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.56	20.50	1.66	1.66	82.51	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.59	20.50	-1.70	1.70	62.62	0.05	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.63	20.50	-1.77	1.77	90.26	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.66	20.50	-1.84	1.84	90.20	0.03	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.70	20.50	-1.91	1.91	90.14	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.73	20.50	-1.98	1.98	90.07	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.76	20.50	-2.05	2.05	90.00	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.80	20.50	-2.12	2.12	89.93	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.83	20.50	-2.19	2.19	89.86	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.87	20.50	-2.26	2.26	89.78	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.90	20.50	-2.33	2.33	89.70	0.04	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.94	20.50	-2.40	2.40	89.62	0.05	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	9.97	20.50	-2.47	2.47	89.53	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.00	20.50	-2.54	2.54	89.45	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.04	20.50	-2.61	2.61	89.36	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.07	20.50	-2.68	2.68	89.27	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.11	20.50	-2.75	2.75	89.18	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.14	20.50	-2.82	2.82	89.08	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.18	20.50	-2.90	2.90	88.98	0.06	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.21	20.50	-2.97	2.97	88.88	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.25	20.50	-3.04	3.04	88.78	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.28	20.50	-3.11	3.11	88.67	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.31	20.50	-3.18	3.18	88.56	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.35	20.50	-3.25	3.25	88.45	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.38	20.50	-3.32	3.32	88.34	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.42	20.50	-3.39	3.39	88.22	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.45	20.50	-3.46	3.46	88.11	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.49	20.50	-3.53	3.53	87.99	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.52	20.50	-3.60	3.60	87.86	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.55	20.50	-3.67	3.67	87.74	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.59	20.50	-3.74	3.74	87.61	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096 — **Licensee : JM WILLIAMS & ASSOCIATES INC**

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	10.62	20.50	-3.81	3.81	87.48	0.07	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.66	20.50	-3.88	3.88	87.35	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.69	20.50	-3.95	3.95	87.22	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.73	20.50	-4.02	4.02	87.08	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.76	20.50	-4.09	4.09	86.94	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.80	20.50	-4.16	4.16	86.80	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.83	20.50	-4.24	4.24	86.65	0.08	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.86	20.50	-4.31	4.31	86.51	0.09	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.90	20.50	-4.38	4.38	86.36	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.93	20.50	-4.45	4.45	86.20	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.97	20.50	-4.52	4.52	86.05	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.00	20.50	-4.59	4.59	85.89	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.04	20.50	-4.66	4.66	85.73	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.07	20.50	-4.73	4.73	85.57	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.10	20.50	-4.80	4.80	85.41	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.14	20.50	-4.87	4.87	85.24	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.17	20.50	-4.94	4.94	85.07	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.21	20.50	-5.01	5.01	84.90	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.24	20.50	-5.08	5.08	84.73	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.28	20.50	-5.15	5.15	84.55	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.31	20.50	-5.22	5.22	84.38	0.11	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.35	20.50	-5.29	5.29	84.20	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.38	20.50	-5.36	5.36	84.01	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.41	20.50	-5.43	5.43	83.83	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.45	20.50	-5.51	5.51	83.64	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.48	20.50	-5.58	5.58	83.45	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.52	20.50	-5.65	5.65	83.25	0.12	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.55	20.50	-5.72	5.72	83.06	0.12	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.59	20.50	-5.79	5.79	82.86	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.62	20.50	-5.86	5.86	82.66	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.65	20.50	-5.93	5.93	82.46	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.69	20.50	-6.00	6.00	82.25	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.72	20.50	-6.07	6.07	82.05	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.76	20.50	-6.14	6.14	81.84	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.79	20.50	-6.21	6.21	81.62	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.83	20.50	-6.28	6.28	81.41	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.86	20.50	-6.35	6.35	81.19	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.90	20.50	-6.42	6.42	80.97	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.93	20.50	-6.49	6.49	80.75	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.96	20.50	-6.56	6.56	80.53	0.14	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.00	20.50	-6.63	6.63	80.30	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.03	20.50	-6.70	6.70	80.07	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.07	20.50	-6.77	6.77	79.84	0.14	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.10	20.50	-6.85	6.85	79.60	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.14	20.50	-6.92	6.92	79.37	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.17	20.50	-6.99	6.99	79.13	0.15	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.20	20.50	-7.06	7.06	78.89	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.24	20.50	-7.13	7.13	78.64	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.27	20.50	-7.20	7.20	78.40	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.31	20.50	-7.27	7.27	78.15	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.34	20.50	-7.34	7.34	77.90	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.38	20.50	-7.41	7.41	77.64	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.41	20.50	-7.48	7.48	77.39	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.45	20.50	-7.55	7.55	77.13	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	12.48	20.50	-7.62	7.62	76.87	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.51	20.50	-7.69	7.69	76.61	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.55	20.50	-7.76	7.76	76.34	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.58	20.50	-7.83	7.83	76.07	0.18	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.62	20.50	-7.90	7.90	75.80	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.65	20.50	-7.97	7.97	75.53	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.69	20.50	-8.04	8.04	75.25	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.72	20.50	-8.12	8.12	74.98	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.75	20.50	-8.19	8.19	74.70	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.79	20.50	-8.26	8.26	74.41	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.82	20.50	-8.33	8.33	74.13	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.86	20.50	-8.40	8.40	73.84	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.89	20.50	-8.47	8.47	73.55	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.93	20.50	-8.54	8.54	73.26	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.96	20.50	-8.61	8.61	72.96	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.00	20.50	-8.68	8.68	72.67	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.03	20.50	-8.75	8.75	72.37	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.06	20.50	-8.82	8.82	72.06	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.10	20.50	-8.89	8.89	71.76	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.13	20.50	-8.96	8.96	71.45	0.21	45.05	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.17	20.50	-9.03	9.03	71.14	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.20	20.50	-9.10	9.10	70.83	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.24	20.50	-9.17	9.17	70.52	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.27	20.50	-9.24	9.24	70.20	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.30	20.50	-9.31	9.31	69.88	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.34	20.50	-9.38	9.38	69.56	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.37	20.50	-9.47	9.47	86.40	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.41	20.50	-9.56	9.56	86.07	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.44	20.50	-9.64	9.64	85.74	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.48	20.50	-9.73	9.73	85.41	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.51	20.50	-9.81	9.81	85.07	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.55	20.50	-9.90	9.90	84.74	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.58	20.50	-9.99	9.99	84.39	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.61	20.50	-10.07	10.07	84.05	0.20	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.65	20.50	-10.16	10.16	83.70	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.68	20.50	-10.24	10.24	83.35	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.72	20.50	-10.33	10.33	83.00	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.75	20.50	-10.42	10.42	82.64	0.22	45.05	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.79	20.50	-10.50	10.50	82.28	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.82	20.50	-10.59	10.59	81.92	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.86	20.50	-10.67	10.67	81.55	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.89	20.50	-10.76	10.76	81.18	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.92	20.50	-10.85	10.85	80.81	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.96	20.50	-10.93	10.93	80.44	0.23	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.99	20.50	-11.02	11.02	80.06	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.03	20.50	-11.10	11.10	79.68	0.24	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.06	20.50	-11.19	11.19	79.30	0.24	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.10	20.50	-11.28	11.28	78.91	0.24	45.15	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.13	20.50	-11.36	11.36	78.52	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.16	20.50	-11.45	11.45	78.13	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.20	20.50	-11.53	11.53	77.74	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.23	20.50	-11.62	11.62	77.34	0.26	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.27	20.50	-11.71	11.71	76.94	0.26	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.30	20.50	-11.79	11.79	76.53	0.26	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	14.34	20.50	-11.88	11.88	76.13	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.37	20.50	-11.96	11.96	75.72	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.41	20.50	-12.05	12.05	75.30	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.44	20.50	-12.14	12.14	74.89	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.47	20.50	-12.22	12.22	74.47	0.28	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.51	20.50	-12.31	12.31	74.05	0.28	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.54	20.50	-12.40	12.40	73.62	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.58	20.50	-12.48	12.48	73.19	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.61	20.50	-12.57	12.57	72.76	0.30	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.65	20.50	-12.65	12.65	72.33	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.68	20.50	-12.74	12.74	71.89	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.71	20.50	-12.83	12.83	71.45	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.75	20.50	-12.91	12.91	71.01	0.31	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.78	20.50	-13.00	13.00	70.57	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.82	20.50	-13.08	13.08	70.12	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.85	20.50	-13.17	13.17	69.67	0.32	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.89	20.50	-13.26	13.26	69.21	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.92	20.50	-13.34	13.34	68.76	0.33	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.96	20.50	-13.43	13.43	68.29	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.99	20.50	-13.51	13.51	67.83	0.34	45.46	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.02	20.50	-13.60	13.60	67.37	0.34	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.06	20.50	-13.69	13.69	66.90	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.09	20.50	-13.77	13.77	66.42	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.13	20.50	-13.86	13.86	65.95	0.36	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.16	20.50	-13.94	13.94	65.47	0.36	45.54	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.20	20.50	-14.03	14.03	64.99	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.23	20.50	-14.12	14.12	64.51	0.37	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.26	20.50	-14.20	14.20	64.02	0.38	45.59	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.30	20.50	-14.29	14.29	63.53	0.38	45.61	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.33	20.50	-14.37	14.37	63.04	0.39	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.37	20.50	-14.44	14.44	62.54	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.40	20.50	-14.51	14.51	62.04	0.40	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.44	20.50	-14.57	14.57	61.55	0.40	45.68	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.47	20.50	-14.64	14.64	61.04	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.51	20.50	-14.71	14.71	60.54	0.42	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.54	20.50	-14.77	14.77	60.03	0.42	45.73	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.57	20.50	-14.84	14.84	59.52	0.43	45.75	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.61	20.50	-14.91	14.91	59.01	0.43	45.77	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.64	20.50	-14.97	14.97	58.50	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.68	20.50	-15.04	15.04	57.98	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.71	20.50	-15.11	15.11	57.46	0.45	45.82	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.75	20.50	-15.17	15.17	56.94	0.46	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.78	20.50	-15.24	15.24	56.42	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.81	20.50	-15.31	15.31	55.90	0.47	45.89	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.85	20.50	-15.37	15.37	55.37	0.47	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.88	20.50	-15.44	15.44	54.84	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.92	20.50	-15.51	15.51	54.31	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.95	20.50	-15.57	15.57	53.77	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.99	20.50	-15.64	15.64	53.24	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.02	20.50	-15.71	15.71	52.70	0.51	46.02	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.06	20.50	-15.77	15.77	52.16	0.52	46.05	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.09	20.50	-15.84	15.84	51.61	0.52	46.07	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.12	20.50	-15.90	15.90	51.07	0.53	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.16	20.50	-15.97	15.97	50.52	0.54	46.12	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	16.19	20.50	-16.04	16.04	49.97	0.55	46.15	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.23	20.50	-16.10	16.10	49.42	0.56	46.18	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.26	20.50	-16.17	16.17	48.86	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.30	20.50	-16.24	16.24	48.30	0.57	46.24	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.33	20.50	-16.30	16.30	47.74	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.36	20.50	-16.37	16.37	47.18	0.59	46.30	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.40	20.50	-16.44	16.44	46.62	0.60	46.33	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.43	20.50	-16.50	16.50	46.05	0.61	46.36	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.47	20.50	-16.57	16.57	45.48	0.62	46.40	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.50	20.50	-16.64	16.64	44.91	0.63	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.54	20.50	-16.70	16.70	44.34	0.64	46.47	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.57	20.50	-16.77	16.77	43.76	0.65	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.61	20.50	-16.84	16.84	43.19	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.64	20.50	-16.90	16.90	42.61	0.68	46.58	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.67	20.50	-16.97	16.97	42.02	0.69	46.62	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.71	20.50	-17.04	17.04	41.44	0.70	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.74	20.50	-17.10	17.10	40.85	0.72	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.78	20.50	-17.17	17.17	40.26	0.73	46.75	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.81	20.50	-17.24	17.24	39.67	0.74	46.79	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.85	20.50	-17.30	17.30	39.08	0.76	46.84	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.88	20.50	-17.37	17.37	38.48	0.77	46.89	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.91	20.50	-17.44	17.44	37.89	0.79	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.95	20.50	-17.50	17.50	37.28	0.80	46.99	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.98	20.50	-17.57	17.57	36.68	0.82	47.04	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.02	20.50	-17.64	17.64	36.08	0.84	47.10	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.05	20.50	-17.70	17.70	35.47	0.85	47.16	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.09	20.50	-17.77	17.77	34.86	0.87	47.21	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.12	20.50	-17.83	17.83	34.25	0.89	47.28	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.16	20.50	-17.90	17.90	33.63	0.91	47.34	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.19	20.50	-17.97	17.97	33.02	0.93	47.41	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.22	20.50	-18.03	18.03	32.40	0.95	47.48	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.26	20.50	-18.10	18.10	31.78	0.97	47.55	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.29	20.50	-18.17	18.17	31.15	1.00	47.63	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.33	20.50	-18.23	18.23	30.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.36	20.50	-18.30	18.30	29.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.40	20.50	-18.37	18.37	29.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.43	20.50	-18.43	18.43	28.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.46	20.50	-18.50	18.50	28.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.50	20.50	-18.57	18.57	27.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.53	20.50	-18.63	18.63	26.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.57	20.50	-18.70	18.70	26.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.60	20.50	-18.77	18.77	25.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.64	20.50	-18.83	18.83	24.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.67	20.50	-18.90	18.90	24.14	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.71	20.50	-18.97	18.97	23.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.74	20.50	-19.03	19.03	22.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.77	20.50	-19.10	19.10	22.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.81	20.50	-19.17	19.17	21.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.84	20.50	-19.23	19.23	20.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.88	20.50	-19.30	19.30	20.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.91	20.50	-19.37	19.37	19.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.95	20.50	-19.43	19.43	18.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.98	20.50	-19.50	19.50	18.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.02	20.50	-19.57	19.57	17.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-D - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	18.05	20.50	-19.63	19.63	16.86	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.08	20.50	-19.70	19.70	16.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.12	20.50	-19.77	19.77	15.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.15	20.50	-19.83	19.83	14.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.19	20.50	-19.90	19.90	14.14	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.22	20.50	-19.96	19.96	13.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.26	20.50	-20.03	20.03	12.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.29	20.50	-20.10	20.10	12.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.32	20.50	-20.16	20.16	11.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.36	20.50	-20.23	20.23	10.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.39	20.50	-20.30	20.30	9.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.43	20.50	-20.36	20.36	9.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.46	20.50	-20.43	20.43	8.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.50	20.50	-20.50	20.50	7.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.53	20.50	-20.56	20.56	7.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.57	20.50	-20.63	20.63	6.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.60	20.50	-20.70	20.70	5.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.63	20.50	-20.76	20.76	5.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.67	20.50	-20.83	20.83	4.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.70	20.50	-20.90	20.90	3.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.74	20.50	-20.96	20.96	2.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.77	20.50	-21.03	21.03	2.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.81	20.50	-21.10	21.10	1.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.84	20.50	-21.16	21.16	0.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	18.87	20.50	-21.23	21.23	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	18.875	104.31	161.89	0.64
+1.40D+1.60H					
Span # 1	1	18.875	91.38	161.89	0.56
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	18.875	104.31	161.89	0.64
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	18.875	104.31	161.89	0.64
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	18.875	78.32	161.89	0.48
+1.20D+1.60Lr-0.50W+1.60H					
Span # 1	1	18.875	78.32	161.89	0.48
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	18.875	78.32	161.89	0.48
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	18.875	78.32	161.89	0.48
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+0.50Lr+0.50L-W+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+0.50L+0.50S-W+1.60H					
Span # 1	1	18.875	86.44	161.89	0.53
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	18.875	91.02	161.89	0.56
+1.20D+0.50L+0.70S-E+1.60H					
Span # 1	1	18.875	83.18	161.89	0.51

Concrete Beam

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Description : GB-D - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+0.90D+W+0.90H					
Span # 1	1	18.875	58.74	161.89	0.36
+0.90D-W+0.90H					
Span # 1	1	18.875	58.74	161.89	0.36
+0.90D+E+0.90H					
Span # 1	1	18.875	63.66	161.89	0.39
+0.90D-E+0.90H					
Span # 1	1	18.875	55.77	161.89	0.34

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0600	9.437		0.0000	0.000

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

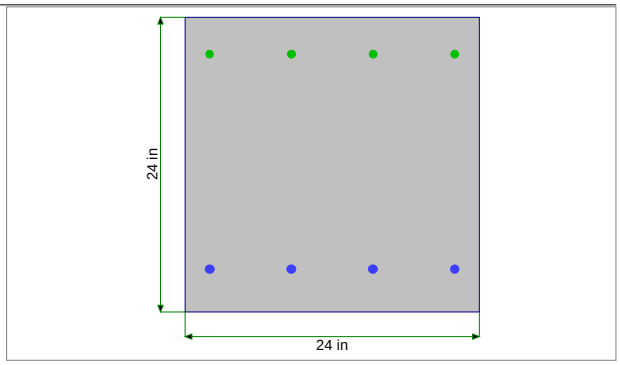
Description : GB-E - ALTERNATE

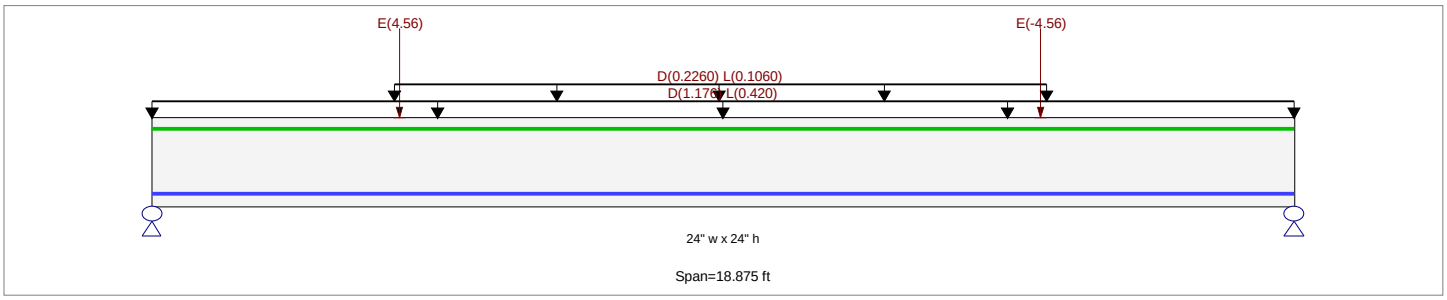
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in
Span #1 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 18.875 ft in this span
4-#5 at 3.0 in from Top, from 0.0 to 18.875 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 0.1120, L = 0.040
Uniform Load on ALL spans : D = 0.1120, L = 0.040 ksf, Tributary Width = 10.50 ft
Partial Length Uniform Load : D = 0.2260, L = 0.1060 k/ft, Extent = 4.0 -->> 14.792 ft
Point Load : E = 4.560 k @ 4.104 ft
Point Load : E = -4.560 k @ 14.688 ft, (SEISMIC OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.863** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	139.796 k-ft	
Mn * Phi : Allowable	161.895 k-ft	
Location of maximum on span	9.420 ft	
Span # where maximum occurs	Span # 1	

Maximum Deflection

Max Downward Transient Deflection	0.017 in	Ratio =	13604 >=36
Max Upward Transient Deflection	-0.002 in	Ratio =	136900 >=36
Max Downward Total Deflection	0.111 in	Ratio =	2038 >=24
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	22.543	22.320
Overall MINimum	2.557	-2.557
+D+H	17.797	17.786
+D+L+H	22.335	22.320
+D+Lr+H	17.797	17.786
+D+S+H	17.797	17.786
+D+0.750Lr+0.750L+H	21.201	21.186
+D+0.750L+0.750S+H	21.201	21.186
+D+0.60W+H	17.797	17.786

Concrete Beam

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Description : GB-E - ALTERNATE

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.70E+H	19.587	15.996
+D+0.750Lr+0.750L+0.450W+H	21.201	21.186
+D+0.750L+0.750S+0.450W+H	21.201	21.186
+D+0.750L+0.750S+0.5250E+H	22.543	19.844
+0.60D+0.60W+0.60H	10.678	10.672
+0.60D+0.70E+0.60H	12.468	8.882
D Only	17.797	17.786
Lr Only		
L Only	4.538	4.533
S Only		
W Only		
E Only	2.557	-2.557
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.50	28.62	28.62	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	20.50	28.52	28.52	0.98	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	20.50	28.43	28.43	1.96	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.50	28.33	28.33	2.94	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	20.50	28.24	28.24	3.91	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	20.50	28.14	28.14	4.88	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	20.50	28.04	28.04	5.84	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	20.50	27.95	27.95	6.81	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	20.50	27.85	27.85	7.77	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	20.50	27.76	27.76	8.72	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	20.50	27.66	27.66	9.67	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	20.50	27.57	27.57	10.62	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	20.50	27.47	27.47	11.57	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	20.50	27.38	27.38	12.51	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.50	27.28	27.28	13.45	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	20.50	27.18	27.18	14.39	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	20.50	27.09	27.09	15.32	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	20.50	26.99	26.99	16.25	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	20.50	26.90	26.90	17.18	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	20.50	26.80	26.80	18.10	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	20.50	26.71	26.71	19.02	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	20.50	26.61	26.61	19.94	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	20.50	26.52	26.52	20.85	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	20.50	26.42	26.42	21.76	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	20.50	26.32	26.32	22.67	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	20.50	26.23	26.23	23.57	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	20.50	26.13	26.13	24.47	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	20.50	26.04	26.04	25.37	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	20.50	25.94	25.94	26.26	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	20.50	25.85	25.85	27.15	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	20.50	25.75	25.75	28.04	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	20.50	25.66	25.66	28.92	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	20.50	25.56	25.56	29.80	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	20.50	25.46	25.46	30.68	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	20.50	25.37	25.37	31.55	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	20.50	25.27	25.27	32.42	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	20.50	25.18	25.18	33.29	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	20.50	25.08	25.08	34.16	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	20.50	24.99	24.99	35.02	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Concrete Beam

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Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.34	20.50	24.89	24.89	35.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	20.50	24.80	24.80	36.73	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	20.50	24.70	24.70	37.58	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	20.50	24.60	24.60	38.43	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	20.50	24.51	24.51	39.27	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	20.50	24.41	24.41	40.11	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	20.50	24.32	24.32	40.95	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	20.50	24.22	24.22	41.78	0.99	47.61	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	20.50	24.13	24.13	42.61	0.97	47.53	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	20.50	24.03	24.03	43.44	0.95	47.46	PhiVc/2 < Vu <=	Min 11.5.6	66.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	20.50	23.94	23.94	44.27	0.92	47.39	PhiVc/2 < Vu <=	Min 11.5.6	66.7	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	20.50	23.84	23.84	45.09	0.90	47.32	PhiVc/2 < Vu <=	Min 11.5.6	66.7	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	20.50	23.74	23.74	45.91	0.88	47.26	PhiVc/2 < Vu <=	Min 11.5.6	66.6	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	20.50	23.65	23.65	46.72	0.86	47.20	PhiVc/2 < Vu <=	Min 11.5.6	66.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	20.50	23.55	23.55	47.53	0.85	47.13	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	20.50	23.46	23.46	48.34	0.83	47.08	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	20.50	23.36	23.36	49.15	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	20.50	23.27	23.27	49.95	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	20.50	23.17	23.17	50.75	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	20.50	23.08	23.08	51.54	0.76	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	20.50	22.98	22.98	52.33	0.75	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	20.50	22.88	22.88	53.12	0.74	46.77	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	20.50	22.79	22.79	53.91	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	20.50	22.69	22.69	54.69	0.71	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	20.50	22.60	22.60	55.47	0.70	46.64	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	20.50	22.50	22.50	56.24	0.68	46.60	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	20.50	22.41	22.41	57.01	0.67	46.56	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	20.50	22.31	22.31	57.78	0.66	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	20.50	22.22	22.22	58.55	0.65	46.48	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	20.50	22.12	22.12	59.31	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	20.50	22.02	22.02	60.07	0.63	46.41	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.50	21.93	21.93	60.82	0.62	46.37	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	20.50	21.83	21.83	61.58	0.61	46.34	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	20.50	21.74	21.74	62.33	0.60	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.50	21.64	21.64	63.07	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	20.50	21.55	21.55	63.81	0.58	46.24	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	20.50	21.45	21.45	64.55	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.50	21.36	21.36	65.29	0.56	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	20.50	21.26	21.26	66.02	0.55	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	20.50	21.16	21.16	66.75	0.54	46.13	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	20.50	21.07	21.07	67.48	0.53	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	20.50	20.97	20.97	68.20	0.53	46.08	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	20.50	20.88	20.88	68.92	0.52	46.05	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	20.50	20.78	20.78	69.64	0.51	46.02	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	20.50	20.69	20.69	70.35	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.50	20.59	20.59	71.06	0.50	45.98	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	20.50	20.50	20.50	71.76	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	20.50	20.40	20.40	72.47	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.50	20.30	20.30	73.17	0.47	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	20.50	20.21	20.21	73.86	0.47	45.88	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	20.50	20.11	20.11	74.56	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	20.50	20.02	20.02	75.25	0.45	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	20.50	19.92	19.92	75.93	0.45	45.82	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	20.50	19.83	19.83	76.62	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.20	20.50	19.73	19.73	77.30	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	20.50	19.64	19.64	77.97	0.43	45.76	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	20.50	19.54	19.54	78.65	0.42	45.74	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	20.50	19.44	19.44	79.32	0.42	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	20.50	19.35	19.35	79.98	0.41	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	20.50	19.25	19.25	80.65	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	20.50	19.16	19.16	81.31	0.40	45.67	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	20.50	19.06	19.06	81.96	0.40	45.65	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	20.50	18.97	18.97	82.62	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	20.50	18.87	18.87	83.27	0.39	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	20.50	18.78	18.78	83.92	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	20.50	18.68	18.68	84.56	0.38	45.59	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	20.50	18.58	18.58	85.20	0.37	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.64	20.50	18.49	18.49	85.84	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.68	20.50	18.39	18.39	86.47	0.36	45.54	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	20.50	18.30	18.30	87.10	0.36	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.75	20.50	18.20	18.20	87.73	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	20.50	18.11	18.11	88.35	0.35	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	20.50	18.01	18.01	88.97	0.35	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	20.50	17.92	17.92	89.59	0.34	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	20.50	17.82	17.82	90.21	0.34	45.46	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	20.50	17.72	17.72	90.82	0.33	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	20.50	17.63	17.63	91.43	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	20.50	17.53	17.53	92.03	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	20.50	17.43	17.43	92.63	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	20.50	17.32	17.32	93.23	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.09	20.50	17.21	17.21	93.82	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	20.50	17.10	17.10	94.41	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	20.50	16.99	16.99	95.00	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	20.50	16.87	16.87	95.58	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	20.50	16.76	16.76	96.16	0.30	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	20.50	16.65	16.65	96.73	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	20.50	16.54	16.54	97.30	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	20.50	16.43	16.43	97.87	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	20.50	16.32	16.32	98.43	0.28	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	20.50	16.21	16.21	98.99	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	20.50	16.10	16.10	99.55	0.28	45.25	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	20.50	15.99	15.99	100.10	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	20.50	15.88	15.88	100.65	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	20.50	15.77	15.77	101.19	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	20.50	15.66	15.66	101.73	0.26	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.61	20.50	15.55	15.55	102.27	0.26	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	20.50	15.44	15.44	102.80	0.26	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.68	20.50	15.32	15.32	103.33	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	20.50	15.21	15.21	103.85	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	20.50	15.10	15.10	104.37	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	20.50	14.99	14.99	104.89	0.24	45.15	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	20.50	14.88	14.88	105.41	0.24	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	20.50	14.77	14.77	105.92	0.24	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	20.50	14.66	14.66	106.42	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	20.50	14.55	14.55	106.92	0.23	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	20.50	14.44	14.44	107.42	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	20.50	14.33	14.33	107.92	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.50	14.22	14.22	108.41	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.05	20.50	14.11	14.11	108.89	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	20.50	14.00	14.00	109.38	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	20.50	13.89	13.89	109.86	0.22	45.05	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	20.50	13.78	13.78	110.33	0.21	45.05	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	20.50	13.66	13.66	110.80	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	20.50	13.55	13.55	111.27	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	20.50	13.44	13.44	111.74	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	20.50	13.33	13.33	112.20	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	20.50	13.22	13.22	112.65	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	20.50	13.11	13.11	113.11	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.50	13.00	13.00	113.55	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	20.50	12.89	12.89	114.00	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	20.50	12.78	12.78	114.44	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.50	12.67	12.67	114.88	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	20.50	12.56	12.56	115.31	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	20.50	12.45	12.45	115.74	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	20.50	12.34	12.34	116.17	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	20.50	12.23	12.23	116.59	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	20.50	12.11	12.11	117.01	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	20.50	12.00	12.00	117.42	0.17	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	20.50	11.89	11.89	117.83	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	20.50	11.78	11.78	118.24	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	20.50	11.67	11.67	118.64	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.84	20.50	11.56	11.56	119.04	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	20.50	11.45	11.45	119.44	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.91	20.50	11.34	11.34	119.83	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	20.50	11.23	11.23	120.22	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	20.50	11.12	11.12	120.60	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	20.50	11.01	11.01	120.98	0.16	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	20.50	10.90	10.90	121.36	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	20.50	10.79	10.79	121.73	0.15	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	20.50	10.68	10.68	122.10	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	20.50	10.56	10.56	122.47	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	20.50	10.45	10.45	122.83	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	20.50	10.34	10.34	123.18	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	20.50	10.23	10.23	123.54	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.29	20.50	10.12	10.12	123.89	0.14	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	20.50	10.01	10.01	124.23	0.14	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.36	20.50	9.90	9.90	124.58	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	20.50	9.79	9.79	124.92	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	20.50	9.68	9.68	125.25	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	20.50	9.57	9.57	125.58	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	20.50	9.46	9.46	125.91	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.53	20.50	9.35	9.35	126.23	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	20.50	9.24	9.24	126.55	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	20.50	9.13	9.13	126.87	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	20.50	9.01	9.01	127.18	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.67	20.50	8.90	8.90	127.49	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.70	20.50	8.79	8.79	127.79	0.12	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.74	20.50	8.68	8.68	128.09	0.12	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.77	20.50	8.57	8.57	128.39	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.81	20.50	8.46	8.46	128.68	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	20.50	8.35	8.35	128.97	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.88	20.50	8.24	8.24	129.25	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.91	20.50	8.13	8.13	129.54	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	20.50	8.02	8.02	129.81	0.11	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	20.50	7.91	7.91	130.09	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	20.50	7.80	7.80	130.36	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.05	20.50	7.69	7.69	130.62	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	20.50	7.58	7.58	130.89	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.12	20.50	7.46	7.46	131.14	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.15	20.50	7.35	7.35	131.40	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.19	20.50	7.24	7.24	131.65	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.22	20.50	7.13	7.13	131.90	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	20.50	7.02	7.02	132.14	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.29	20.50	6.91	6.91	132.38	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	20.50	6.80	6.80	132.62	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	20.50	6.69	6.69	132.85	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	20.50	6.58	6.58	133.08	0.08	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	20.50	6.47	6.47	133.30	0.08	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	20.50	6.36	6.36	133.52	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	20.50	6.25	6.25	133.74	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.53	20.50	6.14	6.14	133.95	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.56	20.50	6.03	6.03	134.16	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.60	20.50	5.91	5.91	134.36	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.63	20.50	5.80	5.80	134.57	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.67	20.50	5.69	5.69	134.76	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.70	20.50	5.58	5.58	134.96	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.74	20.50	5.47	5.47	135.15	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.77	20.50	5.36	5.36	135.33	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.80	20.50	5.25	5.25	135.52	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	20.50	5.14	5.14	135.69	0.06	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	20.50	5.03	5.03	135.87	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	20.50	4.92	4.92	136.04	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	20.50	4.81	4.81	136.21	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.98	20.50	4.70	4.70	136.37	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.01	20.50	4.59	4.59	136.53	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.05	20.50	4.48	4.48	136.69	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.08	20.50	4.37	4.37	136.84	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.11	20.50	4.25	4.25	136.99	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.15	20.50	4.14	4.14	137.13	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.18	20.50	4.03	4.03	137.27	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.22	20.50	3.92	3.92	137.41	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.25	20.50	3.81	3.81	137.54	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.29	20.50	3.70	3.70	137.67	0.05	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.32	20.50	3.59	3.59	137.80	0.04	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.35	20.50	3.48	3.48	137.92	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.39	20.50	3.37	3.37	138.03	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.42	20.50	3.26	3.26	138.15	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.46	20.50	3.15	3.15	138.26	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.49	20.50	3.04	3.04	138.36	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.53	20.50	2.93	2.93	138.47	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.56	20.50	2.82	2.82	138.57	0.03	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.60	20.50	2.70	2.70	138.66	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.63	20.50	2.59	2.59	138.75	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.66	20.50	2.48	2.48	138.84	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.70	20.50	2.37	2.37	138.92	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.73	20.50	2.26	2.26	139.00	0.03	44.43	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	8.77	20.50	2.15	2.15	139.08	0.03	44.43	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.80	20.50	2.04	2.04	139.15	0.03	44.42	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.84	20.50	1.93	1.93	139.22	0.02	44.42	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.87	20.50	1.82	1.82	139.28	0.02	44.42	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.90	20.50	1.71	1.71	139.34	0.02	44.41	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.94	20.50	1.60	1.60	139.40	0.02	44.41	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.97	20.50	1.49	1.49	139.45	0.02	44.40	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.01	20.50	1.38	1.38	139.50	0.02	44.40	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+0.90D+E+0.90H	1	9.04	20.50	-1.30	1.30	78.24	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+0.90D+E+0.90H	1	9.08	20.50	-1.36	1.36	78.20	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+0.90D+E+0.90H	1	9.11	20.50	-1.42	1.42	78.15	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+0.90D+E+0.90H	1	9.15	20.50	-1.49	1.49	78.10	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+0.90D+E+0.90H	1	9.18	20.50	-1.55	1.55	78.05	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.21	20.50	-1.61	1.61	77.99	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.25	20.50	-1.67	1.67	77.94	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.28	20.50	-1.73	1.73	77.88	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.32	20.50	-1.79	1.79	77.82	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.35	20.50	-1.85	1.85	77.75	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.39	20.50	-1.91	1.91	77.69	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+0.90D+E+0.90H	1	9.42	20.50	-1.98	1.98	77.62	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.45	20.50	-2.05	2.05	114.76	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.49	20.50	-2.14	2.14	114.69	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.52	20.50	-2.24	2.24	114.61	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.56	20.50	-2.33	2.33	114.53	0.03	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.59	20.50	-2.42	2.42	114.45	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.63	20.50	-2.51	2.51	114.37	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.66	20.50	-2.60	2.60	114.28	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.70	20.50	-2.69	2.69	114.19	0.04	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.73	20.50	-2.78	2.78	114.09	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.76	20.50	-2.87	2.87	114.00	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.80	20.50	-2.96	2.96	113.90	0.04	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.83	20.50	-3.05	3.05	113.79	0.05	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.87	20.50	-3.14	3.14	113.69	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.90	20.50	-3.23	3.23	113.58	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.94	20.50	-3.33	3.33	113.46	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	9.97	20.50	-3.42	3.42	113.35	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.00	20.50	-3.51	3.51	113.23	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.04	20.50	-3.60	3.60	113.11	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.07	20.50	-3.69	3.69	112.98	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.11	20.50	-3.78	3.78	112.85	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.14	20.50	-3.87	3.87	112.72	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.18	20.50	-3.96	3.96	112.59	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.21	20.50	-4.05	4.05	112.45	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.25	20.50	-4.14	4.14	112.31	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.28	20.50	-4.23	4.23	112.16	0.06	44.55	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.31	20.50	-4.32	4.32	112.02	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.35	20.50	-4.42	4.42	111.87	0.07	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.38	20.50	-4.51	4.51	111.71	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.42	20.50	-4.60	4.60	111.56	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.45	20.50	-4.69	4.69	111.40	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.49	20.50	-4.78	4.78	111.23	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.52	20.50	-4.87	4.87	111.07	0.07	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.55	20.50	-4.96	4.96	110.90	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	10.59	20.50	-5.05	5.05	110.73	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	10.62	20.50	-5.14	5.14	110.55	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.66	20.50	-5.23	5.23	110.37	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.69	20.50	-5.32	5.32	110.19	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.73	20.50	-5.41	5.41	110.01	0.08	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.76	20.50	-5.51	5.51	109.82	0.09	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.80	20.50	-5.60	5.60	109.63	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.83	20.50	-5.69	5.69	109.44	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.86	20.50	-5.78	5.78	109.24	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.90	20.50	-5.87	5.87	109.04	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.93	20.50	-5.96	5.96	108.83	0.09	44.65	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	10.97	20.50	-6.05	6.05	108.63	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.00	20.50	-6.14	6.14	108.42	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.04	20.50	-6.23	6.23	108.21	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.07	20.50	-6.32	6.32	107.99	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.10	20.50	-6.41	6.41	107.77	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.14	20.50	-6.50	6.50	107.55	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.17	20.50	-6.59	6.59	107.32	0.10	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.21	20.50	-6.69	6.69	107.10	0.11	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.24	20.50	-6.78	6.78	106.86	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.28	20.50	-6.87	6.87	106.63	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.31	20.50	-6.96	6.96	106.39	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.35	20.50	-7.05	7.05	106.15	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.38	20.50	-7.14	7.14	105.91	0.12	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.41	20.50	-7.23	7.23	105.66	0.12	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.45	20.50	-7.32	7.32	105.41	0.12	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.48	20.50	-7.41	7.41	105.16	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.52	20.50	-7.50	7.50	104.90	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.55	20.50	-7.59	7.59	104.64	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.59	20.50	-7.68	7.68	104.38	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.62	20.50	-7.78	7.78	104.11	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.66	20.50	-7.87	7.87	103.84	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.69	20.50	-7.96	7.96	103.57	0.13	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.72	20.50	-8.05	8.05	103.30	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.76	20.50	-8.14	8.14	103.02	0.13	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.79	20.50	-8.23	8.23	102.74	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.83	20.50	-8.32	8.32	102.45	0.14	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.86	20.50	-8.41	8.41	102.16	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.90	20.50	-8.50	8.50	101.87	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.93	20.50	-8.59	8.59	101.58	0.14	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	11.96	20.50	-8.68	8.68	101.28	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.00	20.50	-8.77	8.77	100.98	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.03	20.50	-8.87	8.87	100.68	0.15	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.07	20.50	-8.96	8.96	100.37	0.15	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.10	20.50	-9.05	9.05	100.06	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.14	20.50	-9.14	9.14	99.75	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.17	20.50	-9.23	9.23	99.44	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.21	20.50	-9.32	9.32	99.12	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.24	20.50	-9.41	9.41	98.79	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.27	20.50	-9.50	9.50	98.47	0.16	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.31	20.50	-9.59	9.59	98.14	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.34	20.50	-9.68	9.68	97.81	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.38	20.50	-9.77	9.77	97.48	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.41	20.50	-9.86	9.86	97.14	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.45	20.50	-9.95	9.95	96.80	0.18	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	12.48	20.50	-10.05	10.05	96.45	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.51	20.50	-10.14	10.14	96.11	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.55	20.50	-10.23	10.23	95.76	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.58	20.50	-10.32	10.32	95.40	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.62	20.50	-10.41	10.41	95.05	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.65	20.50	-10.50	10.50	94.69	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.69	20.50	-10.59	10.59	94.33	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.72	20.50	-10.68	10.68	93.96	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.76	20.50	-10.77	10.77	93.59	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.79	20.50	-10.86	10.86	93.22	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.82	20.50	-10.95	10.95	92.84	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.86	20.50	-11.04	11.04	92.47	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.89	20.50	-11.14	11.14	92.08	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.93	20.50	-11.24	11.24	120.16	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.96	20.50	-11.36	11.36	119.77	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.00	20.50	-11.47	11.47	119.38	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.03	20.50	-11.58	11.58	118.99	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.06	20.50	-11.69	11.69	118.59	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.10	20.50	-11.80	11.80	118.18	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.13	20.50	-11.91	11.91	117.78	0.17	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.17	20.50	-12.02	12.02	117.36	0.17	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.20	20.50	-12.13	12.13	116.95	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.24	20.50	-12.24	12.24	116.53	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.27	20.50	-12.35	12.35	116.11	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.31	20.50	-12.46	12.46	115.68	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.34	20.50	-12.57	12.57	115.25	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.37	20.50	-12.68	12.68	114.82	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.41	20.50	-12.79	12.79	114.38	0.19	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.44	20.50	-12.91	12.91	113.94	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.48	20.50	-13.02	13.02	113.49	0.20	44.99	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.51	20.50	-13.13	13.13	113.04	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.55	20.50	-13.24	13.24	112.59	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.58	20.50	-13.35	13.35	112.13	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.61	20.50	-13.46	13.46	111.67	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.65	20.50	-13.57	13.57	111.21	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.68	20.50	-13.68	13.68	110.74	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.72	20.50	-13.79	13.79	110.26	0.21	45.05	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.75	20.50	-13.90	13.90	109.79	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.79	20.50	-14.01	14.01	109.31	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.82	20.50	-14.12	14.12	108.83	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.86	20.50	-14.23	14.23	108.34	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.89	20.50	-14.34	14.34	107.85	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.92	20.50	-14.45	14.45	107.35	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.96	20.50	-14.57	14.57	106.85	0.23	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.99	20.50	-14.68	14.68	106.35	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.03	20.50	-14.79	14.79	105.84	0.24	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.06	20.50	-14.90	14.90	105.33	0.24	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.10	20.50	-15.01	15.01	104.82	0.24	45.15	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.13	20.50	-15.12	15.12	104.30	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.16	20.50	-15.23	15.23	103.78	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.20	20.50	-15.34	15.34	103.25	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.23	20.50	-15.45	15.45	102.72	0.26	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.27	20.50	-15.56	15.56	102.19	0.26	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.30	20.50	-15.67	15.67	101.65	0.26	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	14.34	20.50	-15.78	15.78	101.11	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.37	20.50	-15.89	15.89	100.57	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.41	20.50	-16.00	16.00	100.02	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.44	20.50	-16.12	16.12	99.47	0.28	45.25	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.47	20.50	-16.23	16.23	98.91	0.28	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.51	20.50	-16.34	16.34	98.35	0.28	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.54	20.50	-16.45	16.45	97.79	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.58	20.50	-16.56	16.56	97.22	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.61	20.50	-16.67	16.67	96.65	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.65	20.50	-16.78	16.78	96.08	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.68	20.50	-16.89	16.89	95.50	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.71	20.50	-17.00	17.00	94.91	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.75	20.50	-17.11	17.11	94.33	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.78	20.50	-17.22	17.22	93.74	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.82	20.50	-17.32	17.32	93.14	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.85	20.50	-17.42	17.42	92.55	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.89	20.50	-17.51	17.51	91.95	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.92	20.50	-17.61	17.61	91.34	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.96	20.50	-17.70	17.70	90.74	0.33	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.99	20.50	-17.80	17.80	90.13	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.02	20.50	-17.90	17.90	89.51	0.34	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.06	20.50	-17.99	17.99	88.89	0.35	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.09	20.50	-18.09	18.09	88.27	0.35	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.13	20.50	-18.18	18.18	87.65	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.16	20.50	-18.28	18.28	87.02	0.36	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.20	20.50	-18.37	18.37	86.39	0.36	45.54	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.23	20.50	-18.47	18.47	85.76	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.27	20.50	-18.56	18.56	85.12	0.37	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.30	20.50	-18.66	18.66	84.48	0.38	45.59	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.33	20.50	-18.76	18.76	83.84	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.37	20.50	-18.85	18.85	83.20	0.39	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.40	20.50	-18.95	18.95	82.55	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.44	20.50	-19.04	19.04	81.89	0.40	45.65	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.47	20.50	-19.14	19.14	81.24	0.40	45.67	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.51	20.50	-19.23	19.23	80.58	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.54	20.50	-19.33	19.33	79.91	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.57	20.50	-19.42	19.42	79.25	0.42	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.61	20.50	-19.52	19.52	78.58	0.42	45.74	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.64	20.50	-19.62	19.62	77.91	0.43	45.76	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.68	20.50	-19.71	19.71	77.23	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.71	20.50	-19.81	19.81	76.55	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.75	20.50	-19.90	19.90	75.87	0.45	45.82	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.78	20.50	-20.00	20.00	75.18	0.45	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.82	20.50	-20.09	20.09	74.49	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.85	20.50	-20.19	20.19	73.80	0.47	45.88	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.88	20.50	-20.28	20.28	73.10	0.47	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.92	20.50	-20.38	20.38	72.40	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.95	20.50	-20.47	20.47	71.70	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	15.99	20.50	-20.57	20.57	71.00	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.02	20.50	-20.67	20.67	70.29	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.06	20.50	-20.76	20.76	69.58	0.51	46.02	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.09	20.50	-20.86	20.86	68.86	0.52	46.05	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.12	20.50	-20.95	20.95	68.14	0.53	46.07	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.16	20.50	-21.05	21.05	67.42	0.53	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	16.19	20.50	-21.14	21.14	66.69	0.54	46.13	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.23	20.50	-21.24	21.24	65.97	0.55	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.26	20.50	-21.33	21.33	65.23	0.56	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.30	20.50	-21.43	21.43	64.50	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.33	20.50	-21.53	21.53	63.76	0.58	46.24	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.37	20.50	-21.62	21.62	63.02	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.40	20.50	-21.72	21.72	62.27	0.60	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.43	20.50	-21.81	21.81	61.53	0.61	46.34	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.47	20.50	-21.91	21.91	60.77	0.62	46.37	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.50	20.50	-22.00	22.00	60.02	0.63	46.41	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.54	20.50	-22.10	22.10	59.26	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.57	20.50	-22.19	22.19	58.50	0.65	46.48	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.61	20.50	-22.29	22.29	57.73	0.66	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.64	20.50	-22.39	22.39	56.97	0.67	46.56	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.67	20.50	-22.48	22.48	56.20	0.68	46.60	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.71	20.50	-22.58	22.58	55.42	0.70	46.64	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.74	20.50	-22.67	22.67	54.64	0.71	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.78	20.50	-22.77	22.77	53.86	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.81	20.50	-22.86	22.86	53.08	0.74	46.77	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.85	20.50	-22.96	22.96	52.29	0.75	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.88	20.50	-23.05	23.05	51.50	0.76	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.92	20.50	-23.15	23.15	50.70	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.95	20.50	-23.25	23.25	49.91	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	16.98	20.50	-23.34	23.34	49.11	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.02	20.50	-23.44	23.44	48.30	0.83	47.08	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.05	20.50	-23.53	23.53	47.49	0.85	47.13	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	17.09	20.50	-23.63	23.63	46.68	0.86	47.19	PhiVc/2 < Vu <=	Min 11.5.6	66.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.12	20.50	-23.72	23.72	45.87	0.88	47.26	PhiVc/2 < Vu <=	Min 11.5.6	66.6	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.16	20.50	-23.82	23.82	45.05	0.90	47.32	PhiVc/2 < Vu <=	Min 11.5.6	66.7	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.19	20.50	-23.91	23.91	44.23	0.92	47.39	PhiVc/2 < Vu <=	Min 11.5.6	66.7	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.22	20.50	-24.01	24.01	43.41	0.94	47.46	PhiVc/2 < Vu <=	Min 11.5.6	66.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.26	20.50	-24.11	24.11	42.58	0.97	47.53	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.29	20.50	-24.20	24.20	41.75	0.99	47.61	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.33	20.50	-24.30	24.30	40.92	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.36	20.50	-24.39	24.39	40.08	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.40	20.50	-24.49	24.49	39.24	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.43	20.50	-24.58	24.58	38.40	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.47	20.50	-24.68	24.68	37.55	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.50	20.50	-24.77	24.77	36.70	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.53	20.50	-24.87	24.87	35.85	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.57	20.50	-24.97	24.97	34.99	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.60	20.50	-25.06	25.06	34.13	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.64	20.50	-25.16	25.16	33.27	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.67	20.50	-25.25	25.25	32.40	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.71	20.50	-25.35	25.35	31.53	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.74	20.50	-25.44	25.44	30.66	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.77	20.50	-25.54	25.54	29.78	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.81	20.50	-25.63	25.63	28.90	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.84	20.50	-25.73	25.73	28.02	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.88	20.50	-25.83	25.83	27.13	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.91	20.50	-25.92	25.92	26.24	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.95	20.50	-26.02	26.02	25.35	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	17.98	20.50	-26.11	26.11	24.45	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.02	20.50	-26.21	26.21	23.55	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-E - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	18.05	20.50	-26.30	26.30	22.65	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.08	20.50	-26.40	26.40	21.74	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.12	20.50	-26.49	26.49	20.83	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.15	20.50	-26.59	26.59	19.92	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.19	20.50	-26.69	26.69	19.01	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.22	20.50	-26.78	26.78	18.09	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.26	20.50	-26.88	26.88	17.17	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.29	20.50	-26.97	26.97	16.24	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.32	20.50	-27.07	27.07	15.31	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.36	20.50	-27.16	27.16	14.38	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.39	20.50	-27.26	27.26	13.44	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.43	20.50	-27.35	27.35	12.50	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.46	20.50	-27.45	27.45	11.56	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.50	20.50	-27.55	27.55	10.62	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.53	20.50	-27.64	27.64	9.67	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.57	20.50	-27.74	27.74	8.72	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.60	20.50	-27.83	27.83	7.76	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.63	20.50	-27.93	27.93	6.80	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.67	20.50	-28.02	28.02	5.84	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.70	20.50	-28.12	28.12	4.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.74	20.50	-28.21	28.21	3.91	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.77	20.50	-28.31	28.31	2.93	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.81	20.50	-28.41	28.41	1.96	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.84	20.50	-28.50	28.50	0.98	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	18.88	20.50	-28.60	28.60	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	18.875	139.80	161.89	0.86
+1.40D+1.60H					
Span # 1	1	18.875	120.99	161.89	0.75
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	18.875	139.80	161.89	0.86
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	18.875	139.80	161.89	0.86
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	18.875	114.98	161.89	0.71
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	18.875	103.70	161.89	0.64
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	18.875	114.98	161.89	0.71
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	18.875	103.70	161.89	0.64
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	18.875	114.98	161.89	0.71
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	18.875	114.98	161.89	0.71
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	18.875	115.56	161.89	0.71
+0.90D+W+0.90H					
Span # 1	1	18.875	77.78	161.89	0.48
+0.90D+E+0.90H					
Span # 1	1	18.875	78.72	161.89	0.49

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.1111	9.438		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Overall MAXimum	10.790	72.210	48.070	7.149
Overall MINimum	0.092	-0.556	-0.632	0.105
+D+H	6.182	23.621	20.575	5.299
+D+L+H, LL Comb Run (**L)	6.275	23.065	24.414	7.044
+D+L+H, LL Comb Run (*L*)	5.852	27.274	24.227	4.968
+D+L+H, LL Comb Run (*LL)	5.944	26.718	28.066	6.714
+D+L+H, LL Comb Run (L**)	8.255	27.954	19.943	5.404
+D+L+H, LL Comb Run (L*L)	8.347	27.398	23.782	7.149
+D+L+H, LL Comb Run (LL*)	7.924	31.606	23.595	5.073
+D+L+H, LL Comb Run (LLL)	8.017	31.050	27.434	6.819
+D+Lr+H, LL Comb Run (**L)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (*L*)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (*LL)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (L**)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (L*L)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (LL*)	6.182	23.621	20.575	5.299
+D+Lr+H, LL Comb Run (LLL)	6.182	23.621	20.575	5.299
+D+S+H	7.975	70.218	48.070	5.885
+D+0.750Lr+0.750L+H, LL Comb Run (	6.252	23.204	23.454	6.608
+D+0.750Lr+0.750L+H, LL Comb Run (	5.934	26.361	23.314	5.051
+D+0.750Lr+0.750L+H, LL Comb Run (	6.004	25.944	26.194	6.360
+D+0.750Lr+0.750L+H, LL Comb Run (	7.737	26.870	20.101	5.378
+D+0.750Lr+0.750L+H, LL Comb Run (	7.806	26.453	22.980	6.687
+D+0.750Lr+0.750L+H, LL Comb Run (	7.489	29.610	22.840	5.129
+D+0.750Lr+0.750L+H, LL Comb Run (	7.558	29.193	25.719	6.439
+D+0.750L+0.750S+H, LL Comb Run (*	7.596	58.151	44.075	7.048
+D+0.750L+0.750S+H, LL Comb Run (*	7.279	61.308	43.936	5.491
+D+0.750L+0.750S+H, LL Comb Run (*	7.348	60.891	46.815	6.800
+D+0.750L+0.750S+H, LL Comb Run (L	9.082	61.818	40.722	5.817
+D+0.750L+0.750S+H, LL Comb Run (L	9.151	61.401	43.601	7.127
+D+0.750L+0.750S+H, LL Comb Run (L	8.834	64.557	43.462	5.569
+D+0.750L+0.750S+H, LL Comb Run (L	8.903	64.140	46.341	6.879
+D+0.60W+H	6.182	23.621	20.575	5.299
+D+0.70E+H	8.368	33.825	10.373	3.112
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.252	23.204	23.454	6.608
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.934	26.361	23.314	5.051
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.004	25.944	26.194	6.360
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.737	26.870	20.101	5.378
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.806	26.453	22.980	6.687
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.489	29.610	22.840	5.129
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.558	29.193	25.719	6.439
+D+0.750L+0.750S+0.450W+H, LL Comb	7.596	58.151	44.075	7.048
+D+0.750L+0.750S+0.450W+H, LL Comb	7.279	61.308	43.936	5.491
+D+0.750L+0.750S+0.450W+H, LL Comb	7.348	60.891	46.815	6.800
+D+0.750L+0.750S+0.450W+H, LL Comb	9.082	61.818	40.722	5.817
+D+0.750L+0.750S+0.450W+H, LL Comb	9.151	61.401	43.601	7.127
+D+0.750L+0.750S+0.450W+H, LL Comb	8.834	64.557	43.462	5.569
+D+0.750L+0.750S+0.450W+H, LL Comb	8.903	64.140	46.341	6.879
+D+0.750L+0.750S+0.5250E+H, LL Com	9.236	65.804	36.424	5.408
+D+0.750L+0.750S+0.5250E+H, LL Com	8.919	68.961	36.284	3.850
+D+0.750L+0.750S+0.5250E+H, LL Com	8.988	68.544	39.163	5.159
+D+0.750L+0.750S+0.5250E+H, LL Com	10.721	69.471	33.070	4.177
+D+0.750L+0.750S+0.5250E+H, LL Com	10.790	69.054	35.950	5.486
+D+0.750L+0.750S+0.5250E+H, LL Com	10.473	72.210	35.810	3.929
+D+0.750L+0.750S+0.5250E+H, LL Com	10.542	71.793	38.689	5.238
+0.60D+0.60W+0.60H	3.709	14.173	12.345	3.179
+0.60D+0.70E+0.60H	5.895	24.377	2.143	0.992
D Only	6.182	23.621	20.575	5.299
Lr Only, LL Comb Run (**L)				

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.092	-0.556	3.839	1.746
L Only, LL Comb Run (*L*)	-0.331	3.653	3.653	-0.331
L Only, LL Comb Run (*LL)	-0.238	3.097	7.491	1.415
L Only, LL Comb Run (L**)	2.073	4.332	-0.632	0.105
L Only, LL Comb Run (L*L)	2.165	3.776	3.207	1.851
L Only, LL Comb Run (LL*)	1.742	7.985	3.020	-0.226
L Only, LL Comb Run (LLL)	1.834	7.429	6.859	1.520
S Only	1.793	46.596	27.495	0.587
W Only				
E Only	3.123	14.577	-14.575	-3.125
H Only				

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	0.00	20.50	12.88	12.88	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.04	20.50	12.75	12.75	0.54	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.08	20.50	12.61	12.61	1.07	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.13	20.50	12.48	12.48	1.59	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.17	20.50	12.35	12.35	2.11	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.21	20.50	12.22	12.22	2.62	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.25	20.50	12.08	12.08	3.13	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.29	20.50	11.95	11.95	3.63	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.33	20.50	11.82	11.82	4.13	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.38	20.50	11.69	11.69	4.62	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.42	20.50	11.56	11.56	5.11	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.46	20.50	11.42	11.42	5.59	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.50	20.50	11.29	11.29	6.06	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.54	20.50	11.16	11.16	6.53	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.59	20.50	11.03	11.03	6.99	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.63	20.50	10.89	10.89	7.45	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.67	20.50	10.76	10.76	7.91	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.71	20.50	10.63	10.63	8.35	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.75	20.50	10.50	10.50	8.79	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.79	20.50	10.36	10.36	9.23	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.84	20.50	10.23	10.23	9.66	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.88	20.50	10.10	10.10	10.09	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.92	20.50	9.97	9.97	10.50	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.96	20.50	9.83	9.83	10.92	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.00	20.50	9.70	9.70	11.33	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.05	20.50	9.57	9.57	11.73	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.09	20.50	9.44	9.44	12.13	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.13	20.50	9.31	9.31	12.52	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.17	20.50	9.17	9.17	12.90	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.21	20.50	9.04	9.04	13.29	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.25	20.50	8.91	8.91	13.66	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.30	20.50	8.78	8.78	14.03	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.34	20.50	8.64	8.64	14.39	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.38	20.50	8.51	8.51	14.75	0.99	47.59	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.42	20.50	8.38	8.38	15.11	0.95	47.47	Vu < PhiVc/2	Not Reqd	1 47.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.46	20.50	8.25	8.25	15.45	0.91	47.35	Vu < PhiVc/2	Not Reqd	1 47.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	1.50	20.50	8.11	8.11	15.80	0.88	47.24	Vu < PhiVc/2	Not Reqd	1 47.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.55	20.50	7.98	7.98	16.13	0.85	47.13	Vu < PhiVc/2	Not Reqd	1 47.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.59	20.50	7.85	7.85	16.46	0.81	47.03	Vu < PhiVc/2	Not Reqd	1 47.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.63	20.50	7.72	7.72	16.79	0.79	46.93	Vu < PhiVc/2	Not Reqd	1 46.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.67	20.50	7.58	7.58	17.11	0.76	46.84	Vu < PhiVc/2	Not Reqd	1 46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.71	20.50	7.45	7.45	17.42	0.73	46.75	Vu < PhiVc/2	Not Reqd	1 46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.76	20.50	7.32	7.32	17.73	0.71	46.67	Vu < PhiVc/2	Not Reqd	1 46.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.80	20.50	7.19	7.19	18.03	0.68	46.59	Vu < PhiVc/2	Not Reqd	1 46.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.84	20.50	7.06	7.06	18.33	0.66	46.51	Vu < PhiVc/2	Not Reqd	1 46.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.88	20.50	6.92	6.92	18.62	0.64	46.44	Vu < PhiVc/2	Not Reqd	1 46.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.92	20.50	6.79	6.79	18.91	0.61	46.37	Vu < PhiVc/2	Not Reqd	1 46.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.96	20.50	6.66	6.66	19.19	0.59	46.30	Vu < PhiVc/2	Not Reqd	1 46.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.01	20.50	6.53	6.53	19.47	0.57	46.23	Vu < PhiVc/2	Not Reqd	1 46.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.05	20.50	6.39	6.39	19.74	0.55	46.17	Vu < PhiVc/2	Not Reqd	1 46.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.09	20.50	6.26	6.26	20.00	0.53	46.11	Vu < PhiVc/2	Not Reqd	1 46.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.13	20.50	6.13	6.13	20.26	0.52	46.05	Vu < PhiVc/2	Not Reqd	1 46.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.17	20.50	6.00	6.00	20.51	0.50	45.99	Vu < PhiVc/2	Not Reqd	1 46.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.22	20.50	5.86	5.86	20.76	0.48	45.93	Vu < PhiVc/2	Not Reqd	1 45.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.26	20.50	5.73	5.73	21.00	0.47	45.88	Vu < PhiVc/2	Not Reqd	1 45.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.30	20.50	5.60	5.60	21.24	0.45	45.83	Vu < PhiVc/2	Not Reqd	1 45.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.34	20.50	5.47	5.47	21.47	0.43	45.78	Vu < PhiVc/2	Not Reqd	1 45.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.38	20.50	5.33	5.33	21.70	0.42	45.73	Vu < PhiVc/2	Not Reqd	1 45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.42	20.50	5.20	5.20	21.92	0.41	45.68	Vu < PhiVc/2	Not Reqd	1 45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.47	20.50	5.07	5.07	22.13	0.39	45.63	Vu < PhiVc/2	Not Reqd	1 45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.51	20.50	4.94	4.94	22.34	0.38	45.59	Vu < PhiVc/2	Not Reqd	1 45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.55	20.50	4.81	4.81	22.55	0.36	45.54	Vu < PhiVc/2	Not Reqd	1 45.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.59	20.50	4.67	4.67	22.74	0.35	45.50	Vu < PhiVc/2	Not Reqd	1 45.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.63	20.50	4.54	4.54	22.94	0.34	45.46	Vu < PhiVc/2	Not Reqd	1 45.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.68	20.50	4.41	4.41	23.12	0.33	45.42	Vu < PhiVc/2	Not Reqd	1 45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.72	20.50	4.28	4.28	23.31	0.31	45.38	Vu < PhiVc/2	Not Reqd	1 45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.76	20.50	4.14	4.14	23.48	0.30	45.34	Vu < PhiVc/2	Not Reqd	1 45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.80	20.50	4.01	4.01	23.65	0.29	45.30	Vu < PhiVc/2	Not Reqd	1 45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.84	20.50	3.88	3.88	23.82	0.28	45.26	Vu < PhiVc/2	Not Reqd	1 45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.88	20.50	3.75	3.75	23.98	0.27	45.22	Vu < PhiVc/2	Not Reqd	1 45.2	0.0	0.0
+0.90D-E+0.90H	1	2.93	21.00	-3.80	3.80	1.99	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	2.97	21.00	-3.89	3.89	2.16	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.01	21.00	-3.98	3.98	2.32	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.05	21.00	-4.07	4.07	2.49	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.09	21.00	-4.16	4.16	2.66	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.14	21.00	-4.25	4.25	2.84	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.18	21.00	-4.34	4.34	3.02	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.22	21.00	-4.43	4.43	3.20	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.26	21.00	-4.52	4.52	3.39	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.30	21.00	-4.61	4.61	3.58	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.34	21.00	-4.70	4.70	3.77	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.39	21.00	-4.79	4.79	3.97	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.43	21.00	-4.88	4.88	4.17	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.47	21.00	-4.96	4.96	4.38	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.51	21.00	-5.05	5.05	4.59	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.55	21.00	-5.14	5.14	4.80	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.59	21.00	-5.23	5.23	5.02	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.64	21.00	-5.32	5.32	5.24	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.68	21.00	-5.41	5.41	5.46	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0
+0.90D-E+0.90H	1	3.72	21.00	-5.50	5.50	5.69	1.00	47.75	Vu < PhiVc/2	Not Reqd	1 47.7	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+0.90D-E+0.90H	1	3.76	21.00	-5.59	5.59	5.92	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+0.90D-E+0.90H	1	3.80	21.00	-5.68	5.68	6.16	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+0.90D-E+0.90H	1	3.85	21.00	-5.77	5.77	6.40	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.89	20.50	-5.89	5.89	1.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.93	20.50	-6.02	6.02	0.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.97	20.50	-6.19	6.19	0.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.01	20.50	-6.46	6.46	0.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.05	21.00	-6.72	6.72	0.00	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.10	21.00	-6.98	6.98	0.29	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.14	20.50	-28.23	28.23	18.11	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.18	20.50	-28.60	28.60	16.92	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.22	20.50	-28.98	28.98	15.72	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.26	20.50	-29.36	29.36	14.50	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.31	20.50	-29.73	29.73	13.26	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.35	20.50	-30.11	30.11	12.01	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.39	20.50	-30.49	30.49	10.74	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	20.50	-30.87	30.87	9.46	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.47	20.50	-31.24	31.24	8.16	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.51	20.50	-31.62	31.62	6.85	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.56	20.50	-32.00	32.00	5.52	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.60	20.50	-32.37	32.37	4.18	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.64	20.50	-32.75	32.75	2.81	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.68	20.50	-33.13	33.13	1.44	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.72	20.50	-33.51	33.51	0.04	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	21.00	-33.88	33.88	1.36	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.81	21.00	-34.26	34.26	2.79	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.85	21.00	-34.64	34.64	4.23	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	21.00	-35.01	35.01	5.68	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.93	21.00	-35.39	35.39	7.15	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.97	21.00	-35.77	35.77	8.64	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.02	21.00	-36.15	36.15	10.15	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.06	21.00	-36.52	36.52	11.66	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.10	21.00	-36.90	36.90	13.20	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.14	21.00	-37.28	37.28	14.75	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.18	21.00	-37.65	37.65	16.31	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.23	21.00	-38.03	38.03	17.90	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.27	21.00	-38.41	38.41	19.49	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.31	21.00	-38.78	38.78	21.11	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.35	21.00	-39.16	39.16	22.74	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.39	21.00	-39.54	39.54	24.38	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.43	21.00	-39.92	39.92	26.04	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.48	21.00	-40.29	40.29	27.72	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.52	21.00	-40.67	40.67	29.41	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.56	21.00	-41.05	41.05	31.12	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.60	21.00	-41.42	41.42	32.84	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.64	21.00	-41.80	41.80	34.58	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.68	21.00	-42.18	42.18	36.34	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.73	21.00	-42.56	42.56	38.11	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.77	21.00	-42.93	42.93	39.89	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.81	21.00	-43.31	43.31	41.70	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.85	21.00	-43.69	43.69	43.52	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.89	21.00	-44.06	44.06	45.35	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.94	21.00	-44.44	44.44	47.20	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	5.98	21.00	-44.82	44.82	49.06	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	6.02	21.00	-45.20	45.20	50.95	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.06	21.00	-45.57	45.57	52.84	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.10	21.00	-45.95	45.95	54.76	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.14	21.00	-46.33	46.33	56.68	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.19	21.00	-46.70	46.70	58.63	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.23	21.00	-47.08	47.08	60.59	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.27	21.00	59.43	59.43	62.56	1.00	47.90	PhiVc < Vu	11.536	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.31	21.00	59.06	59.06	60.10	1.00	47.90	PhiVc < Vu	11.160	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.35	21.00	58.68	58.68	57.64	1.00	47.90	PhiVc < Vu	10.784	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.40	21.00	58.31	58.31	55.21	1.00	47.90	PhiVc < Vu	10.408	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.44	21.00	57.93	57.93	52.78	1.00	47.90	PhiVc < Vu	10.032	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	21.00	57.55	57.55	50.38	1.00	47.90	PhiVc < Vu	9.656	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.52	21.00	57.18	57.18	47.99	1.00	47.90	PhiVc < Vu	9.281	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.56	21.00	56.80	56.80	45.61	1.00	47.90	PhiVc < Vu	8.905	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.60	21.00	56.43	56.43	43.25	1.00	47.90	PhiVc < Vu	8.529	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.65	21.00	56.05	56.05	40.91	1.00	47.90	PhiVc < Vu	8.153	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.69	21.00	55.67	55.67	38.58	1.00	47.90	PhiVc < Vu	7.777	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.73	21.00	55.30	55.30	36.27	1.00	47.90	PhiVc < Vu	7.401	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.77	21.00	54.92	54.92	33.98	1.00	47.90	PhiVc < Vu	7.025	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.81	21.00	54.55	54.55	31.69	1.00	47.90	PhiVc < Vu	6.649	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.85	21.00	54.17	54.17	29.43	1.00	47.90	PhiVc < Vu	6.273	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.90	21.00	53.80	53.80	27.18	1.00	47.90	PhiVc < Vu	5.898	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.94	21.00	53.42	53.42	24.95	1.00	47.90	PhiVc < Vu	5.522	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.98	21.00	53.04	53.04	22.73	1.00	47.90	PhiVc < Vu	5.146	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.02	21.00	52.67	52.67	20.53	1.00	47.90	PhiVc < Vu	4.770	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.06	21.00	52.29	52.29	18.34	1.00	47.90	PhiVc < Vu	4.394	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.10	21.00	51.92	51.92	16.17	1.00	47.90	PhiVc < Vu	4.018	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.15	21.00	51.54	51.54	14.01	1.00	47.90	PhiVc < Vu	3.642	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.19	21.00	51.16	51.16	11.87	1.00	47.90	PhiVc < Vu	3.266	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.23	21.00	50.79	50.79	9.75	1.00	47.90	PhiVc < Vu	2.890	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	21.00	50.41	50.41	7.64	1.00	47.90	PhiVc < Vu	2.514	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.31	21.00	50.04	50.04	5.55	1.00	47.90	PhiVc < Vu	2.139	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.35	21.00	49.66	49.66	3.47	1.00	47.90	PhiVc < Vu	1.763	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.40	21.00	49.28	49.28	1.41	1.00	47.90	PhiVc < Vu	1.387	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.44	20.50	48.91	48.91	0.64	1.00	47.64	PhiVc < Vu	1.267	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.48	20.50	48.53	48.53	2.67	1.00	47.64	PhiVc < Vu	0.8915	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.52	20.50	48.16	48.16	4.68	1.00	47.64	PhiVc < Vu	0.5156	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.56	20.50	47.78	47.78	6.68	1.00	47.64	PhiVc < Vu	0.1397	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.60	20.50	47.41	47.41	8.66	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.65	20.50	47.03	47.03	10.63	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.69	20.50	46.65	46.65	12.58	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.73	20.50	46.28	46.28	14.52	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.77	20.50	45.90	45.90	16.44	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.81	20.50	45.53	45.53	18.34	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.85	20.50	45.15	45.15	20.23	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.90	20.50	44.77	44.77	22.10	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.94	20.50	44.40	44.40	23.96	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.98	20.50	44.02	44.02	25.80	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.02	20.50	43.65	43.65	27.63	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.06	20.50	43.27	43.27	29.44	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.10	20.50	42.89	42.89	31.24	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.15	20.50	42.52	42.52	33.02	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.19	20.50	42.14	42.14	34.78	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.23	20.50	41.77	41.77	36.53	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	8.27	20.50	6.28	6.28	5.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.31	21.00	6.07	6.07	0.55	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	2	8.35	21.00	5.96	5.96	0.30	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	2	8.40	21.00	5.84	5.84	0.05	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	2	8.44	20.50	5.73	5.73	0.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.48	20.50	5.61	5.61	0.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.52	20.50	5.50	5.50	0.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.56	20.50	5.38	5.38	0.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.60	20.50	5.27	5.27	1.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.65	20.50	5.15	5.15	1.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.69	20.50	5.04	5.04	1.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+0.90D+E+0.90H	2	8.73	20.50	4.92	4.92	1.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.77	20.50	-4.89	4.89	35.45	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.81	20.50	-5.25	5.25	35.24	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.85	20.50	-5.60	5.60	35.01	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.90	20.50	-5.96	5.96	34.77	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.94	20.50	-6.31	6.31	34.52	0.31	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	20.50	-6.66	6.66	34.25	0.33	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.02	20.50	-7.02	7.02	33.96	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.06	20.50	-7.37	7.37	33.66	0.37	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.10	20.50	-7.72	7.72	33.35	0.40	45.65	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.15	20.50	-8.08	8.08	33.02	0.42	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	20.50	-8.43	8.43	32.67	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.23	20.50	-8.79	8.79	32.32	0.46	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.27	20.50	-9.14	9.14	31.94	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.31	20.50	-9.49	9.49	31.55	0.51	46.04	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.35	20.50	-9.85	9.85	31.15	0.54	46.12	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.40	20.50	-10.20	10.20	32.29	0.54	46.12	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.44	20.50	-10.58	10.58	31.86	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.48	20.50	-10.95	10.95	31.41	0.60	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.52	20.50	-11.33	11.33	30.95	0.63	46.41	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.56	20.50	-11.70	11.70	30.47	0.66	46.51	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.60	20.50	-12.08	12.08	29.97	0.69	46.61	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.65	20.50	-12.46	12.46	29.46	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.69	20.50	-12.83	12.83	28.93	0.76	46.84	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.73	20.50	-13.21	13.21	28.39	0.79	46.96	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	20.50	-13.58	13.58	27.83	0.83	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.81	20.50	-13.96	13.96	27.26	0.87	47.23	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.85	20.50	-14.33	14.33	26.67	0.92	47.37	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.90	20.50	-14.71	14.71	26.06	0.96	47.52	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	20.50	-15.09	15.09	25.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.98	20.50	-15.46	15.46	24.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.02	20.50	-15.84	15.84	24.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.06	20.50	-16.21	16.21	23.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.10	20.50	-16.59	16.59	22.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.15	20.50	-16.97	16.97	22.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.19	20.50	-17.34	17.34	21.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.23	20.50	-17.72	17.72	20.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.27	20.50	-18.09	18.09	19.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.31	20.50	-18.47	18.47	19.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.35	20.50	-18.85	18.85	18.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.40	20.50	-19.22	19.22	17.58	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.44	20.50	-19.60	19.60	16.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.48	20.50	-19.97	19.97	15.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H, I	2	10.52	20.50	-20.35	20.35	15.11	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.56	20.50	-20.73	20.73	14.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.60	20.50	-21.10	21.10	13.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.65	20.50	-21.48	21.48	12.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.69	20.50	-21.85	21.85	11.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.73	20.50	-22.23	22.23	10.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.77	20.50	-22.60	22.60	9.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.81	20.50	-22.98	22.98	8.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.85	20.50	-23.36	23.36	7.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.90	20.50	-23.73	23.73	6.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.94	20.50	-24.11	24.11	5.85	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	10.98	20.50	-24.48	24.48	4.83	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.02	20.50	-24.86	24.86	3.81	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.06	20.50	-25.24	25.24	2.76	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.10	20.50	-25.61	25.61	1.70	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.15	20.50	-25.99	25.99	0.63	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.19	21.00	-26.36	26.36	0.46	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.23	21.00	-26.74	26.74	1.57	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.27	21.00	-27.12	27.12	2.69	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.31	21.00	-27.49	27.49	3.83	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.35	21.00	-27.87	27.87	4.98	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.40	21.00	-28.24	28.24	6.15	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.44	21.00	-28.62	28.62	7.34	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.48	21.00	-28.99	28.99	8.54	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.52	21.00	-29.37	29.37	9.75	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.56	21.00	-29.75	29.75	10.98	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.60	21.00	-30.12	30.12	12.23	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.65	21.00	-30.50	30.50	13.49	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.69	21.00	-30.87	30.87	14.77	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.73	21.00	-31.25	31.25	16.07	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.77	21.00	-31.63	31.63	17.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.81	21.00	-32.00	32.00	18.70	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.85	21.00	-32.38	32.38	20.04	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.90	21.00	-32.75	32.75	21.40	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.94	21.00	-33.13	33.13	22.77	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	11.98	21.00	-33.51	33.51	24.16	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.02	21.00	-33.88	33.88	25.57	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.06	21.00	-34.26	34.26	26.98	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.10	21.00	-34.63	34.63	28.42	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.15	21.00	-35.01	35.01	29.87	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.19	21.00	-35.39	35.39	31.34	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.23	21.00	-35.76	35.76	32.82	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.27	21.00	-36.14	36.14	34.32	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.31	21.00	-36.51	36.51	35.83	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.35	21.00	-36.89	36.89	37.36	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.40	21.00	-37.26	37.26	38.91	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.44	21.00	-37.64	37.64	40.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	2	12.48	21.00	-38.02	38.02	42.04	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	3	12.52	21.00	34.04	34.04	43.63	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.56	21.00	33.79	33.79	37.88	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.60	21.00	33.54	33.54	36.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.65	21.00	33.30	33.30	35.07	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.69	21.00	33.05	33.05	33.69	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.73	21.00	32.81	32.81	32.31	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	3	12.77	21.00	32.56	32.56	30.94	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.81	21.00	32.32	32.32	29.59	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.85	21.00	32.08	32.08	28.24	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.90	21.00	31.83	31.83	26.91	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.94	21.00	31.59	31.59	25.58	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.98	21.00	31.34	31.34	24.27	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.02	21.00	31.10	31.10	22.96	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.06	21.00	30.85	30.85	21.67	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.11	21.00	30.61	30.61	20.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.15	21.00	30.36	30.36	19.11	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.19	21.00	30.12	30.12	17.84	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.23	21.00	29.87	29.87	16.59	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.27	21.00	29.63	29.63	15.35	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.31	21.00	29.38	29.38	14.11	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.36	21.00	29.14	29.14	12.89	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.40	21.00	28.89	28.89	11.68	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.44	21.00	28.65	28.65	10.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.48	21.00	28.41	28.41	9.28	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.52	21.00	28.16	28.16	8.10	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.57	21.00	27.92	27.92	6.93	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.61	21.00	27.67	27.67	5.77	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.65	21.00	27.43	27.43	4.61	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.69	21.00	27.18	27.18	3.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.73	21.00	26.94	26.94	2.34	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.77	21.00	26.69	26.69	1.22	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.82	21.00	26.45	26.45	0.11	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.86	20.50	26.20	26.20	0.99	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.90	20.50	25.96	25.96	2.08	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.94	20.50	25.71	25.71	3.16	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.98	20.50	25.47	25.47	4.23	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.02	20.50	25.22	25.22	5.29	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.07	20.50	24.98	24.98	6.34	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.11	20.50	24.74	24.74	7.38	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.15	20.50	24.49	24.49	8.41	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.19	20.50	24.25	24.25	9.43	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.23	20.50	24.00	24.00	10.43	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.28	20.50	23.76	23.76	11.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.32	20.50	23.51	23.51	12.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.36	20.50	23.27	23.27	13.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.40	20.50	23.02	23.02	14.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.44	20.50	22.78	22.78	15.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.48	20.50	22.53	22.53	16.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.53	20.50	22.29	22.29	17.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.57	20.50	22.04	22.04	18.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.61	20.50	21.80	21.80	19.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.65	20.50	21.56	21.56	19.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.69	21.00	7.16	7.16	4.88	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.74	21.00	6.92	6.92	4.59	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.78	21.00	6.67	6.67	4.31	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.82	21.00	6.43	6.43	4.03	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.86	21.00	6.27	6.27	3.77	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.90	21.00	6.16	6.16	3.51	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.94	21.00	6.04	6.04	3.25	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	3	14.99	21.00	5.93	5.93	3.00	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	3	15.03	21.00	5.82	5.82	2.76	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.07	21.00	5.70	5.70	2.52	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.11	21.00	5.59	5.59	2.28	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.15	21.00	5.48	5.48	2.05	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.20	21.00	5.37	5.37	1.82	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.24	21.00	5.25	5.25	1.60	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.28	21.00	5.14	5.14	1.38	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.32	21.00	5.03	5.03	1.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.36	21.00	4.91	4.91	0.96	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.40	21.00	4.80	4.80	0.76	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.45	21.00	4.69	4.69	2.03	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.49	21.00	4.59	4.59	1.83	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.53	21.00	4.49	4.49	1.64	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.57	21.00	4.38	4.38	1.46	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.61	21.00	4.28	4.28	1.28	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.66	21.00	4.18	4.18	1.10	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.70	21.00	4.08	4.08	0.93	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.74	21.00	3.98	3.98	0.76	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	15.78	21.00	3.87	3.87	0.59	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	15.82	21.00	3.79	3.79	3.19	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	15.86	21.00	3.72	3.72	3.03	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	15.91	21.00	3.64	3.64	2.88	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	15.95	21.00	3.56	3.56	2.73	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	15.99	21.00	3.49	3.49	2.58	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+0.90D+E+0.90H	3	16.03	21.00	3.41	3.41	2.44	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.07	20.50	-3.47	3.47	19.42	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.11	20.50	-3.59	3.59	19.27	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.16	20.50	-3.70	3.70	19.12	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.20	20.50	-3.81	3.81	18.96	0.34	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.24	20.50	-3.93	3.93	18.80	0.36	45.52	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.28	20.50	-4.04	4.04	18.63	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.32	20.50	-4.15	4.15	18.46	0.38	45.61	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.37	20.50	-4.27	4.27	18.29	0.40	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.41	20.50	-4.38	4.38	18.10	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.45	20.50	-4.49	4.49	17.92	0.43	45.75	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.49	20.50	-4.60	4.60	17.73	0.44	45.81	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.53	20.50	-4.72	4.72	17.53	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.57	20.50	-4.83	4.83	17.34	0.48	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.62	20.50	-4.94	4.94	17.13	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.66	20.50	-5.06	5.06	16.92	0.51	46.03	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.70	20.50	-5.17	5.17	16.71	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.74	20.50	-5.28	5.28	16.49	0.55	46.15	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.78	20.50	-5.40	5.40	16.27	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.83	20.50	-5.51	5.51	16.04	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.87	20.50	-5.62	5.62	15.81	0.61	46.35	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.91	20.50	-5.73	5.73	15.57	0.63	46.42	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.95	20.50	-5.85	5.85	15.33	0.65	46.49	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.99	20.50	-5.96	5.96	15.08	0.68	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.03	20.50	-6.07	6.07	14.83	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.08	20.50	-6.19	6.19	14.57	0.73	46.73	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.12	20.50	-6.30	6.30	14.31	0.75	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.16	20.50	-6.41	6.41	14.05	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.20	20.50	-6.53	6.53	13.78	0.81	47.01	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.24	20.50	-6.64	6.64	13.50	0.84	47.11	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	3	17.29	20.50	-6.75	6.75	13.22	0.87	47.22	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.33	20.50	-6.86	6.86	12.94	0.91	47.33	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.37	20.50	-6.98	6.98	12.65	0.94	47.45	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.41	20.50	-7.09	7.09	12.35	0.98	47.58	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.45	20.50	-7.20	7.20	12.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.49	20.50	-7.32	7.32	11.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.54	20.50	-7.43	7.43	11.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.58	20.50	-7.54	7.54	11.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.62	20.50	-7.66	7.66	10.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.66	20.50	-7.77	7.77	10.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.70	20.50	-7.88	7.88	10.16	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.75	20.50	-7.99	7.99	9.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.79	20.50	-8.11	8.11	9.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.83	20.50	-8.22	8.22	9.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.87	20.50	-8.33	8.33	8.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.91	20.50	-8.45	8.45	8.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.95	20.50	-8.56	8.56	8.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.00	20.50	-8.67	8.67	7.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.04	20.50	-8.79	8.79	7.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.08	20.50	-8.90	8.90	7.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.12	20.50	-9.01	9.01	6.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.16	20.50	-9.12	9.12	6.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.20	20.50	-9.24	9.24	5.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.25	20.50	-9.35	9.35	5.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.29	20.50	-9.46	9.46	5.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.33	20.50	-9.58	9.58	4.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.37	20.50	-9.69	9.69	4.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.41	20.50	-9.80	9.80	3.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.46	20.50	-9.92	9.92	3.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.50	20.50	-10.03	10.03	3.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.54	20.50	-10.14	10.14	2.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.58	20.50	-10.25	10.25	2.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.62	20.50	-10.37	10.37	1.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.66	20.50	-10.48	10.48	1.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.71	20.50	-10.59	10.59	0.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.75	20.50	-10.71	10.71	0.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.79	20.50	-10.82	10.82	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.270	-60.59	127.58	0.47
Span # 2	2	6.250	-62.56	134.11	0.47
Span # 3	3	6.270	-43.63	134.11	0.33
+1.40D+1.60H					
Span # 1	1	6.270	-18.15	127.58	0.14
Span # 2	2	6.250	-18.85	134.11	0.14
Span # 3	3	6.270	-16.37	134.11	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-14.64	127.58	0.11
Span # 2	2	6.250	-17.21	134.11	0.13
Span # 3	3	6.270	-17.74	134.11	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-18.85	127.58	0.15
Span # 2	2	6.250	-19.48	134.11	0.15
Span # 3	3	6.270	-17.35	134.11	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.270	-17.93	127.58	0.14
Span # 2	2	6.250	-20.30	134.11	0.15
Span # 3	3	6.270	-21.06	134.11	0.16
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-19.53	127.58	0.15
Span # 2	2	6.250	-20.38	134.11	0.15
Span # 3	3	6.270	-12.97	134.11	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-18.61	127.58	0.15
Span # 2	2	6.250	-19.45	134.11	0.15
Span # 3	3	6.270	-16.69	134.11	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-22.82	127.58	0.18
Span # 2	2	6.250	-23.70	134.11	0.18
Span # 3	3	6.270	-16.29	134.11	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-21.90	127.58	0.17
Span # 2	2	6.250	-22.77	134.11	0.17
Span # 3	3	6.270	-20.00	134.11	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-28.00	127.58	0.22
Span # 2	2	6.250	-29.00	134.11	0.22
Span # 3	3	6.270	-26.30	134.11	0.20
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-32.22	127.58	0.25
Span # 2	2	6.250	-33.24	134.11	0.25
Span # 3	3	6.270	-25.91	134.11	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-31.30	127.58	0.25
Span # 2	2	6.250	-32.32	134.11	0.24
Span # 3	3	6.270	-29.62	134.11	0.22
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-32.89	127.58	0.26
Span # 2	2	6.250	-34.14	134.11	0.25
Span # 3	3	6.270	-21.54	134.11	0.16
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-31.97	127.58	0.25
Span # 2	2	6.250	-33.22	134.11	0.25
Span # 3	3	6.270	-25.25	134.11	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-36.18	127.58	0.28
Span # 2	2	6.250	-37.46	134.11	0.28
Span # 3	3	6.270	-24.86	134.11	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-35.26	127.58	0.28
Span # 2	2	6.250	-36.54	134.11	0.27
Span # 3	3	6.270	-28.57	134.11	0.21
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.27	127.58	0.12
Span # 2	2	6.250	-15.87	134.11	0.12
Span # 3	3	6.270	-15.19	134.11	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-16.59	127.58	0.13
Span # 2	2	6.250	-17.20	134.11	0.13
Span # 3	3	6.270	-15.06	134.11	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-16.30	127.58	0.13
Span # 2	2	6.250	-16.91	134.11	0.13
Span # 3	3	6.270	-16.22	134.11	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-16.80	127.58	0.13
Span # 2	2	6.250	-17.48	134.11	0.13
Span # 3	3	6.270	-13.70	134.11	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-16.51	127.58	0.13
Span # 2	2	6.250	-17.19	134.11	0.13
Span # 3	3	6.270	-14.86	134.11	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-17.83	127.58	0.14

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.250	-18.51	134.11	0.14
Span # 3	3	6.270	-14.74	134.11	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-17.54	127.58	0.14
Span # 2	2	6.250	-18.23	134.11	0.14
Span # 3	3	6.270	-15.90	134.11	0.12
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-15.56	127.58	0.12
Span # 2	2	6.250	-16.16	134.11	0.12
Span # 3	3	6.270	-14.03	134.11	0.10
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-58.03	127.58	0.45
Span # 2	2	6.250	-59.92	134.11	0.45
Span # 3	3	6.270	-42.60	134.11	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-59.35	127.58	0.47
Span # 2	2	6.250	-61.25	134.11	0.46

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.270	-42.47	134.11	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-59.06	127.58	0.46
Span # 2	2	6.250	-60.96	134.11	0.45
Span # 3	3	6.270	-43.63	134.11	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-59.56	127.58	0.47
Span # 2	2	6.250	-61.53	134.11	0.46
Span # 3	3	6.270	-41.11	134.11	0.31
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-59.27	127.58	0.46
Span # 2	2	6.250	-61.24	134.11	0.46
Span # 3	3	6.270	-42.27	134.11	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-60.59	127.58	0.47
Span # 2	2	6.250	-62.56	134.11	0.47
Span # 3	3	6.270	-42.14	134.11	0.31
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-60.30	127.58	0.47
Span # 2	2	6.250	-62.28	134.11	0.46
Span # 3	3	6.270	-43.30	134.11	0.32
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.270	-58.32	127.58	0.46
Span # 2	2	6.250	-60.21	134.11	0.45
Span # 3	3	6.270	-41.44	134.11	0.31
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	6.270	-58.32	127.58	0.46
Span # 2	2	6.250	-60.21	134.11	0.45
Span # 3	3	6.270	-41.44	134.11	0.31
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.270	-15.27	127.58	0.12
Span # 2	2	6.250	-15.87	134.11	0.12
Span # 3	3	6.270	-15.19	134.11	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.270	-16.59	127.58	0.13
Span # 2	2	6.250	-17.20	134.11	0.13
Span # 3	3	6.270	-15.06	134.11	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.270	-16.30	127.58	0.13
Span # 2	2	6.250	-16.91	134.11	0.13
Span # 3	3	6.270	-16.22	134.11	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.270	-16.80	127.58	0.13
Span # 2	2	6.250	-17.48	134.11	0.13
Span # 3	3	6.270	-13.70	134.11	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.270	-16.51	127.58	0.13
Span # 2	2	6.250	-17.19	134.11	0.13
Span # 3	3	6.270	-14.86	134.11	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.270	-17.83	127.58	0.14
Span # 2	2	6.250	-18.51	134.11	0.14
Span # 3	3	6.270	-14.74	134.11	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.270	-17.54	127.58	0.14
Span # 2	2	6.250	-18.23	134.11	0.14
Span # 3	3	6.270	-15.90	134.11	0.12
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	6.270	-15.27	127.58	0.12
Span # 2	2	6.250	-15.87	134.11	0.12
Span # 3	3	6.270	-15.19	134.11	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.270	-16.59	127.58	0.13
Span # 2	2	6.250	-17.20	134.11	0.13
Span # 3	3	6.270	-15.06	134.11	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.270	-16.30	127.58	0.13
Span # 2	2	6.250	-16.91	134.11	0.13
Span # 3	3	6.270	-16.22	134.11	0.12

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	6.270	-16.80	127.58	0.13
Span # 2	2	6.250	-17.48	134.11	0.13
Span # 3	3	6.270	-13.70	134.11	0.10
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.270	-16.51	127.58	0.13
Span # 2	2	6.250	-17.19	134.11	0.13
Span # 3	3	6.270	-14.86	134.11	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.270	-17.83	127.58	0.14
Span # 2	2	6.250	-18.51	134.11	0.14
Span # 3	3	6.270	-14.74	134.11	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.270	-17.54	127.58	0.14
Span # 2	2	6.250	-18.23	134.11	0.14
Span # 3	3	6.270	-15.90	134.11	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-28.63	127.58	0.22
Span # 2	2	6.250	-29.64	134.11	0.22
Span # 3	3	6.270	-23.75	134.11	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-29.95	127.58	0.23
Span # 2	2	6.250	-30.96	134.11	0.23
Span # 3	3	6.270	-23.63	134.11	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-29.66	127.58	0.23
Span # 2	2	6.250	-30.67	134.11	0.23
Span # 3	3	6.270	-24.79	134.11	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-30.16	127.58	0.24
Span # 2	2	6.250	-31.24	134.11	0.23
Span # 3	3	6.270	-22.26	134.11	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-29.87	127.58	0.23
Span # 2	2	6.250	-30.95	134.11	0.23
Span # 3	3	6.270	-23.42	134.11	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-31.19	127.58	0.24
Span # 2	2	6.250	-32.28	134.11	0.24
Span # 3	3	6.270	-23.30	134.11	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-30.90	127.58	0.24
Span # 2	2	6.250	-31.99	134.11	0.24
Span # 3	3	6.270	-24.46	134.11	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-28.63	127.58	0.22
Span # 2	2	6.250	-29.64	134.11	0.22
Span # 3	3	6.270	-23.75	134.11	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-29.95	127.58	0.23
Span # 2	2	6.250	-30.96	134.11	0.23
Span # 3	3	6.270	-23.63	134.11	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-29.66	127.58	0.23
Span # 2	2	6.250	-30.67	134.11	0.23
Span # 3	3	6.270	-24.79	134.11	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-30.16	127.58	0.24
Span # 2	2	6.250	-31.24	134.11	0.23
Span # 3	3	6.270	-22.26	134.11	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-29.87	127.58	0.23
Span # 2	2	6.250	-30.95	134.11	0.23
Span # 3	3	6.270	-23.42	134.11	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-31.19	127.58	0.24
Span # 2	2	6.250	-32.28	134.11	0.24
Span # 3	3	6.270	-23.30	134.11	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLL)					

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.270	-30.90	127.58	0.24
Span # 2	2	6.250	-31.99	134.11	0.24
Span # 3	3	6.270	-24.46	134.11	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-44.60	127.58	0.35
Span # 2	2	6.250	-46.22	134.11	0.34
Span # 3	3	6.270	-16.10	134.11	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-45.91	127.58	0.36
Span # 2	2	6.250	-47.55	134.11	0.35
Span # 3	3	6.270	-15.98	134.11	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-45.63	127.58	0.36
Span # 2	2	6.250	-47.26	134.11	0.35
Span # 3	3	6.270	-17.14	134.11	0.13
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-46.12	127.58	0.36
Span # 2	2	6.250	-47.83	134.11	0.36
Span # 3	3	6.270	-14.61	134.11	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-45.84	127.58	0.36
Span # 2	2	6.250	-47.54	134.11	0.35
Span # 3	3	6.270	-15.77	134.11	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-47.15	127.58	0.37
Span # 2	2	6.250	-48.87	134.11	0.36
Span # 3	3	6.270	-15.65	134.11	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-46.87	127.58	0.37
Span # 2	2	6.250	-48.58	134.11	0.36
Span # 3	3	6.270	-16.81	134.11	0.13
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-23.36	127.58	0.18
Span # 2	2	6.250	-37.16	134.11	0.28
Span # 3	3	6.270	-38.26	134.11	0.29
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-24.68	127.58	0.19
Span # 2	2	6.250	-36.98	134.11	0.28
Span # 3	3	6.270	-38.14	134.11	0.28
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-24.39	127.58	0.19
Span # 2	2	6.250	-38.13	134.11	0.28
Span # 3	3	6.270	-39.30	134.11	0.29
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-24.89	127.58	0.20
Span # 2	2	6.250	-35.69	134.11	0.27
Span # 3	3	6.270	-36.77	134.11	0.27
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-24.60	127.58	0.19
Span # 2	2	6.250	-36.84	134.11	0.27
Span # 3	3	6.270	-37.93	134.11	0.28
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-25.92	127.58	0.20
Span # 2	2	6.250	-36.66	134.11	0.27
Span # 3	3	6.270	-37.81	134.11	0.28
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-25.63	127.58	0.20
Span # 2	2	6.250	-37.81	134.11	0.28
Span # 3	3	6.270	-38.97	134.11	0.29
+0.90D+W+0.90H					
Span # 1	1	6.270	-11.67	127.58	0.09
Span # 2	2	6.250	-12.12	134.11	0.09
Span # 3	3	6.270	-10.52	134.11	0.08
+0.90D-W+0.90H					
Span # 1	1	6.270	-11.67	127.58	0.09
Span # 2	2	6.250	-12.12	134.11	0.09
Span # 3	3	6.270	-10.52	134.11	0.08
+0.90D+E+0.90H					
Span # 1	1	6.270	-22.29	127.58	0.17

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F - ALTERNATE

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.250	-23.20	134.11	0.17
Span # 3	3	6.270	-8.64	134.11	0.06
+0.90D-E+0.90H					
Span # 1	1	6.270	-7.92	127.58	0.06
Span # 2	2	6.250	-21.08	134.11	0.16
Span # 3	3	6.270	-21.60	134.11	0.16

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0013	2.884		0.0000	0.000
+D+S+H	2	0.0012	2.875	E Only	-0.0000	6.375
+D+L+H, LL Comb Run (L*L)	3	0.0007	3.386	E Only	-0.0007	2.884

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — **Licensee : JM WILLIAMS & ASSOCIATES INC**

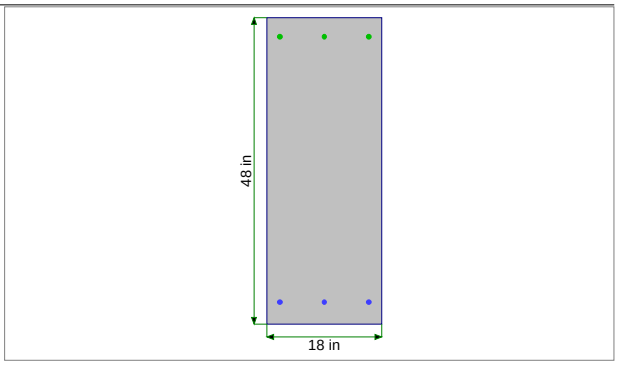
Description : GB-G (2 units)

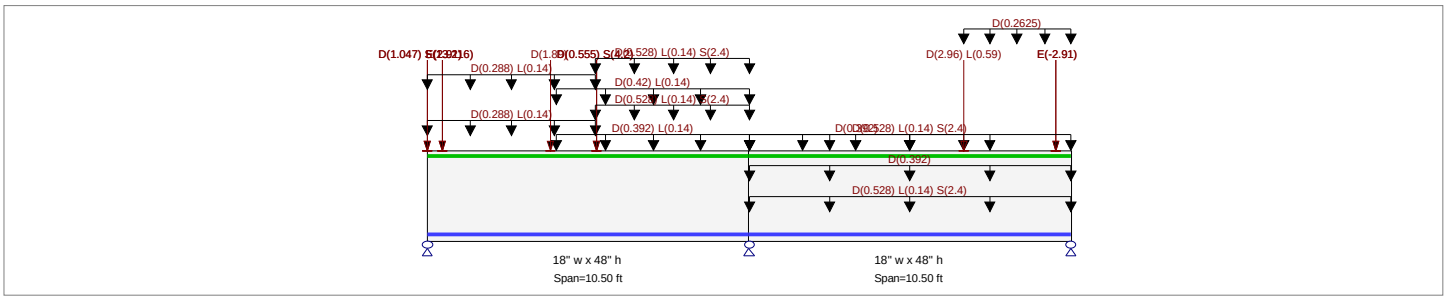
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	5.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	530.33 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.80
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 48.0 in

Span #1 Reinforcing....
3-#6 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
3-#6 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Span #2 Reinforcing....
3-#6 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
3-#6 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.250 -->> 10.50 ft, Tributary Width = 3.50 ft, (slab weight)
Point Load : D = 1.047, S = 13.216 k @ 0.0 ft, (P3)
Point Load : D = 0.5550, S = 4.20 k @ 5.50 ft, (P4)
Uniform Load : D = 0.2880, L = 0.140 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (C1)
Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Extent = 5.50 -->> 10.50 ft, Tributary Width = 1.0 ft, (C2)
Uniform Load : D = 0.120, L = 0.040 ksf, Extent = 4.250 -->> 10.50 ft, Tributary Width = 3.50 ft, (slab weight)
Point Load : D = 1.047, S = 13.216 k @ 0.0 ft, (P3)
Point Load : D = 0.5550, S = 4.20 k @ 5.50 ft, (P4)
Uniform Load : D = 0.2880, L = 0.140 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (C1)
Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Extent = 5.50 -->> 10.50 ft, Tributary Width = 1.0 ft, (C2)
Point Load : E = 2.910 k @ 0.50 ft, (OTM)
Point Load : E = 2.910 k @ 0.50 ft, (OTM)
Point Load : D = 1.890 k @ 4.0 ft, (GB-P)
Load for Span Number 2
Uniform Load : D = 0.1120 ksf, Extent = 0.0 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)
Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)
Uniform Load : D = 0.1120 ksf, Tributary Width = 3.50 ft, (slab weight)
Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)
Point Load : E = -2.910 k @ 10.0 ft, (OTM)
Point Load : E = -2.910 k @ 10.0 ft, (OTM)
Point Load : D = 2.960, L = 0.590 k @ 7.0 ft, (GB-R)
Uniform Load : D = 0.0750 ksf, Extent = 7.0 -->> 10.50 ft, Tributary Width = 3.50 ft, (slab weight)

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.526** : 1

Section used for this span **Typical Section**
Mu : Applied -143.991 k-ft
Mn * Phi : Allowable 273.656 k-ft
Location of maximum on span 0.000 ft
Span # where maximum occurs Span # 2

Maximum Deflection

Max Downward Transient Deflection	0.001 in	Ratio =	104254	>=36
Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Max Downward Total Deflection	0.002 in	Ratio =	64621	>=24
Max Upward Total Deflection	0.000 in	Ratio =	999	<240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	40.276	95.980	31.689
Overall MINimum	-0.227	0.000	-0.312
+D+H	9.739	36.878	12.097
+D+L+H, LL Comb Run (*L)	9.512	39.000	13.732
+D+L+H, LL Comb Run (L*)	11.418	40.202	11.784
+D+L+H, LL Comb Run (LL)	11.190	42.323	13.420
+D+Lr+H, LL Comb Run (*L)	9.739	36.878	12.097
+D+Lr+H, LL Comb Run (L*)	9.739	36.878	12.097
+D+Lr+H, LL Comb Run (LL)	9.739	36.878	12.097
+D+S+H	40.276	95.980	31.689
+D+0.750Lr+0.750L+H, LL Comb Run (	9.569	38.469	13.323
+D+0.750Lr+0.750L+H, LL Comb Run (	10.998	39.371	11.862
+D+0.750Lr+0.750L+H, LL Comb Run (	10.827	40.962	13.089
+D+0.750L+0.750S+H, LL Comb Run (*	32.471	82.796	28.018
+D+0.750L+0.750S+H, LL Comb Run (L	33.901	83.698	26.557
+D+0.750L+0.750S+H, LL Comb Run (L	33.730	85.289	27.784
+D+0.60W+H	9.739	36.878	12.097
+D+0.70E+H	13.619	36.878	8.217
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.569	38.469	13.323
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.998	39.371	11.862
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.827	40.962	13.089
+D+0.750L+0.750S+0.450W+H, LL Comb	32.471	82.796	28.018
+D+0.750L+0.750S+0.450W+H, LL Comb	33.901	83.698	26.557
+D+0.750L+0.750S+0.450W+H, LL Comb	33.730	85.289	27.784
+D+0.750L+0.750S+0.5250E+H, LL Com	35.381	82.796	25.108
+D+0.750L+0.750S+0.5250E+H, LL Com	36.811	83.698	23.647
+D+0.750L+0.750S+0.5250E+H, LL Com	36.640	85.289	24.874
+0.60D+0.60W+0.60H	5.843	22.127	7.258
+0.60D+0.70E+0.60H	9.723	22.127	3.378
D Only	9.739	36.878	12.097
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.227	2.122	1.636
L Only, LL Comb Run (L*)	1.679	3.324	-0.312
L Only, LL Comb Run (LL)	1.451	5.445	1.324
S Only	30.537	59.102	19.593
W Only			
E Only	5.543	0.000	-5.543
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	44.50	61.39	61.39	0.00	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+0.70S+E+1.60	1	0.04	44.50	18.35	18.35	0.81	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.09	44.50	18.27	18.27	1.59	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.13	44.50	18.19	18.19	2.37	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.17	44.50	18.11	18.11	3.15	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.21	44.50	18.03	18.03	3.92	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	0.26	44.50	17.95	17.95	4.69	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.30	44.50	17.87	17.87	5.46	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.34	44.50	17.79	17.79	6.23	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.39	44.50	17.71	17.71	6.99	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.43	44.50	17.63	17.63	7.74	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.47	44.50	17.55	17.55	8.50	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.51	44.50	15.62	15.62	8.32	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.56	44.50	15.54	15.54	8.98	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.60	44.50	15.46	15.46	9.65	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.64	44.50	15.38	15.38	10.31	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.69	44.50	15.30	15.30	10.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.73	44.50	15.22	15.22	11.62	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.77	44.50	15.13	15.13	12.27	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.81	44.50	15.05	15.05	12.92	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.86	44.50	14.97	14.97	13.56	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.90	44.50	14.89	14.89	14.20	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.94	44.50	14.81	14.81	14.84	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	0.99	44.50	14.73	14.73	15.47	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.03	44.50	14.65	14.65	16.10	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.07	44.50	14.57	14.57	16.73	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.11	44.50	14.49	14.49	17.35	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.16	44.50	14.41	14.41	17.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.20	44.50	14.33	14.33	18.58	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.24	44.50	14.25	14.25	19.20	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.29	44.50	14.17	14.17	19.81	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.33	44.50	14.09	14.09	20.41	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.37	44.50	14.01	14.01	21.01	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.41	44.50	13.93	13.93	21.61	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.46	44.50	13.85	13.85	22.21	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.50	44.50	13.77	13.77	22.80	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.54	44.50	13.69	13.69	23.39	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.59	44.50	13.61	13.61	23.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.63	44.50	13.53	13.53	24.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.67	44.50	13.45	13.45	25.13	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.71	44.50	13.37	13.37	25.71	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.76	44.50	13.29	13.29	26.28	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.80	44.50	13.21	13.21	26.85	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.84	44.50	13.13	13.13	27.41	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.89	44.50	13.05	13.05	27.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.93	44.50	12.96	12.96	28.53	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	1.97	44.50	12.88	12.88	29.08	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.01	44.50	12.80	12.80	29.63	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.06	44.50	12.72	12.72	30.18	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.10	44.50	12.64	12.64	30.72	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.14	44.50	12.56	12.56	31.26	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.19	44.50	12.48	12.48	31.80	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.23	44.50	12.40	12.40	32.33	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.27	44.50	12.32	12.32	32.86	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.31	44.50	12.24	12.24	33.39	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.36	44.50	12.16	12.16	33.91	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.40	44.50	12.08	12.08	34.43	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.44	44.50	12.00	12.00	34.95	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.49	44.50	11.92	11.92	35.46	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	2.53	44.50	11.84	11.84	35.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	4.89	44.50	4.44	4.44	56.43	0.29	81.43	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.93	44.50	4.32	4.32	56.62	0.28	81.41	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.97	44.50	4.19	4.19	56.80	0.27	81.39	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.01	44.50	4.06	4.06	56.98	0.26	81.36	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.06	44.50	3.93	3.93	57.15	0.26	81.34	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.10	44.50	3.80	3.80	57.32	0.25	81.32	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	5.14	44.50	3.68	3.68	55.07	0.25	81.32	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	5.19	44.50	3.56	3.56	55.22	0.24	81.30	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.40D+1.60H	1	5.23	44.50	-3.64	3.64	24.50	0.55	82.07	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.40D+1.60H	1	5.27	44.50	-3.78	3.78	24.34	0.58	82.13	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.40D+1.60H	1	5.31	44.50	-3.91	3.91	24.17	0.60	82.20	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.40D+1.60H	1	5.36	44.50	-4.05	4.05	24.00	0.63	82.26	Vu < PhiVc/2	Not Reqd 1	82.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.40	44.50	-4.20	4.20	26.13	0.60	82.18	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.44	44.50	-4.35	4.35	25.95	0.62	82.25	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.49	44.50	-4.51	4.51	25.76	0.65	82.32	Vu < PhiVc/2	Not Reqd 1	82.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.53	44.50	-12.60	12.60	57.62	0.81	82.72	Vu < PhiVc/2	Not Reqd 1	82.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.57	44.50	-13.08	13.08	57.07	0.85	82.81	Vu < PhiVc/2	Not Reqd 1	82.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.61	44.50	-13.56	13.56	56.50	0.89	82.91	Vu < PhiVc/2	Not Reqd 1	82.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.66	44.50	-14.05	14.05	55.91	0.93	83.02	Vu < PhiVc/2	Not Reqd 1	83.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.70	44.50	-14.53	14.53	55.29	0.97	83.12	Vu < PhiVc/2	Not Reqd 1	83.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.74	44.50	-15.01	15.01	54.66	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.79	44.50	-15.49	15.49	54.01	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.83	44.50	-15.97	15.97	53.33	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.87	44.50	-16.46	16.46	52.64	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.91	44.50	-16.94	16.94	51.92	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.96	44.50	-17.42	17.42	51.19	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.00	44.50	-17.90	17.90	50.43	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.04	44.50	-18.38	18.38	49.65	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.09	44.50	-18.87	18.87	48.85	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.13	44.50	-19.35	19.35	48.03	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.17	44.50	-19.83	19.83	47.19	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.21	44.50	-20.31	20.31	46.33	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.26	44.50	-20.79	20.79	45.45	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.30	44.50	-21.28	21.28	44.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.34	44.50	-21.76	21.76	43.63	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.39	44.50	-22.24	22.24	42.69	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.43	44.50	-22.72	22.72	41.72	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.47	44.50	-23.20	23.20	40.74	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.51	44.50	-23.69	23.69	39.74	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.56	44.50	-24.17	24.17	38.71	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.60	44.50	-24.65	24.65	37.66	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.64	44.50	-25.13	25.13	36.60	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.69	44.50	-25.61	25.61	35.51	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.73	44.50	-26.10	26.10	34.40	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.77	44.50	-26.58	26.58	33.27	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.81	44.50	-27.06	27.06	32.12	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.86	44.50	-27.54	27.54	30.95	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.90	44.50	-28.02	28.02	29.76	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.94	44.50	-28.50	28.50	28.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.99	44.50	-28.99	28.99	27.32	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.03	44.50	-29.47	29.47	26.07	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.07	44.50	-29.95	29.95	24.79	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.11	44.50	-30.43	30.43	23.50	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.16	44.50	-30.91	30.91	22.19	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	7.20	44.50	-31.40	31.40	20.85	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.24	44.50	-31.88	31.88	19.49	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.29	44.50	-32.36	32.36	18.12	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.33	44.50	-32.84	32.84	16.72	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.37	44.50	-33.32	33.32	15.30	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.41	44.50	-33.81	33.81	13.86	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.46	44.50	-34.29	34.29	12.40	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.50	44.50	-34.77	34.77	10.92	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.54	44.50	-35.25	35.25	9.42	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.59	44.50	-35.73	35.73	7.90	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.63	44.50	-36.22	36.22	6.36	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.67	44.50	-36.70	36.70	4.80	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.71	44.50	-37.18	37.18	3.22	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.76	44.50	-37.66	37.66	1.61	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.80	45.00	-38.14	38.14	0.01	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.84	45.00	-38.63	38.63	1.66	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.89	45.00	-39.11	39.11	3.32	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.93	45.00	-39.59	39.59	5.01	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.97	45.00	-40.07	40.07	6.72	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.01	45.00	-40.55	40.55	8.44	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.06	45.00	-41.04	41.04	10.19	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.10	45.00	-41.52	41.52	11.96	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.14	45.00	-42.00	42.00	13.75	1.00	84.09	Vu < PhiVc/2	Not Reqd 1	84.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.19	45.00	-42.48	42.48	15.56	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.23	45.00	-42.96	42.96	17.39	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.27	45.00	-43.45	43.45	19.24	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.31	45.00	-43.93	43.93	21.12	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.36	45.00	-44.41	44.41	23.01	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.40	45.00	-44.89	44.89	24.92	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.44	45.00	-45.37	45.37	26.86	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.49	45.00	-45.86	45.86	28.81	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.53	45.00	-46.34	46.34	30.79	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.57	45.00	-46.82	46.82	32.78	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.61	45.00	-47.30	47.30	34.80	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.66	45.00	-47.78	47.78	36.84	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.70	45.00	-48.26	48.26	38.90	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.74	45.00	-48.75	48.75	40.98	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.79	45.00	-49.23	49.23	43.07	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.83	45.00	-49.71	49.71	45.19	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.87	45.00	-50.19	50.19	47.34	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.91	45.00	-50.67	50.67	49.50	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	8.96	45.00	-51.16	51.16	51.68	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.00	45.00	-51.64	51.64	53.88	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.04	45.00	-52.12	52.12	56.11	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.09	45.00	-52.60	52.60	58.35	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.13	45.00	-53.08	53.08	60.61	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.17	45.00	-53.57	53.57	62.90	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.21	45.00	-54.05	54.05	65.21	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.26	45.00	-54.53	54.53	67.53	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.30	45.00	-55.01	55.01	69.88	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.34	45.00	-55.49	55.49	72.25	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.39	45.00	-55.98	55.98	74.64	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.43	45.00	-56.46	56.46	77.05	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.47	45.00	-56.94	56.94	79.48	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	9.51	45.00	-57.42	57.42	81.93	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.56	45.00	-57.90	57.90	84.40	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.60	45.00	-58.39	58.39	86.89	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.64	45.00	-58.87	58.87	89.40	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.69	45.00	-59.35	59.35	91.93	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.73	45.00	-59.83	59.83	94.49	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.77	45.00	-60.31	60.31	97.06	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.81	45.00	-60.80	60.80	99.66	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.86	45.00	-61.28	61.28	102.27	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.90	45.00	-61.76	61.76	104.91	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.94	45.00	-62.24	62.24	107.57	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.99	45.00	-62.72	62.72	110.25	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.03	45.00	-63.21	63.21	112.94	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.07	45.00	-63.69	63.69	115.66	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.11	45.00	-64.17	64.17	118.40	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.16	45.00	-64.65	64.65	121.16	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.20	45.00	-65.13	65.13	123.94	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.24	45.00	-65.62	65.62	126.75	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.29	45.00	-66.10	66.10	129.57	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.33	45.00	-66.58	66.58	132.41	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.37	45.00	-67.06	67.06	135.28	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.41	45.00	-67.54	67.54	138.16	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.46	45.00	-68.03	68.03	141.07	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	45.00	73.03	73.03	143.99	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.54	45.00	72.56	72.56	140.87	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.59	45.00	72.08	72.08	137.77	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.63	45.00	71.61	71.61	134.69	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.67	45.00	71.14	71.14	131.63	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.71	45.00	70.66	70.66	128.60	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.76	45.00	70.19	70.19	125.58	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.80	45.00	69.71	69.71	122.58	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.84	45.00	69.24	69.24	119.60	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.89	45.00	68.76	68.76	116.64	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.93	45.00	68.29	68.29	113.71	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	45.00	67.81	67.81	110.79	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.01	45.00	67.34	67.34	107.90	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.06	45.00	66.86	66.86	105.02	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.10	45.00	66.39	66.39	102.16	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.14	45.00	65.92	65.92	99.33	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.19	45.00	65.44	65.44	96.51	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.23	45.00	64.97	64.97	93.72	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.27	45.00	64.49	64.49	90.95	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.31	45.00	64.02	64.02	88.19	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.36	45.00	63.54	63.54	85.46	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.40	45.00	63.07	63.07	82.75	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.44	45.00	62.59	62.59	80.05	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.49	45.00	62.12	62.12	77.38	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	45.00	61.64	61.64	74.73	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	45.00	61.17	61.17	72.10	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.61	45.00	60.70	60.70	69.48	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.66	45.00	60.22	60.22	66.89	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.70	45.00	59.75	59.75	64.32	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.74	45.00	59.27	59.27	61.77	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.79	45.00	58.80	58.80	59.24	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	11.83	45.00	58.32	58.32	56.73	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.87	45.00	57.85	57.85	54.24	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.91	45.00	57.37	57.37	51.77	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.96	45.00	56.90	56.90	49.33	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.00	45.00	56.43	56.43	46.90	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	45.00	55.95	55.95	44.49	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.09	45.00	55.48	55.48	42.10	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.13	45.00	55.00	55.00	39.73	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.17	45.00	54.53	54.53	37.39	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.21	45.00	54.05	54.05	35.06	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.26	45.00	53.58	53.58	32.75	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.30	45.00	53.10	53.10	30.47	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.34	45.00	52.63	52.63	28.20	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.39	45.00	52.15	52.15	25.96	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.43	45.00	51.68	51.68	23.73	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.47	45.00	51.21	51.21	21.53	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	45.00	50.73	50.73	19.34	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.56	45.00	50.26	50.26	17.18	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.60	45.00	49.78	49.78	15.04	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.64	45.00	49.31	49.31	12.91	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.69	45.00	48.83	48.83	10.81	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.73	45.00	48.36	48.36	8.73	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.77	45.00	47.88	47.88	6.66	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.81	45.00	47.41	47.41	4.62	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.86	45.00	46.93	46.93	2.60	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.90	45.00	46.46	46.46	0.60	1.00	84.09	PhiVc/2 < Vu <=	Min 11.5.6	117.1	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.94	44.50	45.99	45.99	1.38	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.99	44.50	45.51	45.51	3.34	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.03	44.50	45.04	45.04	5.28	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.07	44.50	44.56	44.56	7.20	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.11	44.50	44.09	44.09	9.10	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.16	44.50	43.61	43.61	10.98	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.20	44.50	43.14	43.14	12.84	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.24	44.50	42.66	42.66	14.68	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.29	44.50	42.19	42.19	16.50	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.33	44.50	41.72	41.72	18.30	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.37	44.50	41.24	41.24	20.07	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.41	44.50	40.77	40.77	21.83	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.46	44.50	40.29	40.29	23.57	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.50	44.50	39.82	39.82	25.28	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.54	44.50	39.34	39.34	26.98	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.59	44.50	38.87	38.87	28.66	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.63	44.50	38.39	38.39	30.31	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.67	44.50	37.92	37.92	31.95	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.71	44.50	37.44	37.44	33.56	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.76	44.50	36.97	36.97	35.16	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.80	44.50	36.50	36.50	36.73	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.84	44.50	36.02	36.02	38.29	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.89	44.50	35.55	35.55	39.82	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.93	44.50	35.07	35.07	41.33	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.97	44.50	34.60	34.60	42.82	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.01	44.50	34.12	34.12	44.30	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.06	44.50	33.65	33.65	45.75	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.10	44.50	33.17	33.17	47.18	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	14.14	44.50	32.70	32.70	48.59	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.19	44.50	32.22	32.22	49.98	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.23	44.50	31.75	31.75	51.36	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.27	44.50	31.28	31.28	52.71	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.31	44.50	30.80	30.80	54.04	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.36	44.50	30.33	30.33	55.35	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.40	44.50	29.85	29.85	56.64	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.44	44.50	29.38	29.38	57.90	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.49	44.50	28.90	28.90	59.15	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.53	44.50	28.43	28.43	60.38	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.57	44.50	27.95	27.95	61.59	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.61	44.50	27.48	27.48	62.78	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.66	44.50	27.01	27.01	63.95	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.70	44.50	26.53	26.53	65.09	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.74	44.50	26.06	26.06	66.22	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.79	44.50	25.58	25.58	67.33	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.83	44.50	25.11	25.11	68.41	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.87	44.50	24.63	24.63	69.48	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.91	44.50	24.16	24.16	70.52	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.96	44.50	23.68	23.68	71.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.00	44.50	23.21	23.21	72.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.04	44.50	22.73	22.73	73.54	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.09	44.50	22.26	22.26	74.50	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.13	44.50	21.79	21.79	75.45	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.17	44.50	21.31	21.31	76.37	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.21	44.50	20.84	20.84	77.27	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.26	44.50	20.36	20.36	78.16	0.97	83.10	Vu < PhiVc/2	Not Reqd 1	83.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.30	44.50	19.89	19.89	79.02	0.93	83.02	Vu < PhiVc/2	Not Reqd 1	83.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.34	44.50	19.41	19.41	79.86	0.90	82.94	Vu < PhiVc/2	Not Reqd 1	82.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.39	44.50	18.94	18.94	80.68	0.87	82.87	Vu < PhiVc/2	Not Reqd 1	82.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.43	44.50	18.46	18.46	81.48	0.84	82.79	Vu < PhiVc/2	Not Reqd 1	82.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.47	44.50	17.99	17.99	82.27	0.81	82.72	Vu < PhiVc/2	Not Reqd 1	82.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.51	44.50	17.51	17.51	83.03	0.78	82.65	Vu < PhiVc/2	Not Reqd 1	82.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.56	44.50	17.04	17.04	83.77	0.75	82.58	Vu < PhiVc/2	Not Reqd 1	82.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.60	44.50	16.57	16.57	84.49	0.73	82.51	Vu < PhiVc/2	Not Reqd 1	82.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.64	44.50	16.09	16.09	85.19	0.70	82.44	Vu < PhiVc/2	Not Reqd 1	82.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.69	44.50	15.62	15.62	85.87	0.67	82.38	Vu < PhiVc/2	Not Reqd 1	82.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.73	44.50	15.14	15.14	86.52	0.65	82.32	Vu < PhiVc/2	Not Reqd 1	82.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.77	44.50	14.67	14.67	87.16	0.62	82.26	Vu < PhiVc/2	Not Reqd 1	82.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.81	44.50	14.19	14.19	87.78	0.60	82.19	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.86	44.50	13.72	13.72	88.38	0.58	82.14	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.90	44.50	13.24	13.24	88.96	0.55	82.08	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.94	44.50	12.77	12.77	89.52	0.53	82.02	Vu < PhiVc/2	Not Reqd 1	82.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.99	44.50	12.30	12.30	90.05	0.51	81.96	Vu < PhiVc/2	Not Reqd 1	82.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.03	44.50	11.82	11.82	90.57	0.48	81.91	Vu < PhiVc/2	Not Reqd 1	81.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.07	44.50	11.35	11.35	91.07	0.46	81.85	Vu < PhiVc/2	Not Reqd 1	81.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.11	44.50	10.87	10.87	91.54	0.44	81.80	Vu < PhiVc/2	Not Reqd 1	81.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.16	44.50	10.40	10.40	92.00	0.42	81.75	Vu < PhiVc/2	Not Reqd 1	81.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.20	44.50	9.92	9.92	92.43	0.40	81.70	Vu < PhiVc/2	Not Reqd 1	81.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.24	44.50	9.45	9.45	92.85	0.38	81.64	Vu < PhiVc/2	Not Reqd 1	81.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.29	44.50	8.97	8.97	93.24	0.36	81.59	Vu < PhiVc/2	Not Reqd 1	81.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.33	44.50	8.50	8.50	93.62	0.34	81.54	Vu < PhiVc/2	Not Reqd 1	81.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.37	44.50	8.02	8.02	93.97	0.32	81.49	Vu < PhiVc/2	Not Reqd 1	81.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.41	44.50	7.55	7.55	94.31	0.30	81.45	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	16.46	44.50	7.08	7.08	94.62	0.28	81.40	Vu < PhiVc/2	Not Reqd 1	81.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.50	44.50	6.60	6.60	94.91	0.26	81.35	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.54	44.50	6.13	6.13	95.18	0.24	81.30	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.59	44.50	5.65	5.65	95.44	0.22	81.25	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.63	44.50	5.18	5.18	95.67	0.20	81.21	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.67	44.50	4.70	4.70	95.88	0.18	81.16	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.71	44.50	4.23	4.23	96.07	0.16	81.11	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.76	44.50	3.75	3.75	96.24	0.14	81.07	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.80	44.50	3.28	3.28	96.39	0.13	81.02	Vu < PhiVc/2	Not Reqd 1	81.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.84	44.50	2.88	2.88	55.52	0.19	81.19	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.89	44.50	2.62	2.62	55.64	0.17	81.14	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.93	44.50	2.38	2.38	35.75	0.25	81.32	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.97	44.50	2.22	2.22	35.85	0.23	81.28	Vu < PhiVc/2	Not Reqd 1	81.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	17.01	44.50	2.07	2.07	35.94	0.21	81.24	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	17.06	44.50	1.91	1.91	36.03	0.20	81.20	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	17.10	44.50	1.75	1.75	36.10	0.18	81.16	Vu < PhiVc/2	Not Reqd 1	81.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	17.14	44.50	1.59	1.59	36.18	0.16	81.11	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	17.19	44.50	1.43	1.43	36.24	0.15	81.07	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	2	17.23	44.50	-1.63	1.63	95.36	0.06	80.87	Vu < PhiVc/2	Not Reqd 1	80.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.27	44.50	-2.10	2.10	97.29	0.08	80.91	Vu < PhiVc/2	Not Reqd 1	80.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.31	44.50	-2.57	2.57	97.19	0.10	80.95	Vu < PhiVc/2	Not Reqd 1	81.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.36	44.50	-3.05	3.05	97.07	0.12	81.00	Vu < PhiVc/2	Not Reqd 1	81.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.40	44.50	-3.52	3.52	96.93	0.13	81.04	Vu < PhiVc/2	Not Reqd 1	81.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.44	44.50	-3.99	3.99	96.77	0.15	81.09	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.49	44.50	-4.47	4.47	96.59	0.17	81.14	Vu < PhiVc/2	Not Reqd 1	81.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.53	44.50	-8.79	8.79	96.28	0.34	81.55	Vu < PhiVc/2	Not Reqd 1	81.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.57	44.50	-9.25	9.25	95.89	0.36	81.60	Vu < PhiVc/2	Not Reqd 1	81.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.61	44.50	-9.72	9.72	95.48	0.38	81.65	Vu < PhiVc/2	Not Reqd 1	81.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.66	44.50	-10.19	10.19	95.06	0.40	81.69	Vu < PhiVc/2	Not Reqd 1	81.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.70	44.50	-10.66	10.66	94.61	0.42	81.74	Vu < PhiVc/2	Not Reqd 1	81.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.74	44.50	-11.13	11.13	94.14	0.44	81.80	Vu < PhiVc/2	Not Reqd 1	81.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.79	44.50	-11.59	11.59	93.66	0.46	81.85	Vu < PhiVc/2	Not Reqd 1	81.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.83	44.50	-12.06	12.06	93.15	0.48	81.90	Vu < PhiVc/2	Not Reqd 1	81.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.87	44.50	-12.53	12.53	92.62	0.50	81.95	Vu < PhiVc/2	Not Reqd 1	82.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.91	44.50	-13.00	13.00	92.08	0.52	82.01	Vu < PhiVc/2	Not Reqd 1	82.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.96	44.50	-13.46	13.46	91.51	0.55	82.06	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.00	44.50	-13.93	13.93	90.92	0.57	82.12	Vu < PhiVc/2	Not Reqd 1	82.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.04	44.50	-14.40	14.40	90.31	0.59	82.17	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.09	44.50	-14.87	14.87	89.69	0.61	82.23	Vu < PhiVc/2	Not Reqd 1	82.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.13	44.50	-15.34	15.34	89.04	0.64	82.29	Vu < PhiVc/2	Not Reqd 1	82.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.17	44.50	-15.80	15.80	88.37	0.66	82.35	Vu < PhiVc/2	Not Reqd 1	82.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.21	44.50	-16.27	16.27	87.69	0.69	82.41	Vu < PhiVc/2	Not Reqd 1	82.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.26	44.50	-16.74	16.74	86.98	0.71	82.48	Vu < PhiVc/2	Not Reqd 1	82.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.30	44.50	-17.21	17.21	86.25	0.74	82.54	Vu < PhiVc/2	Not Reqd 1	82.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.34	44.50	-17.68	17.68	85.50	0.77	82.61	Vu < PhiVc/2	Not Reqd 1	82.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.39	44.50	-18.14	18.14	84.74	0.79	82.68	Vu < PhiVc/2	Not Reqd 1	82.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.43	44.50	-18.61	18.61	83.95	0.82	82.75	Vu < PhiVc/2	Not Reqd 1	82.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.47	44.50	-19.08	19.08	83.14	0.85	82.82	Vu < PhiVc/2	Not Reqd 1	82.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.51	44.50	-19.55	19.55	82.31	0.88	82.89	Vu < PhiVc/2	Not Reqd 1	82.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.56	44.50	-20.01	20.01	81.47	0.91	82.97	Vu < PhiVc/2	Not Reqd 1	83.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.60	44.50	-20.48	20.48	80.60	0.94	83.04	Vu < PhiVc/2	Not Reqd 1	83.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.64	44.50	-20.95	20.95	79.71	0.97	83.12	Vu < PhiVc/2	Not Reqd 1	83.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.69	44.50	-21.42	21.42	78.80	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.73	44.50	-21.89	21.89	77.87	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H, I	2	18.77	44.50	-22.35	22.35	76.93	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	18.81	44.50	-22.82	22.82	75.96	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	18.86	44.50	-23.29	23.29	74.97	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	18.90	44.50	-23.76	23.76	73.96	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	18.94	44.50	-24.23	24.23	72.93	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	18.99	44.50	-24.69	24.69	71.88	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.03	44.50	-25.16	25.16	70.82	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.07	44.50	-25.63	25.63	69.73	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.11	44.50	-26.10	26.10	68.62	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.16	44.50	-26.56	26.56	67.49	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.20	44.50	-27.03	27.03	66.34	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.24	44.50	-27.50	27.50	65.17	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.29	44.50	-27.97	27.97	63.99	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.33	44.50	-28.44	28.44	62.78	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.37	44.50	-28.90	28.90	61.55	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.41	44.50	-29.37	29.37	60.30	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.46	44.50	-29.84	29.84	59.03	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.50	44.50	-30.31	30.31	57.74	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.54	44.50	-30.78	30.78	56.43	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.59	44.50	-31.24	31.24	55.10	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.63	44.50	-31.71	31.71	53.76	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.67	44.50	-32.18	32.18	52.39	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.71	44.50	-32.65	32.65	51.00	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.76	44.50	-33.11	33.11	49.59	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.80	44.50	-33.58	33.58	48.16	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.84	44.50	-34.05	34.05	46.71	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.89	44.50	-34.52	34.52	45.24	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.93	44.50	-34.99	34.99	43.75	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	19.97	44.50	-35.45	35.45	42.24	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.01	44.50	-35.92	35.92	40.71	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.06	44.50	-36.39	36.39	39.16	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.10	44.50	-36.86	36.86	37.59	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.14	44.50	-37.33	37.33	36.00	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.19	44.50	-37.79	37.79	34.39	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.23	44.50	-38.26	38.26	32.76	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.27	44.50	-38.73	38.73	31.11	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.31	44.50	-39.20	39.20	29.44	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.36	44.50	-39.66	39.66	27.75	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.40	44.50	-40.13	40.13	26.04	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.44	44.50	-40.60	40.60	24.31	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.49	44.50	-41.07	41.07	22.56	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.53	44.50	-41.54	41.54	20.79	1.00	83.19	Vu < PhiVc/2	Not Reqd 1	83.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.57	44.50	-42.00	42.00	19.00	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.61	44.50	-42.47	42.47	17.19	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.66	44.50	-42.94	42.94	15.36	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.70	44.50	-43.41	43.41	13.51	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.74	44.50	-43.87	43.87	11.64	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.79	44.50	-44.34	44.34	9.75	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.83	44.50	-44.81	44.81	7.84	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.87	44.50	-45.28	45.28	5.91	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.91	44.50	-45.75	45.75	3.96	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	20.96	44.50	-46.21	46.21	1.99	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0
+1.20D+0.50L+1.60S+1.60H, I	2	21.00	44.50	-46.68	46.68	0.00	1.00	83.19	PhiVc/2 < Vu <=	Min 11.5.6	115.8	9.2	9.0

Maximum Forces & Stresses for Load Combinations

Description : GB-G (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	10.500	-141.07	273.66	0.52
Span # 2	2	10.500	-143.99	273.66	0.53
+1.40D+1.60H					
Span # 1	1	10.500	-53.70	273.66	0.20
Span # 2	2	10.500	-54.78	273.66	0.20
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-49.84	273.66	0.18
Span # 2	2	10.500	-50.78	273.66	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-51.07	273.66	0.19
Span # 2	2	10.500	-52.20	273.66	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-54.88	273.66	0.20
Span # 2	2	10.500	-56.02	273.66	0.20
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-78.67	273.66	0.29
Span # 2	2	10.500	-80.21	273.66	0.29
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-79.91	273.66	0.29
Span # 2	2	10.500	-81.64	273.66	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-83.71	273.66	0.31
Span # 2	2	10.500	-85.46	273.66	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-47.22	273.66	0.17
Span # 2	2	10.500	-48.15	273.66	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-47.61	273.66	0.17
Span # 2	2	10.500	-48.59	273.66	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-48.80	273.66	0.18
Span # 2	2	10.500	-49.79	273.66	0.18
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-46.03	273.66	0.17
Span # 2	2	10.500	-46.96	273.66	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-46.03	273.66	0.17
Span # 2	2	10.500	-46.96	273.66	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-46.03	273.66	0.17
Span # 2	2	10.500	-46.96	273.66	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-139.49	273.66	0.51
Span # 2	2	10.500	-142.35	273.66	0.52
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-139.88	273.66	0.51
Span # 2	2	10.500	-142.80	273.66	0.52
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-141.07	273.66	0.52
Span # 2	2	10.500	-143.99	273.66	0.53
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	10.500	-138.30	273.66	0.51
Span # 2	2	10.500	-141.16	273.66	0.52
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-47.22	273.66	0.17
Span # 2	2	10.500	-48.15	273.66	0.18
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-47.61	273.66	0.17
Span # 2	2	10.500	-48.59	273.66	0.18
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-48.80	273.66	0.18
Span # 2	2	10.500	-49.79	273.66	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-76.06	273.66	0.28
Span # 2	2	10.500	-77.59	273.66	0.28
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-76.44	273.66	0.28

Concrete Beam

Lic. # : KW-06007096 **Licensee : JM WILLIAMS & ASSOCIATES INC**

Description : GB-G (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	10.500	-78.03	273.66	0.29
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-77.63	273.66	0.28
Span # 2	2	10.500	-79.23	273.66	0.29
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-87.58	273.66	0.32
Span # 2	2	10.500	-89.36	273.66	0.33
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-87.96	273.66	0.32
Span # 2	2	10.500	-89.81	273.66	0.33
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-89.15	273.66	0.33
Span # 2	2	10.500	-91.00	273.66	0.33
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-87.60	273.66	0.32
Span # 2	2	10.500	-89.36	273.66	0.33
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-87.99	273.66	0.32
Span # 2	2	10.500	-89.81	273.66	0.33
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-89.18	273.66	0.33
Span # 2	2	10.500	-91.00	273.66	0.33
+0.90D+W+0.90H					
Span # 1	1	10.500	-34.52	273.66	0.13
Span # 2	2	10.500	-35.22	273.66	0.13
+0.90D+E+0.90H					
Span # 1	1	10.500	-34.51	273.66	0.13
Span # 2	2	10.500	-35.22	273.66	0.13
+0.90D-E+0.90H					
Span # 1	1	10.500	-34.54	273.66	0.13
Span # 2	2	10.500	-35.22	273.66	0.13

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0010	4.650	+D+0.750L+0.750S+0.450W+H, LL Co	-0.0000	10.050
+D+S+H	2	0.0019	5.850		0.0000	10.050

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

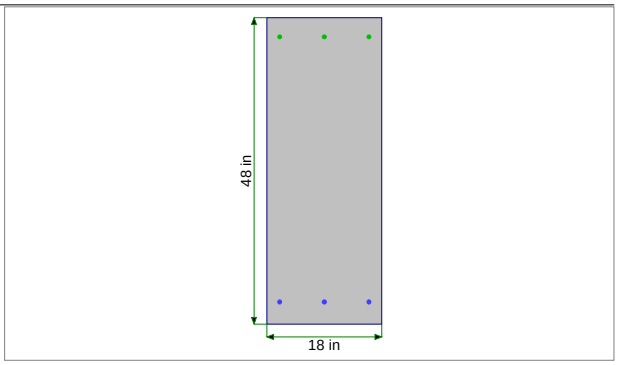
Description : GB-G (2 units) - alt

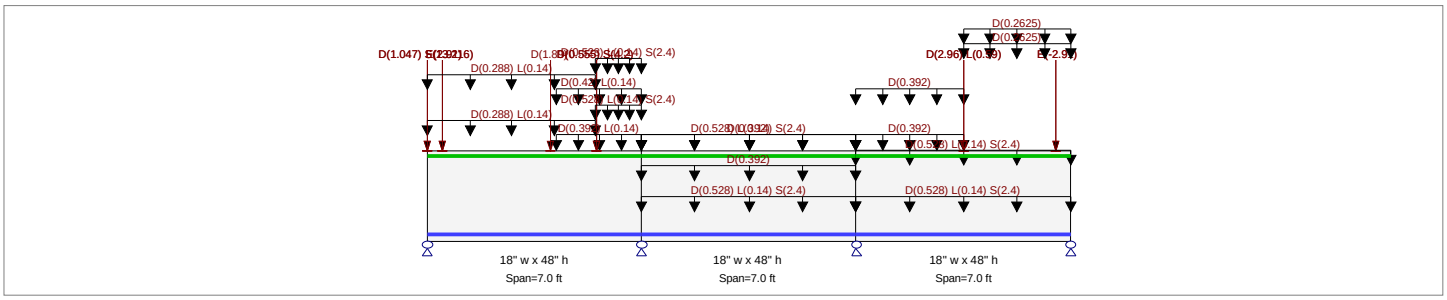
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 48.0 in

Span #1 Reinforcing....
- 3-#5 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #2 Reinforcing....
- 3-#5 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #3 Reinforcing....
- 3-#5 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads

Load for Span Number 1
- Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.250 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)
- Point Load : D = 1.047, S = 13.216 k @ 0.0 ft, (P3)
- Point Load : D = 0.5550, S = 4.20 k @ 5.50 ft, (P4)
- Uniform Load : D = 0.2880, L = 0.140 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (C1)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Extent = 5.50 -->> 7.0 ft, Tributary Width = 1.0 ft, (C2)
- Uniform Load : D = 0.120, L = 0.040 ksf, Extent = 4.250 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)
- Point Load : D = 1.047, S = 13.216 k @ 0.0 ft, (P3)
- Point Load : D = 0.5550, S = 4.20 k @ 5.50 ft, (P4)
- Uniform Load : D = 0.2880, L = 0.140 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (C1)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Extent = 5.50 -->> 7.0 ft, Tributary Width = 1.0 ft, (C2)
- Point Load : E = 2.910 k @ 0.50 ft, (OTM)
- Point Load : E = 2.910 k @ 0.50 ft, (OTM)
- Point Load : D = 1.890 k @ 4.0 ft, (GB-P)

Load for Span Number 2
- Uniform Load : D = 0.1120 ksf, Extent = 0.0 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)
- Uniform Load : D = 0.1120 ksf, Tributary Width = 3.50 ft, (slab weight)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)

Load for Span Number 3
- Uniform Load : D = 0.1120 ksf, Extent = 0.0 -->> 3.50 ft, Tributary Width = 3.50 ft, (slab weight)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)
- Uniform Load : D = 0.1120 ksf, Extent = 0.0 -->> 3.50 ft, Tributary Width = 3.50 ft, (slab weight)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (C2)

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Point Load : E = -2.910 k @ 6.50 ft, (OTM)
Point Load : E = -2.910 k @ 6.50 ft, (OTM)
Point Load : D = 2.960, L = 0.590 k @ 3.50 ft, (GB-R)
Uniform Load : D = 0.0750 ksf, Extent = 3.50 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)
Point Load : D = 2.960, L = 0.590 k @ 3.50 ft, (GB-R)
Uniform Load : D = 0.0750 ksf, Extent = 3.50 -->> 7.0 ft, Tributary Width = 3.50 ft, (slab weight)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.323** : 1
Section used for this span **Typical Section**
Mu : Applied -63.033 k-ft
Mn * Phi : Allowable 195.070 k-ft
Location of maximum on span 0.000 ft
Span # where maximum occurs Span # 3

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Overall MAXimum	33.957	50.154	63.814	22.429
Overall MINimum	-0.036	-0.373	-0.274	0.046
+D+H	7.079	19.747	24.998	9.298
+D+L+H, LL Comb Run (**L)	7.141	19.374	27.127	10.620
+D+L+H, LL Comb Run (*L*)	6.981	20.825	26.076	9.200
+D+L+H, LL Comb Run (*LL)	7.043	20.452	28.205	10.522
+D+L+H, LL Comb Run (L**)	8.028	21.757	24.724	9.344
+D+L+H, LL Comb Run (L*L)	8.090	21.384	26.853	10.665
+D+L+H, LL Comb Run (LL*)	7.930	22.835	25.802	9.246
+D+L+H, LL Comb Run (LLL)	7.992	22.462	27.931	10.567
+D+Lr+H, LL Comb Run (**L)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (*L*)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (*LL)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (L**)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (L*L)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (LL*)	7.079	19.747	24.998	9.298
+D+Lr+H, LL Comb Run (LLL)	7.079	19.747	24.998	9.298
+D+S+H	33.957	50.154	63.814	22.429
+D+0.750Lr+0.750L+H, LL Comb Run (	7.126	19.467	26.595	10.289
+D+0.750Lr+0.750L+H, LL Comb Run (	7.006	20.556	25.806	9.225
+D+0.750Lr+0.750L+H, LL Comb Run (	7.052	20.276	27.404	10.216
+D+0.750Lr+0.750L+H, LL Comb Run (	7.791	21.255	24.792	9.333
+D+0.750Lr+0.750L+H, LL Comb Run (	7.837	20.975	26.389	10.324
+D+0.750Lr+0.750L+H, LL Comb Run (	7.717	22.063	25.601	9.259
+D+0.750Lr+0.750L+H, LL Comb Run (	7.764	21.783	27.198	10.250
+D+0.750L+0.750S+H, LL Comb Run (*	27.284	42.273	55.707	20.137
+D+0.750L+0.750S+H, LL Comb Run (*	27.164	43.361	54.919	19.073
+D+0.750L+0.750S+H, LL Comb Run (*	27.211	43.081	56.516	20.064
+D+0.750L+0.750S+H, LL Comb Run (L	27.949	44.060	53.905	19.180
+D+0.750L+0.750S+H, LL Comb Run (L	27.996	43.780	55.502	20.171
+D+0.750L+0.750S+H, LL Comb Run (L	27.876	44.868	54.713	19.107
+D+0.750L+0.750S+H, LL Comb Run (L	27.922	44.589	56.310	20.098
+D+0.60W+H	7.079	19.747	24.998	9.298
+D+0.70E+H	10.766	20.328	24.417	5.612
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.126	19.467	26.595	10.289
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.006	20.556	25.806	9.225
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.052	20.276	27.404	10.216
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.791	21.255	24.792	9.333
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.837	20.975	26.389	10.324
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.717	22.063	25.601	9.259
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.764	21.783	27.198	10.250
+D+0.750L+0.750S+0.450W+H, LL Comb	27.284	42.273	55.707	20.137
+D+0.750L+0.750S+0.450W+H, LL Comb	27.164	43.361	54.919	19.073

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
+D+0.750L+0.750S+0.450W+H, LL Comb	27.211	43.081	56.516	20.064
+D+0.750L+0.750S+0.450W+H, LL Comb	27.949	44.060	53.905	19.180
+D+0.750L+0.750S+0.450W+H, LL Comb	27.996	43.780	55.502	20.171
+D+0.750L+0.750S+0.450W+H, LL Comb	27.876	44.868	54.713	19.107
+D+0.750L+0.750S+0.450W+H, LL Comb	27.922	44.589	56.310	20.098
+D+0.750L+0.750S+0.5250E+H, LL Com	30.049	42.708	55.272	17.372
+D+0.750L+0.750S+0.5250E+H, LL Com	29.929	43.796	54.483	16.308
+D+0.750L+0.750S+0.5250E+H, LL Com	29.976	43.517	56.081	17.299
+D+0.750L+0.750S+0.5250E+H, LL Com	30.714	44.495	53.469	16.416
+D+0.750L+0.750S+0.5250E+H, LL Com	30.761	44.215	55.066	17.407
+D+0.750L+0.750S+0.5250E+H, LL Com	30.640	45.304	54.278	16.342
+D+0.750L+0.750S+0.5250E+H, LL Com	30.687	45.024	55.875	17.333
+0.60D+0.60W+0.60H	4.247	11.848	14.999	5.579
+0.60D+0.70E+0.60H	7.934	12.429	14.418	1.892
D Only	7.079	19.747	24.998	9.298
Lr Only, LL Comb Run (**L)				
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.062	-0.373	2.129	1.321
L Only, LL Comb Run (*L*)	-0.098	1.078	1.078	-0.098
L Only, LL Comb Run (*LL)	-0.036	0.705	3.207	1.223
L Only, LL Comb Run (L**)	0.948	2.010	-0.274	0.046
L Only, LL Comb Run (L*L)	1.011	1.637	1.855	1.367
L Only, LL Comb Run (LL*)	0.850	3.088	0.804	-0.052
L Only, LL Comb Run (LLL)	0.913	2.715	2.933	1.269
S Only	26.878	30.407	38.817	13.131
W Only				
E Only	5.266	0.829	-0.829	-5.266
H Only				

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H, I	1	0.00	44.50	52.01	52.01	0.00	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.05	44.50	11.98	11.98	0.58	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.09	44.50	11.89	11.89	1.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.14	44.50	11.80	11.80	1.69	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.19	44.50	11.72	11.72	2.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.23	44.50	11.63	11.63	2.78	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.28	44.50	11.54	11.54	3.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.33	44.50	11.45	11.45	3.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.37	44.50	11.37	11.37	4.39	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.42	44.50	11.28	11.28	4.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.47	44.50	11.19	11.19	5.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.51	44.50	6.70	6.70	3.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.56	44.50	6.60	6.60	4.05	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.61	44.50	6.50	6.50	4.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.65	44.50	6.40	6.40	4.66	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.70	44.50	6.29	6.29	4.95	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.75	44.50	6.19	6.19	5.25	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.79	44.50	6.09	6.09	5.53	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.84	44.50	5.99	5.99	5.81	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.89	44.50	5.89	5.89	6.09	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.93	44.50	5.78	5.78	6.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Concrete Beam

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Description : GB-G (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.98	44.50	5.68	5.68	6.63	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.03	44.50	5.58	5.58	6.89	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.07	44.50	5.48	5.48	7.15	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.12	44.50	5.38	5.38	7.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.17	44.50	5.28	5.28	7.65	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.21	44.50	5.17	5.17	7.90	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.26	44.50	5.07	5.07	8.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.31	44.50	4.97	4.97	8.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.35	44.50	4.87	4.87	8.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.40	44.50	4.77	4.77	8.82	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.45	44.50	4.66	4.66	9.04	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.49	44.50	4.56	4.56	9.26	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.54	44.50	4.47	4.47	6.21	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.59	44.50	4.38	4.38	6.41	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.63	44.50	4.29	4.29	6.62	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.68	44.50	4.20	4.20	6.81	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.73	44.50	4.12	4.12	7.01	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.77	44.50	4.03	4.03	7.20	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.82	44.50	3.94	3.94	7.38	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.87	44.50	3.85	3.85	7.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.91	44.50	3.77	3.77	7.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.96	44.50	3.68	3.68	7.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.01	44.50	3.59	3.59	8.09	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.05	44.50	3.50	3.50	8.25	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.10	44.50	3.42	3.42	8.41	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.15	44.50	3.33	3.33	8.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.19	44.50	3.24	3.24	8.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.24	44.50	3.15	3.15	8.87	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.29	44.50	3.07	3.07	9.02	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.33	44.50	2.98	2.98	9.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.38	44.50	2.89	2.89	9.30	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.43	44.50	2.80	2.80	9.43	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.47	44.50	2.72	2.72	9.56	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.52	44.50	2.63	2.63	9.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.57	44.50	2.54	2.54	9.80	0.96	73.87	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.61	44.50	2.45	2.45	9.92	0.92	73.79	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.66	44.50	2.37	2.37	10.03	0.87	73.71	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.71	44.50	2.28	2.28	10.14	0.83	73.64	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.75	44.50	2.19	2.19	10.25	0.79	73.57	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.80	44.50	2.10	2.10	10.35	0.75	73.50	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.85	44.50	2.02	2.02	10.44	0.72	73.44	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.89	44.50	1.93	1.93	10.53	0.68	73.37	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.94	44.50	1.84	1.84	10.62	0.64	73.31	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.99	44.50	1.75	1.75	10.71	0.61	73.25	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.03	44.50	1.67	1.67	10.79	0.57	73.19	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.08	44.50	1.58	1.58	10.86	0.54	73.13	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.13	44.50	1.49	1.49	10.93	0.51	73.07	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.17	44.50	1.40	1.40	11.00	0.47	73.01	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.22	44.50	1.32	1.32	11.06	0.44	72.96	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.27	44.50	1.23	1.23	11.12	0.41	72.90	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.31	44.50	1.14	1.14	11.18	0.38	72.85	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.36	44.50	1.05	1.05	11.23	0.35	72.80	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.41	44.50	0.97	0.97	10.47	0.34	72.79	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.45	44.50	0.89	0.89	10.52	0.31	72.74	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	1	3.50	44.50	0.81	0.81	10.56	0.28	72.68	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.55	44.50	0.72	0.72	10.59	0.25	72.63	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+0.90D+E+0.90H	1	3.59	44.50	-0.74	0.74	8.64	0.32	72.75	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+0.90D+E+0.90H	1	3.64	44.50	-0.80	0.80	8.61	0.35	72.79	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+0.90D+E+0.90H	1	3.69	44.50	-0.86	0.86	8.57	0.37	72.84	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+0.90D+E+0.90H	1	3.73	44.50	-0.93	0.93	8.53	0.40	72.89	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+0.90D+E+0.90H	1	3.78	44.50	-0.99	0.99	8.48	0.43	72.94	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+0.90D+E+0.90H	1	3.83	44.50	-1.05	1.05	8.43	0.46	72.99	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.87	44.50	-1.11	1.11	12.07	0.34	72.79	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.92	44.50	-1.22	1.22	12.01	0.38	72.84	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.97	44.50	-1.32	1.32	11.95	0.41	72.90	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.40D+1.60H	1	4.01	44.50	-3.79	3.79	11.67	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.06	44.50	-3.89	3.89	11.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.11	44.50	-3.98	3.98	11.31	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.15	44.50	-4.07	4.07	11.12	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.20	44.50	-4.17	4.17	10.93	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.25	44.50	-4.26	4.26	10.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.29	44.50	-4.41	4.41	10.53	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.34	44.50	-4.56	4.56	10.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.40D+1.60H	1	4.39	44.50	-4.70	4.70	10.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.43	44.50	-4.86	4.86	10.09	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.48	44.50	-5.03	5.03	9.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.53	44.50	-5.20	5.20	9.62	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.57	44.50	-5.37	5.37	9.38	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.62	44.50	-5.54	5.54	9.12	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.67	44.50	-5.71	5.71	8.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.71	44.50	-5.87	5.87	8.59	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.76	44.50	-6.04	6.04	8.31	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.81	44.50	-6.21	6.21	8.03	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.85	44.50	-6.38	6.38	7.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.90	44.50	-6.55	6.55	7.43	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.95	44.50	-6.72	6.72	7.12	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.99	44.50	-6.88	6.88	6.80	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.04	44.50	-7.05	7.05	6.48	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.09	44.50	-7.22	7.22	6.15	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.13	44.50	-7.39	7.39	5.81	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.18	44.50	-7.56	7.56	5.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.23	44.50	-7.73	7.73	5.10	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.27	44.50	-7.89	7.89	4.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.32	44.50	-8.06	8.06	4.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.37	44.50	-8.23	8.23	3.98	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.41	44.50	-8.40	8.40	3.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.46	44.50	-8.57	8.57	3.20	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.51	44.50	-21.70	21.70	6.42	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.55	44.50	-22.23	22.23	5.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.60	44.50	-22.75	22.75	4.35	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.65	44.50	-23.27	23.27	3.28	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.69	44.50	-23.80	23.80	2.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.74	44.50	-24.32	24.32	1.05	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.79	45.00	-24.85	24.85	0.09	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.83	45.00	-25.37	25.37	1.27	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.88	45.00	-25.90	25.90	2.46	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.93	45.00	-26.42	26.42	3.68	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.97	45.00	-26.95	26.95	4.93	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	6.02	45.00	-27.47	27.47	6.20	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.07	45.00	-28.00	28.00	7.49	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.11	45.00	-28.52	28.52	8.81	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.16	45.00	-29.05	29.05	10.15	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.21	45.00	-29.57	29.57	11.52	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.25	45.00	-30.10	30.10	12.91	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.30	45.00	-30.62	30.62	14.33	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.35	45.00	-31.15	31.15	15.77	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.39	45.00	-31.67	31.67	17.24	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.44	45.00	-32.20	32.20	18.73	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.49	45.00	-32.72	32.72	20.24	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.53	45.00	-33.25	33.25	21.78	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.58	45.00	-33.77	33.77	23.35	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.63	45.00	-34.30	34.30	24.93	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.67	45.00	-34.82	34.82	26.55	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.72	45.00	-35.35	35.35	28.18	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.77	45.00	-35.87	35.87	29.85	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.81	45.00	-36.39	36.39	31.53	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.86	45.00	-36.92	36.92	33.24	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	6.91	45.00	-37.44	37.44	34.98	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	6.95	45.00	-37.97	37.97	36.74	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	7.00	45.00	35.40	35.40	38.52	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	45.00	34.88	34.88	36.88	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.09	45.00	34.36	34.36	35.27	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.14	45.00	33.85	33.85	33.67	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.19	45.00	33.33	33.33	32.11	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.23	45.00	32.81	32.81	30.56	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.28	45.00	32.30	32.30	29.04	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.33	45.00	31.78	31.78	27.55	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.37	45.00	31.26	31.26	26.08	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.42	45.00	30.75	30.75	24.63	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.47	45.00	30.23	30.23	23.21	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.51	45.00	29.71	29.71	21.81	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.56	45.00	29.20	29.20	20.44	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.61	45.00	28.68	28.68	19.08	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.65	45.00	28.16	28.16	17.76	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.70	45.00	27.65	27.65	16.46	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.75	45.00	27.13	27.13	15.18	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.79	45.00	26.61	26.61	13.92	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.84	45.00	26.10	26.10	12.69	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.89	45.00	25.58	25.58	11.49	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.93	45.00	25.06	25.06	10.31	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.98	45.00	24.55	24.55	9.15	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.03	45.00	24.03	24.03	8.02	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	45.00	23.51	23.51	6.91	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.12	45.00	23.00	23.00	5.82	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.17	45.00	22.48	22.48	4.76	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.21	45.00	21.96	21.96	3.72	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.26	45.00	21.45	21.45	2.71	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.31	45.00	20.93	20.93	1.72	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.35	45.00	20.41	20.41	0.76	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.40	44.50	19.90	19.90	0.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.45	44.50	19.38	19.38	1.10	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.49	44.50	18.86	18.86	1.99	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	8.54	44.50	18.35	18.35	2.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.59	44.50	17.83	17.83	3.71	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.63	44.50	17.31	17.31	4.53	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.68	44.50	16.80	16.80	5.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.73	44.50	16.28	16.28	6.09	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.77	44.50	15.76	15.76	6.84	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.82	44.50	15.25	15.25	7.56	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.87	44.50	14.73	14.73	8.26	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.91	44.50	14.21	14.21	8.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.96	44.50	13.70	13.70	9.59	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.01	44.50	13.18	13.18	10.22	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.05	44.50	12.66	12.66	10.82	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.10	44.50	12.15	12.15	11.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.15	44.50	11.63	11.63	11.95	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	44.50	11.11	11.11	12.48	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.24	44.50	10.60	10.60	12.99	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.29	44.50	10.08	10.08	13.47	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.33	44.50	9.56	9.56	13.93	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.38	44.50	9.05	9.05	14.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	44.50	8.53	8.53	14.78	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.47	44.50	8.01	8.01	15.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.52	44.50	7.50	7.50	15.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.57	44.50	6.98	6.98	15.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.61	44.50	6.46	6.46	16.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	44.50	5.95	5.95	16.47	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.71	44.50	5.43	5.43	16.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.75	44.50	4.91	4.91	16.97	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.80	44.50	4.40	4.40	17.19	0.95	73.84	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.85	44.50	3.88	3.88	17.38	0.83	73.63	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	44.50	3.36	3.36	17.55	0.71	73.43	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	44.50	2.85	2.85	17.70	0.60	73.23	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.99	44.50	2.33	2.33	17.82	0.48	73.04	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.03	44.50	1.81	1.81	17.91	0.38	72.84	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.08	44.50	1.30	1.30	17.99	0.27	72.66	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.13	44.50	0.88	0.88	8.21	0.40	72.88	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.17	44.50	0.59	0.59	8.25	0.27	72.65	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.22	44.50	-0.68	0.68	6.61	0.38	72.86	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.27	44.50	-1.07	1.07	17.50	0.23	72.59	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.31	44.50	-1.58	1.58	17.44	0.34	72.78	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.36	44.50	-2.09	2.09	17.35	0.45	72.97	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.41	44.50	-2.60	2.60	17.24	0.56	73.17	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.45	44.50	-3.11	3.11	17.11	0.67	73.37	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	44.50	-3.62	3.62	17.47	0.77	73.53	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.55	44.50	-4.14	4.14	17.29	0.89	73.74	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.59	44.50	-4.66	4.66	17.08	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.64	44.50	-5.17	5.17	16.85	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.69	44.50	-5.69	5.69	16.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.73	44.50	-6.21	6.21	16.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.78	44.50	-6.72	6.72	16.02	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.83	44.50	-7.24	7.24	15.69	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.87	44.50	-7.76	7.76	15.34	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.92	44.50	-8.27	8.27	14.97	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	44.50	-8.79	8.79	14.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.01	44.50	-9.31	9.31	14.15	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	11.06	44.50	-9.82	9.82	13.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.11	44.50	-10.34	10.34	13.23	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.15	44.50	-10.86	10.86	12.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.20	44.50	-11.37	11.37	12.22	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.25	44.50	-11.89	11.89	11.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.29	44.50	-12.41	12.41	11.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.34	44.50	-12.92	12.92	10.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.39	44.50	-13.44	13.44	9.90	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.43	44.50	-13.96	13.96	9.26	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.48	44.50	-14.47	14.47	8.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	44.50	-14.99	14.99	7.91	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	44.50	-15.51	15.51	7.20	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.62	44.50	-16.02	16.02	6.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.67	44.50	-16.54	16.54	5.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.71	44.50	-17.06	17.06	4.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.76	44.50	-17.57	17.57	4.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.81	44.50	-18.09	18.09	3.28	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.85	44.50	-18.61	18.61	2.42	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.90	44.50	-19.12	19.12	1.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.95	44.50	-19.64	19.64	0.64	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.99	45.00	-20.16	20.16	0.29	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	45.00	-20.67	20.67	1.24	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.09	45.00	-21.19	21.19	2.22	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.13	45.00	-21.71	21.71	3.22	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.18	45.00	-22.22	22.22	4.25	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.23	45.00	-22.74	22.74	5.29	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.27	45.00	-23.26	23.26	6.37	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.32	45.00	-23.78	23.78	7.47	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.37	45.00	-24.29	24.29	8.59	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.41	45.00	-24.81	24.81	9.73	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.46	45.00	-25.33	25.33	10.90	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	45.00	-25.84	25.84	12.10	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.55	45.00	-26.36	26.36	13.31	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.60	45.00	-26.88	26.88	14.56	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.65	45.00	-27.39	27.39	15.82	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.69	45.00	-27.91	27.91	17.11	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.74	45.00	-28.43	28.43	18.43	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.79	45.00	-28.94	28.94	19.77	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.83	45.00	-29.46	29.46	21.13	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.88	45.00	-29.98	29.98	22.52	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.93	45.00	-30.49	30.49	23.93	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.97	45.00	-31.01	31.01	25.36	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.02	45.00	-31.53	31.53	26.82	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.07	45.00	-32.04	32.04	28.30	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.11	45.00	-32.56	32.56	29.81	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.16	45.00	-33.08	33.08	31.34	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.21	45.00	-33.59	33.59	32.90	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.25	45.00	-34.11	34.11	34.48	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.30	45.00	-34.63	34.63	36.08	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.35	45.00	-35.14	35.14	37.71	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.39	45.00	-35.66	35.66	39.36	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.44	45.00	-36.18	36.18	41.04	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.49	45.00	-36.69	36.69	42.74	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.53	45.00	-37.21	37.21	44.46	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	13.58	45.00	-37.73	37.73	46.21	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.63	45.00	-38.24	38.24	47.98	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.67	45.00	-38.76	38.76	49.78	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.72	45.00	-39.28	39.28	51.60	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.77	45.00	-39.79	39.79	53.45	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.81	45.00	-40.31	40.31	55.32	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.86	45.00	-40.83	40.83	57.21	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.91	45.00	-41.34	41.34	59.13	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	13.95	45.00	-41.86	41.86	61.07	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.00	45.00	51.33	51.33	63.03	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.05	45.00	50.82	50.82	60.65	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	45.00	50.30	50.30	58.29	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.14	45.00	49.78	49.78	55.95	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.19	45.00	49.26	49.26	53.64	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.23	45.00	48.75	48.75	51.36	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.28	45.00	48.23	48.23	49.09	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.33	45.00	47.71	47.71	46.85	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.37	45.00	47.20	47.20	44.64	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.42	45.00	46.68	46.68	42.45	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.47	45.00	46.16	46.16	40.28	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.51	45.00	45.65	45.65	38.14	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.56	45.00	45.13	45.13	36.02	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.61	45.00	44.61	44.61	33.93	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.65	45.00	44.10	44.10	31.86	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.70	45.00	43.58	43.58	29.81	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.75	45.00	43.06	43.06	27.79	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.79	45.00	42.55	42.55	25.79	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.84	45.00	42.03	42.03	23.82	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	45.00	41.51	41.51	21.87	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.93	45.00	41.00	41.00	19.95	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.98	45.00	40.48	40.48	18.04	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.03	45.00	39.96	39.96	16.17	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.07	45.00	39.45	39.45	14.31	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.12	45.00	38.93	38.93	12.49	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.17	45.00	38.41	38.41	10.68	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.21	45.00	37.90	37.90	8.90	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.26	45.00	37.38	37.38	7.14	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	15.31	45.00	36.86	36.86	5.41	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.35	45.00	36.35	36.35	3.70	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.40	45.00	35.83	35.83	2.02	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.45	45.00	35.31	35.31	0.36	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.49	44.50	34.80	34.80	1.28	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.54	44.50	34.28	34.28	2.89	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.59	44.50	33.76	33.76	4.48	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.63	44.50	33.25	33.25	6.04	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.68	44.50	32.73	32.73	7.58	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.73	44.50	32.21	32.21	9.10	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.77	44.50	31.70	31.70	10.59	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.82	44.50	31.18	31.18	12.05	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.87	44.50	30.66	30.66	13.50	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.91	44.50	30.15	30.15	14.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.96	44.50	29.63	29.63	16.31	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.01	44.50	29.11	29.11	17.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.05	44.50	28.60	28.60	19.03	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	16.10	44.50	28.08	28.08	20.35	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.15	44.50	27.56	27.56	21.65	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.19	44.50	27.05	27.05	22.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.24	44.50	26.53	26.53	24.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.29	44.50	26.01	26.01	25.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.33	44.50	25.50	25.50	26.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.38	44.50	24.98	24.98	27.78	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.43	44.50	24.46	24.46	28.93	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.47	44.50	23.95	23.95	30.06	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.52	44.50	23.43	23.43	31.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.57	44.50	22.91	22.91	32.25	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.61	44.50	22.40	22.40	33.31	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.66	44.50	21.88	21.88	34.34	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.71	44.50	21.36	21.36	35.35	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.75	44.50	20.85	20.85	36.33	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.80	44.50	20.33	20.33	37.29	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.85	44.50	19.81	19.81	38.23	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.89	44.50	19.30	19.30	39.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.94	44.50	18.78	18.78	40.03	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.99	44.50	18.26	18.26	40.90	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.03	44.50	17.75	17.75	41.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.08	44.50	17.23	17.23	42.55	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.13	44.50	16.71	16.71	43.34	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.17	44.50	16.20	16.20	44.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.22	44.50	15.68	15.68	44.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.27	44.50	15.16	15.16	45.58	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.31	44.50	14.65	14.65	46.27	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.36	44.50	14.13	14.13	46.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.41	44.50	13.61	13.61	47.59	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.45	44.50	13.10	13.10	48.21	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.50	44.50	5.06	5.06	47.36	0.40	72.88	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.55	44.50	4.56	4.56	47.58	0.36	72.81	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.59	44.50	4.07	4.07	47.78	0.32	72.74	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.64	44.50	3.57	3.57	47.96	0.28	72.67	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.69	44.50	3.07	3.07	48.12	0.24	72.60	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.73	44.50	2.58	2.58	48.25	0.20	72.54	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.78	44.50	-2.43	2.43	25.40	0.36	72.81	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.83	44.50	-2.59	2.59	25.28	0.38	72.85	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.87	44.50	-2.75	2.75	25.16	0.41	72.90	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.92	44.50	-2.91	2.91	25.03	0.43	72.94	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.97	44.50	-3.06	3.06	24.89	0.46	72.99	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.01	44.50	-3.22	3.22	24.74	0.48	73.03	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.06	44.50	-3.38	3.38	24.59	0.51	73.08	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.11	44.50	-3.54	3.54	24.43	0.54	73.13	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.15	44.50	-3.70	3.70	24.26	0.57	73.18	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.20	44.50	-3.86	3.86	24.08	0.59	73.23	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.25	44.50	-4.01	4.01	23.90	0.62	73.28	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.29	44.50	-4.24	4.24	32.68	0.48	73.03	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.34	44.50	-4.51	4.51	32.48	0.52	73.09	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.39	44.50	-4.78	4.78	32.26	0.55	73.15	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.43	44.50	-5.23	5.23	48.87	0.40	72.88	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.48	44.50	-5.73	5.73	48.61	0.44	72.95	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.53	44.50	-6.23	6.23	48.33	0.48	73.02	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.57	44.50	-6.74	6.74	48.03	0.52	73.10	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	18.62	44.50	-7.24	7.24	47.71	0.56	73.17	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.67	44.50	-7.74	7.74	47.36	0.61	73.25	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.71	44.50	-8.24	8.24	46.98	0.65	73.32	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.76	44.50	-8.75	8.75	46.59	0.70	73.40	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.81	44.50	-9.25	9.25	46.17	0.74	73.49	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.85	44.50	-9.75	9.75	45.72	0.79	73.57	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.90	44.50	-10.25	10.25	45.26	0.84	73.65	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.95	44.50	-10.75	10.75	44.77	0.89	73.74	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.99	44.50	-11.26	11.26	44.25	0.94	73.83	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.04	44.50	-11.76	11.76	43.72	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.09	44.50	-12.26	12.26	43.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.13	44.50	-12.76	12.76	42.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.18	44.50	-13.26	13.26	41.96	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.23	44.50	-13.77	13.77	41.33	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.27	44.50	-14.27	14.27	40.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.32	44.50	-14.77	14.77	40.00	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.37	44.50	-15.27	15.27	39.30	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.41	44.50	-15.78	15.78	38.58	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.46	44.50	-16.28	16.28	37.83	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.51	44.50	-16.78	16.78	37.06	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.55	44.50	-17.28	17.28	36.26	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.60	44.50	-17.78	17.78	35.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.65	44.50	-18.29	18.29	34.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.69	44.50	-18.79	18.79	33.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.74	44.50	-19.29	19.29	32.85	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.79	44.50	-19.79	19.79	31.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.83	44.50	-20.30	20.30	31.00	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.88	44.50	-20.80	20.80	30.04	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.93	44.50	-21.30	21.30	29.06	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.97	44.50	-21.80	21.80	28.05	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.02	44.50	-22.30	22.30	27.03	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.07	44.50	-22.81	22.81	25.97	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.11	44.50	-23.31	23.31	24.90	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.16	44.50	-23.81	23.81	23.80	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.21	44.50	-24.31	24.31	22.67	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.25	44.50	-24.82	24.82	21.53	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.30	44.50	-25.32	25.32	20.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.35	44.50	-25.82	25.82	19.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.39	44.50	-26.32	26.32	17.95	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.44	44.50	-26.82	26.82	16.71	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.49	44.50	-27.33	27.33	15.45	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.53	44.50	-27.83	27.83	14.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.58	44.50	-28.33	28.33	12.85	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.63	44.50	-28.83	28.83	11.51	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.67	44.50	-29.34	29.34	10.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.72	44.50	-29.84	29.84	8.78	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.77	44.50	-30.34	30.34	7.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.81	44.50	-30.84	30.84	5.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.86	44.50	-31.34	31.34	4.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.91	44.50	-31.85	31.85	3.02	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.95	44.50	-32.35	32.35	1.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.00	44.50	-32.85	32.85	0.00	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Description : GB-G (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.000	-36.74	195.07	0.19
Span # 2	2	7.000	-61.07	195.07	0.31
Span # 3	3	7.000	-63.03	195.07	0.32
+1.40D+1.60H					
Span # 1	1	7.000	-15.34	195.07	0.08
Span # 2	2	7.000	-23.51	195.07	0.12
Span # 3	3	7.000	24.54	190.10	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-12.46	195.07	0.06
Span # 2	2	7.000	-22.91	195.07	0.12
Span # 3	3	7.000	25.69	190.10	0.14
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-14.24	195.07	0.07
Span # 2	2	7.000	-21.17	195.07	0.11
Span # 3	3	7.000	-21.82	195.07	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-13.55	195.07	0.07
Span # 2	2	7.000	-23.93	195.07	0.12
Span # 3	3	7.000	25.14	190.10	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-15.07	195.07	0.08
Span # 2	2	7.000	-19.65	195.07	0.10
Span # 3	3	7.000	21.29	190.10	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-14.38	195.07	0.07
Span # 2	2	7.000	-22.41	195.07	0.11
Span # 3	3	7.000	25.95	190.10	0.14
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-16.16	195.07	0.08
Span # 2	2	7.000	-20.68	195.07	0.11
Span # 3	3	7.000	-21.31	195.07	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-15.47	195.07	0.08
Span # 2	2	7.000	-23.44	195.07	0.12
Span # 3	3	7.000	25.40	190.10	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-19.54	195.07	0.10
Span # 2	2	7.000	-35.33	195.07	0.18
Span # 3	3	7.000	-36.35	195.07	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-21.32	195.07	0.11
Span # 2	2	7.000	-33.59	195.07	0.17
Span # 3	3	7.000	-34.66	195.07	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-20.63	195.07	0.11
Span # 2	2	7.000	-36.35	195.07	0.19
Span # 3	3	7.000	-37.45	195.07	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-22.14	195.07	0.11
Span # 2	2	7.000	-32.07	195.07	0.16
Span # 3	3	7.000	-33.05	195.07	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-21.45	195.07	0.11
Span # 2	2	7.000	-34.83	195.07	0.18
Span # 3	3	7.000	-35.84	195.07	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-23.23	195.07	0.12
Span # 2	2	7.000	-33.10	195.07	0.17
Span # 3	3	7.000	-34.15	195.07	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-22.54	195.07	0.12
Span # 2	2	7.000	-35.86	195.07	0.18
Span # 3	3	7.000	-36.94	195.07	0.19
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-12.94	195.07	0.07
Span # 2	2	7.000	-21.01	195.07	0.11
Span # 3	3	7.000	22.49	190.10	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.000	-13.49	195.07	0.07
Span # 2	2	7.000	-20.47	195.07	0.10
Span # 3	3	7.000	20.87	190.10	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-13.28	195.07	0.07
Span # 2	2	7.000	-21.33	195.07	0.11
Span # 3	3	7.000	22.32	190.10	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-13.75	195.07	0.07
Span # 2	2	7.000	-19.99	195.07	0.10
Span # 3	3	7.000	21.12	190.10	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-13.53	195.07	0.07
Span # 2	2	7.000	-20.86	195.07	0.11
Span # 3	3	7.000	22.57	190.10	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-14.09	195.07	0.07
Span # 2	2	7.000	-20.31	195.07	0.10
Span # 3	3	7.000	20.95	190.10	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-13.88	195.07	0.07
Span # 2	2	7.000	-21.18	195.07	0.11
Span # 3	3	7.000	22.40	190.10	0.12
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-13.15	195.07	0.07
Span # 2	2	7.000	-20.15	195.07	0.10
Span # 3	3	7.000	21.04	190.10	0.11
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-35.58	195.07	0.18
Span # 2	2	7.000	-60.75	195.07	0.31
Span # 3	3	7.000	-62.69	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-36.14	195.07	0.19
Span # 2	2	7.000	-60.20	195.07	0.31
Span # 3	3	7.000	-62.16	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-35.92	195.07	0.18
Span # 2	2	7.000	-61.07	195.07	0.31
Span # 3	3	7.000	-63.03	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-36.40	195.07	0.19
Span # 2	2	7.000	-59.73	195.07	0.31
Span # 3	3	7.000	-61.66	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-36.18	195.07	0.19

Description : GB-G (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.000	-60.59	195.07	0.31
Span # 3	3	7.000	-62.53	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-36.74	195.07	0.19
Span # 2	2	7.000	-60.05	195.07	0.31
Span # 3	3	7.000	-62.00	195.07	0.32
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-36.52	195.07	0.19
Span # 2	2	7.000	-60.91	195.07	0.31
Span # 3	3	7.000	-62.87	195.07	0.32
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.000	-35.80	195.07	0.18
Span # 2	2	7.000	-59.88	195.07	0.31
Span # 3	3	7.000	-61.82	195.07	0.32
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.000	-12.94	195.07	0.07
Span # 2	2	7.000	-21.01	195.07	0.11
Span # 3	3	7.000	22.49	190.10	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.000	-13.49	195.07	0.07
Span # 2	2	7.000	-20.47	195.07	0.10
Span # 3	3	7.000	20.87	190.10	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.000	-13.28	195.07	0.07
Span # 2	2	7.000	-21.33	195.07	0.11
Span # 3	3	7.000	22.32	190.10	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.000	-13.75	195.07	0.07
Span # 2	2	7.000	-19.99	195.07	0.10
Span # 3	3	7.000	21.12	190.10	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.000	-13.53	195.07	0.07
Span # 2	2	7.000	-20.86	195.07	0.11
Span # 3	3	7.000	22.57	190.10	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.000	-14.09	195.07	0.07
Span # 2	2	7.000	-20.31	195.07	0.10
Span # 3	3	7.000	20.95	190.10	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.000	-13.88	195.07	0.07
Span # 2	2	7.000	-21.18	195.07	0.11
Span # 3	3	7.000	22.40	190.10	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-20.01	195.07	0.10
Span # 2	2	7.000	-33.43	195.07	0.17
Span # 3	3	7.000	-34.44	195.07	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-20.57	195.07	0.11
Span # 2	2	7.000	-32.89	195.07	0.17
Span # 3	3	7.000	-33.91	195.07	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-20.35	195.07	0.10
Span # 2	2	7.000	-33.75	195.07	0.17
Span # 3	3	7.000	-34.78	195.07	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-20.83	195.07	0.11
Span # 2	2	7.000	-32.41	195.07	0.17
Span # 3	3	7.000	-33.40	195.07	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-20.61	195.07	0.11
Span # 2	2	7.000	-33.27	195.07	0.17
Span # 3	3	7.000	-34.28	195.07	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-21.17	195.07	0.11
Span # 2	2	7.000	-32.73	195.07	0.17
Span # 3	3	7.000	-33.75	195.07	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-20.95	195.07	0.11
Span # 2	2	7.000	-33.59	195.07	0.17

Description : GB-G (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.000	-34.62	195.07	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-23.78	195.07	0.12
Span # 2	2	7.000	-37.44	195.07	0.19
Span # 3	3	7.000	-38.61	195.07	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-24.34	195.07	0.12
Span # 2	2	7.000	-36.90	195.07	0.19
Span # 3	3	7.000	-38.08	195.07	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-24.12	195.07	0.12
Span # 2	2	7.000	-37.76	195.07	0.19
Span # 3	3	7.000	-38.95	195.07	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-24.60	195.07	0.13
Span # 2	2	7.000	-36.43	195.07	0.19
Span # 3	3	7.000	-37.58	195.07	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-24.38	195.07	0.12
Span # 2	2	7.000	-37.29	195.07	0.19
Span # 3	3	7.000	-38.45	195.07	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-24.94	195.07	0.13
Span # 2	2	7.000	-36.75	195.07	0.19
Span # 3	3	7.000	-37.92	195.07	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-24.72	195.07	0.13
Span # 2	2	7.000	-37.61	195.07	0.19
Span # 3	3	7.000	-38.79	195.07	0.20
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-21.90	195.07	0.11
Span # 2	2	7.000	-39.35	195.07	0.20
Span # 3	3	7.000	-40.54	195.07	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-22.46	195.07	0.12
Span # 2	2	7.000	-38.80	195.07	0.20
Span # 3	3	7.000	-40.01	195.07	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-22.25	195.07	0.11
Span # 2	2	7.000	-39.67	195.07	0.20
Span # 3	3	7.000	-40.88	195.07	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-22.72	195.07	0.12
Span # 2	2	7.000	-38.33	195.07	0.20
Span # 3	3	7.000	-39.51	195.07	0.20
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-22.50	195.07	0.12
Span # 2	2	7.000	-39.19	195.07	0.20
Span # 3	3	7.000	-40.38	195.07	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-23.06	195.07	0.12
Span # 2	2	7.000	-38.65	195.07	0.20
Span # 3	3	7.000	-39.85	195.07	0.20
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-22.84	195.07	0.12
Span # 2	2	7.000	-39.51	195.07	0.20
Span # 3	3	7.000	-40.72	195.07	0.21
+0.90D+W+0.90H					
Span # 1	1	7.000	-9.86	195.07	0.05
Span # 2	2	7.000	-15.11	195.07	0.08
Span # 3	3	7.000	15.78	190.10	0.08
+0.90D+E+0.90H					
Span # 1	1	7.000	-10.80	195.07	0.06
Span # 2	2	7.000	-14.16	195.07	0.07
Span # 3	3	7.000	14.81	190.10	0.08
+0.90D-E+0.90H					
Span # 1	1	7.000	-8.92	195.07	0.05
Span # 2	2	7.000	-16.06	195.07	0.08
Span # 3	3	7.000	16.75	190.10	0.09

Concrete Beam

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Description : GB-G (2 units) - alt

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0002	3.220	+D+L+H, LL Comb Run (L*L)	-0.0000	7.140
S Only	2	0.0001	3.220	+D+L+H, LL Comb Run (L*L)	-0.0000	5.180
+D+S+H	3	0.0005	3.780		0.0000	5.180

Concrete Beam

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ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

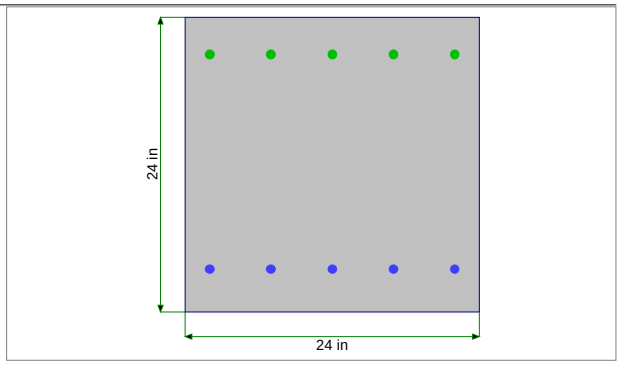
Description : GB-H (2 units) - alt

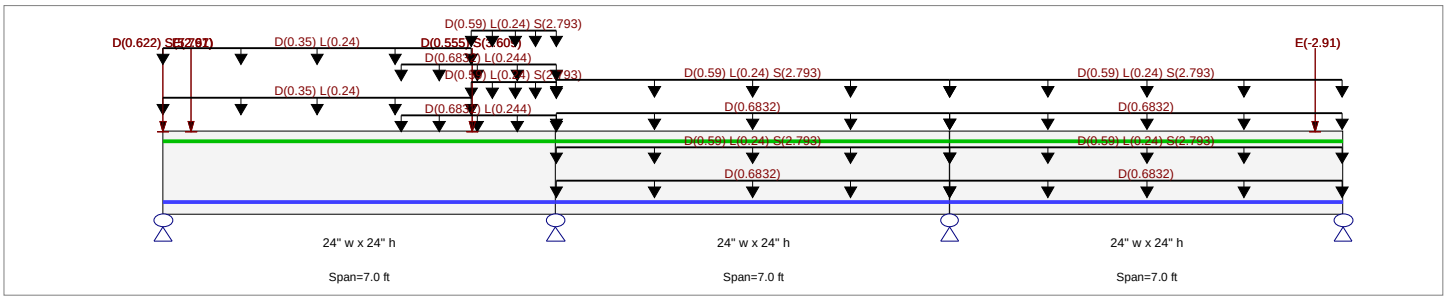
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
5-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
5-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #2 Reinforcing....
5-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
5-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #3 Reinforcing....
5-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
5-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.250 -->> 7.0 ft, Tributary Width = 6.10 ft, (slab weight)
Point Load : D = 0.6220, S = 5.767 k @ 0.0 ft, (P5)
Point Load : D = 0.5550, S = 3.609 k @ 5.50 ft, (P6)
Uniform Load : D = 0.350, L = 0.240 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (B1)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Extent = 5.50 -->> 7.0 ft, Tributary Width = 1.0 ft, (B2)
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.250 -->> 7.0 ft, Tributary Width = 6.10 ft, (slab weight)
Point Load : D = 0.6220, S = 5.767 k @ 0.0 ft, (P5)
Point Load : D = 0.5550, S = 3.609 k @ 5.50 ft, (P6)
Uniform Load : D = 0.350, L = 0.240 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (B1)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Extent = 5.50 -->> 7.0 ft, Tributary Width = 1.0 ft, (B2)
Point Load : E = 2.910 k @ 0.50 ft, (OTM)
Point Load : E = 2.910 k @ 0.50 ft, (OTM)
Load for Span Number 2
Uniform Load : D = 0.1120 ksf, Tributary Width = 6.10 ft, (slab weight)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Tributary Width = 1.0 ft, (B2)
Uniform Load : D = 0.1120 ksf, Tributary Width = 6.10 ft, (slab weight)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Tributary Width = 1.0 ft, (B2)
Load for Span Number 3
Uniform Load : D = 0.1120 ksf, Tributary Width = 6.10 ft, (slab weight)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Tributary Width = 1.0 ft, (B2)
Uniform Load : D = 0.1120 ksf, Tributary Width = 6.10 ft, (slab weight)
Uniform Load : D = 0.590, L = 0.240, S = 2.793 k/ft, Tributary Width = 1.0 ft, (B2)
Point Load : E = -2.910 k @ 6.50 ft

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Point Load : E = -2.910 k @ 6.50 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.335** : 1

Section used for this span **Typical Section**

Mu : Applied -69.178 k-ft

Mn * Phi : Allowable 206.348 k-ft

Location of maximum on span 0.000 ft

Span # where maximum occurs Span # 3

Maximum Deflection

Max Downward Transient Deflection	0.002 in	Ratio =	50172	>=36
Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Max Downward Total Deflection	0.003 in	Ratio =	31646	>=24
Max Upward Total Deflection	0.000 in	Ratio =	999	<240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Overall MAXimum	17.887	53.964	70.283	23.862
Overall MINimum	0.056	-0.336	-0.472	0.079
+D+H	5.074	21.053	24.802	8.633
+D+L+H, LL Comb Run (**L)	5.130	20.717	26.986	10.089
+D+L+H, LL Comb Run (*L*)	4.906	22.901	26.650	8.465
+D+L+H, LL Comb Run (*LL)	4.962	22.565	28.834	9.921
+D+L+H, LL Comb Run (L**)	6.703	24.520	24.330	8.711
+D+L+H, LL Comb Run (L*L)	6.759	24.184	26.514	10.167
+D+L+H, LL Comb Run (LL*)	6.535	26.368	26.178	8.543
+D+L+H, LL Comb Run (LLL)	6.591	26.032	28.362	9.999
+D+Lr+H, LL Comb Run (**L)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (*L*)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (*LL)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (L**)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (L*L)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (LL*)	5.074	21.053	24.802	8.633
+D+Lr+H, LL Comb Run (LLL)	5.074	21.053	24.802	8.633
+D+S+H	16.787	53.964	70.283	23.862
+D+0.750Lr+0.750L+H, LL Comb Run (	5.116	20.801	26.440	9.725
+D+0.750Lr+0.750L+H, LL Comb Run (	4.948	22.439	26.188	8.507
+D+0.750Lr+0.750L+H, LL Comb Run (	4.990	22.187	27.826	9.599
+D+0.750Lr+0.750L+H, LL Comb Run (	6.296	23.653	24.448	8.692
+D+0.750Lr+0.750L+H, LL Comb Run (	6.338	23.401	26.086	9.784
+D+0.750Lr+0.750L+H, LL Comb Run (	6.170	25.039	25.834	8.566
+D+0.750Lr+0.750L+H, LL Comb Run (	6.212	24.787	27.472	9.658
+D+0.750L+0.750S+H, LL Comb Run (*	13.901	45.485	60.551	21.146
+D+0.750L+0.750S+H, LL Comb Run (*	13.733	47.123	60.299	19.928
+D+0.750L+0.750S+H, LL Comb Run (*	13.775	46.871	61.937	21.020
+D+0.750L+0.750S+H, LL Comb Run (L	15.080	48.337	58.559	20.114
+D+0.750L+0.750S+H, LL Comb Run (L	15.122	48.085	60.197	21.206
+D+0.750L+0.750S+H, LL Comb Run (L	14.954	49.723	59.945	19.988
+D+0.750L+0.750S+H, LL Comb Run (L	14.996	49.471	61.583	21.080
+D+0.60W+H	5.074	21.053	24.802	8.633
+D+0.70E+H	8.761	21.633	24.221	4.946
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.116	20.801	26.440	9.725
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.948	22.439	26.188	8.507
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.990	22.187	27.826	9.599
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.296	23.653	24.448	8.692
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.338	23.401	26.086	9.784
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.170	25.039	25.834	8.566
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.212	24.787	27.472	9.658
+D+0.750L+0.750S+0.450W+H, LL Comb	13.901	45.485	60.551	21.146
+D+0.750L+0.750S+0.450W+H, LL Comb	13.733	47.123	60.299	19.928
+D+0.750L+0.750S+0.450W+H, LL Comb	13.775	46.871	61.937	21.020
+D+0.750L+0.750S+0.450W+H, LL Comb	15.080	48.337	58.559	20.114
+D+0.750L+0.750S+0.450W+H, LL Comb	15.122	48.085	60.197	21.206
+D+0.750L+0.750S+0.450W+H, LL Comb	14.954	49.723	59.945	19.988
+D+0.750L+0.750S+0.450W+H, LL Comb	14.996	49.471	61.583	21.080

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
+D+0.750L+0.750S+0.5250E+H, LL Com	16.666	45.920	60.115	18.382
+D+0.750L+0.750S+0.5250E+H, LL Com	16.498	47.558	59.863	17.164
+D+0.750L+0.750S+0.5250E+H, LL Com	16.540	47.306	61.501	18.256
+D+0.750L+0.750S+0.5250E+H, LL Com	17.845	48.772	58.123	17.349
+D+0.750L+0.750S+0.5250E+H, LL Com	17.887	48.520	59.761	18.441
+D+0.750L+0.750S+0.5250E+H, LL Com	17.719	50.158	59.509	17.223
+D+0.750L+0.750S+0.5250E+H, LL Com	17.761	49.906	61.147	18.315
+0.60D+0.60W+0.60H	3.044	12.632	14.881	5.180
+0.60D+0.70E+0.60H	6.731	13.212	14.301	1.493
D Only	5.074	21.053	24.802	8.633
Lr Only, LL Comb Run (**L)				
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.056	-0.336	2.184	1.456
L Only, LL Comb Run (*L*)	-0.168	1.848	1.848	-0.168
L Only, LL Comb Run (*LL)	-0.112	1.512	4.032	1.288
L Only, LL Comb Run (L**)	1.629	3.467	-0.472	0.079
L Only, LL Comb Run (L*L)	1.685	3.131	1.712	1.535
L Only, LL Comb Run (LL*)	1.461	5.315	1.376	-0.089
L Only, LL Comb Run (LLL)	1.517	4.979	3.560	1.367
S Only	11.713	32.912	45.481	15.229
W Only				
E Only	5.266	0.829	-0.829	-5.266
H Only				

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H, I	1	0.00	20.50	25.67	25.67	0.00	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.05	20.50	10.75	10.75	0.51	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.09	20.50	10.66	10.66	1.01	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.14	20.50	10.58	10.58	1.51	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.19	20.50	10.50	10.50	2.00	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.23	20.50	10.42	10.42	2.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.28	20.50	10.33	10.33	2.97	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.33	20.50	10.25	10.25	3.45	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.37	20.50	10.17	10.17	3.93	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.42	20.50	10.08	10.08	4.40	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	0.47	20.50	10.00	10.00	4.87	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.51	20.50	6.20	6.20	3.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.56	20.50	6.09	6.09	3.78	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.61	20.50	5.98	5.98	4.06	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.65	20.50	5.88	5.88	4.34	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.70	20.50	5.77	5.77	4.61	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.75	20.50	5.66	5.66	4.88	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.79	20.50	5.55	5.55	5.14	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.84	20.50	5.45	5.45	5.39	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.89	20.50	5.34	5.34	5.65	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.93	20.50	5.23	5.23	5.89	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.98	20.50	5.12	5.12	6.13	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.03	20.50	5.02	5.02	6.37	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.07	20.50	4.91	4.91	6.60	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.12	20.50	4.80	4.80	6.83	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	1.17	20.50	4.69	4.69	7.05	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.21	20.50	4.59	4.59	7.27	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.26	20.50	4.48	4.48	7.48	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.31	20.50	4.37	4.37	7.68	0.97	48.35	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.35	20.50	4.26	4.26	7.89	0.92	48.15	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.40	20.50	4.16	4.16	8.08	0.88	47.96	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.45	20.50	4.05	4.05	8.27	0.84	47.79	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.49	20.50	3.94	3.94	8.46	0.80	47.62	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.54	20.50	3.83	3.83	8.64	0.76	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.59	20.50	3.73	3.73	8.82	0.72	47.32	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.63	20.50	3.62	3.62	8.99	0.69	47.18	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.68	20.50	3.51	3.51	9.16	0.66	47.04	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.73	20.50	3.40	3.40	9.32	0.62	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.77	20.50	3.30	3.30	9.47	0.59	46.79	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.82	20.50	3.19	3.19	9.62	0.57	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.87	20.50	3.08	3.08	9.77	0.54	46.56	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.91	20.50	2.97	2.97	9.91	0.51	46.46	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.96	20.50	2.87	2.87	10.05	0.49	46.35	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.01	20.50	2.76	2.76	10.18	0.46	46.25	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.05	20.50	2.65	2.65	10.31	0.44	46.15	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.10	20.50	2.54	2.54	10.43	0.42	46.06	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.15	20.50	2.44	2.44	10.54	0.39	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.19	20.50	2.33	2.33	10.65	0.37	45.88	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.24	20.50	2.22	2.22	10.76	0.35	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.29	20.50	2.11	2.11	10.86	0.33	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.33	20.50	2.01	2.01	10.96	0.31	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.38	20.50	1.90	1.90	11.05	0.29	45.55	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.43	20.50	1.79	1.79	11.13	0.27	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.47	20.50	1.68	1.68	11.22	0.26	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.52	20.50	1.58	1.58	11.29	0.24	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.57	20.50	1.47	1.47	11.36	0.22	45.25	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.61	20.50	1.36	1.36	11.43	0.20	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.66	20.50	1.25	1.25	11.49	0.19	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.71	20.50	1.15	1.15	11.55	0.17	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.75	20.50	1.04	1.04	11.60	0.15	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.80	20.50	0.93	0.93	11.64	0.14	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.85	20.50	0.82	0.82	11.68	0.12	44.84	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.89	20.50	0.72	0.72	11.72	0.10	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	2.94	20.50	0.61	0.61	11.75	0.09	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+0.90D+E+0.90H	1	2.99	20.50	-0.55	0.55	6.41	0.15	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+0.90D+E+0.90H	1	3.03	20.50	-0.60	0.60	6.39	0.16	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+0.90D+E+0.90H	1	3.08	20.50	-0.65	0.65	6.36	0.18	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.13	20.50	-0.72	0.72	8.18	0.15	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.17	20.50	-0.79	0.79	8.14	0.17	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.22	20.50	-0.86	0.86	8.10	0.18	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.27	20.50	-0.93	0.93	8.06	0.20	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.31	20.50	-1.01	1.01	8.02	0.21	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.36	20.50	-1.08	1.08	7.97	0.23	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.41	20.50	-1.15	1.15	9.30	0.21	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.45	20.50	-1.23	1.23	9.24	0.23	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.50	20.50	-1.32	1.32	9.18	0.25	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.55	20.50	-1.40	1.40	9.12	0.26	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.59	20.50	-1.48	1.48	9.05	0.28	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.64	20.50	-1.57	1.57	8.98	0.30	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	3.69	20.50	-1.65	1.65	8.91	0.32	45.65	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	3.73	20.50	-1.73	1.73	8.83	0.34	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	3.78	20.50	-1.82	1.82	8.75	0.35	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	3.83	20.50	-1.90	1.90	8.66	0.37	45.89	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.87	20.50	-1.99	1.99	9.57	0.36	45.81	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.92	20.50	-2.10	2.10	9.48	0.38	45.90	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.97	20.50	-2.21	2.21	9.38	0.40	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.01	20.50	-2.31	2.31	9.27	0.43	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.06	20.50	-2.42	2.42	9.16	0.45	46.20	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.11	20.50	-2.53	2.53	9.05	0.48	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.15	20.50	-2.64	2.64	8.93	0.50	46.42	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.20	20.50	-2.74	2.74	8.80	0.53	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.25	20.50	-2.85	2.85	8.67	0.56	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.29	20.50	-3.06	3.06	8.53	0.61	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.34	20.50	-3.28	3.28	8.38	0.67	47.10	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.39	20.50	-3.50	3.50	8.23	0.73	47.34	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.43	20.50	-3.72	3.72	8.06	0.79	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.48	20.50	-3.95	3.95	7.88	0.86	47.87	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.53	20.50	-4.17	4.17	7.69	0.93	48.16	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.57	20.50	-4.39	4.39	7.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.62	20.50	-4.61	4.61	7.28	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.67	20.50	-4.83	4.83	7.06	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.71	20.50	-5.05	5.05	6.83	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.76	20.50	-5.27	5.27	6.59	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.81	20.50	-5.49	5.49	6.34	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.85	20.50	-5.71	5.71	6.08	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.90	20.50	-5.93	5.93	5.80	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.95	20.50	-6.15	6.15	5.52	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.99	20.50	-6.37	6.37	5.23	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.04	20.50	-6.59	6.59	4.93	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.09	20.50	-6.81	6.81	4.62	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.13	20.50	-7.03	7.03	4.29	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.18	20.50	-7.25	7.25	3.96	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.23	20.50	-7.47	7.47	3.62	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.27	20.50	-7.69	7.69	3.26	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.32	20.50	-7.91	7.91	2.90	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.37	20.50	-8.13	8.13	2.52	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.41	20.50	-8.35	8.35	2.14	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.46	20.50	-8.58	8.58	1.74	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.51	20.50	-19.48	19.48	2.42	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.55	20.50	-20.09	20.09	1.50	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.60	20.50	-20.71	20.71	0.55	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.65	21.00	-21.32	21.32	0.43	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.69	21.00	-21.94	21.94	1.44	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.74	21.00	-22.55	22.55	2.48	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.79	21.00	-23.17	23.17	3.55	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.83	21.00	-23.78	23.78	4.64	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.88	21.00	-24.40	24.40	5.77	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.93	21.00	-25.01	25.01	6.92	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.97	21.00	-25.63	25.63	8.10	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.02	21.00	-26.24	26.24	9.31	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.07	21.00	-26.86	26.86	10.55	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.11	21.00	-27.47	27.47	11.82	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.16	21.00	-28.08	28.08	13.11	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	6.21	21.00	-28.70	28.70	14.44	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.25	21.00	-29.31	29.31	15.79	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.30	21.00	-29.93	29.93	17.17	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.35	21.00	-30.54	30.54	18.59	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.39	21.00	-31.16	31.16	20.03	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.44	21.00	-31.77	31.77	21.49	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.49	21.00	-32.39	32.39	22.99	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.53	21.00	-33.00	33.00	24.52	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.58	21.00	-33.62	33.62	26.07	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.63	21.00	-34.23	34.23	27.65	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.67	21.00	-34.85	34.85	29.27	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.72	21.00	-35.46	35.46	30.91	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.77	21.00	-36.08	36.08	32.58	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.81	21.00	-36.69	36.69	34.27	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.86	21.00	-37.31	37.31	36.00	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.91	21.00	-37.92	37.92	37.76	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	6.95	21.00	-38.54	38.54	39.54	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.00	21.00	41.43	41.43	41.35	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	21.00	40.83	40.83	39.43	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.09	21.00	40.22	40.22	37.54	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.14	21.00	39.62	39.62	35.68	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.19	21.00	39.02	39.02	33.84	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.23	21.00	38.41	38.41	32.04	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.28	21.00	37.81	37.81	30.26	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.33	21.00	37.21	37.21	28.51	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.37	21.00	36.60	36.60	26.79	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.42	21.00	36.00	36.00	25.09	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.47	21.00	35.40	35.40	23.43	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.51	21.00	34.79	34.79	21.79	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.56	21.00	34.19	34.19	20.18	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.61	21.00	33.58	33.58	18.60	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.65	21.00	32.98	32.98	17.04	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.70	21.00	32.38	32.38	15.52	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.75	21.00	31.77	31.77	14.02	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.79	21.00	31.17	31.17	12.55	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.84	21.00	30.57	30.57	11.11	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.89	21.00	29.96	29.96	9.70	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.93	21.00	29.36	29.36	8.32	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	7.98	21.00	28.76	28.76	6.96	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.03	21.00	28.15	28.15	5.63	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	21.00	27.55	27.55	4.33	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.12	21.00	26.95	26.95	3.06	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.17	21.00	26.34	26.34	1.82	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.21	21.00	25.74	25.74	0.60	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.26	20.50	25.14	25.14	0.58	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.31	20.50	24.53	24.53	1.74	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	8.35	20.50	23.93	23.93	2.87	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.40	20.50	23.33	23.33	3.98	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.45	20.50	22.72	22.72	5.05	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.49	20.50	22.12	22.12	6.10	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.54	20.50	21.52	21.52	7.12	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.59	20.50	20.91	20.91	8.11	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.63	20.50	20.31	20.31	9.07	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.68	20.50	19.71	19.71	10.00	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	8.73	20.50	19.10	19.10	10.91	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.77	20.50	18.50	18.50	11.79	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.82	20.50	17.90	17.90	12.63	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.87	20.50	17.29	17.29	13.46	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.91	20.50	16.69	16.69	14.25	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.96	20.50	16.09	16.09	15.01	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.01	20.50	15.48	15.48	15.75	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.05	20.50	14.88	14.88	16.46	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.10	20.50	14.28	14.28	17.14	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.15	20.50	13.67	13.67	17.79	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	20.50	13.07	13.07	18.42	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.24	20.50	12.47	12.47	19.01	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.29	20.50	11.86	11.86	19.58	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.33	20.50	11.26	11.26	20.12	0.96	48.29	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.38	20.50	10.66	10.66	20.63	0.88	47.98	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	20.50	10.05	10.05	21.11	0.81	47.70	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.47	20.50	9.45	9.45	21.57	0.75	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.52	20.50	8.85	8.85	21.99	0.69	47.18	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.57	20.50	8.24	8.24	22.39	0.63	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.61	20.50	7.64	7.64	22.76	0.57	46.71	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	20.50	7.04	7.04	23.11	0.52	46.49	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.71	20.50	6.43	6.43	23.42	0.47	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.75	20.50	5.83	5.83	23.71	0.42	46.07	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.80	20.50	5.23	5.23	23.97	0.37	45.88	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.85	20.50	4.62	4.62	24.20	0.33	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	20.50	4.02	4.02	24.40	0.28	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	20.50	3.42	3.42	24.57	0.24	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.99	20.50	2.81	2.81	24.72	0.19	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.03	20.50	2.28	2.28	12.94	0.30	45.59	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.08	20.50	1.94	1.94	13.04	0.25	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.13	20.50	1.60	1.60	13.12	0.21	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.17	20.50	1.38	1.38	7.42	0.32	45.65	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.22	20.50	1.17	1.17	7.48	0.27	45.44	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.27	20.50	-1.20	1.20	24.32	0.08	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.31	20.50	-1.79	1.79	24.25	0.13	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.36	20.50	-2.38	2.38	24.15	0.17	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.41	20.50	-2.98	2.98	24.03	0.21	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.45	20.50	-3.57	3.57	23.87	0.26	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	20.50	-4.16	4.16	23.69	0.30	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.55	20.50	-4.76	4.76	24.37	0.33	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.59	20.50	-5.37	5.37	24.13	0.38	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.64	20.50	-5.97	5.97	23.87	0.43	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.69	20.50	-6.57	6.57	23.57	0.48	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.73	20.50	-7.18	7.18	23.25	0.53	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.78	20.50	-7.78	7.78	22.90	0.58	46.74	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.83	20.50	-8.38	8.38	22.53	0.64	46.96	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.87	20.50	-8.99	8.99	22.12	0.69	47.20	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.92	20.50	-9.59	9.59	21.69	0.76	47.46	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	20.50	-10.19	10.19	21.23	0.82	47.73	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.01	20.50	-10.80	10.80	20.74	0.89	48.01	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.06	20.50	-11.40	11.40	20.22	0.96	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.11	20.50	-12.00	12.00	19.67	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.15	20.50	-12.61	12.61	19.10	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.20	20.50	-13.21	13.21	18.50	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	11.25	20.50	-13.81	13.81	17.86	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.29	20.50	-14.42	14.42	17.21	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.34	20.50	-15.02	15.02	16.52	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.39	20.50	-15.62	15.62	15.80	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.43	20.50	-16.23	16.23	15.06	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.48	20.50	-16.83	16.83	14.29	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	20.50	-17.43	17.43	13.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	20.50	-18.04	18.04	12.66	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.62	20.50	-18.64	18.64	11.81	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.67	20.50	-19.24	19.24	10.92	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.71	20.50	-19.85	19.85	10.01	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.76	20.50	-20.45	20.45	9.07	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.81	20.50	-21.05	21.05	8.10	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.85	20.50	-21.66	21.66	7.10	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.90	20.50	-22.26	22.26	6.08	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.95	20.50	-22.86	22.86	5.03	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.99	20.50	-23.47	23.47	3.95	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	20.50	-24.07	24.07	2.84	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.09	20.50	-24.67	24.67	1.70	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.13	20.50	-25.28	25.28	0.53	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.18	21.00	-25.88	25.88	0.66	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.23	21.00	-26.49	26.49	1.88	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.27	21.00	-27.09	27.09	3.13	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.32	21.00	-27.69	27.69	4.41	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.37	21.00	-28.30	28.30	5.72	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.41	21.00	-28.90	28.90	7.05	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.46	21.00	-29.50	29.50	8.41	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	21.00	-30.11	30.11	9.80	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.55	21.00	-30.71	30.71	11.22	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.60	21.00	-31.31	31.31	12.67	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.65	21.00	-31.92	31.92	14.15	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.69	21.00	-32.52	32.52	15.65	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.74	21.00	-33.12	33.12	17.18	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.79	21.00	-33.73	33.73	18.74	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.83	21.00	-34.33	34.33	20.33	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.88	21.00	-34.93	34.93	21.94	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.93	21.00	-35.54	35.54	23.59	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	12.97	21.00	-36.14	36.14	25.26	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.02	21.00	-36.74	36.74	26.96	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.07	21.00	-37.35	37.35	28.69	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.11	21.00	-37.95	37.95	30.45	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.16	21.00	-38.55	38.55	32.23	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.21	21.00	-39.16	39.16	34.05	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.25	21.00	-39.76	39.76	35.89	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.30	21.00	-40.36	40.36	37.76	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.35	21.00	-40.97	40.97	39.65	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.39	21.00	-41.57	41.57	41.58	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.44	21.00	-42.17	42.17	43.53	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.49	21.00	-42.78	42.78	45.52	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.53	21.00	-43.38	43.38	47.53	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.58	21.00	-43.98	43.98	49.57	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.63	21.00	-44.59	44.59	51.63	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.67	21.00	-45.19	45.19	53.73	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.72	21.00	-45.79	45.79	55.85	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	13.77	21.00	-46.40	46.40	58.00	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.81	21.00	-47.00	47.00	60.18	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.86	21.00	-47.60	47.60	62.39	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.91	21.00	-48.21	48.21	64.62	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	13.95	21.00	-48.81	48.81	66.89	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.00	21.00	55.14	55.14	69.18	1.00	49.55	PhiVc < Vu	5.587	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.05	21.00	54.53	54.53	66.62	1.00	49.55	PhiVc < Vu	4.984	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	21.00	53.93	53.93	64.09	1.00	49.55	PhiVc < Vu	4.380	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.14	21.00	53.32	53.32	61.59	1.00	49.55	PhiVc < Vu	3.777	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.19	21.00	52.72	52.72	59.11	1.00	49.55	PhiVc < Vu	3.174	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.23	21.00	52.12	52.12	56.67	1.00	49.55	PhiVc < Vu	2.570	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.28	21.00	51.51	51.51	54.25	1.00	49.55	PhiVc < Vu	1.967	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.33	21.00	50.91	50.91	51.86	1.00	49.55	PhiVc < Vu	1.364	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.37	21.00	50.31	50.31	49.50	1.00	49.55	PhiVc < Vu	0.7602	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.42	21.00	49.70	49.70	47.16	1.00	49.55	PhiVc < Vu	0.1568	69.3	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.47	21.00	49.10	49.10	44.86	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.51	21.00	48.50	48.50	42.58	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.56	21.00	47.89	47.89	40.33	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.61	21.00	47.29	47.29	38.11	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.65	21.00	46.69	46.69	35.92	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.70	21.00	46.08	46.08	33.75	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.75	21.00	45.48	45.48	31.61	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.79	21.00	44.88	44.88	29.51	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.84	21.00	44.27	44.27	27.43	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	21.00	43.67	43.67	25.37	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.93	21.00	43.07	43.07	23.35	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.98	21.00	42.46	42.46	21.35	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.03	21.00	41.86	41.86	19.39	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.07	21.00	41.26	41.26	17.45	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.12	21.00	40.65	40.65	15.54	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.17	21.00	40.05	40.05	13.65	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.21	21.00	39.45	39.45	11.80	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.26	21.00	38.84	38.84	9.97	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.31	21.00	38.24	38.24	8.17	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.35	21.00	37.64	37.64	6.40	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.40	21.00	37.03	37.03	4.66	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.45	21.00	36.43	36.43	2.95	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.49	21.00	35.83	35.83	1.26	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.54	20.50	35.22	35.22	0.40	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.59	20.50	34.62	34.62	2.03	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.63	20.50	34.02	34.02	3.63	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.68	20.50	33.41	33.41	5.20	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.73	20.50	32.81	32.81	6.75	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.77	20.50	32.21	32.21	8.27	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.82	20.50	31.60	31.60	9.75	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.87	20.50	31.00	31.00	11.21	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.91	20.50	30.40	30.40	12.65	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	15.96	20.50	29.79	29.79	14.05	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.01	20.50	29.19	29.19	15.43	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.05	20.50	28.59	28.59	16.78	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.10	20.50	27.98	27.98	18.10	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.15	20.50	27.38	27.38	19.39	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.19	20.50	26.78	26.78	20.65	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.24	20.50	26.17	26.17	21.89	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	16.29	20.50	25.57	25.57	23.09	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.33	20.50	24.97	24.97	24.27	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.38	20.50	24.36	24.36	25.42	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	16.43	20.50	23.76	23.76	26.55	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.47	20.50	23.16	23.16	27.64	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.52	20.50	22.55	22.55	28.71	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.57	20.50	21.95	21.95	29.75	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.61	20.50	21.35	21.35	30.76	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.66	20.50	20.74	20.74	31.74	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.71	20.50	20.14	20.14	32.69	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.75	20.50	19.54	19.54	33.62	0.99	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.80	20.50	18.93	18.93	34.52	0.94	48.21	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.85	20.50	18.33	18.33	35.39	0.88	47.99	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.89	20.50	17.73	17.73	36.23	0.84	47.79	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.94	20.50	17.12	17.12	37.04	0.79	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.99	20.50	16.52	16.52	37.83	0.75	47.42	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.03	20.50	15.92	15.92	38.58	0.70	47.25	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.08	20.50	15.31	15.31	39.31	0.67	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.13	20.50	14.71	14.71	40.01	0.63	46.93	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.17	20.50	14.11	14.11	40.68	0.59	46.78	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.22	20.50	13.50	13.50	41.33	0.56	46.64	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.27	20.50	12.90	12.90	41.94	0.53	46.51	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.31	20.50	12.30	12.30	42.53	0.49	46.38	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.36	20.50	11.69	11.69	43.09	0.46	46.25	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.41	20.50	11.09	11.09	43.62	0.43	46.13	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.45	20.50	10.49	10.49	44.13	0.41	46.02	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.50	20.50	9.88	9.88	44.60	0.38	45.90	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.55	20.50	9.28	9.28	45.05	0.35	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.59	20.50	8.68	8.68	45.47	0.33	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.64	20.50	8.07	8.07	45.86	0.30	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.69	20.50	7.47	7.47	46.22	0.28	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.73	20.50	6.87	6.87	46.56	0.25	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.78	20.50	6.26	6.26	46.86	0.23	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.83	20.50	5.66	5.66	47.14	0.21	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.87	20.50	5.06	5.06	47.39	0.18	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.92	20.50	4.45	4.45	47.61	0.16	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.97	20.50	3.85	3.85	46.70	0.14	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.01	20.50	3.26	3.26	46.87	0.12	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.06	20.50	2.66	2.66	47.01	0.10	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.11	20.50	2.07	2.07	47.12	0.08	44.65	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.15	20.50	1.48	1.48	47.20	0.05	44.56	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.20	20.50	0.89	0.89	47.26	0.03	44.47	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	3	18.25	20.50	-0.58	0.58	28.65	0.03	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	3	18.29	20.50	-0.95	0.95	28.61	0.06	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	3	18.34	20.50	-1.32	1.32	28.56	0.08	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.39	20.50	-1.70	1.70	48.61	0.06	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.43	20.50	-2.31	2.31	48.51	0.08	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.48	20.50	-2.91	2.91	48.39	0.10	44.77	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.53	20.50	-3.51	3.51	48.24	0.12	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.57	20.50	-4.12	4.12	48.06	0.15	44.95	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.62	20.50	-4.72	4.72	47.86	0.17	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.67	20.50	-5.32	5.32	47.62	0.19	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.71	20.50	-5.93	5.93	47.36	0.21	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.76	20.50	-6.53	6.53	47.07	0.24	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-H (2 units) - alt

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	18.81	20.50	-7.14	7.14	46.75	0.26	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.85	20.50	-7.74	7.74	46.40	0.28	45.52	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.90	20.50	-8.34	8.34	46.03	0.31	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.95	20.50	-8.95	8.95	45.62	0.33	45.72	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.99	20.50	-9.55	9.55	45.19	0.36	45.83	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.04	20.50	-10.15	10.15	44.73	0.39	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.09	20.50	-10.76	10.76	44.24	0.42	46.05	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.13	20.50	-11.36	11.36	43.73	0.44	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.18	20.50	-11.96	11.96	43.18	0.47	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.23	20.50	-12.57	12.57	42.61	0.50	46.42	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.27	20.50	-13.17	13.17	42.01	0.54	46.55	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.32	20.50	-13.77	13.77	41.38	0.57	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.37	20.50	-14.38	14.38	40.73	0.60	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.41	20.50	-14.98	14.98	40.04	0.64	46.98	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.46	20.50	-15.58	15.58	39.33	0.68	47.13	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.51	20.50	-16.19	16.19	38.59	0.72	47.30	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.55	20.50	-16.79	16.79	37.82	0.76	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.60	20.50	-17.39	17.39	37.02	0.80	47.65	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.65	20.50	-18.00	18.00	36.19	0.85	47.85	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.69	20.50	-18.60	18.60	35.34	0.90	48.05	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.74	20.50	-19.20	19.20	34.46	0.95	48.27	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.79	20.50	-19.81	19.81	33.55	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.83	20.50	-20.41	20.41	32.61	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.88	20.50	-21.01	21.01	31.64	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.93	20.50	-21.62	21.62	30.65	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.97	20.50	-22.22	22.22	29.63	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.02	20.50	-22.82	22.82	28.57	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.07	20.50	-23.43	23.43	27.50	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.11	20.50	-24.03	24.03	26.39	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.16	20.50	-24.63	24.63	25.25	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.21	20.50	-25.24	25.24	24.09	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.25	20.50	-25.84	25.84	22.90	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.30	20.50	-26.44	26.44	21.68	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.35	20.50	-27.05	27.05	20.43	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.39	20.50	-27.65	27.65	19.15	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.44	20.50	-28.25	28.25	17.85	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.49	20.50	-28.86	28.86	16.52	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.53	20.50	-29.46	29.46	15.16	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.58	20.50	-30.06	30.06	13.77	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.63	20.50	-30.67	30.67	12.35	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.67	20.50	-31.27	31.27	10.90	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.72	20.50	-31.87	31.87	9.43	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.77	20.50	-32.48	32.48	7.93	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.81	20.50	-33.08	33.08	6.40	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.86	20.50	-33.68	33.68	4.84	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.91	20.50	-34.29	34.29	3.26	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	20.95	20.50	-34.89	34.89	1.64	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	21.00	20.50	-35.49	35.49	0.00	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.000	-39.54	206.35	0.19
Span # 2	2	7.000	-66.89	206.35	0.32

Description : GB-H (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.000	-69.18	206.35	0.34
+1.40D+1.60H					
Span # 1	1	7.000	-15.99	206.35	0.08
Span # 2	2	7.000	-21.89	206.35	0.11
Span # 3	3	7.000	-22.64	206.35	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-13.08	206.35	0.06
Span # 2	2	7.000	-21.25	206.35	0.10
Span # 3	3	7.000	-21.91	206.35	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-15.58	206.35	0.08
Span # 2	2	7.000	-20.52	206.35	0.10
Span # 3	3	7.000	-21.28	206.35	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-14.95	206.35	0.07
Span # 2	2	7.000	-23.01	206.35	0.11
Span # 3	3	7.000	-23.79	206.35	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-17.01	206.35	0.08
Span # 2	2	7.000	-17.91	206.35	0.09
Span # 3	3	7.000	-18.52	206.35	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-16.38	206.35	0.08
Span # 2	2	7.000	-20.40	206.35	0.10
Span # 3	3	7.000	-21.03	206.35	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-18.87	206.35	0.09
Span # 2	2	7.000	-19.71	206.35	0.10
Span # 3	3	7.000	-20.40	206.35	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-18.25	206.35	0.09
Span # 2	2	7.000	-22.15	206.35	0.11
Span # 3	3	7.000	-22.91	206.35	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-20.65	206.35	0.10
Span # 2	2	7.000	-35.87	206.35	0.17
Span # 3	3	7.000	-37.04	206.35	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-23.14	206.35	0.11
Span # 2	2	7.000	-35.14	206.35	0.17
Span # 3	3	7.000	-36.41	206.35	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-22.52	206.35	0.11
Span # 2	2	7.000	-37.63	206.35	0.18
Span # 3	3	7.000	-38.92	206.35	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-24.57	206.35	0.12
Span # 2	2	7.000	-32.53	206.35	0.16
Span # 3	3	7.000	-33.65	206.35	0.16
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-23.95	206.35	0.12
Span # 2	2	7.000	-35.02	206.35	0.17
Span # 3	3	7.000	-36.16	206.35	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-26.44	206.35	0.13
Span # 2	2	7.000	-34.29	206.35	0.17
Span # 3	3	7.000	-35.53	206.35	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-25.82	206.35	0.13
Span # 2	2	7.000	-36.78	206.35	0.18
Span # 3	3	7.000	-38.04	206.35	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-13.51	206.35	0.07
Span # 2	2	7.000	-19.54	206.35	0.09
Span # 3	3	7.000	-20.19	206.35	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-14.29	206.35	0.07
Span # 2	2	7.000	-19.31	206.35	0.09
Span # 3	3	7.000	-19.99	206.35	0.10

Description : GB-H (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-14.10	206.35	0.07
Span # 2	2	7.000	-20.09	206.35	0.10
Span # 3	3	7.000	-20.78	206.35	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-14.74	206.35	0.07
Span # 2	2	7.000	-18.49	206.35	0.09
Span # 3	3	7.000	-19.13	206.35	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-14.54	206.35	0.07
Span # 2	2	7.000	-19.27	206.35	0.09
Span # 3	3	7.000	-19.91	206.35	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-15.32	206.35	0.07
Span # 2	2	7.000	-19.04	206.35	0.09
Span # 3	3	7.000	-19.72	206.35	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-15.13	206.35	0.07
Span # 2	2	7.000	-19.82	206.35	0.10
Span # 3	3	7.000	-20.50	206.35	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-13.71	206.35	0.07
Span # 2	2	7.000	-18.76	206.35	0.09
Span # 3	3	7.000	-19.40	206.35	0.09
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-37.73	206.35	0.18
Span # 2	2	7.000	-66.34	206.35	0.32
Span # 3	3	7.000	-68.59	206.35	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-38.51	206.35	0.19
Span # 2	2	7.000	-66.11	206.35	0.32
Span # 3	3	7.000	-68.39	206.35	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-38.31	206.35	0.19
Span # 2	2	7.000	-66.89	206.35	0.32
Span # 3	3	7.000	-69.18	206.35	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-38.96	206.35	0.19
Span # 2	2	7.000	-65.29	206.35	0.32
Span # 3	3	7.000	-67.53	206.35	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-38.76	206.35	0.19
Span # 2	2	7.000	-66.07	206.35	0.32
Span # 3	3	7.000	-68.31	206.35	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					

Description : GB-H (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.000	-39.54	206.35	0.19
Span # 2	2	7.000	-65.84	206.35	0.32
Span # 3	3	7.000	-68.12	206.35	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-39.34	206.35	0.19
Span # 2	2	7.000	-66.62	206.35	0.32
Span # 3	3	7.000	-68.90	206.35	0.33
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.000	-37.93	206.35	0.18
Span # 2	2	7.000	-65.56	206.35	0.32
Span # 3	3	7.000	-67.81	206.35	0.33
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.000	-13.51	206.35	0.07
Span # 2	2	7.000	-19.54	206.35	0.09
Span # 3	3	7.000	-20.19	206.35	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.000	-14.29	206.35	0.07
Span # 2	2	7.000	-19.31	206.35	0.09
Span # 3	3	7.000	-19.99	206.35	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.000	-14.10	206.35	0.07
Span # 2	2	7.000	-20.09	206.35	0.10
Span # 3	3	7.000	-20.78	206.35	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.000	-14.74	206.35	0.07
Span # 2	2	7.000	-18.49	206.35	0.09
Span # 3	3	7.000	-19.13	206.35	0.09
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.000	-14.54	206.35	0.07
Span # 2	2	7.000	-19.27	206.35	0.09
Span # 3	3	7.000	-19.91	206.35	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.000	-15.32	206.35	0.07
Span # 2	2	7.000	-19.04	206.35	0.09
Span # 3	3	7.000	-19.72	206.35	0.10
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.000	-15.13	206.35	0.07
Span # 2	2	7.000	-19.82	206.35	0.10
Span # 3	3	7.000	-20.50	206.35	0.10
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-21.08	206.35	0.10
Span # 2	2	7.000	-34.16	206.35	0.17
Span # 3	3	7.000	-35.31	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-21.86	206.35	0.11
Span # 2	2	7.000	-33.93	206.35	0.16
Span # 3	3	7.000	-35.12	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-21.67	206.35	0.10
Span # 2	2	7.000	-34.71	206.35	0.17
Span # 3	3	7.000	-35.90	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-22.31	206.35	0.11
Span # 2	2	7.000	-33.12	206.35	0.16
Span # 3	3	7.000	-34.25	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-22.11	206.35	0.11
Span # 2	2	7.000	-33.90	206.35	0.16
Span # 3	3	7.000	-35.04	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-22.89	206.35	0.11
Span # 2	2	7.000	-33.67	206.35	0.16
Span # 3	3	7.000	-34.84	206.35	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-22.70	206.35	0.11
Span # 2	2	7.000	-34.45	206.35	0.17
Span # 3	3	7.000	-35.63	206.35	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	7.000	-25.05	206.35	0.12

Concrete Beam

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Description : GB-H (2 units) - alt

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.000	-39.06	206.35	0.19
Span # 3	3	7.000	-40.40	206.35	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	7.000	-25.83	206.35	0.13
Span # 2	2	7.000	-38.83	206.35	0.19
Span # 3	3	7.000	-40.20	206.35	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	7.000	-25.63	206.35	0.12
Span # 2	2	7.000	-39.61	206.35	0.19
Span # 3	3	7.000	-40.99	206.35	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	7.000	-26.27	206.35	0.13
Span # 2	2	7.000	-38.02	206.35	0.18
Span # 3	3	7.000	-39.34	206.35	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	7.000	-26.08	206.35	0.13
Span # 2	2	7.000	-38.79	206.35	0.19
Span # 3	3	7.000	-40.12	206.35	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	7.000	-26.86	206.35	0.13
Span # 2	2	7.000	-38.57	206.35	0.19
Span # 3	3	7.000	-39.93	206.35	0.19
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	7.000	-26.66	206.35	0.13
Span # 2	2	7.000	-39.34	206.35	0.19
Span # 3	3	7.000	-40.71	206.35	0.20
+0.90D+W+0.90H					
Span # 1	1	7.000	-10.28	206.35	0.05
Span # 2	2	7.000	-14.07	206.35	0.07
Span # 3	3	7.000	-14.55	206.35	0.07
+0.90D+E+0.90H					
Span # 1	1	7.000	-11.22	206.35	0.05
Span # 2	2	7.000	-13.12	206.35	0.06
Span # 3	3	7.000	-13.59	206.35	0.07

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0008	3.220		0.0000	0.000
+D+S+H	2	0.0009	3.220	+D+L+H, LL Comb Run (L*L)	-0.0001	6.020
+D+S+H	3	0.0027	4.060		0.0000	6.020

Concrete Beam

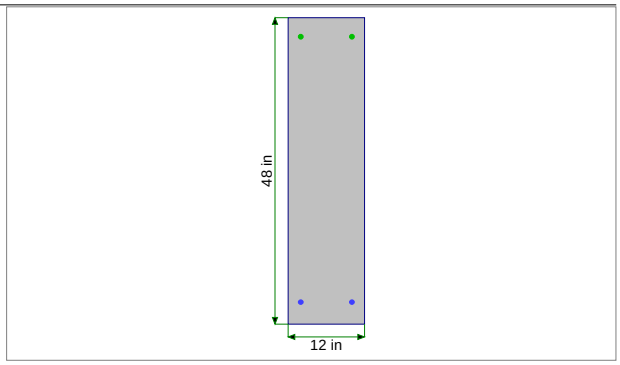
Description : GB-I (ALT)

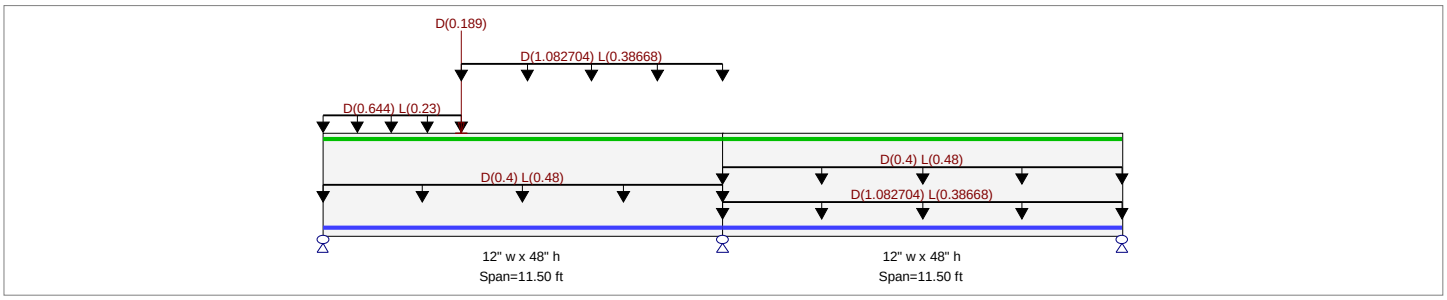
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in
Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 11.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 11.50 ft in this span
Span #2 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 11.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 11.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 0.0 -->> 4.0 ft, Tributary Width = 5.750 ft, (slab weight)
Uniform Load : D = 0.40, L = 0.480 k/ft, Tributary Width = 1.0 ft, (wall load)
Point Load : D = 0.1890 k @ 4.0 ft, (GB-P)
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.0 -->> 11.50 ft, Tributary Width = 9.667 ft, (slab weight)
Load for Span Number 2
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 9.667 ft, (slab weight)
Uniform Load : D = 0.40, L = 0.480 k/ft, Tributary Width = 1.0 ft, (WALL D)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.348** : 1	Maximum Deflection				
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0	<360
Mu : Applied	-62.582 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Mn * Phi : Allowable	180.038 k-ft	Max Downward Total Deflection	0.002 in	Ratio =	81658	>=24
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999	<240
Span # where maximum occurs	Span # 2					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	11.495	41.596	13.313
Overall MINimum	-0.623	6.069	-0.597
+D+H	7.626	29.297	8.953
+D+L+H, LL Comb Run (*L)	7.003	35.527	13.313
+D+L+H, LL Comb Run (L*)	11.495	35.367	8.355

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
+D+L+H, LL Comb Run (LL)	10.872	41.596	12.716
+D+Lr+H, LL Comb Run (*L)	7.626	29.297	8.953
+D+Lr+H, LL Comb Run (L*)	7.626	29.297	8.953
+D+Lr+H, LL Comb Run (LL)	7.626	29.297	8.953
+D+S+H	7.626	29.297	8.953
+D+0.750Lr+0.750L+H, LL Comb Run (	7.159	33.969	12.223
+D+0.750Lr+0.750L+H, LL Comb Run (	10.528	33.849	8.505
+D+0.750Lr+0.750L+H, LL Comb Run (	10.060	38.521	11.775
+D+0.750L+0.750S+H, LL Comb Run (*	7.159	33.969	12.223
+D+0.750L+0.750S+H, LL Comb Run (L	10.528	33.849	8.505
+D+0.750L+0.750S+H, LL Comb Run (L	10.060	38.521	11.775
+D+0.60W+H	7.626	29.297	8.953
+D+0.70E+H	7.626	29.297	8.953
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.159	33.969	12.223
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.528	33.849	8.505
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.060	38.521	11.775
+D+0.750L+0.750S+0.450W+H, LL Comb	7.159	33.969	12.223
+D+0.750L+0.750S+0.450W+H, LL Comb	10.528	33.849	8.505
+D+0.750L+0.750S+0.450W+H, LL Comb	10.060	38.521	11.775
+D+0.750L+0.750S+0.5250E+H, LL Com	7.159	33.969	12.223
+D+0.750L+0.750S+0.5250E+H, LL Com	10.528	33.849	8.505
+D+0.750L+0.750S+0.5250E+H, LL Com	10.060	38.521	11.775
+0.60D+0.60W+0.60H	4.576	17.578	5.372
+0.60D+0.70E+0.60H	4.576	17.578	5.372
D Only	7.626	29.297	8.953
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.623	6.229	4.360
L Only, LL Comb Run (L*)	3.868	6.069	-0.597
L Only, LL Comb Run (LL)	3.245	12.298	3.763
S Only			
W Only			
E Only			
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.00	44.50	15.34	15.34	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.05	44.50	15.20	15.20	0.72	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.09	44.50	15.05	15.05	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.14	44.50	14.91	14.91	2.13	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.19	44.50	14.76	14.76	2.83	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.23	44.50	14.62	14.62	3.52	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.28	44.50	14.47	14.47	4.20	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.33	44.50	14.33	14.33	4.87	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.38	44.50	14.18	14.18	5.54	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.42	44.50	14.04	14.04	6.21	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.47	44.50	13.89	13.89	6.86	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.52	44.50	13.75	13.75	7.51	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.56	44.50	13.60	13.60	8.15	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.61	44.50	13.46	13.46	8.79	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.66	44.50	13.31	13.31	9.42	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.70	44.50	13.17	13.17	10.04	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.75	44.50	13.02	13.02	10.65	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.80	44.50	12.88	12.88	11.26	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.84	44.50	12.73	12.73	11.86	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0

Concrete Beam

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Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	0.89	44.50	12.59	12.59	12.45	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.94	44.50	12.44	12.44	13.04	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.99	44.50	12.30	12.30	13.62	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.03	44.50	12.16	12.16	14.20	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.08	44.50	12.01	12.01	14.76	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.13	44.50	11.87	11.87	15.32	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.17	44.50	11.72	11.72	15.88	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.22	44.50	11.58	11.58	16.42	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.27	44.50	11.43	11.43	16.96	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.31	44.50	11.29	11.29	17.50	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.36	44.50	11.14	11.14	18.02	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.41	44.50	11.00	11.00	18.54	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.46	44.50	10.85	10.85	19.06	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.50	44.50	10.71	10.71	19.56	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.55	44.50	10.56	10.56	20.06	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.60	44.50	10.42	10.42	20.55	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.64	44.50	10.27	10.27	21.04	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.69	44.50	10.13	10.13	21.52	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.74	44.50	9.98	9.98	21.99	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.78	44.50	9.84	9.84	22.46	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.83	44.50	9.69	9.69	22.91	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.88	44.50	9.55	9.55	23.37	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.92	44.50	9.40	9.40	23.81	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.97	44.50	9.26	9.26	24.25	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.02	44.50	9.11	9.11	24.68	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.07	44.50	8.97	8.97	25.10	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.11	44.50	8.83	8.83	25.52	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.16	44.50	8.68	8.68	25.93	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.21	44.50	8.54	8.54	26.34	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.25	44.50	8.39	8.39	26.73	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.30	44.50	8.25	8.25	27.12	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.35	44.50	8.10	8.10	27.51	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.39	44.50	7.96	7.96	27.89	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.44	44.50	7.81	7.81	28.26	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.49	44.50	7.67	7.67	28.62	0.99	49.77	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.53	44.50	7.52	7.52	28.98	0.96	49.72	Vu < PhiVc/2	Not Reqd	1 49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.58	44.50	7.38	7.38	29.32	0.93	49.67	Vu < PhiVc/2	Not Reqd	1 49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.63	44.50	7.23	7.23	29.67	0.90	49.62	Vu < PhiVc/2	Not Reqd	1 49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.68	44.50	7.09	7.09	30.00	0.88	49.57	Vu < PhiVc/2	Not Reqd	1 49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.72	44.50	6.94	6.94	30.33	0.85	49.53	Vu < PhiVc/2	Not Reqd	1 49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.77	44.50	6.80	6.80	30.66	0.82	49.48	Vu < PhiVc/2	Not Reqd	1 49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.82	44.50	6.65	6.65	30.97	0.80	49.44	Vu < PhiVc/2	Not Reqd	1 49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.86	44.50	6.51	6.51	31.28	0.77	49.40	Vu < PhiVc/2	Not Reqd	1 49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.91	44.50	6.36	6.36	31.58	0.75	49.36	Vu < PhiVc/2	Not Reqd	1 49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.96	44.50	6.22	6.22	31.88	0.72	49.32	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.00	44.50	6.07	6.07	32.17	0.70	49.28	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.05	44.50	5.93	5.93	32.45	0.68	49.24	Vu < PhiVc/2	Not Reqd	1 49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.10	44.50	5.78	5.78	32.72	0.66	49.21	Vu < PhiVc/2	Not Reqd	1 49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.14	44.50	5.64	5.64	32.99	0.63	49.17	Vu < PhiVc/2	Not Reqd	1 49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.19	44.50	5.49	5.49	33.25	0.61	49.14	Vu < PhiVc/2	Not Reqd	1 49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.24	44.50	5.35	5.35	33.51	0.59	49.10	Vu < PhiVc/2	Not Reqd	1 49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.29	44.50	5.21	5.21	33.75	0.57	49.07	Vu < PhiVc/2	Not Reqd	1 49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.33	44.50	5.06	5.06	34.00	0.55	49.04	Vu < PhiVc/2	Not Reqd	1 49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.38	44.50	4.92	4.92	34.23	0.53	49.01	Vu < PhiVc/2	Not Reqd	1 49.0	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	3.43	44.50	4.77	4.77	34.46	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.47	44.50	4.63	4.63	34.68	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.52	44.50	4.48	4.48	34.89	0.48	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.57	44.50	4.34	4.34	35.10	0.46	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.61	44.50	4.19	4.19	35.30	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.66	44.50	4.05	4.05	35.49	0.42	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.71	44.50	3.90	3.90	35.68	0.41	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.76	44.50	3.76	3.76	35.86	0.39	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.80	44.50	3.61	3.61	36.03	0.37	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.85	44.50	3.47	3.47	36.20	0.36	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.90	44.50	3.32	3.32	36.36	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.94	44.50	3.18	3.18	36.51	0.32	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.99	44.50	3.03	3.03	36.65	0.31	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.04	44.50	2.63	2.63	36.78	0.27	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.08	44.50	2.45	2.45	36.90	0.25	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.13	44.50	2.27	2.27	37.01	0.23	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.18	44.50	2.09	2.09	37.12	0.21	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.22	44.50	1.91	1.91	37.21	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.27	44.50	1.73	1.73	37.30	0.17	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.32	44.50	1.55	1.55	37.37	0.15	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.37	44.50	1.36	1.36	37.44	0.14	48.35	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.41	44.50	1.18	1.18	37.50	0.12	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.46	44.50	-1.00	1.00	16.83	0.22	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.51	44.50	-1.12	1.12	16.78	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.55	44.50	-1.24	1.24	16.72	0.27	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.60	44.50	-1.35	1.35	16.66	0.30	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.65	44.50	-1.47	1.47	16.60	0.33	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.69	44.50	-1.58	1.58	16.53	0.36	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.74	44.50	-1.70	1.70	16.45	0.38	48.76	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.79	44.50	-1.82	1.82	16.37	0.41	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.83	44.50	-1.93	1.93	16.28	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.88	44.50	-2.05	2.05	16.18	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.93	44.50	-2.17	2.17	16.09	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.98	44.50	-2.28	2.28	15.98	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.02	44.50	-2.40	2.40	15.87	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.07	44.50	-2.51	2.51	15.76	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.12	44.50	-2.63	2.63	15.63	0.62	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.16	44.50	-2.75	2.75	15.51	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.21	44.50	-2.90	2.90	32.02	0.34	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.26	44.50	-3.08	3.08	31.88	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.30	44.50	-3.26	3.26	31.73	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.35	44.50	-3.44	3.44	31.58	0.40	48.79	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.40	44.50	-3.62	3.62	31.41	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.44	44.50	-3.80	3.80	31.24	0.45	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.49	44.50	-3.98	3.98	31.05	0.48	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.54	44.50	-4.16	4.16	30.86	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.59	44.50	-4.35	4.35	30.66	0.53	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.63	44.50	-4.53	4.53	30.45	0.55	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.68	44.50	-4.71	4.71	30.24	0.58	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.73	44.50	-4.89	4.89	30.01	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.77	44.50	-5.07	5.07	29.78	0.63	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.82	44.50	-5.25	5.25	29.54	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.87	44.50	-5.43	5.43	29.29	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.91	44.50	-5.61	5.61	29.03	0.72	49.31	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	5.96	44.50	-5.80	5.80	28.76	0.75	49.36	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.01	44.50	-5.98	5.98	28.48	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.06	44.50	-6.16	6.16	28.20	0.81	49.46	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.10	44.50	-6.34	6.34	27.90	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.15	44.50	-6.52	6.52	27.60	0.88	49.57	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.20	44.50	-6.70	6.70	27.29	0.91	49.63	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.24	44.50	-6.88	6.88	26.97	0.95	49.69	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.29	44.50	-7.06	7.06	26.65	0.98	49.75	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.34	44.50	-7.25	7.25	26.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.38	44.50	-7.43	7.43	25.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.43	44.50	-7.61	7.61	25.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.48	44.50	-7.79	7.79	25.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.52	44.50	-7.97	7.97	24.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.57	44.50	-8.15	8.15	24.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.62	44.50	-8.33	8.33	24.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.67	44.50	-8.52	8.52	23.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.71	44.50	-8.70	8.70	23.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.76	44.50	-8.88	8.88	22.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.81	44.50	-9.06	9.06	22.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.85	44.50	-9.24	9.24	22.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.90	44.50	-9.42	9.42	21.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.95	44.50	-9.60	9.60	21.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.99	44.50	-9.78	9.78	20.71	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.04	44.50	-9.97	9.97	20.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.09	44.50	-10.15	10.15	19.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.13	44.50	-10.33	10.33	19.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.18	44.50	-10.51	10.51	18.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.23	44.50	-10.69	10.69	18.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.28	44.50	-10.87	10.87	17.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.32	44.50	-11.05	11.05	17.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.37	44.50	-11.23	11.23	16.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.42	44.50	-11.42	11.42	16.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.46	44.50	-11.60	11.60	15.70	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.51	44.50	-11.78	11.78	15.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.56	44.50	-11.96	11.96	14.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.60	44.50	-12.14	12.14	14.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.65	44.50	-12.32	12.32	13.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.70	44.50	-12.50	12.50	12.87	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.74	44.50	-12.68	12.68	12.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.79	44.50	-12.87	12.87	11.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.84	44.50	-13.05	13.05	11.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.89	44.50	-13.23	13.23	10.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.93	44.50	-13.41	13.41	9.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	7.98	44.50	-13.59	13.59	9.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.03	44.50	-13.77	13.77	8.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.07	44.50	-13.95	13.95	7.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.12	44.50	-14.13	14.13	7.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.17	44.50	-14.32	14.32	6.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.21	44.50	-14.50	14.50	5.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.26	44.50	-14.68	14.68	5.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.31	44.50	-14.86	14.86	4.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.36	44.50	-15.04	15.04	3.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.40	44.50	-15.22	15.22	3.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.45	44.50	-15.40	15.40	2.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	8.50	44.50	-15.58	15.58	1.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.54	44.50	-15.77	15.77	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.59	44.50	-15.95	15.95	0.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.64	45.00	-16.13	16.13	0.57	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.68	45.00	-16.31	16.31	1.33	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.73	45.00	-16.49	16.49	2.10	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.78	45.00	-16.67	16.67	2.88	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.82	45.00	-16.85	16.85	3.67	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.87	45.00	-17.03	17.03	4.46	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.92	45.00	-17.22	17.22	5.27	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	8.97	45.00	-17.40	17.40	6.08	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.01	45.00	-17.58	17.58	6.90	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.06	45.00	-17.76	17.76	7.73	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.11	45.00	-17.94	17.94	8.57	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.15	45.00	-18.12	18.12	9.41	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.20	45.00	-18.30	18.30	10.27	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.25	45.00	-18.49	18.49	11.13	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.29	45.00	-18.67	18.67	12.00	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.34	45.00	-18.85	18.85	12.88	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.39	45.00	-19.03	19.03	13.77	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.43	45.00	-19.21	19.21	14.67	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.48	45.00	-19.39	19.39	15.58	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.53	45.00	-19.57	19.57	16.49	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.58	45.00	-19.75	19.75	17.41	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.62	45.00	-19.94	19.94	18.35	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.67	45.00	-20.12	20.12	19.29	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.72	45.00	-20.30	20.30	20.23	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.76	45.00	-20.48	20.48	21.19	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.81	45.00	-20.66	20.66	22.16	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.86	45.00	-20.84	20.84	23.13	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.90	45.00	-21.02	21.02	24.11	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	9.95	45.00	-21.20	21.20	25.10	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.00	45.00	-21.39	21.39	26.10	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.04	45.00	-21.57	21.57	27.11	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.09	45.00	-21.75	21.75	28.13	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.14	45.00	-21.93	21.93	29.15	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.19	45.00	-22.11	22.11	30.19	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.23	45.00	-22.29	22.29	31.23	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.28	45.00	-22.47	22.47	32.28	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.33	45.00	-22.65	22.65	33.34	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.37	45.00	-22.84	22.84	34.41	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.42	45.00	-23.02	23.02	35.48	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.47	45.00	-23.20	23.20	36.57	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.51	45.00	-23.38	23.38	37.66	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.56	45.00	-23.56	23.56	38.76	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.61	45.00	-23.74	23.74	39.87	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.66	45.00	-23.92	23.92	40.99	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.70	45.00	-24.10	24.10	42.12	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.75	45.00	-24.29	24.29	43.25	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.80	45.00	-24.47	24.47	44.40	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.84	45.00	-24.65	24.65	45.55	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.89	45.00	-24.83	24.83	46.71	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.94	45.00	-25.01	25.01	47.88	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	10.98	45.00	-25.19	25.19	49.06	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	11.03	45.00	-25.37	25.37	50.25	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.08	45.00	-25.55	25.55	51.44	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.12	45.00	-25.74	25.74	52.65	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.17	45.00	-25.92	25.92	53.86	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.22	45.00	-26.10	26.10	55.08	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.27	45.00	-26.28	26.28	56.31	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.31	45.00	-26.46	26.46	57.55	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.36	45.00	-26.64	26.64	58.79	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.41	45.00	-26.82	26.82	60.05	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	1	11.45	45.00	-27.00	27.00	61.31	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.50	45.00	27.65	27.65	62.58	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.55	45.00	27.47	27.47	61.29	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.59	45.00	27.29	27.29	60.00	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.64	45.00	27.10	27.10	58.73	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.69	45.00	26.92	26.92	57.46	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.73	45.00	26.74	26.74	56.20	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.78	45.00	26.56	26.56	54.95	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.83	45.00	26.38	26.38	53.71	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.88	45.00	26.20	26.20	52.47	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.92	45.00	26.02	26.02	51.25	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	11.97	45.00	25.84	25.84	50.03	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	12.02	45.00	25.65	25.65	48.82	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	12.06	45.00	25.47	25.47	47.62	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	12.11	45.00	25.29	25.29	46.43	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	2	12.16	45.00	25.11	25.11	45.25	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.20	45.00	24.93	24.93	44.07	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.25	45.00	24.75	24.75	42.91	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.30	45.00	24.57	24.57	41.75	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.34	45.00	24.39	24.39	40.60	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.39	45.00	24.20	24.20	39.46	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.44	45.00	24.02	24.02	38.33	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.49	45.00	23.84	23.84	37.20	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.53	45.00	23.66	23.66	36.09	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.58	45.00	23.48	23.48	34.98	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.63	45.00	23.30	23.30	33.89	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.67	45.00	23.12	23.12	32.80	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.72	45.00	22.93	22.93	31.72	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.77	45.00	22.75	22.75	30.64	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.81	45.00	22.57	22.57	29.58	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.86	45.00	22.39	22.39	28.52	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.91	45.00	22.21	22.21	27.48	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.96	45.00	22.03	22.03	26.44	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.00	45.00	21.85	21.85	25.41	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.05	45.00	21.67	21.67	24.39	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.10	45.00	21.48	21.48	23.38	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.14	45.00	21.30	21.30	22.37	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.19	45.00	21.12	21.12	21.38	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.24	45.00	20.94	20.94	20.39	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.28	45.00	20.76	20.76	19.41	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.33	45.00	20.58	20.58	18.44	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.38	45.00	20.40	20.40	17.48	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.42	45.00	20.22	20.22	16.53	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.47	45.00	20.03	20.03	15.58	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.52	45.00	19.85	19.85	14.64	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	13.57	45.00	19.67	19.67	13.72	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.61	45.00	19.49	19.49	12.80	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.66	45.00	19.31	19.31	11.89	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.71	45.00	19.13	19.13	10.98	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.75	45.00	18.95	18.95	10.09	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.80	45.00	18.77	18.77	9.21	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.85	45.00	18.58	18.58	8.33	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.89	45.00	18.40	18.40	7.46	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.94	45.00	18.22	18.22	6.60	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.99	45.00	18.04	18.04	5.75	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.03	45.00	17.86	17.86	4.91	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.08	45.00	17.68	17.68	4.07	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.13	45.00	17.50	17.50	3.25	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.18	45.00	17.32	17.32	2.43	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.22	45.00	17.13	17.13	1.62	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.27	45.00	16.95	16.95	0.82	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.32	45.00	16.77	16.77	0.03	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.36	44.50	16.59	16.59	0.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.41	44.50	16.41	16.41	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.46	44.50	16.23	16.23	2.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.50	44.50	16.05	16.05	3.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.55	44.50	15.87	15.87	3.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.60	44.50	15.68	15.68	4.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.64	44.50	15.50	15.50	5.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.69	44.50	15.32	15.32	5.99	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.74	44.50	15.14	15.14	6.71	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.79	44.50	14.96	14.96	7.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.83	44.50	14.78	14.78	8.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.88	44.50	14.60	14.60	8.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.93	44.50	14.41	14.41	9.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	14.97	44.50	14.23	14.23	10.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.02	44.50	14.05	14.05	10.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.07	44.50	13.87	13.87	11.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.11	44.50	13.69	13.69	12.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.16	44.50	13.51	13.51	12.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.21	44.50	13.33	13.33	13.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.26	44.50	13.15	13.15	14.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.30	44.50	12.96	12.96	14.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.35	44.50	12.78	12.78	15.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.40	44.50	12.60	12.60	15.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.44	44.50	12.42	12.42	16.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.49	44.50	12.24	12.24	16.99	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.54	44.50	12.06	12.06	17.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.58	44.50	11.88	11.88	18.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.63	44.50	11.70	11.70	18.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.68	44.50	11.51	11.51	19.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.72	44.50	11.33	11.33	19.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.77	44.50	11.15	11.15	20.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.82	44.50	10.97	10.97	20.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.87	44.50	10.79	10.79	21.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.91	44.50	10.61	10.61	21.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	15.96	44.50	10.43	10.43	22.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.01	44.50	10.25	10.25	22.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.05	44.50	10.06	10.06	23.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H,	2	16.10	44.50	9.88	9.88	23.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.15	44.50	9.70	9.70	24.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.19	44.50	9.52	9.52	24.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.24	44.50	9.34	9.34	25.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.29	44.50	9.16	9.16	25.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.33	44.50	8.98	8.98	25.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.38	44.50	8.80	8.80	26.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.43	44.50	8.61	8.61	26.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.48	44.50	8.43	8.43	27.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.52	44.50	8.25	8.25	27.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.57	44.50	8.07	8.07	27.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.62	44.50	7.89	7.89	28.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.66	44.50	7.71	7.71	28.69	1.00	49.77	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.71	44.50	7.53	7.53	29.05	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.76	44.50	7.35	7.35	29.40	0.93	49.66	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.80	44.50	7.16	7.16	29.74	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.85	44.50	6.98	6.98	30.07	0.86	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.90	44.50	6.80	6.80	30.40	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.94	44.50	6.62	6.62	30.71	0.80	49.45	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.99	44.50	6.44	6.44	31.02	0.77	49.40	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.04	44.50	6.26	6.26	31.32	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.09	44.50	6.08	6.08	31.61	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.13	44.50	5.90	5.90	31.89	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.18	44.50	5.71	5.71	32.16	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.23	44.50	5.53	5.53	32.42	0.63	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.27	44.50	5.35	5.35	32.68	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.32	44.50	5.17	5.17	32.93	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.37	44.50	4.99	4.99	33.16	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.41	44.50	4.81	4.81	33.39	0.53	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.46	44.50	4.63	4.63	33.62	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.51	44.50	4.44	4.44	33.83	0.49	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.56	44.50	4.26	4.26	34.03	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.60	44.50	4.08	4.08	34.23	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.65	44.50	3.90	3.90	34.42	0.42	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.70	44.50	3.72	3.72	34.59	0.40	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.74	44.50	3.54	3.54	34.76	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.79	44.50	3.36	3.36	34.93	0.36	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.84	44.50	3.18	3.18	35.08	0.34	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.88	44.50	2.99	2.99	35.22	0.32	48.65	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.93	44.50	2.81	2.81	35.36	0.30	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	17.98	44.50	2.64	2.64	17.94	0.55	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.02	44.50	2.53	2.53	18.06	0.52	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.07	44.50	2.41	2.41	18.18	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.12	44.50	2.30	2.30	18.29	0.47	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.17	44.50	2.18	2.18	18.39	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.21	44.50	2.06	2.06	18.49	0.41	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.26	44.50	1.95	1.95	18.58	0.39	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.31	44.50	1.83	1.83	18.67	0.36	48.73	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.35	44.50	1.71	1.71	18.76	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.40	44.50	1.60	1.60	18.83	0.31	48.65	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.45	44.50	1.48	1.48	18.91	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.49	44.50	1.37	1.37	18.97	0.27	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.54	44.50	1.25	1.25	19.03	0.24	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.59	44.50	1.13	1.13	19.09	0.22	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	18.63	44.50	1.02	1.02	19.14	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.68	44.50	-1.04	1.04	40.51	0.10	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.73	44.50	-1.22	1.22	40.46	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.78	44.50	-1.41	1.41	40.40	0.13	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.82	44.50	-1.59	1.59	40.33	0.15	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.87	44.50	-1.77	1.77	40.25	0.16	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.92	44.50	-1.95	1.95	40.16	0.18	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	18.96	44.50	-2.13	2.13	40.07	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.01	44.50	-2.31	2.31	39.96	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.06	44.50	-2.49	2.49	39.85	0.23	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.10	44.50	-2.67	2.67	39.73	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.15	44.50	-2.86	2.86	39.60	0.27	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.20	44.50	-3.04	3.04	39.46	0.29	48.60	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.24	44.50	-3.22	3.22	39.31	0.30	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.29	44.50	-3.40	3.40	39.16	0.32	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.34	44.50	-3.58	3.58	38.99	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.39	44.50	-3.76	3.76	38.82	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.43	44.50	-3.94	3.94	38.64	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.48	44.50	-4.12	4.12	38.45	0.40	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.53	44.50	-4.31	4.31	38.25	0.42	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.57	44.50	-4.49	4.49	38.05	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.62	44.50	-4.67	4.67	37.83	0.46	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.67	44.50	-4.85	4.85	37.61	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.71	44.50	-5.03	5.03	37.38	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.76	44.50	-5.21	5.21	37.14	0.52	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.81	44.50	-5.39	5.39	36.89	0.54	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.86	44.50	-5.57	5.57	36.63	0.56	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.90	44.50	-5.76	5.76	36.36	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	19.95	44.50	-5.94	5.94	36.09	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.00	44.50	-6.12	6.12	35.81	0.63	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.04	44.50	-6.30	6.30	35.51	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.09	44.50	-6.48	6.48	35.21	0.68	49.25	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.14	44.50	-6.66	6.66	34.91	0.71	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.18	44.50	-6.84	6.84	34.59	0.73	49.34	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.23	44.50	-7.02	7.02	34.26	0.76	49.38	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.28	44.50	-7.21	7.21	33.93	0.79	49.43	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.32	44.50	-7.39	7.39	33.59	0.82	49.47	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.37	44.50	-7.57	7.57	33.24	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.42	44.50	-7.75	7.75	32.88	0.87	49.57	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.47	44.50	-7.93	7.93	32.51	0.90	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.51	44.50	-8.11	8.11	32.13	0.94	49.67	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.56	44.50	-8.29	8.29	31.75	0.97	49.73	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.61	44.50	-8.47	8.47	31.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.65	44.50	-8.66	8.66	30.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.70	44.50	-8.84	8.84	30.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.75	44.50	-9.02	9.02	30.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.79	44.50	-9.20	9.20	29.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.84	44.50	-9.38	9.38	29.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.89	44.50	-9.56	9.56	28.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.93	44.50	-9.74	9.74	28.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	20.98	44.50	-9.93	9.93	27.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.03	44.50	-10.11	10.11	27.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.08	44.50	-10.29	10.29	26.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.12	44.50	-10.47	10.47	26.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

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Description : GB-I (ALT)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	21.17	44.50	-10.65	10.65	25.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.22	44.50	-10.83	10.83	25.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.26	44.50	-11.01	11.01	24.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.31	44.50	-11.19	11.19	24.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.36	44.50	-11.38	11.38	23.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.40	44.50	-11.56	11.56	23.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.45	44.50	-11.74	11.74	22.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.50	44.50	-11.92	11.92	22.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.54	44.50	-12.10	12.10	21.70	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.59	44.50	-12.28	12.28	21.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.64	44.50	-12.46	12.46	20.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.69	44.50	-12.64	12.64	19.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.73	44.50	-12.83	12.83	19.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.78	44.50	-13.01	13.01	18.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.83	44.50	-13.19	13.19	18.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.87	44.50	-13.37	13.37	17.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.92	44.50	-13.55	13.55	16.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	21.97	44.50	-13.73	13.73	16.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.01	44.50	-13.91	13.91	15.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.06	44.50	-14.09	14.09	14.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.11	44.50	-14.28	14.28	14.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.16	44.50	-14.46	14.46	13.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.20	44.50	-14.64	14.64	12.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.25	44.50	-14.82	14.82	12.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.30	44.50	-15.00	15.00	11.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.34	44.50	-15.18	15.18	10.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.39	44.50	-15.36	15.36	10.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.44	44.50	-15.54	15.54	9.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.48	44.50	-15.73	15.73	8.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.53	44.50	-15.91	15.91	7.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.58	44.50	-16.09	16.09	7.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.62	44.50	-16.27	16.27	6.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.67	44.50	-16.45	16.45	5.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.72	44.50	-16.63	16.63	4.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.77	44.50	-16.81	16.81	4.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.81	44.50	-16.99	16.99	3.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.86	44.50	-17.18	17.18	2.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.91	44.50	-17.36	17.36	1.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	22.95	44.50	-17.54	17.54	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	23.00	44.50	-17.72	17.72	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	11.500	-61.31	180.04	0.34
Span # 2	2	11.500	-62.58	180.04	0.35
+1.40D+1.60H					
Span # 1	1	11.500	-45.87	180.04	0.25
Span # 2	2	11.500	-46.82	180.04	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-50.73	180.04	0.28
Span # 2	2	11.500	-51.59	180.04	0.29
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-49.89	180.04	0.28
Span # 2	2	11.500	-51.12	180.04	0.28
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					

Description : GB-I (ALT)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	11.500	-61.31	180.04	0.34
Span # 2	2	11.500	-62.58	180.04	0.35
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-50.73	180.04	0.28
Span # 2	2	11.500	-51.59	180.04	0.29
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-49.89	180.04	0.28
Span # 2	2	11.500	-51.12	180.04	0.28
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-61.31	180.04	0.34
Span # 2	2	11.500	-62.58	180.04	0.35
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-42.88	180.04	0.24
Span # 2	2	11.500	-43.71	180.04	0.24
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-42.62	180.04	0.24
Span # 2	2	11.500	-43.56	180.04	0.24
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-46.19	180.04	0.26
Span # 2	2	11.500	-47.15	180.04	0.26
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-39.31	180.04	0.22
Span # 2	2	11.500	-40.13	180.04	0.22
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-39.31	180.04	0.22
Span # 2	2	11.500	-40.13	180.04	0.22
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-39.31	180.04	0.22
Span # 2	2	11.500	-40.13	180.04	0.22
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-42.88	180.04	0.24
Span # 2	2	11.500	-43.71	180.04	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-42.62	180.04	0.24
Span # 2	2	11.500	-43.56	180.04	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-46.19	180.04	0.26
Span # 2	2	11.500	-47.15	180.04	0.26
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	11.500	-39.31	180.04	0.22
Span # 2	2	11.500	-40.13	180.04	0.22
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-42.88	180.04	0.24
Span # 2	2	11.500	-43.71	180.04	0.24
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-42.62	180.04	0.24
Span # 2	2	11.500	-43.56	180.04	0.24
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-46.19	180.04	0.26
Span # 2	2	11.500	-47.15	180.04	0.26
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-42.88	180.04	0.24
Span # 2	2	11.500	-43.71	180.04	0.24
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-42.62	180.04	0.24
Span # 2	2	11.500	-43.56	180.04	0.24
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-46.19	180.04	0.26
Span # 2	2	11.500	-47.15	180.04	0.26
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	11.500	-42.88	180.04	0.24
Span # 2	2	11.500	-43.71	180.04	0.24
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					
Span # 1	1	11.500	-42.62	180.04	0.24
Span # 2	2	11.500	-43.56	180.04	0.24
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	11.500	-46.19	180.04	0.26
Span # 2	2	11.500	-47.15	180.04	0.26
+0.90D+W+0.90H					

Concrete Beam

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Description : GB-I (ALT)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	11.500	-29.49	180.04	0.16
Span # 2	2	11.500	-30.10	180.04	0.17
+0.90D+E+0.90H					
Span # 1	1	11.500	-29.49	180.04	0.16
Span # 2	2	11.500	-30.10	180.04	0.17

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*)	1	0.0015	5.093		0.0000	0.000
+D+L+H, LL Comb Run (*L)	2	0.0017	6.407		0.0000	0.000

Concrete Beam

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ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

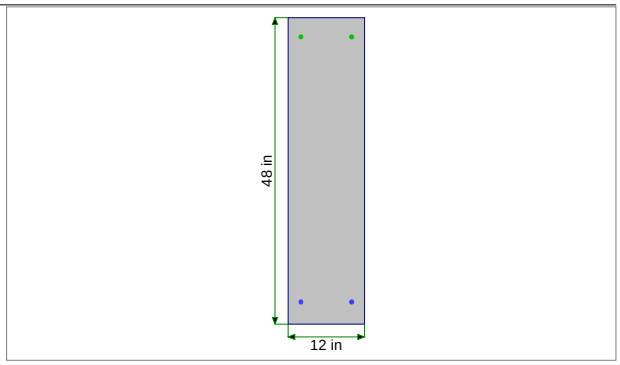
Description : GB-J - (2 UNITS)

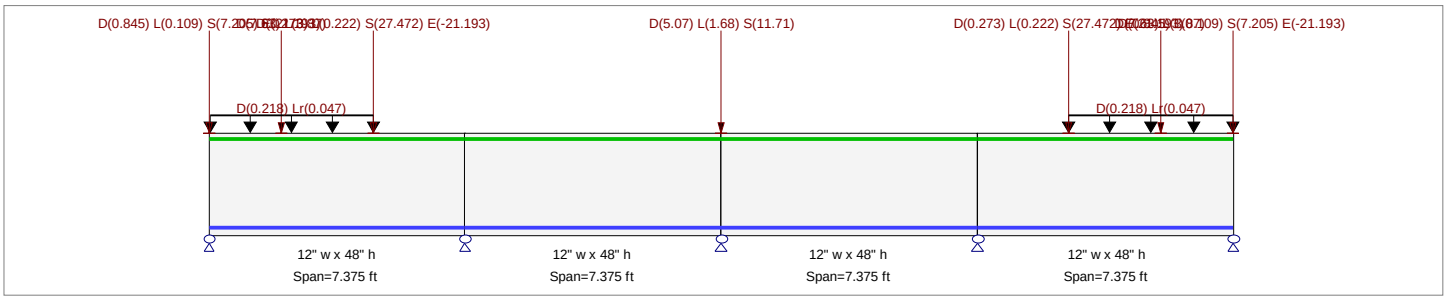
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in

Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.375 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.375 ft in this span

Span #2 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.375 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.375 ft in this span

Span #3 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.375 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.375 ft in this span

Span #4 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.375 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.375 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.2180, Lr = 0.0470 k/ft, Extent = 0.0 -->> 4.750 ft, Tributary Width = 1.0 ft, (WALL A)
Point Load : D = 0.8450, L = 0.1090, S = 7.205, E = 21.193 k @ 0.0 ft, (P1 W/ OTM)
Point Load : D = 0.2730, L = 0.2220, S = 27.472, E = -21.193 k @ 4.750 ft, (P2 W/ OTM)
Point Load : D = 7.630, L = 3.870 k @ 2.083 ft, (GB-I)
Load for Span Number 3
Point Load : D = 5.070, L = 1.680, S = 11.710 k @ 0.0 ft, (GB-H)
Load for Span Number 4
Uniform Load : D = 0.2180, Lr = 0.0470 k/ft, Extent = 2.625 -->> 7.375 ft, Tributary Width = 1.0 ft, (WALL A)
Point Load : D = 0.8450, L = 0.1090, S = 7.205, E = -21.193 k @ 7.375 ft, (P1 W/ OTM)
Point Load : D = 0.2730, L = 0.2220, S = 27.472, E = 21.193 k @ 2.625 ft, (P2 W/ OTM)
Point Load : D = 7.630, L = 3.870 k @ 5.292 ft, (GB-I)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.465** : 1		Maximum Deflection			
Section used for this span	**Typical Section**		Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied	58.977 k-ft		Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	126.735 k-ft		Max Downward Total Deflection	0.001 in	Ratio =	81444 >=24
Location of maximum on span	4.736 ft		Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 1					

Description : GB-J - (2 UNITS)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	28.864	38.822	-6.918	38.822	28.864
Overall MINimum	-2.823	-3.116	1.023	-3.116	-2.823
+D+H	8.128	9.232	1.957	9.232	8.128
+D+L+H, LL Comb Run (***L)	8.109	9.349	1.490	11.129	10.801
+D+L+H, LL Comb Run (**L*)	8.128	9.232	1.957	9.232	8.128
+D+L+H, LL Comb Run (**LL)	8.109	9.349	1.490	11.129	10.801
+D+L+H, LL Comb Run (*L**)	8.128	9.232	1.957	9.232	8.128
+D+L+H, LL Comb Run (*L*L)	8.109	9.349	1.490	11.129	10.801
+D+L+H, LL Comb Run (*LL*)	8.128	9.232	1.957	9.232	8.128
+D+L+H, LL Comb Run (*LLL)	8.109	9.349	1.490	11.129	10.801
+D+L+H, LL Comb Run (L***)	10.801	11.129	1.490	9.349	8.109
+D+L+H, LL Comb Run (L**L)	10.782	11.246	1.023	11.246	10.782
+D+L+H, LL Comb Run (L*L*)	10.801	11.129	1.490	9.349	8.109
+D+L+H, LL Comb Run (L*LL)	10.782	11.246	1.023	11.246	10.782
+D+L+H, LL Comb Run (LL**)	10.801	11.129	1.490	9.349	8.109
+D+L+H, LL Comb Run (LL*L)	10.782	11.246	1.023	11.246	10.782
+D+L+H, LL Comb Run (LLL*)	10.801	11.129	1.490	9.349	8.109
+D+L+H, LL Comb Run (LLLL)	10.782	11.246	1.023	11.246	10.782
+D+Lr+H, LL Comb Run (***L)	8.127	9.238	1.933	9.338	8.264
+D+Lr+H, LL Comb Run (**L*)	8.128	9.232	1.957	9.232	8.128
+D+Lr+H, LL Comb Run (**LL)	8.127	9.238	1.933	9.338	8.264
+D+Lr+H, LL Comb Run (*L**)	8.128	9.232	1.957	9.232	8.128
+D+Lr+H, LL Comb Run (*L*L)	8.127	9.238	1.933	9.338	8.264
+D+Lr+H, LL Comb Run (*LL*)	8.128	9.232	1.957	9.232	8.128
+D+Lr+H, LL Comb Run (*LLL)	8.127	9.238	1.933	9.338	8.264
+D+Lr+H, LL Comb Run (L***)	8.264	9.338	1.933	9.238	8.127
+D+Lr+H, LL Comb Run (L**L)	8.263	9.344	1.908	9.344	8.263
+D+Lr+H, LL Comb Run (L*L*)	8.264	9.338	1.933	9.238	8.127
+D+Lr+H, LL Comb Run (L*LL)	8.263	9.344	1.908	9.344	8.263
+D+Lr+H, LL Comb Run (LL**)	8.264	9.338	1.933	9.238	8.127
+D+Lr+H, LL Comb Run (LL*L)	8.263	9.344	1.908	9.344	8.263
+D+Lr+H, LL Comb Run (LLL*)	8.264	9.338	1.933	9.238	8.127
+D+Lr+H, LL Comb Run (LLLL)	8.263	9.344	1.908	9.344	8.263
+D+S+H	22.152	34.323	-6.918	34.323	22.152
+D+0.750Lr+0.750L+H, LL Comb Run (	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+H, LL Comb Run (	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+H, LL Comb Run (	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+H, LL Comb Run (	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+H, LL Comb Run (	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+H, LL Comb Run (	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+H, LL Comb Run (	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+H, LL Comb Run (	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+H, LL Comb Run (	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+H, LL Comb Run (	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+H, LL Comb Run (	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+H, LL Comb Run (	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+H, LL Comb Run (	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+H, LL Comb Run (	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+H, LL Comb Run (	10.220	10.827	1.220	10.827	10.220
+D+0.750L+0.750S+H, LL Comb Run (*	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+H, LL Comb Run (*	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+H, LL Comb Run (*	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+H, LL Comb Run (*	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+H, LL Comb Run (*	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+H, LL Comb Run (*	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+H, LL Comb Run (*	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+H, LL Comb Run (L	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+H, LL Comb Run (L	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+H, LL Comb Run (L	20.651	29.473	-5.050	28.138	18.631

Description : GB-J - (2 UNITS)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+H, LL Comb Run (L	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+H, LL Comb Run (L	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+H, LL Comb Run (L	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+H, LL Comb Run (L	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+H, LL Comb Run (L	20.636	29.561	-5.400	29.561	20.636
+D+0.60W+H	8.128	9.232	1.957	9.232	8.128
+D+0.70E+H	19.079	-3.116	1.957	21.580	-2.823
+D-0.70E+H	-2.823	21.580	1.957	-3.116	19.079
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.128	9.232	1.957	9.232	8.128
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.113	9.324	1.589	10.735	10.235
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.220	10.827	1.220	10.827	10.220
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.235	10.735	1.589	9.324	8.113
+D+0.750Lr+0.750L+0.450W+H, LL Com	10.220	10.827	1.220	10.827	10.220
+D+0.750L+0.750S+0.450W+H, LL Comb	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+0.450W+H, LL Comb	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+0.450W+H, LL Comb	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+0.450W+H, LL Comb	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+0.450W+H, LL Comb	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+0.450W+H, LL Comb	18.646	28.050	-4.699	28.050	18.646
+D+0.750L+0.750S+0.450W+H, LL Comb	18.631	28.138	-5.050	29.473	20.651
+D+0.750L+0.750S+0.450W+H, LL Comb	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+0.450W+H, LL Comb	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+0.450W+H, LL Comb	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+0.450W+H, LL Comb	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+0.450W+H, LL Comb	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+0.450W+H, LL Comb	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+0.450W+H, LL Comb	20.651	29.473	-5.050	28.138	18.631
+D+0.750L+0.750S+0.450W+H, LL Comb	20.636	29.561	-5.400	29.561	20.636
+D+0.750L+0.750S+0.5250E+H, LL Com	26.844	18.877	-5.050	38.734	12.438
+D+0.750L+0.750S+0.5250E+H, LL Com	26.859	18.789	-4.699	37.311	10.433
+D+0.750L+0.750S+0.5250E+H, LL Com	26.844	18.877	-5.050	38.734	12.438
+D+0.750L+0.750S+0.5250E+H, LL Com	26.859	18.789	-4.699	37.311	10.433
+D+0.750L+0.750S+0.5250E+H, LL Com	26.844	18.877	-5.050	38.734	12.438
+D+0.750L+0.750S+0.5250E+H, LL Com	26.859	18.789	-4.699	37.311	10.433
+D+0.750L+0.750S+0.5250E+H, LL Com	26.844	18.877	-5.050	38.734	12.438
+D+0.750L+0.750S+0.5250E+H, LL Com	28.864	20.212	-5.050	37.399	10.418
+D+0.750L+0.750S+0.5250E+H, LL Com	28.849	20.300	-5.400	38.822	12.423
+D+0.750L+0.750S+0.5250E+H, LL Com	28.864	20.212	-5.050	37.399	10.418
+D+0.750L+0.750S+0.5250E+H, LL Com	28.849	20.300	-5.400	38.822	12.423
+D+0.750L+0.750S+0.5250E+H, LL Com	28.864	20.212	-5.050	37.399	10.418
+D+0.750L+0.750S+0.5250E+H, LL Com	28.849	20.300	-5.400	38.822	12.423
+D+0.750L+0.750S+0.5250E+H, LL Com	28.864	20.212	-5.050	37.399	10.418
+D+0.750L+0.750S+0.5250E+H, LL Com	28.849	20.300	-5.400	38.822	12.423
+D+0.750L+0.750S-0.5250E+H, LL Com	10.418	37.399	-5.050	20.212	28.864
+D+0.750L+0.750S-0.5250E+H, LL Com	10.433	37.311	-4.699	18.789	26.859
+D+0.750L+0.750S-0.5250E+H, LL Com	10.418	37.399	-5.050	20.212	28.864
+D+0.750L+0.750S-0.5250E+H, LL Com	10.433	37.311	-4.699	18.789	26.859
+D+0.750L+0.750S-0.5250E+H, LL Com	10.418	37.399	-5.050	20.212	28.864
+D+0.750L+0.750S-0.5250E+H, LL Com	10.433	37.311	-4.699	18.789	26.859

Description : GB-J - (2 UNITS)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S-0.5250E+H, LL Com	10.418	37.399	-5.050	20.212	28.864
+D+0.750L+0.750S-0.5250E+H, LL Com	12.438	38.734	-5.050	18.877	26.844
+D+0.750L+0.750S-0.5250E+H, LL Com	12.423	38.822	-5.400	20.300	28.849
+D+0.750L+0.750S-0.5250E+H, LL Com	12.438	38.734	-5.050	18.877	26.844
+D+0.750L+0.750S-0.5250E+H, LL Com	12.423	38.822	-5.400	20.300	28.849
+D+0.750L+0.750S-0.5250E+H, LL Com	12.438	38.734	-5.050	18.877	26.844
+D+0.750L+0.750S-0.5250E+H, LL Com	12.423	38.822	-5.400	20.300	28.849
+D+0.750L+0.750S-0.5250E+H, LL Com	12.438	38.734	-5.050	18.877	26.844
+D+0.750L+0.750S-0.5250E+H, LL Com	12.423	38.822	-5.400	20.300	28.849
+0.60D+0.60W+0.60H	4.877	5.539	1.174	5.539	4.877
+0.60D+0.70E+0.60H	15.827	-6.809	1.174	17.887	-6.074
+0.60D-0.70E+0.60H	-6.074	17.887	1.174	-6.809	15.827

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60	1	0.00	44.50	36.55	36.55	0.00	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	0.08	44.50	20.86	20.86	1.63	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.16	44.50	20.78	20.78	3.25	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	44.50	20.71	20.71	4.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.31	44.50	20.63	20.63	6.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.39	44.50	20.56	20.56	8.06	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.47	44.50	20.49	20.49	9.66	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.54	44.50	20.41	20.41	11.24	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.62	44.50	20.34	20.34	12.83	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.70	44.50	20.26	20.26	14.40	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.78	44.50	20.19	20.19	15.97	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.85	44.50	20.11	20.11	17.54	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.93	44.50	20.04	20.04	19.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.01	44.50	19.97	19.97	20.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.09	44.50	19.89	19.89	22.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.16	44.50	19.82	19.82	23.74	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.24	44.50	19.74	19.74	25.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.32	44.50	19.67	19.67	26.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.40	44.50	19.59	19.59	28.32	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	44.50	19.52	19.52	29.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.55	44.50	19.44	19.44	31.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.63	44.50	19.37	19.37	32.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.71	44.50	19.30	19.30	34.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.79	44.50	19.22	19.22	35.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.86	44.50	19.15	19.15	37.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.94	44.50	19.07	19.07	38.83	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.02	44.50	19.00	19.00	40.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.10	44.50	8.49	8.49	38.97	0.81	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.17	44.50	8.41	8.41	39.63	0.79	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.25	44.50	8.34	8.34	40.28	0.77	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.33	44.50	8.26	8.26	40.92	0.75	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.41	44.50	8.19	8.19	41.56	0.73	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.48	44.50	8.11	8.11	42.20	0.71	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.56	44.50	8.04	8.04	42.82	0.70	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.64	44.50	7.97	7.97	43.44	0.68	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	1	2.72	44.50	7.89	7.89	44.06	0.66	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+0.90D+E+0.90H	1	2.79	45.00	-7.87	7.87	4.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	2.87	45.00	-7.92	7.92	5.48	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	2.95	45.00	-7.98	7.98	6.09	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.03	45.00	-8.04	8.04	6.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+0.90D+E+0.90H	1	3.11	45.00	-8.09	8.09	7.34	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.18	45.00	-8.15	8.15	7.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.26	45.00	-8.20	8.20	8.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.34	45.00	-8.26	8.26	9.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.42	45.00	-8.31	8.31	9.89	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.49	45.00	-8.37	8.37	10.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.57	45.00	-8.43	8.43	11.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.65	45.00	-8.48	8.48	11.85	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.73	45.00	-8.54	8.54	12.51	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.80	45.00	-8.59	8.59	13.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.88	45.00	-8.65	8.65	13.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	3.96	45.00	-8.71	8.71	14.51	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.04	45.00	-8.76	8.76	15.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.11	45.00	-8.82	8.82	15.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.19	45.00	-8.87	8.87	16.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.27	45.00	-8.93	8.93	17.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.35	45.00	-8.98	8.98	17.95	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.43	45.00	-9.04	9.04	18.65	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.50	45.00	-9.10	9.10	19.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.58	45.00	-9.15	9.15	20.06	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.66	45.00	-9.21	9.21	20.77	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D+E+0.90H	1	4.74	45.00	-9.26	9.26	21.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.81	44.50	-39.16	39.16	56.54	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.89	44.50	-39.21	39.21	53.49	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.97	44.50	-39.26	39.26	50.45	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.05	44.50	-39.32	39.32	47.40	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.12	44.50	-39.37	39.37	44.34	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.20	44.50	-39.43	39.43	41.29	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.28	44.50	-39.48	39.48	38.22	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.36	44.50	-39.53	39.53	35.16	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.43	44.50	-39.59	39.59	32.08	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.51	44.50	-39.64	39.64	29.01	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.59	44.50	-39.70	39.70	25.93	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.67	44.50	-39.75	39.75	22.85	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.74	44.50	-39.80	39.80	19.76	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.82	44.50	-39.86	39.86	16.67	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.90	44.50	-39.91	39.91	13.57	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.98	44.50	-39.97	39.97	10.47	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.06	44.50	-40.02	40.02	7.36	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.13	44.50	-40.07	40.07	4.26	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.21	44.50	-40.13	40.13	1.14	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.29	45.00	-40.18	40.18	1.98	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.37	45.00	-40.24	40.24	5.10	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.44	45.00	-40.29	40.29	8.22	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.52	45.00	-40.34	40.34	11.35	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.60	45.00	-40.40	40.40	14.49	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.68	45.00	-40.45	40.45	17.62	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.75	45.00	-40.51	40.51	20.77	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.83	45.00	-40.56	40.56	23.91	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.91	45.00	-40.61	40.61	27.06	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.99	45.00	-40.67	40.67	30.22	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.06	45.00	-40.72	40.72	33.38	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.14	45.00	-40.78	40.78	36.54	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.22	45.00	-40.83	40.83	39.71	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	7.30	45.00	-40.88	40.88	42.88	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	7.38	45.00	11.29	11.29	46.06	0.92	49.74	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.45	45.00	11.24	11.24	45.18	0.93	49.75	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.53	45.00	11.18	11.18	44.31	0.95	49.77	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.61	45.00	11.13	11.13	43.45	0.96	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.69	45.00	11.08	11.08	42.58	0.98	49.80	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.76	45.00	11.02	11.02	41.73	0.99	49.82	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.84	45.00	10.97	10.97	40.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.92	45.00	10.91	10.91	40.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.00	45.00	10.86	10.86	39.18	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	45.00	10.81	10.81	38.34	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.15	45.00	10.75	10.75	37.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.23	45.00	10.70	10.70	36.67	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.31	45.00	10.64	10.64	35.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.38	45.00	10.59	10.59	35.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.46	45.00	10.54	10.54	34.20	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.54	45.00	10.48	10.48	33.38	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.62	45.00	10.43	10.43	32.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.69	45.00	10.37	10.37	31.76	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.77	45.00	10.32	10.32	30.96	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.85	45.00	10.27	10.27	30.16	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.93	45.00	10.21	10.21	29.36	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.01	45.00	10.16	10.16	28.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.08	45.00	10.10	10.10	27.79	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.16	45.00	10.05	10.05	27.00	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.24	45.00	10.00	10.00	26.23	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	45.00	9.94	9.94	25.45	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.39	45.00	9.89	9.89	24.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.47	45.00	9.83	9.83	23.92	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	45.00	9.78	9.78	23.16	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.63	45.00	9.73	9.73	22.40	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.70	45.00	9.67	9.67	21.65	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.78	45.00	9.62	9.62	20.90	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.86	45.00	9.56	9.56	20.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	45.00	9.51	9.51	19.41	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.01	45.00	9.46	9.46	18.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.09	45.00	9.40	9.40	17.94	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.17	45.00	9.35	9.35	17.22	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.25	45.00	9.29	9.29	16.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.33	45.00	9.24	9.24	15.77	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.40	45.00	9.19	9.19	15.06	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.48	45.00	9.13	9.13	14.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.56	45.00	9.08	9.08	13.64	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.64	45.00	9.02	9.02	12.94	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.71	45.00	8.97	8.97	12.24	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.79	45.00	8.92	8.92	11.55	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.87	45.00	8.86	8.86	10.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.95	45.00	8.81	8.81	10.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.02	45.00	8.75	8.75	9.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.10	45.00	8.70	8.70	8.81	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.18	45.00	8.64	8.64	8.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.26	45.00	8.59	8.59	7.47	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.33	45.00	8.54	8.54	6.80	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.41	45.00	8.48	8.48	6.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	11.49	45.00	8.43	8.43	5.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	45.00	8.37	8.37	4.83	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.64	45.00	8.32	8.32	4.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.72	45.00	8.27	8.27	3.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.80	45.00	8.21	8.21	2.90	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.88	45.00	8.16	8.16	2.27	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.96	45.00	8.10	8.10	1.64	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.03	45.00	8.05	8.05	1.01	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.11	45.00	8.00	8.00	0.39	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.19	44.50	7.94	7.94	0.23	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.27	44.50	7.89	7.89	0.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.34	44.50	7.83	7.83	1.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.42	44.50	7.78	7.78	2.06	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.50	44.50	7.73	7.73	2.67	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.58	44.50	7.67	7.67	3.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.65	44.50	7.62	7.62	3.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.73	44.50	7.56	7.56	4.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.81	44.50	7.51	7.51	5.03	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.89	44.50	7.46	7.46	5.61	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.96	44.50	7.40	7.40	6.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.04	44.50	7.35	7.35	6.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.12	44.50	7.29	7.29	7.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.20	44.50	7.24	7.24	7.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.28	44.50	7.19	7.19	8.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.35	44.50	7.13	7.13	9.01	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.43	44.50	7.08	7.08	9.56	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.51	44.50	7.02	7.02	10.11	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.59	44.50	6.97	6.97	10.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.66	44.50	6.92	6.92	11.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.74	44.50	6.86	6.86	11.73	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.82	44.50	6.81	6.81	12.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.90	44.50	6.75	6.75	12.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.97	44.50	6.70	6.70	13.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.05	44.50	6.65	6.65	13.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.13	44.50	6.59	6.59	14.34	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.21	44.50	6.54	6.54	14.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.28	44.50	6.48	6.48	15.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.36	44.50	6.43	6.43	15.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.44	44.50	6.38	6.38	16.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.52	44.50	6.32	6.32	16.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.59	44.50	6.27	6.27	17.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.67	44.50	6.21	6.21	17.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.75	44.50	-6.16	6.16	18.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.83	44.50	-6.21	6.21	17.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.91	44.50	-6.27	6.27	17.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.98	44.50	-6.32	6.32	16.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.06	44.50	-6.38	6.38	16.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.14	44.50	-6.43	6.43	15.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.22	44.50	-6.48	6.48	15.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.29	44.50	-6.54	6.54	14.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.37	44.50	-6.59	6.59	14.34	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.45	44.50	-6.65	6.65	13.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.53	44.50	-6.70	6.70	13.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.60	44.50	-6.75	6.75	12.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	15.68	44.50	-6.81	6.81	12.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.76	44.50	-6.86	6.86	11.73	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.84	44.50	-6.92	6.92	11.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.91	44.50	-6.97	6.97	10.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.99	44.50	-7.02	7.02	10.11	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.07	44.50	-7.08	7.08	9.56	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.15	44.50	-7.13	7.13	9.01	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.23	44.50	-7.19	7.19	8.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.30	44.50	-7.24	7.24	7.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.38	44.50	-7.29	7.29	7.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.46	44.50	-7.35	7.35	6.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.54	44.50	-7.40	7.40	6.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.61	44.50	-7.46	7.46	5.61	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.69	44.50	-7.51	7.51	5.03	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.77	44.50	-7.56	7.56	4.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.85	44.50	-7.62	7.62	3.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	16.92	44.50	-7.67	7.67	3.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.00	44.50	-7.73	7.73	2.67	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.08	44.50	-7.78	7.78	2.06	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.16	44.50	-7.83	7.83	1.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.23	44.50	-7.89	7.89	0.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.31	44.50	-7.94	7.94	0.23	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.39	45.00	-8.00	8.00	0.39	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.47	45.00	-8.05	8.05	1.01	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.54	45.00	-8.10	8.10	1.64	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.62	45.00	-8.16	8.16	2.27	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.70	45.00	-8.21	8.21	2.90	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.78	45.00	-8.27	8.27	3.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.86	45.00	-8.32	8.32	4.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	17.93	45.00	-8.37	8.37	4.83	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.01	45.00	-8.43	8.43	5.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.09	45.00	-8.48	8.48	6.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.17	45.00	-8.54	8.54	6.80	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.24	45.00	-8.59	8.59	7.47	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.32	45.00	-8.64	8.64	8.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.40	45.00	-8.70	8.70	8.81	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.48	45.00	-8.75	8.75	9.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.55	45.00	-8.81	8.81	10.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.63	45.00	-8.86	8.86	10.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.71	45.00	-8.92	8.92	11.55	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.79	45.00	-8.97	8.97	12.24	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.86	45.00	-9.02	9.02	12.94	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.94	45.00	-9.08	9.08	13.64	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.02	45.00	-9.13	9.13	14.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.10	45.00	-9.19	9.19	15.06	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.18	45.00	-9.24	9.24	15.77	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.25	45.00	-9.29	9.29	16.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.33	45.00	-9.35	9.35	17.22	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.41	45.00	-9.40	9.40	17.94	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.49	45.00	-9.46	9.46	18.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.56	45.00	-9.51	9.51	19.41	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.64	45.00	-9.56	9.56	20.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.72	45.00	-9.62	9.62	20.90	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.80	45.00	-9.67	9.67	21.65	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	19.87	45.00	-9.73	9.73	22.40	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	19.95	45.00	-9.78	9.78	23.16	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.03	45.00	-9.83	9.83	23.92	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.11	45.00	-9.89	9.89	24.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.18	45.00	-9.94	9.94	25.45	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.26	45.00	-10.00	10.00	26.23	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.34	45.00	-10.05	10.05	27.00	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.42	45.00	-10.10	10.10	27.79	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.49	45.00	-10.16	10.16	28.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.57	45.00	-10.21	10.21	29.36	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.65	45.00	-10.27	10.27	30.16	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.73	45.00	-10.32	10.32	30.96	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.81	45.00	-10.37	10.37	31.76	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.88	45.00	-10.43	10.43	32.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.96	45.00	-10.48	10.48	33.38	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.04	45.00	-10.54	10.54	34.20	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.12	45.00	-10.59	10.59	35.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.19	45.00	-10.64	10.64	35.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.27	45.00	-10.70	10.70	36.67	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.35	45.00	-10.75	10.75	37.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.43	45.00	-10.81	10.81	38.34	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.50	45.00	-10.86	10.86	39.18	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.58	45.00	-10.91	10.91	40.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.66	45.00	-10.97	10.97	40.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.74	45.00	-11.02	11.02	41.73	0.99	49.82	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.81	45.00	-11.08	11.08	42.58	0.98	49.80	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.89	45.00	-11.13	11.13	43.45	0.96	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	21.97	45.00	-11.18	11.18	44.31	0.95	49.77	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	22.05	45.00	-11.24	11.24	45.18	0.93	49.75	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.13	45.00	40.94	40.94	46.06	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.20	45.00	40.88	40.88	42.88	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.28	45.00	40.83	40.83	39.71	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.36	45.00	40.78	40.78	36.54	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.44	45.00	40.72	40.72	33.38	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.51	45.00	40.67	40.67	30.22	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.59	45.00	40.61	40.61	27.06	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.67	45.00	40.56	40.56	23.91	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.75	45.00	40.51	40.51	20.77	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.82	45.00	40.45	40.45	17.62	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.90	45.00	40.40	40.40	14.49	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	22.98	45.00	40.34	40.34	11.35	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.06	45.00	40.29	40.29	8.22	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.13	45.00	40.24	40.24	5.10	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.21	45.00	40.18	40.18	1.98	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.29	44.50	40.13	40.13	1.14	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.37	44.50	40.07	40.07	4.26	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.44	44.50	40.02	40.02	7.36	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.52	44.50	39.97	39.97	10.47	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.60	44.50	39.91	39.91	13.57	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.68	44.50	39.86	39.86	16.67	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.76	44.50	39.80	39.80	19.76	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.83	44.50	39.75	39.75	22.85	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.91	44.50	39.70	39.70	25.93	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	23.99	44.50	39.64	39.64	29.01	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	24.07	44.50	39.59	39.59	32.08	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.14	44.50	39.53	39.53	35.16	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.22	44.50	39.48	39.48	38.22	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.30	44.50	39.43	39.43	41.29	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.38	44.50	39.37	39.37	44.34	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.45	44.50	39.32	39.32	47.40	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.53	44.50	39.26	39.26	50.45	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.61	44.50	39.21	39.21	53.49	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	4	24.69	44.50	39.16	39.16	56.54	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+0.90D-E+0.90H	4	24.76	45.00	9.26	9.26	21.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	24.84	45.00	9.21	9.21	20.77	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	24.92	45.00	9.15	9.15	20.06	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.00	45.00	9.10	9.10	19.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.08	45.00	9.04	9.04	18.65	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.15	45.00	8.98	8.98	17.95	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.23	45.00	8.93	8.93	17.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.31	45.00	8.87	8.87	16.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.39	45.00	8.82	8.82	15.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.46	45.00	8.76	8.76	15.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.54	45.00	8.71	8.71	14.51	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.62	45.00	8.65	8.65	13.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.70	45.00	8.59	8.59	13.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.77	45.00	8.54	8.54	12.51	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.85	45.00	8.48	8.48	11.85	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	25.93	45.00	8.43	8.43	11.19	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.01	45.00	8.37	8.37	10.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.08	45.00	8.31	8.31	9.89	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.16	45.00	8.26	8.26	9.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.24	45.00	8.20	8.20	8.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.32	45.00	8.15	8.15	7.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.39	45.00	8.09	8.09	7.34	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.47	45.00	8.04	8.04	6.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.55	45.00	7.98	7.98	6.09	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.63	45.00	7.92	7.92	5.48	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+0.90D-E+0.90H	4	26.71	45.00	7.87	7.87	4.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	26.78	44.50	-7.89	7.89	44.06	0.66	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	26.86	44.50	-7.97	7.97	43.44	0.68	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	26.94	44.50	-8.04	8.04	42.82	0.70	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.02	44.50	-8.11	8.11	42.20	0.71	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.09	44.50	-8.19	8.19	41.56	0.73	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.17	44.50	-8.26	8.26	40.92	0.75	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.25	44.50	-8.34	8.34	40.28	0.77	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.33	44.50	-8.41	8.41	39.63	0.79	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60S-0.50W+1.60H	4	27.40	44.50	-8.49	8.49	38.97	0.81	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.48	44.50	-19.00	19.00	40.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.56	44.50	-19.07	19.07	38.83	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.64	44.50	-19.15	19.15	37.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.71	44.50	-19.22	19.22	35.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.79	44.50	-19.30	19.30	34.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.87	44.50	-19.37	19.37	32.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	27.95	44.50	-19.44	19.44	31.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.03	44.50	-19.52	19.52	29.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.10	44.50	-19.59	19.59	28.32	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.18	44.50	-19.67	19.67	26.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	28.26	44.50	-19.74	19.74	25.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.34	44.50	-19.82	19.82	23.74	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.41	44.50	-19.89	19.89	22.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.49	44.50	-19.97	19.97	20.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.57	44.50	-20.04	20.04	19.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.65	44.50	-20.11	20.11	17.54	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.72	44.50	-20.19	20.19	15.97	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.80	44.50	-20.26	20.26	14.40	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.88	44.50	-20.34	20.34	12.83	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	28.96	44.50	-20.41	20.41	11.24	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.03	44.50	-20.49	20.49	9.66	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.11	44.50	-20.56	20.56	8.06	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.19	44.50	-20.63	20.63	6.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.27	44.50	-20.71	20.71	4.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.34	44.50	-20.78	20.78	3.25	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	29.42	44.50	-20.86	20.86	1.63	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	29.50	44.50	-36.55	36.55	0.00	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.375	58.98	126.73	0.47
Span # 2	2	7.375	-46.06	130.05	0.35
Span # 3	3	7.375	-45.18	130.05	0.35
Span # 4	4	7.375	58.98	126.73	0.47
+1.40D+1.60H					
Span # 1	1	7.375	18.78	126.73	0.15
Span # 2	2	7.375	-11.67	130.05	0.09
Span # 3	3	7.375	-11.31	130.05	0.09
Span # 4	4	7.375	18.78	126.73	0.15
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	16.03	126.73	0.13
Span # 2	2	7.375	-10.23	130.05	0.08
Span # 3	3	7.375	-13.15	130.05	0.10
Span # 4	4	7.375	24.71	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	16.03	126.73	0.13
Span # 2	2	7.375	-10.23	130.05	0.08
Span # 3	3	7.375	-13.15	130.05	0.10
Span # 4	4	7.375	24.71	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	16.03	126.73	0.13
Span # 2	2	7.375	-10.23	130.05	0.08
Span # 3	3	7.375	-13.15	130.05	0.10
Span # 4	4	7.375	24.71	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	16.03	126.73	0.13

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.375	-10.23	130.05	0.08
Span # 3	3	7.375	-13.15	130.05	0.10
Span # 4	4	7.375	24.71	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	24.71	126.73	0.19
Span # 2	2	7.375	-13.50	130.05	0.10
Span # 3	3	7.375	-9.91	130.05	0.08
Span # 4	4	7.375	16.03	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	24.64	126.73	0.19
Span # 2	2	7.375	-13.73	130.05	0.11
Span # 3	3	7.375	-13.37	130.05	0.10
Span # 4	4	7.375	24.64	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	24.71	126.73	0.19
Span # 2	2	7.375	-13.50	130.05	0.10
Span # 3	3	7.375	-9.91	130.05	0.08
Span # 4	4	7.375	16.03	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	24.64	126.73	0.19
Span # 2	2	7.375	-13.73	130.05	0.11
Span # 3	3	7.375	-13.37	130.05	0.10
Span # 4	4	7.375	24.64	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	24.71	126.73	0.19
Span # 2	2	7.375	-13.50	130.05	0.10
Span # 3	3	7.375	-9.91	130.05	0.08
Span # 4	4	7.375	16.03	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	24.64	126.73	0.19
Span # 2	2	7.375	-13.73	130.05	0.11
Span # 3	3	7.375	-13.37	130.05	0.10
Span # 4	4	7.375	24.64	126.73	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	24.71	126.73	0.19
Span # 2	2	7.375	-13.50	130.05	0.10
Span # 3	3	7.375	-9.91	130.05	0.08
Span # 4	4	7.375	16.03	126.73	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.375	24.64	126.73	0.19
Span # 2	2	7.375	-13.73	130.05	0.11
Span # 3	3	7.375	-13.37	130.05	0.10
Span # 4	4	7.375	24.64	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	23.66	126.73	0.19
Span # 2	2	7.375	-21.14	130.05	0.16
Span # 3	3	7.375	-23.83	130.05	0.18
Span # 4	4	7.375	31.76	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	23.66	126.73	0.19
Span # 2	2	7.375	-21.14	130.05	0.16
Span # 3	3	7.375	-23.83	130.05	0.18
Span # 4	4	7.375	31.76	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	23.66	126.73	0.19
Span # 2	2	7.375	-21.14	130.05	0.16
Span # 3	3	7.375	-23.83	130.05	0.18
Span # 4	4	7.375	31.76	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*)					

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	23.66	126.73	0.19
Span # 2	2	7.375	-21.14	130.05	0.16
Span # 3	3	7.375	-23.83	130.05	0.18
Span # 4	4	7.375	31.76	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	31.76	126.73	0.25
Span # 2	2	7.375	-24.35	130.05	0.19
Span # 3	3	7.375	-20.65	130.05	0.16
Span # 4	4	7.375	23.66	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	31.70	126.73	0.25
Span # 2	2	7.375	-24.58	130.05	0.19
Span # 3	3	7.375	-24.05	130.05	0.18
Span # 4	4	7.375	31.70	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	31.76	126.73	0.25
Span # 2	2	7.375	-24.35	130.05	0.19
Span # 3	3	7.375	-20.65	130.05	0.16
Span # 4	4	7.375	23.66	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	31.70	126.73	0.25
Span # 2	2	7.375	-24.58	130.05	0.19
Span # 3	3	7.375	-24.05	130.05	0.18
Span # 4	4	7.375	31.70	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	31.76	126.73	0.25
Span # 2	2	7.375	-24.35	130.05	0.19
Span # 3	3	7.375	-20.65	130.05	0.16
Span # 4	4	7.375	23.66	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	31.70	126.73	0.25
Span # 2	2	7.375	-24.58	130.05	0.19
Span # 3	3	7.375	-24.05	130.05	0.18
Span # 4	4	7.375	31.70	126.73	0.25
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	31.76	126.73	0.25
Span # 2	2	7.375	-24.35	130.05	0.19
Span # 3	3	7.375	-20.65	130.05	0.16
Span # 4	4	7.375	23.66	126.73	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.375	31.70	126.73	0.25
Span # 2	2	7.375	-24.58	130.05	0.19
Span # 3	3	7.375	-24.05	130.05	0.18
Span # 4	4	7.375	31.70	126.73	0.25
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.08	130.05	0.08
Span # 3	3	7.375	-10.93	130.05	0.08
Span # 4	4	7.375	19.05	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.08	130.05	0.08
Span # 3	3	7.375	-10.93	130.05	0.08
Span # 4	4	7.375	19.05	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.08	130.05	0.08
Span # 3	3	7.375	-10.93	130.05	0.08
Span # 4	4	7.375	19.05	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.08	130.05	0.08
Span # 3	3	7.375	-10.93	130.05	0.08
Span # 4	4	7.375	19.05	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	19.05	126.73	0.15
Span # 2	2	7.375	-11.26	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	19.03	126.73	0.15
Span # 2	2	7.375	-11.34	130.05	0.09
Span # 3	3	7.375	-11.01	130.05	0.08
Span # 4	4	7.375	19.03	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	19.05	126.73	0.15
Span # 2	2	7.375	-11.26	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	19.03	126.73	0.15
Span # 2	2	7.375	-11.34	130.05	0.09
Span # 3	3	7.375	-11.01	130.05	0.08
Span # 4	4	7.375	19.03	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	19.05	126.73	0.15
Span # 2	2	7.375	-11.26	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	19.03	126.73	0.15
Span # 2	2	7.375	-11.34	130.05	0.09
Span # 3	3	7.375	-11.01	130.05	0.08
Span # 4	4	7.375	19.03	126.73	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	19.05	126.73	0.15
Span # 2	2	7.375	-11.26	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.375	19.03	126.73	0.15
Span # 2	2	7.375	-11.34	130.05	0.09
Span # 3	3	7.375	-11.01	130.05	0.08
Span # 4	4	7.375	19.03	126.73	0.15
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	16.09	126.73	0.13
Span # 2	2	7.375	-10.01	130.05	0.08
Span # 3	3	7.375	-9.87	130.05	0.08
Span # 4	4	7.375	16.39	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	16.39	126.73	0.13
Span # 2	2	7.375	-10.18	130.05	0.08
Span # 3	3	7.375	-9.71	130.05	0.07
Span # 4	4	7.375	16.09	126.73	0.13
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.375	16.38	126.73	0.13
Span # 2	2	7.375	-10.19	130.05	0.08
Span # 3	3	7.375	-9.88	130.05	0.08
Span # 4	4	7.375	16.38	126.73	0.13
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (***L)					
Span # 1	1	7.375	57.99	126.73	0.46

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.375	-44.98	130.05	0.35
Span # 3	3	7.375	-45.12	130.05	0.35
Span # 4	4	7.375	58.98	126.73	0.47
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.375	58.04	126.73	0.46
Span # 2	2	7.375	-44.91	130.05	0.35
Span # 3	3	7.375	-44.05	130.05	0.34
Span # 4	4	7.375	58.04	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.375	57.99	126.73	0.46
Span # 2	2	7.375	-44.98	130.05	0.35
Span # 3	3	7.375	-45.12	130.05	0.35
Span # 4	4	7.375	58.98	126.73	0.47
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.375	58.04	126.73	0.46
Span # 2	2	7.375	-44.91	130.05	0.35
Span # 3	3	7.375	-44.05	130.05	0.34
Span # 4	4	7.375	58.04	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.375	57.99	126.73	0.46
Span # 2	2	7.375	-44.98	130.05	0.35
Span # 3	3	7.375	-45.12	130.05	0.35
Span # 4	4	7.375	58.98	126.73	0.47
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.375	58.04	126.73	0.46
Span # 2	2	7.375	-44.91	130.05	0.35
Span # 3	3	7.375	-44.05	130.05	0.34
Span # 4	4	7.375	58.04	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.375	57.99	126.73	0.46
Span # 2	2	7.375	-44.98	130.05	0.35
Span # 3	3	7.375	-45.12	130.05	0.35
Span # 4	4	7.375	58.98	126.73	0.47
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L***)					
Span # 1	1	7.375	58.98	126.73	0.47
Span # 2	2	7.375	-45.99	130.05	0.35
Span # 3	3	7.375	-44.12	130.05	0.34
Span # 4	4	7.375	57.99	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.375	58.93	126.73	0.46
Span # 2	2	7.375	-46.06	130.05	0.35
Span # 3	3	7.375	-45.18	130.05	0.35
Span # 4	4	7.375	58.93	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.375	58.98	126.73	0.47
Span # 2	2	7.375	-45.99	130.05	0.35
Span # 3	3	7.375	-44.12	130.05	0.34
Span # 4	4	7.375	57.99	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.375	58.93	126.73	0.46
Span # 2	2	7.375	-46.06	130.05	0.35
Span # 3	3	7.375	-45.18	130.05	0.35
Span # 4	4	7.375	58.93	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.375	58.98	126.73	0.47
Span # 2	2	7.375	-45.99	130.05	0.35
Span # 3	3	7.375	-44.12	130.05	0.34
Span # 4	4	7.375	57.99	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.375	58.93	126.73	0.46
Span # 2	2	7.375	-46.06	130.05	0.35
Span # 3	3	7.375	-45.18	130.05	0.35
Span # 4	4	7.375	58.93	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.375	58.98	126.73	0.47
Span # 2	2	7.375	-45.99	130.05	0.35
Span # 3	3	7.375	-44.12	130.05	0.34
Span # 4	4	7.375	57.99	126.73	0.46
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLLL)					

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.375	58.93	126.73	0.46
Span # 2	2	7.375	-46.06	130.05	0.35
Span # 3	3	7.375	-45.18	130.05	0.35
Span # 4	4	7.375	58.93	126.73	0.46
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.375	58.04	126.73	0.46
Span # 2	2	7.375	-44.91	130.05	0.35
Span # 3	3	7.375	-44.05	130.05	0.34
Span # 4	4	7.375	58.04	126.73	0.46
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	7.375	58.04	126.73	0.46
Span # 2	2	7.375	-44.91	130.05	0.35
Span # 3	3	7.375	-44.05	130.05	0.34
Span # 4	4	7.375	58.04	126.73	0.46
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (***					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (***					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.375	16.10	126.73	0.13
Span # 2	2	7.375	-10.00	130.05	0.08
Span # 3	3	7.375	-9.69	130.05	0.07
Span # 4	4	7.375	16.10	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.375	16.07	126.73	0.13
Span # 2	2	7.375	-10.07	130.05	0.08
Span # 3	3	7.375	-10.81	130.05	0.08
Span # 4	4	7.375	18.85	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.375	18.85	126.73	0.15
Span # 2	2	7.375	-11.13	130.05	0.09
Span # 3	3	7.375	-9.77	130.05	0.08
Span # 4	4	7.375	16.07	126.73	0.13
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.375	18.83	126.73	0.15
Span # 2	2	7.375	-11.21	130.05	0.09
Span # 3	3	7.375	-10.88	130.05	0.08
Span # 4	4	7.375	18.83	126.73	0.15
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (***L					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L*					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**LL					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L**					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L***					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**L					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL**					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (***L					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**L*					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**LL					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L**					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.375	23.75	126.73	0.19
Span # 2	2	7.375	-20.91	130.05	0.16
Span # 3	3	7.375	-20.43	130.05	0.16
Span # 4	4	7.375	23.75	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.375	23.72	126.73	0.19
Span # 2	2	7.375	-20.98	130.05	0.16
Span # 3	3	7.375	-21.49	130.05	0.17
Span # 4	4	7.375	25.96	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L***					
Span # 1	1	7.375	25.96	126.73	0.20

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L**L					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL**					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.375	25.96	126.73	0.20
Span # 2	2	7.375	-21.98	130.05	0.17
Span # 3	3	7.375	-20.50	130.05	0.16
Span # 4	4	7.375	23.72	126.73	0.19
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.375	25.94	126.73	0.20
Span # 2	2	7.375	-22.06	130.05	0.17
Span # 3	3	7.375	-21.56	130.05	0.17
Span # 4	4	7.375	25.94	126.73	0.20
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (***L					
Span # 1	1	7.375	14.47	126.73	0.11
Span # 2	2	7.375	-10.62	130.05	0.08
Span # 3	3	7.375	-40.36	130.05	0.31
Span # 4	4	7.375	56.17	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L*					
Span # 1	1	7.375	14.49	126.73	0.11
Span # 2	2	7.375	-10.55	130.05	0.08
Span # 3	3	7.375	-39.29	130.05	0.30
Span # 4	4	7.375	55.23	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**LL					
Span # 1	1	7.375	14.47	126.73	0.11
Span # 2	2	7.375	-10.62	130.05	0.08
Span # 3	3	7.375	-40.36	130.05	0.31
Span # 4	4	7.375	56.17	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L**					
Span # 1	1	7.375	14.49	126.73	0.11
Span # 2	2	7.375	-10.55	130.05	0.08
Span # 3	3	7.375	-39.29	130.05	0.30
Span # 4	4	7.375	55.23	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.375	14.47	126.73	0.11
Span # 2	2	7.375	-10.62	130.05	0.08
Span # 3	3	7.375	-40.36	130.05	0.31
Span # 4	4	7.375	56.17	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.375	14.49	126.73	0.11
Span # 2	2	7.375	-10.55	130.05	0.08
Span # 3	3	7.375	-39.29	130.05	0.30
Span # 4	4	7.375	55.23	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LLL					

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.375	14.47	126.73	0.11
Span # 2	2	7.375	-10.62	130.05	0.08
Span # 3	3	7.375	-40.36	130.05	0.31
Span # 4	4	7.375	56.17	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L***					
Span # 1	1	7.375	17.15	126.73	0.14
Span # 2	2	7.375	-11.63	130.05	0.09
Span # 3	3	7.375	-39.36	130.05	0.30
Span # 4	4	7.375	55.19	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**L					
Span # 1	1	7.375	17.13	126.73	0.14
Span # 2	2	7.375	-11.70	130.05	0.09
Span # 3	3	7.375	-40.42	130.05	0.31
Span # 4	4	7.375	56.13	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.375	17.15	126.73	0.14
Span # 2	2	7.375	-11.63	130.05	0.09
Span # 3	3	7.375	-39.36	130.05	0.30
Span # 4	4	7.375	55.19	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.375	17.13	126.73	0.14
Span # 2	2	7.375	-11.70	130.05	0.09
Span # 3	3	7.375	-40.42	130.05	0.31
Span # 4	4	7.375	56.13	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL**					
Span # 1	1	7.375	17.15	126.73	0.14
Span # 2	2	7.375	-11.63	130.05	0.09
Span # 3	3	7.375	-39.36	130.05	0.30
Span # 4	4	7.375	55.19	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.375	17.13	126.73	0.14
Span # 2	2	7.375	-11.70	130.05	0.09
Span # 3	3	7.375	-40.42	130.05	0.31
Span # 4	4	7.375	56.13	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.375	17.15	126.73	0.14
Span # 2	2	7.375	-11.63	130.05	0.09
Span # 3	3	7.375	-39.36	130.05	0.30
Span # 4	4	7.375	55.19	126.73	0.44
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.375	17.13	126.73	0.14
Span # 2	2	7.375	-11.70	130.05	0.09
Span # 3	3	7.375	-40.42	130.05	0.31
Span # 4	4	7.375	56.13	126.73	0.44
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (***L					
Span # 1	1	7.375	55.19	126.73	0.44
Span # 2	2	7.375	-40.07	130.05	0.31
Span # 3	3	7.375	-11.22	130.05	0.09
Span # 4	4	7.375	17.15	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L*					
Span # 1	1	7.375	55.23	126.73	0.44
Span # 2	2	7.375	-40.00	130.05	0.31
Span # 3	3	7.375	-10.16	130.05	0.08
Span # 4	4	7.375	14.49	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**LL					
Span # 1	1	7.375	55.19	126.73	0.44
Span # 2	2	7.375	-40.07	130.05	0.31
Span # 3	3	7.375	-11.22	130.05	0.09
Span # 4	4	7.375	17.15	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L**					
Span # 1	1	7.375	55.23	126.73	0.44
Span # 2	2	7.375	-40.00	130.05	0.31
Span # 3	3	7.375	-10.16	130.05	0.08
Span # 4	4	7.375	14.49	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.375	55.19	126.73	0.44
Span # 2	2	7.375	-40.07	130.05	0.31
Span # 3	3	7.375	-11.22	130.05	0.09
Span # 4	4	7.375	17.15	126.73	0.14

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.375	55.23	126.73	0.44
Span # 2	2	7.375	-40.00	130.05	0.31
Span # 3	3	7.375	-10.16	130.05	0.08
Span # 4	4	7.375	14.49	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.375	55.19	126.73	0.44
Span # 2	2	7.375	-40.07	130.05	0.31
Span # 3	3	7.375	-11.22	130.05	0.09
Span # 4	4	7.375	17.15	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L***					
Span # 1	1	7.375	56.17	126.73	0.44
Span # 2	2	7.375	-41.07	130.05	0.32
Span # 3	3	7.375	-10.23	130.05	0.08
Span # 4	4	7.375	14.47	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**L					
Span # 1	1	7.375	56.13	126.73	0.44
Span # 2	2	7.375	-41.14	130.05	0.32
Span # 3	3	7.375	-11.29	130.05	0.09
Span # 4	4	7.375	17.13	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.375	56.17	126.73	0.44
Span # 2	2	7.375	-41.07	130.05	0.32
Span # 3	3	7.375	-10.23	130.05	0.08
Span # 4	4	7.375	14.47	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.375	56.13	126.73	0.44
Span # 2	2	7.375	-41.14	130.05	0.32
Span # 3	3	7.375	-11.29	130.05	0.09
Span # 4	4	7.375	17.13	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL**					
Span # 1	1	7.375	56.17	126.73	0.44
Span # 2	2	7.375	-41.07	130.05	0.32
Span # 3	3	7.375	-10.23	130.05	0.08
Span # 4	4	7.375	14.47	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.375	56.13	126.73	0.44
Span # 2	2	7.375	-41.14	130.05	0.32
Span # 3	3	7.375	-11.29	130.05	0.09
Span # 4	4	7.375	17.13	126.73	0.14
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.375	56.17	126.73	0.44
Span # 2	2	7.375	-41.07	130.05	0.32
Span # 3	3	7.375	-10.23	130.05	0.08
Span # 4	4	7.375	14.47	126.73	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.375	56.13	126.73	0.44
Span # 2	2	7.375	-41.14	130.05	0.32
Span # 3	3	7.375	-11.29	130.05	0.09
Span # 4	4	7.375	17.13	126.73	0.14
+0.90D+W+0.90H					
Span # 1	1	7.375	12.07	126.73	0.10
Span # 2	2	7.375	-7.50	130.05	0.06
Span # 3	3	7.375	-7.27	130.05	0.06
Span # 4	4	7.375	12.07	126.73	0.10
+0.90D-W+0.90H					
Span # 1	1	7.375	12.07	126.73	0.10
Span # 2	2	7.375	-7.50	130.05	0.06
Span # 3	3	7.375	-7.27	130.05	0.06
Span # 4	4	7.375	12.07	126.73	0.10
+0.90D+E+0.90H					
Span # 1	1	7.375	-21.49	130.05	0.17
Span # 2	2	7.375	8.13	126.73	0.06
Span # 3	3	7.375	-21.84	130.05	0.17
Span # 4	4	7.375	31.03	126.73	0.24
+0.90D-E+0.90H					
Span # 1	1	7.375	31.03	126.73	0.24
Span # 2	2	7.375	-22.22	130.05	0.17
Span # 3	3	7.375	8.13	126.73	0.06

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J - (2 UNITS)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	7.375	-21.49	130.05	0.17

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+S+H	1	0.0009	3.688	+D+S+H	-0.0000	7.569
E Only	2	0.0003	3.299	+D+S+H	-0.0003	2.523
+D+0.750L+0.750S+0.5250E+H, LL C	3	0.0001	7.569	+D+0.750L+0.750S+0.5250E+H, LL C	-0.0004	4.852
+D+0.750L+0.750S+0.5250E+H, LL C	4	0.0011	3.688		0.0000	4.852

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

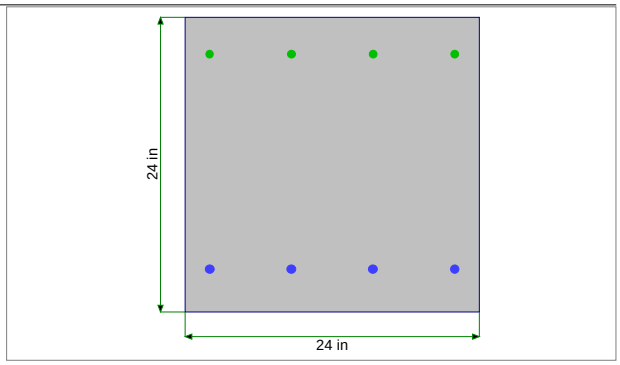
Description : GB-K

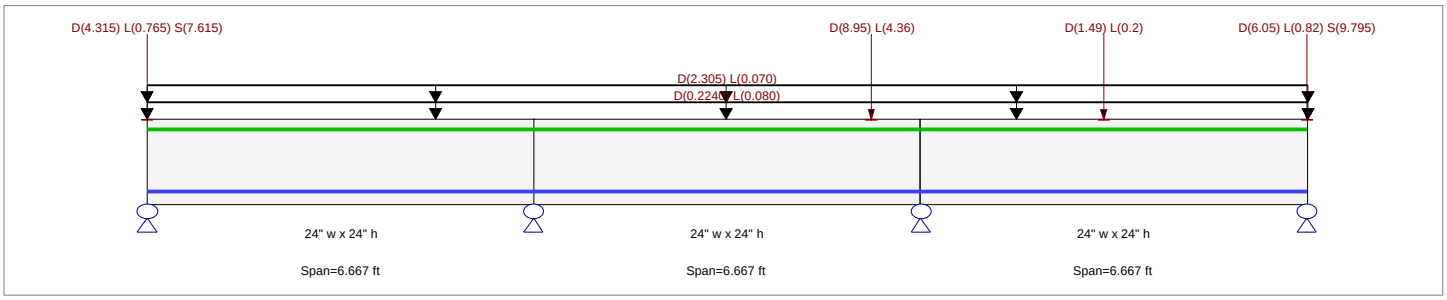
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 0.1120, L = 0.040
Uniform Load on ALL spans : D = 0.1120, L = 0.040 ksf, Tributary Width = 2.0 ft
Partial Length Uniform Load : D = 2.305, L = 0.070 k/ft, Extent = 0.0 -->> 20.0 ft
Load for Span Number 1
Point Load : D = 4.315, L = 0.7650, S = 7.615 k @ 0.0 ft, (GB-H)
Load for Span Number 2
Point Load : D = 8.950, L = 4.360 k @ 5.833 ft
Load for Span Number 3
Point Load : D = 6.050, L = 0.820, S = 9.795 k @ 6.667 ft, (GB-G)
Point Load : D = 1.490, L = 0.20 k @ 3.167 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.194** : 1

Section used for this span	**Typical Section**	
Mu : Applied	-24.749	k-ft
Mn * Phi : Allowable	127.584	k-ft
Location of maximum on span	0.000	ft
Span # where maximum occurs	Span # 3	

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Description : GB-K

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Overall MAXimum	20.086	25.330	37.903	24.272
Overall MINimum	0.022	0.001	0.002	0.017
+D+H	12.472	23.621	32.415	14.478
+D+L+H, LL Comb Run (**L)	12.494	23.490	33.216	15.806
+D+L+H, LL Comb Run (*L*)	12.338	24.680	37.102	14.225
+D+L+H, LL Comb Run (*LL)	12.360	24.550	37.903	15.553
+D+L+H, LL Comb Run (L**)	13.670	24.271	32.315	14.495
+D+L+H, LL Comb Run (L*L)	13.692	24.140	33.116	15.823
+D+L+H, LL Comb Run (LL*)	13.536	25.330	37.002	14.242
+D+L+H, LL Comb Run (LLL)	13.558	25.200	37.803	15.570
+D+Lr+H, LL Comb Run (**L)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (*L*)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (*LL)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (L**)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (L*L)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (LL*)	12.472	23.621	32.415	14.478
+D+Lr+H, LL Comb Run (LLL)	12.472	23.621	32.415	14.478
+D+S+H	20.086	23.622	32.417	24.272
+D+0.750Lr+0.750L+H, LL Comb Run (	12.488	23.523	33.016	15.474
+D+0.750Lr+0.750L+H, LL Comb Run (	12.372	24.415	35.930	14.289
+D+0.750Lr+0.750L+H, LL Comb Run (	12.388	24.318	36.531	15.285
+D+0.750Lr+0.750L+H, LL Comb Run (	13.370	24.108	32.340	14.491
+D+0.750Lr+0.750L+H, LL Comb Run (	13.387	24.010	32.941	15.487
+D+0.750Lr+0.750L+H, LL Comb Run (	13.270	24.903	35.855	14.301
+D+0.750Lr+0.750L+H, LL Comb Run (	13.287	24.805	36.456	15.297
+D+0.750L+0.750S+H, LL Comb Run (*	18.198	23.524	33.017	22.819
+D+0.750L+0.750S+H, LL Comb Run (*	18.082	24.416	35.931	21.634
+D+0.750L+0.750S+H, LL Comb Run (*	18.098	24.318	36.532	22.630
+D+0.750L+0.750S+H, LL Comb Run (L	19.081	24.109	32.341	21.836
+D+0.750L+0.750S+H, LL Comb Run (L	19.097	24.011	32.942	22.832
+D+0.750L+0.750S+H, LL Comb Run (L	18.981	24.904	35.856	21.646
+D+0.750L+0.750S+H, LL Comb Run (L	18.997	24.806	36.457	22.642
+D+0.60W+H	12.472	23.621	32.415	14.478
+D+0.70E+H	12.472	23.621	32.415	14.478
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.488	23.523	33.016	15.474
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.372	24.415	35.930	14.289
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.388	24.318	36.531	15.285
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.370	24.108	32.340	14.491
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.387	24.010	32.941	15.487
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.270	24.903	35.855	14.301
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.287	24.805	36.456	15.297
+D+0.750L+0.750S+0.450W+H, LL Comb	18.198	23.524	33.017	22.819
+D+0.750L+0.750S+0.450W+H, LL Comb	18.082	24.416	35.931	21.634
+D+0.750L+0.750S+0.450W+H, LL Comb	18.098	24.318	36.532	22.630
+D+0.750L+0.750S+0.450W+H, LL Comb	19.081	24.109	32.341	21.836
+D+0.750L+0.750S+0.450W+H, LL Comb	19.097	24.011	32.942	22.832
+D+0.750L+0.750S+0.450W+H, LL Comb	18.981	24.904	35.856	21.646
+D+0.750L+0.750S+0.450W+H, LL Comb	18.997	24.806	36.457	22.642
+D+0.750L+0.750S+0.5250E+H, LL Com	18.198	23.524	33.017	22.819
+D+0.750L+0.750S+0.5250E+H, LL Com	18.082	24.416	35.931	21.634
+D+0.750L+0.750S+0.5250E+H, LL Com	18.098	24.318	36.532	22.630
+D+0.750L+0.750S+0.5250E+H, LL Com	19.081	24.109	32.341	21.836
+D+0.750L+0.750S+0.5250E+H, LL Com	19.097	24.011	32.942	22.832
+D+0.750L+0.750S+0.5250E+H, LL Com	18.981	24.904	35.856	21.646
+D+0.750L+0.750S+0.5250E+H, LL Com	18.997	24.806	36.457	22.642
+0.60D+0.60W+0.60H	7.483	14.172	19.449	8.687
+0.60D+0.70E+0.60H	7.483	14.172	19.449	8.687
D Only	12.472	23.621	32.415	14.478
Lr Only, LL Comb Run (**L)				

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.022	-0.130	0.801	1.328
L Only, LL Comb Run (*L*)	-0.134	1.060	4.687	-0.253
L Only, LL Comb Run (*LL)	-0.112	0.929	5.487	1.075
L Only, LL Comb Run (L**)	1.198	0.650	-0.100	0.017
L Only, LL Comb Run (L*L)	1.220	0.520	0.701	1.345
L Only, LL Comb Run (LL*)	1.065	1.710	4.587	-0.236
L Only, LL Comb Run (LLL)	1.086	1.579	5.387	1.092
S Only	7.614	0.001	0.002	9.794
W Only				
E Only				
H Only				

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	27.76	27.76	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.40D+1.60H	1	0.04	20.50	11.23	11.23	0.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.09	20.50	11.03	11.03	1.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.13	20.50	10.84	10.84	1.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.18	20.50	10.65	10.65	1.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.22	20.50	10.45	10.45	2.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.27	20.50	10.26	10.26	2.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.31	20.50	10.07	10.07	3.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.36	20.50	9.87	9.87	3.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.40	20.50	9.68	9.68	4.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.44	20.50	9.48	9.48	4.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.49	20.50	9.29	9.29	5.07	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.53	20.50	9.10	9.10	5.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.58	20.50	8.90	8.90	5.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.62	20.50	8.71	8.71	6.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.67	20.50	8.52	8.52	6.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.71	20.50	8.32	8.32	7.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.76	20.50	8.13	8.13	7.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.80	20.50	7.94	7.94	7.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.84	20.50	7.74	7.74	8.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.89	20.50	7.55	7.55	8.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.93	20.50	7.36	7.36	8.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.98	20.50	7.16	7.16	9.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.02	20.50	6.97	6.97	9.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.07	20.50	6.78	6.78	9.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.11	20.50	6.58	6.58	10.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.16	20.50	6.39	6.39	10.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.20	20.50	6.20	6.20	10.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.24	20.50	6.00	6.00	10.85	0.95	47.46	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.40D+1.60H	1	1.29	20.50	5.81	5.81	11.11	0.89	47.29	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	1	1.33	20.50	5.62	5.62	11.36	0.84	47.13	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	1	1.38	20.50	5.42	5.42	11.61	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	1	1.42	20.50	5.23	5.23	11.84	0.75	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	1.47	20.50	5.04	5.04	12.07	0.71	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	1	1.51	20.50	4.84	4.84	12.29	0.67	46.56	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	1	1.56	20.50	4.65	4.65	12.50	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.60	20.50	4.45	4.45	12.71	0.60	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.40D+1.60H	1	1.64	20.50	4.26	4.26	12.90	0.56	46.20	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	1	1.69	20.50	4.07	4.07	13.08	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	1	1.73	20.50	3.87	3.87	13.26	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	1	1.78	20.50	3.68	3.68	13.43	0.47	45.89	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	1	1.82	20.50	3.49	3.49	13.59	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	1	1.87	20.50	3.29	3.29	13.74	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	1	1.91	20.50	3.10	3.10	13.88	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	1	1.96	20.50	2.91	2.91	14.01	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	1	2.00	20.50	2.71	2.71	14.14	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	1	2.04	20.50	2.52	2.52	14.26	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	2.09	20.50	2.33	2.33	14.36	0.28	45.25	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	2.13	20.50	2.13	2.13	14.46	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	2.18	20.50	1.94	1.94	14.55	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	1	2.22	20.50	1.75	1.75	14.63	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.40D+1.60H	1	2.27	20.50	1.55	1.55	14.71	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.40D+1.60H	1	2.31	20.50	1.36	1.36	14.77	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.40D+1.60H	1	2.36	20.50	1.17	1.17	14.83	0.13	44.78	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.40	20.50	0.99	0.99	13.81	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.44	20.50	0.81	0.81	13.85	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.49	20.50	0.63	0.63	13.88	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.53	20.50	0.46	0.46	13.90	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.58	20.50	0.28	0.28	13.92	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.62	20.50	-0.21	0.21	12.29	0.03	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.67	20.50	-0.38	0.38	12.27	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.71	20.50	-0.54	0.54	12.25	0.08	44.59	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.76	20.50	-0.71	0.71	12.22	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.80	20.50	-0.87	0.87	12.19	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.84	20.50	-1.04	1.04	12.15	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.89	20.50	-1.20	1.20	13.10	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.93	20.50	-1.38	1.38	13.04	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.98	20.50	-1.56	1.56	12.98	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.40D+1.60H	1	3.02	20.50	-1.74	1.74	14.64	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.40D+1.60H	1	3.07	20.50	-1.93	1.93	14.56	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	1	3.11	20.50	-2.12	2.12	14.47	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	3.16	20.50	-2.32	2.32	14.37	0.28	45.25	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	3.20	20.50	-2.51	2.51	14.26	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	3.24	20.50	-2.70	2.70	14.15	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	1	3.29	20.50	-2.90	2.90	14.02	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	1	3.33	20.50	-3.09	3.09	13.89	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	1	3.38	20.50	-3.28	3.28	13.75	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	1	3.42	20.50	-3.48	3.48	13.60	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	1	3.47	20.50	-3.67	3.67	13.44	0.47	45.88	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	1	3.51	20.50	-3.86	3.86	13.27	0.50	45.98	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	1	3.56	20.50	-4.06	4.06	13.09	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	1	3.60	20.50	-4.25	4.25	12.91	0.56	46.20	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	1	3.64	20.50	-4.44	4.44	12.72	0.60	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.40D+1.60H	1	3.69	20.50	-4.64	4.64	12.51	0.63	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	1	3.73	20.50	-4.83	4.83	12.30	0.67	46.55	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	1	3.78	20.50	-5.02	5.02	12.09	0.71	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	1	3.82	20.50	-5.22	5.22	11.86	0.75	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	3.87	20.50	-5.41	5.41	11.62	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	1	3.91	20.50	-5.60	5.60	11.38	0.84	47.12	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	1	3.96	20.50	-5.80	5.80	11.12	0.89	47.28	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	4.00	20.50	-5.99	5.99	10.86	0.94	47.45	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.40D+1.60H	1	4.04	20.50	-6.19	6.19	10.59	1.00	47.63	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.09	20.50	-6.38	6.38	10.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.13	20.50	-6.57	6.57	10.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.18	20.50	-6.77	6.77	9.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.22	20.50	-6.96	6.96	9.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.27	20.50	-7.15	7.15	9.11	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.31	20.50	-7.35	7.35	8.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.36	20.50	-7.54	7.54	8.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.40	20.50	-7.73	7.73	8.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.44	20.50	-7.93	7.93	7.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.49	20.50	-8.12	8.12	7.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.53	20.50	-8.31	8.31	7.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.58	20.50	-8.51	8.51	6.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.62	20.50	-8.70	8.70	6.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.67	20.50	-8.89	8.89	5.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.71	20.50	-9.09	9.09	5.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.76	20.50	-9.28	9.28	5.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.80	20.50	-9.47	9.47	4.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.84	20.50	-9.67	9.67	4.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.89	20.50	-9.86	9.86	3.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.93	20.50	-10.05	10.05	3.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.98	20.50	-10.25	10.25	2.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.02	20.50	-10.44	10.44	2.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.07	20.50	-10.63	10.63	1.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.11	20.50	-10.83	10.83	1.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.16	20.50	-11.02	11.02	1.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.20	20.50	-11.22	11.22	0.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.24	20.50	-11.41	11.41	0.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.29	21.00	-11.60	11.60	0.48	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.33	21.00	-11.80	11.80	1.00	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.38	21.00	-11.99	11.99	1.53	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.42	21.00	-12.18	12.18	2.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.47	21.00	-12.38	12.38	2.61	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.51	21.00	-12.57	12.57	3.16	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.56	21.00	-12.76	12.76	3.73	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.60	21.00	-12.96	12.96	4.30	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.64	21.00	-13.15	13.15	4.88	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.69	21.00	-13.34	13.34	5.47	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.73	21.00	-13.54	13.54	6.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.78	21.00	-13.73	13.73	6.67	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.82	21.00	-13.92	13.92	7.29	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.87	21.00	-14.12	14.12	7.91	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.91	21.00	-14.31	14.31	8.54	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.96	21.00	-14.50	14.50	9.18	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.00	21.00	-14.70	14.70	9.83	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.04	21.00	-14.89	14.89	10.49	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.09	21.00	-15.08	15.08	11.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.13	21.00	-15.28	15.28	11.83	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.18	21.00	-15.47	15.47	12.51	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.22	21.00	-15.66	15.66	13.20	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.27	21.00	-15.86	15.86	13.90	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.31	21.00	-16.05	16.05	14.61	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.36	21.00	-16.25	16.25	15.33	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	6.40	21.00	-16.44	16.44	16.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.44	21.00	-16.63	16.63	16.79	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.49	21.00	-16.83	16.83	17.54	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.53	21.00	-17.02	17.02	18.29	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.58	21.00	-17.21	17.21	19.05	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.62	21.00	-17.41	17.41	19.82	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.67	21.00	15.47	15.47	20.60	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.71	21.00	15.28	15.28	19.91	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.76	21.00	15.08	15.08	19.24	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.80	21.00	14.89	14.89	18.57	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.84	21.00	14.70	14.70	17.91	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.89	21.00	14.50	14.50	17.27	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.93	21.00	14.31	14.31	16.62	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.98	21.00	14.12	14.12	15.99	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.02	21.00	13.92	13.92	15.37	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.07	21.00	13.73	13.73	14.76	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.11	21.00	13.53	13.53	14.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.16	21.00	13.34	13.34	13.55	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.20	21.00	13.15	13.15	12.96	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.24	21.00	12.95	12.95	12.38	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.29	21.00	12.76	12.76	11.81	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.33	21.00	12.57	12.57	11.25	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.38	21.00	12.37	12.37	10.69	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.42	21.00	12.18	12.18	10.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.47	21.00	11.99	11.99	9.61	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.51	21.00	11.79	11.79	9.08	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.56	21.00	11.60	11.60	8.56	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.60	21.00	11.41	11.41	8.05	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.64	21.00	11.21	11.21	7.55	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.69	21.00	11.02	11.02	7.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.73	21.00	10.83	10.83	6.57	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.78	21.00	10.63	10.63	6.09	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.82	21.00	10.44	10.44	5.62	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.87	21.00	10.25	10.25	5.17	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.91	21.00	10.05	10.05	4.71	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.96	21.00	9.86	9.86	4.27	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.00	21.00	9.67	9.67	3.84	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.04	21.00	9.47	9.47	3.41	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.09	21.00	9.28	9.28	3.00	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.13	21.00	9.09	9.09	2.59	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.18	21.00	8.89	8.89	2.19	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.22	21.00	8.70	8.70	1.80	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.27	21.00	8.52	8.52	1.07	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.31	21.00	8.34	8.34	0.70	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.36	21.00	8.17	8.17	0.33	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.40	20.50	7.99	7.99	0.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.44	20.50	7.82	7.82	0.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.49	20.50	7.64	7.64	0.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.53	20.50	7.46	7.46	1.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.58	20.50	7.29	7.29	1.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.62	20.50	7.11	7.11	1.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.67	20.50	6.93	6.93	2.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.71	20.50	6.76	6.76	2.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.76	20.50	6.58	6.58	2.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	8.80	20.50	6.40	6.40	2.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.84	20.50	6.23	6.23	3.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.89	20.50	6.05	6.05	3.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.93	20.50	5.87	5.87	3.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.98	20.50	5.70	5.70	3.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.02	20.50	5.52	5.52	4.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.07	20.50	5.34	5.34	4.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.11	20.50	5.17	5.17	4.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.16	20.50	4.99	4.99	4.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.20	20.50	4.81	4.81	5.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.24	20.50	4.64	4.64	5.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.29	20.50	4.46	4.46	5.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.33	20.50	4.29	4.29	5.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.38	20.50	4.11	4.11	5.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.42	20.50	3.93	3.93	6.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.47	20.50	3.76	3.76	6.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.51	20.50	3.58	3.58	6.46	0.95	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.56	20.50	3.40	3.40	6.61	0.88	47.24	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.60	20.50	3.23	3.23	6.76	0.82	47.03	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.64	20.50	3.05	3.05	6.90	0.76	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.69	20.50	2.87	2.87	7.03	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.73	20.50	2.70	2.70	7.16	0.64	46.47	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.78	20.50	2.52	2.52	7.27	0.59	46.30	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.82	20.50	2.34	2.34	7.38	0.54	46.13	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.87	20.50	2.17	2.17	7.48	0.50	45.98	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.91	20.50	1.99	1.99	7.57	0.45	45.82	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.96	20.50	1.81	1.81	7.66	0.40	45.68	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.00	20.50	1.64	1.64	7.73	0.36	45.54	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.04	20.50	1.46	1.46	7.80	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.09	20.50	1.29	1.29	7.86	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.13	20.50	1.11	1.11	7.92	0.24	45.13	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.18	20.50	0.93	0.93	7.96	0.20	45.00	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.22	20.50	0.76	0.76	8.00	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.27	20.50	0.58	0.58	8.03	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.31	20.50	-0.51	0.51	5.49	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.36	20.50	-0.68	0.68	5.47	0.21	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.40	20.50	-0.84	0.84	5.43	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.44	20.50	-1.01	1.01	5.39	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.49	20.50	-1.18	1.18	5.34	0.38	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	2	10.53	20.50	-1.36	1.36	6.68	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	2	10.58	20.50	-1.55	1.55	6.62	0.40	45.67	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	2	10.62	20.50	-1.75	1.75	6.54	0.46	45.85	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	2	10.67	20.50	-1.94	1.94	6.46	0.51	46.04	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	2	10.71	20.50	-2.14	2.14	6.37	0.57	46.23	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	2	10.76	20.50	-2.33	2.33	6.27	0.63	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	2	10.80	20.50	-2.52	2.52	6.16	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	2	10.84	20.50	-2.72	2.72	6.05	0.77	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	2	10.89	20.50	-2.91	2.91	5.92	0.84	47.11	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	2	10.93	20.50	-3.10	3.10	5.79	0.92	47.36	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	2	10.98	20.50	-3.30	3.30	5.65	1.00	47.63	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.02	20.50	-3.49	3.49	5.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.07	20.50	-3.68	3.68	5.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.11	20.50	-3.88	3.88	5.17	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.16	20.50	-4.07	4.07	4.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	2	11.20	20.50	-4.26	4.26	4.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.25	20.50	-4.46	4.46	4.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.29	20.50	-4.65	4.65	4.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.33	20.50	-4.84	4.84	4.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.38	20.50	-5.04	5.04	3.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.42	20.50	-5.23	5.23	3.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.47	20.50	-5.42	5.42	3.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.51	20.50	-5.62	5.62	3.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.56	20.50	-5.81	5.81	3.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.60	20.50	-6.00	6.00	2.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.65	20.50	-6.20	6.20	2.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.69	20.50	-6.39	6.39	2.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.73	20.50	-6.58	6.58	1.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.78	20.50	-6.78	6.78	1.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.82	20.50	-6.97	6.97	1.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.87	20.50	-7.17	7.17	1.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.91	20.50	-7.36	7.36	0.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.96	20.50	-7.55	7.55	0.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	12.00	20.50	-7.75	7.75	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	12.05	21.00	-7.94	7.94	0.35	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.09	21.00	-8.13	8.13	0.70	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.13	21.00	-8.33	8.33	1.07	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.18	21.00	-8.52	8.52	1.44	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.22	21.00	-8.71	8.71	1.83	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.27	21.00	-8.91	8.91	2.22	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.31	21.00	-9.10	9.10	2.62	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.36	21.00	-9.29	9.29	3.03	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.40	21.00	-9.49	9.49	3.44	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.45	21.00	-9.68	9.68	3.87	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.49	21.00	-9.87	9.87	4.30	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	12.53	21.00	-26.45	26.45	2.32	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.58	21.00	-26.62	26.62	3.50	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.62	21.00	-26.80	26.80	4.69	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.67	21.00	-26.97	26.97	5.88	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.71	21.00	-27.15	27.15	7.09	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.76	21.00	-27.33	27.33	8.30	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.80	21.00	-27.50	27.50	9.51	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.85	21.00	-27.68	27.68	10.74	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.89	21.00	-27.86	27.86	11.98	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.93	21.00	-28.03	28.03	13.22	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	12.98	21.00	-28.21	28.21	14.47	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.02	21.00	-28.39	28.39	15.72	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.07	21.00	-28.56	28.56	16.99	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.11	21.00	-28.74	28.74	18.26	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.16	21.00	-28.92	28.92	19.55	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.20	21.00	-29.09	29.09	20.83	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.25	21.00	-29.27	29.27	22.13	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.29	21.00	-29.45	29.45	23.44	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.40D+1.60H	3	13.33	21.00	19.30	19.30	24.64	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.38	21.00	19.11	19.11	23.79	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.42	21.00	18.92	18.92	22.95	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.47	21.00	18.72	18.72	22.11	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.51	21.00	18.53	18.53	21.28	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.56	21.00	18.33	18.33	20.46	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	3	13.60	21.00	18.14	18.14	19.65	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.65	21.00	17.95	17.95	18.85	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.69	21.00	17.75	17.75	18.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.73	21.00	17.56	17.56	17.27	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.78	21.00	17.37	17.37	16.49	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.82	21.00	17.17	17.17	15.73	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.87	21.00	16.98	16.98	14.97	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.91	21.00	16.79	16.79	14.22	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.96	21.00	16.59	16.59	13.48	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.00	21.00	16.40	16.40	12.74	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.05	21.00	16.21	16.21	12.02	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.09	21.00	16.01	16.01	11.30	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.13	21.00	15.82	15.82	10.59	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.18	21.00	15.63	15.63	9.90	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.22	21.00	15.43	15.43	9.21	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.27	21.00	15.24	15.24	8.52	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.31	21.00	15.05	15.05	7.85	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.36	21.00	14.85	14.85	7.19	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.40	21.00	14.66	14.66	6.53	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.45	21.00	14.47	14.47	5.88	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.49	21.00	14.27	14.27	5.24	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.53	21.00	14.08	14.08	4.61	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.58	21.00	13.89	13.89	3.99	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.62	21.00	13.69	13.69	3.38	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.67	21.00	13.50	13.50	2.78	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.71	21.00	13.30	13.30	2.18	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.76	21.00	13.11	13.11	1.59	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.80	21.00	12.92	12.92	1.02	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.85	21.00	12.72	12.72	0.45	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.89	20.50	12.53	12.53	0.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.93	20.50	12.34	12.34	0.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.98	20.50	12.14	12.14	1.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.02	20.50	11.95	11.95	1.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.07	20.50	11.76	11.76	2.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.11	20.50	11.56	11.56	2.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.16	20.50	11.37	11.37	3.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.20	20.50	11.18	11.18	3.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.25	20.50	10.98	10.98	4.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.29	20.50	10.79	10.79	4.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.33	20.50	10.60	10.60	5.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.38	20.50	10.40	10.40	5.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.42	20.50	10.21	10.21	6.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.47	20.50	10.02	10.02	6.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.51	20.50	9.82	9.82	7.07	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.56	20.50	9.63	9.63	7.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.60	20.50	9.44	9.44	7.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.65	20.50	9.24	9.24	8.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.69	20.50	9.05	9.05	8.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.73	20.50	8.86	8.86	9.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.78	20.50	8.66	8.66	9.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.82	20.50	8.47	8.47	9.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.87	20.50	8.27	8.27	10.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.91	20.50	8.08	8.08	10.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.96	20.50	7.89	7.89	11.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	3	16.00	20.50	7.69	7.69	11.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.05	20.50	7.50	7.50	11.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.09	20.50	7.31	7.31	12.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.13	20.50	7.11	7.11	12.34	0.98	47.59	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.18	20.50	6.92	6.92	12.65	0.93	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	3	16.22	20.50	6.73	6.73	12.96	0.89	47.27	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	3	16.27	20.50	6.53	6.53	13.25	0.84	47.12	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	3	16.31	20.50	6.34	6.34	13.54	0.80	46.98	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	3	16.36	20.50	6.15	6.15	13.81	0.76	46.85	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	3	16.40	20.50	5.95	5.95	14.08	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	3	16.45	20.50	5.76	5.76	14.34	0.69	46.61	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	3	16.49	20.50	5.57	5.57	14.59	0.65	46.49	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	3	16.53	20.50	3.29	3.29	14.77	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	3	16.58	20.50	3.09	3.09	14.91	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	3	16.62	20.50	2.90	2.90	15.04	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.67	20.50	2.73	2.73	11.65	0.40	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.71	20.50	2.56	2.56	11.77	0.37	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.76	20.50	2.39	2.39	11.88	0.34	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.80	20.50	2.23	2.23	11.98	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.85	20.50	2.06	2.06	12.08	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.89	20.50	1.90	1.90	12.17	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.93	20.50	1.73	1.73	12.25	0.24	45.14	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.98	20.50	1.56	1.56	12.32	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.02	20.50	1.40	1.40	12.39	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.07	20.50	1.23	1.23	12.45	0.17	44.90	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.11	20.50	1.07	1.07	12.50	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.16	20.50	0.90	0.90	12.54	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.20	20.50	0.74	0.74	12.58	0.10	44.67	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.25	20.50	0.57	0.57	12.61	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.29	20.50	0.40	0.40	12.63	0.05	44.52	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.33	20.50	-0.37	0.37	15.11	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.38	20.50	-0.54	0.54	15.08	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.42	20.50	-0.72	0.72	15.06	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.47	20.50	-0.90	0.90	15.02	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.51	20.50	-1.07	1.07	14.98	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.56	20.50	-1.25	1.25	14.93	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.60	20.50	-1.43	1.43	14.87	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.65	20.50	-1.60	1.60	14.80	0.18	44.95	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.69	20.50	-1.78	1.78	14.72	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.73	20.50	-1.96	1.96	14.64	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.78	20.50	-2.13	2.13	14.55	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	3	17.82	20.50	-2.32	2.32	15.39	0.26	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	3	17.87	20.50	-2.52	2.52	15.28	0.28	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	3	17.91	20.50	-2.71	2.71	15.17	0.31	45.35	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	3	17.96	20.50	-2.90	2.90	15.04	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	3	18.00	20.50	-3.10	3.10	14.91	0.35	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	3	18.05	20.50	-3.29	3.29	14.77	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	3	18.09	20.50	-3.48	3.48	14.62	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	3	18.13	20.50	-3.68	3.68	14.46	0.43	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	3	18.18	20.50	-3.87	3.87	14.29	0.46	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	3	18.22	20.50	-4.06	4.06	14.11	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	3	18.27	20.50	-4.26	4.26	13.93	0.52	46.07	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	3	18.31	20.50	-4.45	4.45	13.73	0.55	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	3	18.36	20.50	-4.64	4.64	13.53	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	3	18.40	20.50	-4.84	4.84	13.32	0.62	46.39	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	3	18.45	20.50	-5.03	5.03	13.10	0.66	46.51	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	3	18.49	20.50	-5.23	5.23	12.87	0.69	46.63	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	3	18.53	20.50	-5.42	5.42	12.64	0.73	46.76	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	3	18.58	20.50	-5.61	5.61	12.39	0.77	46.89	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	3	18.62	20.50	-5.81	5.81	12.14	0.82	47.04	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	3	18.67	20.50	-6.00	6.00	11.88	0.86	47.19	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.40D+1.60H	3	18.71	20.50	-6.19	6.19	11.60	0.91	47.35	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	3	18.76	20.50	-6.39	6.39	11.33	0.96	47.52	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.40D+1.60H	3	18.80	20.50	-6.58	6.58	11.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.85	20.50	-6.77	6.77	10.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.89	20.50	-6.97	6.97	10.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.93	20.50	-7.16	7.16	10.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.98	20.50	-7.35	7.35	9.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.02	20.50	-7.55	7.55	9.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.07	20.50	-7.74	7.74	9.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.11	20.50	-7.93	7.93	8.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.16	20.50	-8.13	8.13	8.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.20	20.50	-8.32	8.32	8.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.25	20.50	-8.51	8.51	7.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.29	20.50	-8.71	8.71	7.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.33	20.50	-8.90	8.90	6.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.38	20.50	-9.09	9.09	6.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.42	20.50	-9.29	9.29	6.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.47	20.50	-9.48	9.48	5.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.51	20.50	-9.67	9.67	5.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.56	20.50	-9.87	9.87	4.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.60	20.50	-10.06	10.06	4.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.65	20.50	-10.26	10.26	3.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.69	20.50	-10.45	10.45	3.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.73	20.50	-10.64	10.64	3.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.78	20.50	-10.84	10.84	2.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.82	20.50	-11.03	11.03	2.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.87	20.50	-11.22	11.22	1.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.91	20.50	-11.42	11.42	1.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.96	20.50	-11.61	11.61	0.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.00	20.50	-33.72	33.72	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.667	-19.82	127.58	0.16
Span # 2	2	6.667	-23.49	127.58	0.18
Span # 3	3	6.667	-24.75	127.58	0.19
+1.40D+1.60H					
Span # 1	1	6.667	-19.82	127.58	0.16
Span # 2	2	6.667	-23.49	127.58	0.18
Span # 3	3	6.667	-24.64	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.76	127.58	0.13
Span # 2	2	6.667	-21.05	127.58	0.17
Span # 3	3	6.667	-22.05	127.58	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-18.40	127.58	0.14
Span # 2	2	6.667	-22.52	127.58	0.18
Span # 3	3	6.667	-23.82	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					

Description : GB-K

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-18.17	127.58	0.14
Span # 2	2	6.667	-23.44	127.58	0.18
Span # 3	3	6.667	-24.75	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.66	127.58	0.14
Span # 2	2	6.667	-19.96	127.58	0.16
Span # 3	3	6.667	-20.95	127.58	0.16
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-19.07	127.58	0.15
Span # 2	2	6.667	-22.34	127.58	0.18
Span # 3	3	6.667	-23.64	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-18.84	127.58	0.15
Span # 2	2	6.667	-23.26	127.58	0.18
Span # 3	3	6.667	-24.57	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.76	127.58	0.13
Span # 2	2	6.667	-21.05	127.58	0.17
Span # 3	3	6.667	-22.05	127.58	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-18.40	127.58	0.14
Span # 2	2	6.667	-22.52	127.58	0.18
Span # 3	3	6.667	-23.82	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-18.17	127.58	0.14
Span # 2	2	6.667	-23.44	127.58	0.18
Span # 3	3	6.667	-24.75	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.66	127.58	0.14
Span # 2	2	6.667	-19.96	127.58	0.16
Span # 3	3	6.667	-20.95	127.58	0.16
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-19.07	127.58	0.15
Span # 2	2	6.667	-22.34	127.58	0.18
Span # 3	3	6.667	-23.64	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-18.84	127.58	0.15
Span # 2	2	6.667	-23.26	127.58	0.18
Span # 3	3	6.667	-24.57	127.58	0.19
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.91	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-20.82	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.13	127.58	0.16
Span # 3	3	6.667	-21.12	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.92	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.42	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16

Description : GB-K

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.13	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.83	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.14	127.58	0.16
Span # 3	3	6.667	-21.13	127.58	0.17
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	6.667	-16.99	127.58	0.13
Span # 2	2	6.667	-20.14	127.58	0.16
Span # 3	3	6.667	-21.13	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-16.91	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.82	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-16.91	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17

Description : GB-K

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.82	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.91	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.83	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.91	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.83	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLL)					

Description : GB-K

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.92	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.83	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.92	127.58	0.13
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.43	127.58	0.14
Span # 2	2	6.667	-20.88	127.58	0.16
Span # 3	3	6.667	-21.97	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.36	127.58	0.14
Span # 2	2	6.667	-21.17	127.58	0.17
Span # 3	3	6.667	-22.26	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.20	127.58	0.13
Span # 2	2	6.667	-20.08	127.58	0.16
Span # 3	3	6.667	-21.07	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.12	127.58	0.13
Span # 2	2	6.667	-20.37	127.58	0.16
Span # 3	3	6.667	-21.36	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.64	127.58	0.14
Span # 2	2	6.667	-20.83	127.58	0.16
Span # 3	3	6.667	-21.91	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.57	127.58	0.14
Span # 2	2	6.667	-21.11	127.58	0.17
Span # 3	3	6.667	-22.20	127.58	0.17
+0.90D+W+0.90H					
Span # 1	1	6.667	-12.74	127.58	0.10
Span # 2	2	6.667	-15.10	127.58	0.12
Span # 3	3	6.667	-15.84	127.58	0.12
+0.90D-W+0.90H					
Span # 1	1	6.667	-12.74	127.58	0.10
Span # 2	2	6.667	-15.10	127.58	0.12
Span # 3	3	6.667	-15.84	127.58	0.12
+0.90D+E+0.90H					
Span # 1	1	6.667	-12.74	127.58	0.10

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-K

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-15.10	127.58	0.12
Span # 3	3	6.667	-15.84	127.58	0.12
+0.90D-E+0.90H					
Span # 1	1	6.667	-12.74	127.58	0.10
Span # 2	2	6.667	-15.10	127.58	0.12
Span # 3	3	6.667	-15.84	127.58	0.12

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*L)	1	0.0009	3.067	+D+L+H, LL Comb Run (L*L)	-0.0000	6.800
+D+L+H, LL Comb Run (*L*)	2	0.0003	3.600	+D+L+H, LL Comb Run (L*L)	-0.0000	0.667
+D+L+H, LL Comb Run (L*L)	3	0.0009	3.867		0.0000	0.667

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

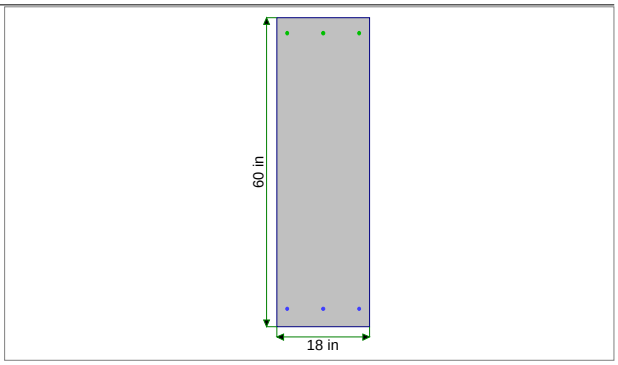
Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

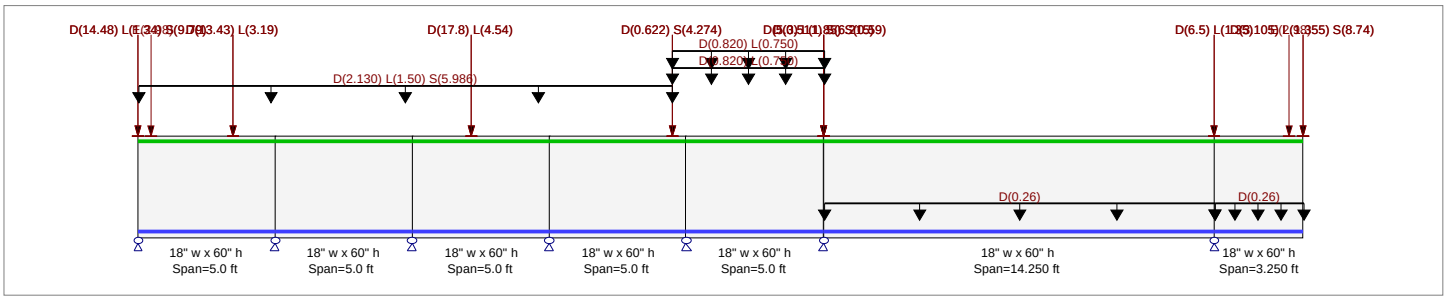
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 60.0 in

Span #1 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #2 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #3 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #4 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #5 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #6 Reinforcing....	
4-#6 at 3.50 in from Bottom, from 0.0 to 14.250 ft in this span	4-#6 at 3.0 in from Top, from 0.0 to 14.250 ft in this span
Span #7 Reinforcing....	
3-#5 at 3.50 in from Bottom, from 0.0 to 3.250 ft in this span	3-#5 at 3.0 in from Top, from 0.0 to 3.250 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 1.065, L = 0.750, S = 2.993 ksf, Extent = 0.0 -->> 19.50 ft, Tributary Width = 2.0 ft
Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.0 ft
Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.0 ft
Load for Span Number 1
Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
Point Load : E = 2.980 k @ 0.50 ft, (OTM)
Load for Span Number 3
Point Load : D = 17.80, L = 4.540 k @ 2.167 ft, (GB-E)
Point Load : D = 17.80, L = 4.540 k @ 2.167 ft, (GB-E)
Load for Span Number 4
Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P12)

Concrete Beam

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P12)
Load for Span Number 6
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 0.0 ft, (GB-F)
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 0.0 ft, (GB-F)
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)
Uniform Load : D = 0.260 k/ft, Tributary Width = 1.0 ft, (WALL L3)
Load for Span Number 7
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM LOAD)
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM LOAD)
Uniform Load : D = 0.260 k/ft, Tributary Width = 1.0 ft, (WALL L3)
Point Load : E = 2.980 k @ 2.750 ft, (OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.522** : 1	Maximum Deflection			
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.002 in	Ratio =	50660 >=36
Mu : Applied	-128.028 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	245.290 k-ft	Max Downward Total Deflection	0.002 in	Ratio =	44804 >=24
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 7				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Overall MAXimum	72.884	75.488	68.064	70.402	36.083	23.160	57.870	
Overall MINimum	-0.000	0.000	-0.000	0.000	-0.000	0.000	0.000	
+D+H	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+L+H, LL Comb Run (******L)	41.518	38.488	35.420	36.545	8.933	17.559	37.444	
+D+L+H, LL Comb Run (*****L*)	41.515	38.507	35.342	36.836	7.847	19.271	36.579	
+D+L+H, LL Comb Run (*****LL)	41.518	38.488	35.420	36.545	8.933	17.560	40.144	
+D+L+H, LL Comb Run (****L**)	41.523	38.459	35.536	36.108	12.440	22.817	33.814	
+D+L+H, LL Comb Run (****L*L)	41.526	38.440	35.614	35.817	13.526	21.106	37.379	
+D+L+H, LL Comb Run (****LL*)	41.523	38.459	35.536	36.108	12.440	22.817	36.514	
+D+L+H, LL Comb Run (****LLL)	41.526	38.440	35.614	35.817	13.525	21.106	40.079	
+D+L+H, LL Comb Run (***L***)	41.488	38.667	34.702	41.112	12.009	18.823	33.897	
+D+L+H, LL Comb Run (***L**L)	41.492	38.648	34.779	40.821	13.095	17.111	37.462	
+D+L+H, LL Comb Run (***L*L*)	41.488	38.667	34.702	41.112	12.009	18.823	36.596	
+D+L+H, LL Comb Run (***L*LL)	41.492	38.648	34.779	40.821	13.094	17.112	40.161	
+D+L+H, LL Comb Run (***LL**)	41.497	38.619	34.896	40.384	16.601	22.369	33.832	
+D+L+H, LL Comb Run (***LL*L)	41.500	38.600	34.974	40.093	17.687	20.658	37.397	
+D+L+H, LL Comb Run (***LLL*)	41.497	38.619	34.896	40.384	16.601	22.370	36.532	
+D+L+H, LL Comb Run (***LLLL)	41.500	38.600	34.974	40.093	17.687	20.658	40.096	
+D+L+H, LL Comb Run (**L****)	41.803	36.779	45.782	45.734	6.224	19.589	33.867	
+D+L+H, LL Comb Run (**L***L)	41.806	36.760	45.859	45.443	7.309	17.877	37.432	
+D+L+H, LL Comb Run (**L**L*)	41.803	36.779	45.782	45.734	6.223	19.589	36.567	
+D+L+H, LL Comb Run (**L**LL)	41.806	36.760	45.859	45.444	7.309	17.878	40.132	
+D+L+H, LL Comb Run (**L*L**)	41.811	36.731	45.976	45.006	10.816	23.135	33.802	
+D+L+H, LL Comb Run (**L*L*L)	41.815	36.711	46.054	44.716	11.902	21.424	37.367	
+D+L+H, LL Comb Run (**L*LL*)	41.811	36.731	45.976	45.006	10.816	23.136	36.502	
+D+L+H, LL Comb Run (**L*LLL)	41.815	36.711	46.054	44.716	11.902	21.424	40.067	
+D+L+H, LL Comb Run (**LL***)	41.777	36.939	45.142	50.010	10.385	19.141	33.884	
+D+L+H, LL Comb Run (**LL**L)	41.780	36.920	45.219	49.719	11.471	17.429	37.449	
+D+L+H, LL Comb Run (**LL*L*)	41.777	36.939	45.142	50.010	10.385	19.141	36.584	
+D+L+H, LL Comb Run (**LL*LL)	41.780	36.920	45.219	49.719	11.471	17.430	40.149	
+D+L+H, LL Comb Run (**LLL**)	41.785	36.891	45.336	49.282	14.978	22.687	33.820	
+D+L+H, LL Comb Run (**LLL*L)	41.788	36.871	45.413	48.992	16.063	20.976	37.384	
+D+L+H, LL Comb Run (**LLLL*)	41.785	36.891	45.336	49.282	14.977	22.688	36.519	
+D+L+H, LL Comb Run (**LLLLL)	41.788	36.871	45.413	48.992	16.063	20.977	40.084	
+D+L+H, LL Comb Run (*L*****)	41.147	42.589	39.640	36.188	8.015	19.238	33.881	
+D+L+H, LL Comb Run (*L****L)	41.151	42.570	39.717	35.897	9.100	17.527	37.445	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (*L***L*)	41.147	42.589	39.640	36.188	8.015	19.238	36.580	
+D+L+H, LL Comb Run (*L***LL)	41.151	42.570	39.717	35.898	9.100	17.527	40.145	
+D+L+H, LL Comb Run (*L**L**)	41.155	42.541	39.834	35.460	12.607	22.784	33.816	
+D+L+H, LL Comb Run (*L**L*L)	41.159	42.521	39.911	35.170	13.693	21.073	37.381	
+D+L+H, LL Comb Run (*L**LL*)	41.155	42.541	39.834	35.460	12.607	22.785	36.516	
+D+L+H, LL Comb Run (*L**LLL)	41.159	42.521	39.911	35.170	13.693	21.074	40.080	
+D+L+H, LL Comb Run (*L*L***)	41.121	42.749	39.000	40.464	12.176	18.790	33.898	
+D+L+H, LL Comb Run (*L*L**L)	41.124	42.730	39.077	40.173	13.262	17.079	37.463	
+D+L+H, LL Comb Run (*L*L*L*)	41.121	42.749	39.000	40.464	12.176	18.790	36.598	
+D+L+H, LL Comb Run (*L*L*LL)	41.124	42.730	39.077	40.174	13.262	17.079	40.163	
+D+L+H, LL Comb Run (*L*LL**)	41.129	42.701	39.194	39.736	16.769	22.336	33.833	
+D+L+H, LL Comb Run (*L*LL*L)	41.132	42.681	39.271	39.446	17.854	20.625	37.398	
+D+L+H, LL Comb Run (*L*LLL*)	41.129	42.701	39.194	39.736	16.768	22.337	36.533	
+D+L+H, LL Comb Run (*L*LLLL)	41.132	42.681	39.271	39.446	17.854	20.626	40.098	
+D+L+H, LL Comb Run (*LL****)	41.435	40.861	50.080	45.087	6.391	19.556	33.868	
+D+L+H, LL Comb Run (*LL***L)	41.439	40.842	50.157	44.796	7.477	17.845	37.433	
+D+L+H, LL Comb Run (*LL**L*)	41.435	40.861	50.080	45.087	6.391	19.556	36.568	
+D+L+H, LL Comb Run (*LL**LL)	41.439	40.842	50.157	44.796	7.476	17.845	40.133	
+D+L+H, LL Comb Run (*LL*L**)	41.443	40.812	50.274	44.359	10.983	23.102	33.803	
+D+L+H, LL Comb Run (*LL*L*L)	41.447	40.793	50.351	44.068	12.069	21.391	37.368	
+D+L+H, LL Comb Run (*LL*LL*)	41.443	40.812	50.274	44.359	10.983	23.103	36.503	
+D+L+H, LL Comb Run (*LL*LLL)	41.447	40.793	50.351	44.068	12.069	21.392	40.068	
+D+L+H, LL Comb Run (*LLL***)	41.409	41.021	49.439	49.363	10.553	19.108	33.886	
+D+L+H, LL Comb Run (*LLL**L)	41.412	41.002	49.517	49.072	11.638	17.397	37.450	
+D+L+H, LL Comb Run (*LLL*L*)	41.409	41.021	49.439	49.363	10.552	19.108	36.585	
+D+L+H, LL Comb Run (*LLL*LL)	41.412	41.002	49.517	49.072	11.638	17.397	40.150	
+D+L+H, LL Comb Run (*LLLL**)	41.417	40.973	49.633	48.635	15.145	22.654	33.821	
+D+L+H, LL Comb Run (*LLLL*L)	41.420	40.953	49.711	48.344	16.231	20.943	37.386	
+D+L+H, LL Comb Run (*LLLLL*)	41.417	40.973	49.633	48.635	15.145	22.655	36.521	
+D+L+H, LL Comb Run (*LLLLLL)	41.420	40.953	49.711	48.344	16.230	20.944	40.085	
+D+L+H, LL Comb Run (L******)	48.746	49.248	33.553	37.314	7.724	19.295	33.878	
+D+L+H, LL Comb Run (L*****L)	48.749	49.228	33.631	37.023	8.810	17.584	37.443	
+D+L+H, LL Comb Run (L****L*)	48.746	49.248	33.553	37.314	7.724	19.295	36.578	
+D+L+H, LL Comb Run (L****LL)	48.749	49.228	33.631	37.023	8.809	17.584	40.143	
+D+L+H, LL Comb Run (L***L**)	48.754	49.199	33.748	36.586	12.316	22.841	33.814	
+D+L+H, LL Comb Run (L***L*L)	48.757	49.180	33.825	36.295	13.402	21.130	37.378	
+D+L+H, LL Comb Run (L***LL*)	48.754	49.199	33.748	36.586	12.316	22.842	36.513	
+D+L+H, LL Comb Run (L***LLL)	48.757	49.180	33.825	36.295	13.402	21.131	40.078	
+D+L+H, LL Comb Run (L**L***)	48.719	49.408	32.913	41.590	11.885	18.847	33.896	
+D+L+H, LL Comb Run (L**L**L)	48.722	49.388	32.991	41.299	12.971	17.136	37.461	
+D+L+H, LL Comb Run (L**L*L*)	48.719	49.408	32.913	41.590	11.885	18.847	36.595	
+D+L+H, LL Comb Run (L**L*LL)	48.722	49.388	32.991	41.299	12.971	17.136	40.160	
+D+L+H, LL Comb Run (L**LL**)	48.727	49.359	33.107	40.862	16.478	22.393	33.831	
+D+L+H, LL Comb Run (L**LL*L)	48.731	49.340	33.185	40.571	17.564	20.682	37.396	
+D+L+H, LL Comb Run (L**LLL*)	48.727	49.359	33.107	40.862	16.478	22.394	36.531	
+D+L+H, LL Comb Run (L**LLLL)	48.731	49.340	33.185	40.571	17.563	20.683	40.096	
+D+L+H, LL Comb Run (L*L****)	49.034	47.519	43.993	46.212	6.100	19.613	33.866	
+D+L+H, LL Comb Run (L*L***L)	49.037	47.500	44.071	45.922	7.186	17.902	37.431	
+D+L+H, LL Comb Run (L*L**L*)	49.034	47.519	43.993	46.212	6.100	19.613	36.566	
+D+L+H, LL Comb Run (L*L**LL)	49.037	47.500	44.071	45.922	7.186	17.902	40.131	
+D+L+H, LL Comb Run (L*L*L**)	49.042	47.471	44.187	45.484	10.693	23.159	33.801	
+D+L+H, LL Comb Run (L*L*L*L)	49.045	47.451	44.265	45.194	11.778	21.448	37.366	
+D+L+H, LL Comb Run (L*L*LL*)	49.042	47.471	44.187	45.485	10.692	23.160	36.501	
+D+L+H, LL Comb Run (L*L*LLL)	49.045	47.451	44.265	45.194	11.778	21.449	40.066	
+D+L+H, LL Comb Run (L*LL***)	49.007	47.679	43.353	50.488	10.262	19.165	33.883	
+D+L+H, LL Comb Run (L*LL**L)	49.010	47.660	43.431	50.197	11.347	17.454	37.448	
+D+L+H, LL Comb Run (L*LL*L*)	49.007	47.679	43.353	50.488	10.261	19.165	36.583	
+D+L+H, LL Comb Run (L*LL*LL)	49.010	47.660	43.430	50.198	11.347	17.454	40.148	
+D+L+H, LL Comb Run (L*LLL**)	49.015	47.631	43.547	49.760	14.854	22.711	33.819	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (L*LLL*L)	49.019	47.611	43.625	49.470	15.940	21.000	37.383	
+D+L+H, LL Comb Run (L*LLLL*)	49.015	47.631	43.547	49.760	14.854	22.712	36.518	
+D+L+H, LL Comb Run (L*LLLLL)	49.019	47.611	43.625	49.470	15.940	21.001	40.083	
+D+L+H, LL Comb Run (LL*****)	48.378	53.329	37.851	36.666	7.891	19.262	33.880	
+D+L+H, LL Comb Run (LL****L)	48.381	53.310	37.929	36.376	8.977	17.551	37.444	
+D+L+H, LL Comb Run (LL***L*)	48.378	53.329	37.851	36.666	7.891	19.262	36.579	
+D+L+H, LL Comb Run (LL***LL)	48.381	53.310	37.929	36.376	8.977	17.551	40.144	
+D+L+H, LL Comb Run (LL**L**)	48.386	53.281	38.045	35.938	12.484	22.808	33.815	
+D+L+H, LL Comb Run (LL**L*L)	48.389	53.262	38.123	35.648	13.569	21.097	37.380	
+D+L+H, LL Comb Run (LL**LL*)	48.386	53.281	38.045	35.939	12.483	22.809	36.515	
+D+L+H, LL Comb Run (LL**LLL)	48.389	53.262	38.123	35.648	13.569	21.098	40.079	
+D+L+H, LL Comb Run (LL*L***)	48.351	53.489	37.211	40.942	12.053	18.814	33.897	
+D+L+H, LL Comb Run (LL*L**L)	48.355	53.470	37.288	40.651	13.138	17.103	37.462	
+D+L+H, LL Comb Run (LL*L*L*)	48.351	53.489	37.211	40.942	12.053	18.814	36.597	
+D+L+H, LL Comb Run (LL*L*LL)	48.355	53.470	37.288	40.652	13.138	17.103	40.162	
+D+L+H, LL Comb Run (LL*LL**)	48.359	53.441	37.405	40.214	16.645	22.361	33.832	
+D+L+H, LL Comb Run (LL*LL*L)	48.363	53.422	37.483	39.924	17.731	20.649	37.397	
+D+L+H, LL Comb Run (LL*LLL*)	48.359	53.441	37.405	40.214	16.645	22.361	36.532	
+D+L+H, LL Comb Run (LL*LLLL)	48.363	53.422	37.482	39.924	17.731	20.650	40.097	
+D+L+H, LL Comb Run (LLL****)	48.666	51.601	48.291	45.565	6.268	19.580	33.867	
+D+L+H, LL Comb Run (LLL***L)	48.669	51.582	48.368	45.274	7.353	17.869	37.432	
+D+L+H, LL Comb Run (LLL**L*)	48.666	51.601	48.291	45.565	6.267	19.580	36.567	
+D+L+H, LL Comb Run (LLL**LL)	48.669	51.582	48.368	45.274	7.353	17.869	40.132	
+D+L+H, LL Comb Run (LLL*L**)	48.674	51.553	48.485	44.837	10.860	23.127	33.802	
+D+L+H, LL Comb Run (LLL*L*L)	48.677	51.533	48.563	44.546	11.946	21.415	37.367	
+D+L+H, LL Comb Run (LLL*LL*)	48.674	51.553	48.485	44.837	10.860	23.127	36.502	
+D+L+H, LL Comb Run (LLL*LLL)	48.677	51.533	48.563	44.546	11.945	21.416	40.067	
+D+L+H, LL Comb Run (LLLL***)	48.639	51.761	47.651	49.841	10.429	19.132	33.885	
+D+L+H, LL Comb Run (LLLL**L)	48.643	51.742	47.728	49.550	11.515	17.421	37.450	
+D+L+H, LL Comb Run (LLLL*L*)	48.639	51.761	47.651	49.841	10.429	19.132	36.584	
+D+L+H, LL Comb Run (LLLL*LL)	48.643	51.742	47.728	49.550	11.514	17.421	40.149	
+D+L+H, LL Comb Run (LLLLL**)	48.648	51.713	47.845	49.113	15.021	22.679	33.820	
+D+L+H, LL Comb Run (LLLLL*L)	48.651	51.693	47.922	48.822	16.107	20.967	37.385	
+D+L+H, LL Comb Run (LLLLLL*)	48.648	51.713	47.845	49.113	15.021	22.679	36.520	
+D+L+H, LL Comb Run (LLLLLLL)	48.651	51.693	47.922	48.822	16.107	20.968	40.084	
+D+Lr+H, LL Comb Run (******L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*****L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*****LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (****L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (****L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (****LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (****LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***L***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***L**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***L*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***L*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***LL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***LL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***LLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (***LLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L***L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L**L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L**LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L*L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L*L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L*LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**L*LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LL***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (**LL**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LL*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LL*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LLL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LLL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LLLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (**LLLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L****L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L***L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L***LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L**L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L**L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L**LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L**LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*L***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*L**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*L*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*L*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*LL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*LL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*LLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*L*LLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL***L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL**L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL**LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL*L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL*L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL*LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LL*LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLL***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLL**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLL*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLL*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLLL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLLL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLLLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (*LLLLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L******)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*****L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L****L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L****LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L***L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L***L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L***LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L***LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**L***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**L**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**L*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**L*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**LL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**LL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**LLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L**LLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L***L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L**L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L**LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (L*L*L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L*L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L*LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*L*LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LL***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LL**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LL*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LL*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LLL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LLL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LLLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (L*LLLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL****L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL***L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL***LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL**L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL**L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL**LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL**LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*L***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*L**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*L*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*L*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*LL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*LL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*LLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LL*LLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL****)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL***L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL**L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL**LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL*L**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL*L*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL*LL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLL*LLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLL***)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLL**L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLL*L*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLL*LL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLLL**)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLLL*L)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLLLL*)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+Lr+H, LL Comb Run (LLLLLLL)	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+S+H	72.884	72.511	63.962	67.939	34.786	6.510	56.940	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.518	38.493	35.400	36.618	8.662	17.987	36.553	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.515	38.507	35.342	36.836	7.847	19.271	35.904	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.518	38.493	35.400	36.618	8.662	17.987	38.578	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.521	38.471	35.488	36.290	11.292	21.930	33.831	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.524	38.456	35.546	36.072	12.106	20.647	36.504	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.521	38.471	35.488	36.290	11.292	21.931	35.856	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.524	38.456	35.546	36.072	12.106	20.647	38.529	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.495	38.627	34.862	40.043	10.969	18.934	33.892	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.498	38.613	34.920	39.825	11.783	17.651	36.566	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.495	38.627	34.862	40.043	10.968	18.935	35.917	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.498	38.613	34.920	39.825	11.783	17.651	38.591	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.501	38.591	35.008	39.497	14.413	21.594	33.844	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.504	38.577	35.066	39.279	15.227	20.311	36.517	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.501	38.591	35.008	39.497	14.413	21.595	35.869	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	41.504	38.577	35.066	39.279	15.227	20.311	38.542	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.731	37.211	43.172	43.510	6.630	19.509	33.870	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.734	37.197	43.230	43.292	7.444	18.226	36.544	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.731	37.211	43.172	43.510	6.629	19.509	35.895	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.734	37.197	43.230	43.292	7.444	18.226	38.569	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.737	37.175	43.318	42.964	10.074	22.169	33.821	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.740	37.160	43.376	42.746	10.888	20.886	36.495	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.737	37.175	43.318	42.964	10.074	22.169	35.846	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.740	37.160	43.376	42.746	10.888	20.886	38.520	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.711	37.331	42.692	46.717	9.751	19.173	33.883	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.714	37.317	42.750	46.498	10.565	17.890	36.557	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.711	37.331	42.692	46.717	9.751	19.173	35.908	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.714	37.317	42.750	46.499	10.565	17.890	38.582	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.717	37.295	42.837	46.171	13.195	21.833	33.834	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.720	37.280	42.896	45.953	14.009	20.550	36.508	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.717	37.295	42.837	46.171	13.195	21.833	35.859	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.720	37.280	42.896	45.953	14.009	20.550	38.533	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.239	41.569	38.565	36.350	7.973	19.246	33.880	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.242	41.554	38.624	36.132	8.787	17.963	36.554	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.239	41.569	38.565	36.350	7.973	19.246	35.905	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.242	41.554	38.624	36.132	8.787	17.963	38.579	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.245	41.532	38.711	35.804	11.417	21.906	33.832	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.248	41.518	38.769	35.586	12.232	20.622	36.505	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.245	41.532	38.711	35.804	11.417	21.906	35.856	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.248	41.518	38.769	35.586	12.231	20.623	38.530	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.219	41.689	38.085	39.557	11.094	18.910	33.893	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.222	41.674	38.143	39.339	11.908	17.627	36.567	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.219	41.689	38.085	39.557	11.094	18.910	35.918	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.222	41.674	38.143	39.339	11.908	17.627	38.592	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.225	41.652	38.231	39.011	14.538	21.570	33.845	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.228	41.638	38.289	38.793	15.353	20.287	36.518	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.225	41.652	38.231	39.011	14.538	21.570	35.869	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.228	41.638	38.289	38.793	15.353	20.287	38.543	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.455	40.273	46.395	43.024	6.755	19.484	33.871	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.458	40.258	46.453	42.806	7.569	18.201	36.545	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.455	40.273	46.395	43.024	6.755	19.485	35.896	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.458	40.258	46.453	42.806	7.569	18.201	38.569	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.461	40.236	46.541	42.478	10.199	22.144	33.822	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.464	40.222	46.599	42.260	11.014	20.861	36.496	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.461	40.236	46.541	42.478	10.199	22.145	35.847	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.464	40.222	46.599	42.260	11.014	20.861	38.521	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.435	40.393	45.915	46.231	9.876	19.148	33.884	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.438	40.378	45.973	46.013	10.691	17.865	36.558	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.435	40.393	45.915	46.231	9.876	19.149	35.909	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.438	40.378	45.973	46.013	10.690	17.865	38.582	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.441	40.356	46.061	45.685	13.321	21.808	33.835	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.444	40.342	46.119	45.467	14.135	20.525	36.509	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.441	40.356	46.061	45.685	13.320	21.809	35.860	
+D+0.750Lr+0.750L+H, LL Comb Run (	41.444	40.342	46.119	45.467	14.135	20.525	38.534	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.938	46.563	34.001	37.194	7.755	19.289	33.879	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.941	46.548	34.059	36.976	8.569	18.005	36.552	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.938	46.563	34.001	37.194	7.755	19.289	35.903	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.941	46.548	34.059	36.976	8.569	18.006	38.577	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.944	46.526	34.146	36.648	11.199	21.949	33.830	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.947	46.512	34.204	36.430	12.013	20.665	36.504	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.944	46.526	34.146	36.648	11.199	21.949	35.855	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.947	46.512	34.204	36.430	12.013	20.666	38.528	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.918	46.683	33.520	40.401	10.876	18.953	33.892	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.921	46.668	33.579	40.183	11.690	17.669	36.565	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	46.918	46.683	33.520	40.401	10.876	18.953	35.916	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.921	46.668	33.579	40.183	11.690	17.670	38.590	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.924	46.646	33.666	39.855	14.320	21.613	33.843	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.927	46.632	33.724	39.637	15.135	20.329	36.517	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.924	46.646	33.666	39.855	14.320	21.613	35.868	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.927	46.632	33.724	39.637	15.134	20.330	38.541	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.154	45.266	41.830	43.868	6.537	19.527	33.869	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.157	45.252	41.889	43.650	7.351	18.244	36.543	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.154	45.266	41.830	43.868	6.537	19.528	35.894	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.157	45.252	41.889	43.650	7.351	18.244	38.568	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.160	45.230	41.976	43.322	9.981	22.187	33.821	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.163	45.215	42.034	43.104	10.796	20.904	36.494	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.160	45.230	41.976	43.322	9.981	22.187	35.846	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.163	45.215	42.034	43.104	10.795	20.904	38.519	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.134	45.386	41.350	47.075	9.658	19.191	33.882	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.137	45.372	41.408	46.857	10.472	17.908	36.556	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.134	45.386	41.350	47.075	9.658	19.192	35.907	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.137	45.372	41.408	46.857	10.472	17.908	38.581	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.140	45.350	41.496	46.529	13.102	21.851	33.834	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.143	45.335	41.554	46.311	13.917	20.568	36.507	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.140	45.350	41.496	46.529	13.102	21.851	35.859	
+D+0.750Lr+0.750L+H, LL Comb Run (	47.143	45.335	41.554	46.311	13.917	20.568	38.532	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.662	49.624	37.224	36.709	7.880	19.264	33.880	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.665	49.609	37.282	36.491	8.695	17.981	36.553	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.662	49.624	37.224	36.709	7.880	19.264	35.904	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.665	49.609	37.282	36.491	8.694	17.981	38.578	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.668	49.588	37.369	36.163	11.325	21.924	33.831	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.671	49.573	37.428	35.945	12.139	20.641	36.505	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.668	49.588	37.369	36.163	11.324	21.924	35.856	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.671	49.573	37.428	35.945	12.139	20.641	38.529	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.642	49.744	36.744	39.916	11.001	18.928	33.893	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.645	49.729	36.802	39.698	11.816	17.645	36.566	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.642	49.744	36.744	39.916	11.001	18.928	35.917	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.645	49.729	36.802	39.698	11.816	17.645	38.591	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.648	49.708	36.889	39.370	14.446	21.588	33.844	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.651	49.693	36.947	39.152	15.260	20.305	36.518	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.648	49.708	36.889	39.370	14.446	21.588	35.869	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.651	49.693	36.947	39.152	15.260	20.305	38.542	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.878	48.328	45.054	43.383	6.663	19.503	33.870	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.881	48.313	45.112	43.164	7.477	18.219	36.544	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.878	48.328	45.054	43.383	6.662	19.503	35.895	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.881	48.313	45.112	43.165	7.477	18.220	38.569	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.884	48.291	45.199	42.837	10.107	22.163	33.822	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.887	48.277	45.257	42.619	10.921	20.879	36.495	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.884	48.291	45.199	42.837	10.107	22.163	35.847	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.887	48.277	45.257	42.619	10.921	20.880	38.520	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.858	48.448	44.574	46.590	9.784	19.167	33.883	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.861	48.433	44.632	46.371	10.598	17.883	36.557	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.858	48.448	44.573	46.590	9.783	19.167	35.908	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.861	48.433	44.632	46.371	10.598	17.884	38.582	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.864	48.411	44.719	46.044	13.228	21.827	33.835	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.867	48.397	44.777	45.826	14.042	20.543	36.508	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.864	48.411	44.719	46.044	13.228	21.827	35.860	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.867	48.397	44.777	45.826	14.042	20.544	38.533	
+D+0.750L+0.750S+H, LL Comb Run (*	65.044	63.996	56.866	59.945	28.866	8.417	53.849	
+D+0.750L+0.750S+H, LL Comb Run (*	65.042	64.010	56.807	60.163	28.051	9.701	53.200	
+D+0.750L+0.750S+H, LL Comb Run (*	65.044	63.996	56.866	59.945	28.866	8.417	55.873	
+D+0.750L+0.750S+H, LL Comb Run (*	65.048	63.974	56.953	59.617	31.496	12.360	51.126	
+D+0.750L+0.750S+H, LL Comb Run (*	65.050	63.959	57.011	59.399	32.310	11.077	53.800	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (*	65.048	63.974	56.953	59.617	31.496	12.361	53.151	
+D+0.750L+0.750S+H, LL Comb Run (*	65.050	63.959	57.011	59.399	32.310	11.077	55.825	
+D+0.750L+0.750S+H, LL Comb Run (*	65.022	64.130	56.327	63.370	31.173	9.364	51.188	
+D+0.750L+0.750S+H, LL Comb Run (*	65.024	64.116	56.385	63.152	31.987	8.081	53.862	
+D+0.750L+0.750S+H, LL Comb Run (*	65.022	64.130	56.327	63.370	31.173	9.365	53.213	
+D+0.750L+0.750S+H, LL Comb Run (*	65.024	64.116	56.385	63.152	31.987	8.081	55.886	
+D+0.750L+0.750S+H, LL Comb Run (*	65.028	64.094	56.473	62.824	34.617	12.024	51.139	
+D+0.750L+0.750S+H, LL Comb Run (*	65.030	64.079	56.531	62.606	35.431	10.741	53.813	
+D+0.750L+0.750S+H, LL Comb Run (*	65.028	64.094	56.473	62.824	34.617	12.025	53.164	
+D+0.750L+0.750S+H, LL Comb Run (*	65.030	64.079	56.531	62.606	35.431	10.741	55.838	
+D+0.750L+0.750S+H, LL Comb Run (*	65.258	62.714	64.637	66.837	26.834	9.939	51.166	
+D+0.750L+0.750S+H, LL Comb Run (*	65.260	62.699	64.695	66.619	27.648	8.656	53.839	
+D+0.750L+0.750S+H, LL Comb Run (*	65.258	62.714	64.637	66.837	26.834	9.939	53.190	
+D+0.750L+0.750S+H, LL Comb Run (*	65.260	62.699	64.695	66.619	27.648	8.656	55.864	
+D+0.750L+0.750S+H, LL Comb Run (*	65.264	62.677	64.783	66.291	30.278	12.599	51.117	
+D+0.750L+0.750S+H, LL Comb Run (*	65.266	62.663	64.841	66.073	31.092	11.316	53.791	
+D+0.750L+0.750S+H, LL Comb Run (*	65.264	62.677	64.783	66.291	30.278	12.599	53.142	
+D+0.750L+0.750S+H, LL Comb Run (*	65.266	62.663	64.841	66.073	31.092	11.316	55.816	
+D+0.750L+0.750S+H, LL Comb Run (*	65.238	62.834	64.157	70.044	29.955	9.603	51.179	
+D+0.750L+0.750S+H, LL Comb Run (*	65.240	62.819	64.215	69.826	30.769	8.320	53.852	
+D+0.750L+0.750S+H, LL Comb Run (*	65.238	62.834	64.157	70.044	29.955	9.603	53.204	
+D+0.750L+0.750S+H, LL Comb Run (*	65.240	62.819	64.215	69.826	30.769	8.320	55.877	
+D+0.750L+0.750S+H, LL Comb Run (*	65.244	62.798	64.303	69.498	33.399	12.263	51.130	
+D+0.750L+0.750S+H, LL Comb Run (*	65.246	62.783	64.361	69.280	34.213	10.980	53.804	
+D+0.750L+0.750S+H, LL Comb Run (*	65.244	62.798	64.303	69.498	33.399	12.263	53.155	
+D+0.750L+0.750S+H, LL Comb Run (*	65.246	62.783	64.361	69.280	34.213	10.980	55.829	
+D+0.750L+0.750S+H, LL Comb Run (*	64.766	67.071	60.031	59.677	28.177	9.676	51.176	
+D+0.750L+0.750S+H, LL Comb Run (*	64.768	67.057	60.089	59.459	28.991	8.392	53.849	
+D+0.750L+0.750S+H, LL Comb Run (*	64.766	67.071	60.031	59.677	28.177	9.676	53.201	
+D+0.750L+0.750S+H, LL Comb Run (*	64.768	67.057	60.089	59.459	28.991	8.393	55.874	
+D+0.750L+0.750S+H, LL Comb Run (*	64.772	67.035	60.176	59.132	31.621	12.336	51.127	
+D+0.750L+0.750S+H, LL Comb Run (*	64.774	67.021	60.234	58.913	32.436	11.052	53.801	
+D+0.750L+0.750S+H, LL Comb Run (*	64.772	67.035	60.176	59.132	31.621	12.336	53.152	
+D+0.750L+0.750S+H, LL Comb Run (*	64.774	67.021	60.234	58.913	32.435	11.053	55.826	
+D+0.750L+0.750S+H, LL Comb Run (*	64.746	67.192	59.550	62.884	31.298	9.340	51.189	
+D+0.750L+0.750S+H, LL Comb Run (*	64.748	67.177	59.609	62.666	32.112	8.056	53.863	
+D+0.750L+0.750S+H, LL Comb Run (*	64.746	67.192	59.550	62.884	31.298	9.340	53.214	
+D+0.750L+0.750S+H, LL Comb Run (*	64.748	67.177	59.609	62.666	32.112	8.057	55.887	
+D+0.750L+0.750S+H, LL Comb Run (*	64.752	67.155	59.696	62.338	34.743	12.000	51.140	
+D+0.750L+0.750S+H, LL Comb Run (*	64.754	67.141	59.754	62.120	35.557	10.716	53.814	
+D+0.750L+0.750S+H, LL Comb Run (*	64.752	67.155	59.696	62.339	34.742	12.000	53.165	
+D+0.750L+0.750S+H, LL Comb Run (*	64.754	67.141	59.754	62.120	35.557	10.717	55.839	
+D+0.750L+0.750S+H, LL Comb Run (*	64.982	65.775	67.860	66.351	26.959	9.914	51.167	
+D+0.750L+0.750S+H, LL Comb Run (*	64.984	65.761	67.919	66.133	27.773	8.631	53.840	
+D+0.750L+0.750S+H, LL Comb Run (*	64.982	65.775	67.860	66.351	26.959	9.915	53.191	
+D+0.750L+0.750S+H, LL Comb Run (*	64.984	65.761	67.919	66.133	27.773	8.631	55.865	
+D+0.750L+0.750S+H, LL Comb Run (*	64.988	65.739	68.006	65.805	30.404	12.574	51.118	
+D+0.750L+0.750S+H, LL Comb Run (*	64.990	65.724	68.064	65.587	31.218	11.291	53.792	
+D+0.750L+0.750S+H, LL Comb Run (*	64.988	65.739	68.006	65.805	30.403	12.575	53.143	
+D+0.750L+0.750S+H, LL Comb Run (*	64.990	65.724	68.064	65.587	31.218	11.291	55.816	
+D+0.750L+0.750S+H, LL Comb Run (*	64.962	65.895	67.380	69.558	30.080	9.578	51.180	
+D+0.750L+0.750S+H, LL Comb Run (*	64.964	65.881	67.438	69.340	30.895	8.295	53.853	
+D+0.750L+0.750S+H, LL Comb Run (*	64.962	65.895	67.380	69.558	30.080	9.579	53.204	
+D+0.750L+0.750S+H, LL Comb Run (*	64.964	65.881	67.438	69.340	30.894	8.295	55.878	
+D+0.750L+0.750S+H, LL Comb Run (*	64.968	65.859	67.526	69.012	33.525	12.238	51.131	
+D+0.750L+0.750S+H, LL Comb Run (*	64.970	65.844	67.584	68.794	34.339	10.955	53.805	
+D+0.750L+0.750S+H, LL Comb Run (*	64.968	65.859	67.526	69.012	33.524	12.239	53.156	
+D+0.750L+0.750S+H, LL Comb Run (*	64.970	65.844	67.584	68.794	34.339	10.955	55.830	
+D+0.750L+0.750S+H, LL Comb Run (L	70.465	72.065	55.466	60.522	27.959	9.719	51.174	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	70.467	72.051	55.524	60.303	28.773	8.435	53.848	
+D+0.750L+0.750S+H, LL Comb Run (L	70.465	72.065	55.466	60.522	27.959	9.719	53.199	
+D+0.750L+0.750S+H, LL Comb Run (L	70.467	72.051	55.524	60.304	28.773	8.435	55.873	
+D+0.750L+0.750S+H, LL Comb Run (L	70.471	72.029	55.611	59.976	31.403	12.378	51.126	
+D+0.750L+0.750S+H, LL Comb Run (L	70.473	72.014	55.670	59.758	32.218	11.095	53.799	
+D+0.750L+0.750S+H, LL Comb Run (L	70.471	72.029	55.611	59.976	31.403	12.379	53.150	
+D+0.750L+0.750S+H, LL Comb Run (L	70.473	72.014	55.670	59.758	32.217	11.095	55.824	
+D+0.750L+0.750S+H, LL Comb Run (L	70.445	72.185	54.986	63.729	31.080	9.383	51.187	
+D+0.750L+0.750S+H, LL Comb Run (L	70.447	72.171	55.044	63.510	31.894	8.099	53.861	
+D+0.750L+0.750S+H, LL Comb Run (L	70.445	72.185	54.986	63.729	31.080	9.383	53.212	
+D+0.750L+0.750S+H, LL Comb Run (L	70.447	72.171	55.044	63.510	31.894	8.100	55.886	
+D+0.750L+0.750S+H, LL Comb Run (L	70.451	72.149	55.131	63.183	34.524	12.042	51.139	
+D+0.750L+0.750S+H, LL Comb Run (L	70.453	72.134	55.189	62.965	35.339	10.759	53.812	
+D+0.750L+0.750S+H, LL Comb Run (L	70.451	72.149	55.131	63.183	34.524	12.043	53.163	
+D+0.750L+0.750S+H, LL Comb Run (L	70.453	72.134	55.189	62.965	35.338	10.759	55.837	
+D+0.750L+0.750S+H, LL Comb Run (L	70.681	70.769	63.296	67.195	26.741	9.957	51.165	
+D+0.750L+0.750S+H, LL Comb Run (L	70.683	70.754	63.354	66.977	27.555	8.674	53.839	
+D+0.750L+0.750S+H, LL Comb Run (L	70.681	70.769	63.296	67.195	26.741	9.957	53.190	
+D+0.750L+0.750S+H, LL Comb Run (L	70.683	70.754	63.354	66.977	27.555	8.674	55.863	
+D+0.750L+0.750S+H, LL Comb Run (L	70.687	70.733	63.441	66.650	30.185	12.617	51.116	
+D+0.750L+0.750S+H, LL Comb Run (L	70.689	70.718	63.499	66.431	31.000	11.334	53.790	
+D+0.750L+0.750S+H, LL Comb Run (L	70.687	70.733	63.441	66.650	30.185	12.617	53.141	
+D+0.750L+0.750S+H, LL Comb Run (L	70.689	70.718	63.499	66.431	30.999	11.334	55.815	
+D+0.750L+0.750S+H, LL Comb Run (L	70.661	70.889	62.815	70.402	29.862	9.621	51.178	
+D+0.750L+0.750S+H, LL Comb Run (L	70.663	70.875	62.874	70.184	30.676	8.338	53.852	
+D+0.750L+0.750S+H, LL Comb Run (L	70.661	70.889	62.815	70.402	29.862	9.621	53.203	
+D+0.750L+0.750S+H, LL Comb Run (L	70.663	70.875	62.874	70.184	30.676	8.338	55.876	
+D+0.750L+0.750S+H, LL Comb Run (L	70.667	70.853	62.961	69.856	33.307	12.281	51.129	
+D+0.750L+0.750S+H, LL Comb Run (L	70.669	70.838	63.019	69.638	34.121	10.998	53.803	
+D+0.750L+0.750S+H, LL Comb Run (L	70.667	70.853	62.961	69.857	33.306	12.281	53.154	
+D+0.750L+0.750S+H, LL Comb Run (L	70.669	70.838	63.019	69.638	34.121	10.998	55.828	
+D+0.750L+0.750S+H, LL Comb Run (L	70.189	75.127	58.689	60.036	28.084	9.694	51.175	
+D+0.750L+0.750S+H, LL Comb Run (L	70.191	75.112	58.747	59.818	28.899	8.411	53.849	
+D+0.750L+0.750S+H, LL Comb Run (L	70.189	75.127	58.689	60.036	28.084	9.694	53.200	
+D+0.750L+0.750S+H, LL Comb Run (L	70.191	75.112	58.747	59.818	28.898	8.411	55.874	
+D+0.750L+0.750S+H, LL Comb Run (L	70.195	75.090	58.835	59.490	31.529	12.354	51.127	
+D+0.750L+0.750S+H, LL Comb Run (L	70.197	75.076	58.893	59.272	32.343	11.071	53.800	
+D+0.750L+0.750S+H, LL Comb Run (L	70.195	75.090	58.835	59.490	31.529	12.354	53.151	
+D+0.750L+0.750S+H, LL Comb Run (L	70.197	75.076	58.893	59.272	32.343	11.071	55.825	
+D+0.750L+0.750S+H, LL Comb Run (L	70.169	75.247	58.209	63.243	31.206	9.358	51.188	
+D+0.750L+0.750S+H, LL Comb Run (L	70.171	75.232	58.267	63.025	32.020	8.075	53.862	
+D+0.750L+0.750S+H, LL Comb Run (L	70.169	75.247	58.209	63.243	31.205	9.358	53.213	
+D+0.750L+0.750S+H, LL Comb Run (L	70.171	75.232	58.267	63.025	32.020	8.075	55.887	
+D+0.750L+0.750S+H, LL Comb Run (L	70.175	75.210	58.354	62.697	34.650	12.018	51.140	
+D+0.750L+0.750S+H, LL Comb Run (L	70.177	75.196	58.413	62.479	35.464	10.735	53.813	
+D+0.750L+0.750S+H, LL Comb Run (L	70.175	75.210	58.354	62.697	34.650	12.018	53.164	
+D+0.750L+0.750S+H, LL Comb Run (L	70.177	75.196	58.413	62.479	35.464	10.735	55.838	
+D+0.750L+0.750S+H, LL Comb Run (L	70.405	73.830	66.519	66.710	26.867	9.933	51.166	
+D+0.750L+0.750S+H, LL Comb Run (L	70.407	73.816	66.577	66.492	27.681	8.649	53.840	
+D+0.750L+0.750S+H, LL Comb Run (L	70.405	73.830	66.519	66.710	26.866	9.933	53.191	
+D+0.750L+0.750S+H, LL Comb Run (L	70.407	73.816	66.577	66.492	27.681	8.649	55.864	
+D+0.750L+0.750S+H, LL Comb Run (L	70.411	73.794	66.665	66.164	30.311	12.592	51.117	
+D+0.750L+0.750S+H, LL Comb Run (L	70.413	73.779	66.723	65.946	31.125	11.309	53.791	
+D+0.750L+0.750S+H, LL Comb Run (L	70.411	73.794	66.664	66.164	30.311	12.593	53.142	
+D+0.750L+0.750S+H, LL Comb Run (L	70.413	73.779	66.723	65.946	31.125	11.309	55.816	
+D+0.750L+0.750S+H, LL Comb Run (L	70.385	73.950	66.039	69.917	29.988	9.597	51.179	
+D+0.750L+0.750S+H, LL Comb Run (L	70.387	73.936	66.097	69.699	30.802	8.313	53.853	
+D+0.750L+0.750S+H, LL Comb Run (L	70.385	73.950	66.039	69.917	29.988	9.597	53.204	
+D+0.750L+0.750S+H, LL Comb Run (L	70.387	73.936	66.097	69.699	30.802	8.314	55.877	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	70.391	73.914	66.184	69.371	33.432	12.256	51.130	
+D+0.750L+0.750S+H, LL Comb Run (L	70.393	73.900	66.242	69.153	34.246	10.973	53.804	
+D+0.750L+0.750S+H, LL Comb Run (L	70.391	73.914	66.184	69.371	33.432	12.257	53.155	
+D+0.750L+0.750S+H, LL Comb Run (L	70.393	73.900	66.242	69.153	34.246	10.973	55.829	
+D+0.60W+H	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
+D+0.70E+H	43.339	38.829	35.304	36.670	8.549	18.157	36.522	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.518	38.493	35.400	36.618	8.662	17.987	36.553	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.515	38.507	35.342	36.836	7.847	19.271	35.904	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.518	38.493	35.400	36.618	8.662	17.987	38.578	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.521	38.471	35.488	36.290	11.292	21.930	33.831	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.524	38.456	35.546	36.072	12.106	20.647	36.504	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.521	38.471	35.488	36.290	11.292	21.931	35.856	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.524	38.456	35.546	36.072	12.106	20.647	38.529	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.495	38.627	34.862	40.043	10.969	18.934	33.892	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.498	38.613	34.920	39.825	11.783	17.651	36.566	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.495	38.627	34.862	40.043	10.968	18.935	35.917	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.498	38.613	34.920	39.825	11.783	17.651	38.591	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.501	38.591	35.008	39.497	14.413	21.594	33.844	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.504	38.577	35.066	39.279	15.227	20.311	36.517	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.501	38.591	35.008	39.497	14.413	21.595	35.869	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.504	38.577	35.066	39.279	15.227	20.311	38.542	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.731	37.211	43.172	43.510	6.630	19.509	33.870	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.734	37.197	43.230	43.292	7.444	18.226	36.544	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.731	37.211	43.172	43.510	6.629	19.509	35.895	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.734	37.197	43.230	43.292	7.444	18.226	38.569	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.737	37.175	43.318	42.964	10.074	22.169	33.821	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.740	37.160	43.376	42.746	10.888	20.886	36.495	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.737	37.175	43.318	42.964	10.074	22.169	35.846	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.740	37.160	43.376	42.746	10.888	20.886	38.520	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.711	37.331	42.692	46.717	9.751	19.173	33.883	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.714	37.317	42.750	46.498	10.565	17.890	36.557	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.711	37.331	42.692	46.717	9.751	19.173	35.908	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.714	37.317	42.750	46.499	10.565	17.890	38.582	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.717	37.295	42.837	46.171	13.195	21.833	33.834	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.720	37.280	42.896	45.953	14.009	20.550	36.508	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.717	37.295	42.837	46.171	13.195	21.833	35.859	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.720	37.280	42.896	45.953	14.009	20.550	38.533	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.239	41.569	38.565	36.350	7.973	19.246	33.880	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.242	41.554	38.624	36.132	8.787	17.963	36.554	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.239	41.569	38.565	36.350	7.973	19.246	35.905	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.242	41.554	38.624	36.132	8.787	17.963	38.579	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.245	41.532	38.711	35.804	11.417	21.906	33.832	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.248	41.518	38.769	35.586	12.232	20.622	36.505	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.245	41.532	38.711	35.804	11.417	21.906	35.856	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.248	41.518	38.769	35.586	12.231	20.623	38.530	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.219	41.689	38.085	39.557	11.094	18.910	33.893	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.222	41.674	38.143	39.339	11.908	17.627	36.567	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.219	41.689	38.085	39.557	11.094	18.910	35.918	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.222	41.674	38.143	39.339	11.908	17.627	38.592	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.225	41.652	38.231	39.011	14.538	21.570	33.845	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.228	41.638	38.289	38.793	15.353	20.287	36.518	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.225	41.652	38.231	39.011	14.538	21.570	35.869	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.228	41.638	38.289	38.793	15.353	20.287	38.543	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.455	40.273	46.395	43.024	6.755	19.484	33.871	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.458	40.258	46.453	42.806	7.569	18.201	36.545	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.455	40.273	46.395	43.024	6.755	19.485	35.896	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.458	40.258	46.453	42.806	7.569	18.201	38.569	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.461	40.236	46.541	42.478	10.199	22.144	33.822	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.464	40.222	46.599	42.260	11.014	20.861	36.496	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.461	40.236	46.541	42.478	10.199	22.145	35.847	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.464	40.222	46.599	42.260	11.014	20.861	38.521	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.435	40.393	45.915	46.231	9.876	19.148	33.884	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.438	40.378	45.973	46.013	10.691	17.865	36.558	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.435	40.393	45.915	46.231	9.876	19.149	35.909	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.438	40.378	45.973	46.013	10.690	17.865	38.582	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.441	40.356	46.061	45.685	13.321	21.808	33.835	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.444	40.342	46.119	45.467	14.135	20.525	36.509	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.441	40.356	46.061	45.685	13.320	21.809	35.860	
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.444	40.342	46.119	45.467	14.135	20.525	38.534	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.938	46.563	34.001	37.194	7.755	19.289	33.879	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.941	46.548	34.059	36.976	8.569	18.005	36.552	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.938	46.563	34.001	37.194	7.755	19.289	35.903	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.941	46.548	34.059	36.976	8.569	18.006	38.577	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.944	46.526	34.146	36.648	11.199	21.949	33.830	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.947	46.512	34.204	36.430	12.013	20.665	36.504	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.944	46.526	34.146	36.648	11.199	21.949	35.855	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.947	46.512	34.204	36.430	12.013	20.666	38.528	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.918	46.683	33.520	40.401	10.876	18.953	33.892	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.921	46.668	33.579	40.183	11.690	17.669	36.565	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.918	46.683	33.520	40.401	10.876	18.953	35.916	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.921	46.668	33.579	40.183	11.690	17.670	38.590	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.924	46.646	33.666	39.855	14.320	21.613	33.843	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.927	46.632	33.724	39.637	15.135	20.329	36.517	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.924	46.646	33.666	39.855	14.320	21.613	35.868	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.927	46.632	33.724	39.637	15.134	20.330	38.541	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.154	45.266	41.830	43.868	6.537	19.527	33.869	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.157	45.252	41.889	43.650	7.351	18.244	36.543	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.154	45.266	41.830	43.868	6.537	19.528	35.894	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.157	45.252	41.889	43.650	7.351	18.244	38.568	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.160	45.230	41.976	43.322	9.981	22.187	33.821	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.163	45.215	42.034	43.104	10.796	20.904	36.494	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.160	45.230	41.976	43.322	9.981	22.187	35.846	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.163	45.215	42.034	43.104	10.795	20.904	38.519	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.134	45.386	41.350	47.075	9.658	19.191	33.882	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.137	45.372	41.408	46.857	10.472	17.908	36.556	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.134	45.386	41.350	47.075	9.658	19.192	35.907	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.137	45.372	41.408	46.857	10.472	17.908	38.581	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.140	45.350	41.496	46.529	13.102	21.851	33.834	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.143	45.335	41.554	46.311	13.917	20.568	36.507	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.140	45.350	41.496	46.529	13.102	21.851	35.859	
+D+0.750Lr+0.750L+0.450W+H, LL Com	47.143	45.335	41.554	46.311	13.917	20.568	38.532	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.662	49.624	37.224	36.709	7.880	19.264	33.880	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.665	49.609	37.282	36.491	8.695	17.981	36.553	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.662	49.624	37.224	36.709	7.880	19.264	35.904	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.665	49.609	37.282	36.491	8.694	17.981	38.578	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.668	49.588	37.369	36.163	11.325	21.924	33.831	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.671	49.573	37.428	35.945	12.139	20.641	36.505	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.668	49.588	37.369	36.163	11.324	21.924	35.856	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.671	49.573	37.428	35.945	12.139	20.641	38.529	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.642	49.744	36.744	39.916	11.001	18.928	33.893	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.645	49.729	36.802	39.698	11.816	17.645	36.566	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.642	49.744	36.744	39.916	11.001	18.928	35.917	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.645	49.729	36.802	39.698	11.816	17.645	38.591	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.648	49.708	36.889	39.370	14.446	21.588	33.844	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.651	49.693	36.947	39.152	15.260	20.305	36.518	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.648	49.708	36.889	39.370	14.446	21.588	35.869	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.651	49.693	36.947	39.152	15.260	20.305	38.542	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.878	48.328	45.054	43.383	6.663	19.503	33.870	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.881	48.313	45.112	43.164	7.477	18.219	36.544	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.878	48.328	45.054	43.383	6.662	19.503	35.895	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.881	48.313	45.112	43.165	7.477	18.220	38.569	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.884	48.291	45.199	42.837	10.107	22.163	33.822	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.887	48.277	45.257	42.619	10.921	20.879	36.495	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.884	48.291	45.199	42.837	10.107	22.163	35.847	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.887	48.277	45.257	42.619	10.921	20.880	38.520	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.858	48.448	44.574	46.590	9.784	19.167	33.883	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.861	48.433	44.632	46.371	10.598	17.883	36.557	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.858	48.448	44.573	46.590	9.783	19.167	35.908	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.861	48.433	44.632	46.371	10.598	17.884	38.582	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.864	48.411	44.719	46.044	13.228	21.827	33.835	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.867	48.397	44.777	45.826	14.042	20.543	36.508	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.864	48.411	44.719	46.044	13.228	21.827	35.860	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.867	48.397	44.777	45.826	14.042	20.544	38.533	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.044	63.996	56.866	59.945	28.866	8.417	53.849	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.042	64.010	56.807	60.163	28.051	9.701	53.200	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.044	63.996	56.866	59.945	28.866	8.417	55.873	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.048	63.974	56.953	59.617	31.496	12.360	51.126	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.050	63.959	57.011	59.399	32.310	11.077	53.800	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.048	63.974	56.953	59.617	31.496	12.361	53.151	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.050	63.959	57.011	59.399	32.310	11.077	55.825	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.022	64.130	56.327	63.370	31.173	9.364	51.188	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.024	64.116	56.385	63.152	31.987	8.081	53.862	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.022	64.130	56.327	63.370	31.173	9.365	53.213	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.024	64.116	56.385	63.152	31.987	8.081	55.886	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.028	64.094	56.473	62.824	34.617	12.024	51.139	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.030	64.079	56.531	62.606	35.431	10.741	53.813	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.028	64.094	56.473	62.824	34.617	12.025	53.164	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.030	64.079	56.531	62.606	35.431	10.741	55.838	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.258	62.714	64.637	66.837	26.834	9.939	51.166	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.260	62.699	64.695	66.619	27.648	8.656	53.839	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.258	62.714	64.637	66.837	26.834	9.939	53.190	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.260	62.699	64.695	66.619	27.648	8.656	55.864	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.264	62.677	64.783	66.291	30.278	12.599	51.117	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.266	62.663	64.841	66.073	31.092	11.316	53.791	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.264	62.677	64.783	66.291	30.278	12.599	53.142	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.266	62.663	64.841	66.073	31.092	11.316	55.816	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.238	62.834	64.157	70.044	29.955	9.603	51.179	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.240	62.819	64.215	69.826	30.769	8.320	53.852	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.238	62.834	64.157	70.044	29.955	9.603	53.204	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.240	62.819	64.215	69.826	30.769	8.320	55.877	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.244	62.798	64.303	69.498	33.399	12.263	51.130	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.246	62.783	64.361	69.280	34.213	10.980	53.804	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.244	62.798	64.303	69.498	33.399	12.263	53.155	
+D+0.750L+0.750S+0.450W+H, LL Comb	65.246	62.783	64.361	69.280	34.213	10.980	55.829	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.766	67.071	60.031	59.677	28.177	9.676	51.176	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.768	67.057	60.089	59.459	28.991	8.392	53.849	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.766	67.071	60.031	59.677	28.177	9.676	53.201	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.768	67.057	60.089	59.459	28.991	8.393	55.874	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.772	67.035	60.176	59.132	31.621	12.336	51.127	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.774	67.021	60.234	58.913	32.436	11.052	53.801	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.772	67.035	60.176	59.132	31.621	12.336	53.152	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.774	67.021	60.234	58.913	32.435	11.053	55.826	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.746	67.192	59.550	62.884	31.298	9.340	51.189	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.748	67.177	59.609	62.666	32.112	8.056	53.863	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.746	67.192	59.550	62.884	31.298	9.340	53.214	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.748	67.177	59.609	62.666	32.112	8.057	55.887	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.752	67.155	59.696	62.338	34.743	12.000	51.140	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	64.754	67.141	59.754	62.120	35.557	10.716	53.814	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.752	67.155	59.696	62.339	34.742	12.000	53.165	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.754	67.141	59.754	62.120	35.557	10.717	55.839	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.982	65.775	67.860	66.351	26.959	9.914	51.167	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.984	65.761	67.919	66.133	27.773	8.631	53.840	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.982	65.775	67.860	66.351	26.959	9.915	53.191	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.984	65.761	67.919	66.133	27.773	8.631	55.865	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.988	65.739	68.006	65.805	30.404	12.574	51.118	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.990	65.724	68.064	65.587	31.218	11.291	53.792	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.988	65.739	68.006	65.805	30.403	12.575	53.143	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.990	65.724	68.064	65.587	31.218	11.291	55.816	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.962	65.895	67.380	69.558	30.080	9.578	51.180	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.964	65.881	67.438	69.340	30.895	8.295	53.853	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.962	65.895	67.380	69.558	30.080	9.579	53.204	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.964	65.881	67.438	69.340	30.894	8.295	55.878	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.968	65.859	67.526	69.012	33.525	12.238	51.131	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.970	65.844	67.584	68.794	34.339	10.955	53.805	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.968	65.859	67.526	69.012	33.524	12.239	53.156	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.970	65.844	67.584	68.794	34.339	10.955	55.830	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.465	72.065	55.466	60.522	27.959	9.719	51.174	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.467	72.051	55.524	60.303	28.773	8.435	53.848	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.465	72.065	55.466	60.522	27.959	9.719	53.199	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.467	72.051	55.524	60.304	28.773	8.435	55.873	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.471	72.029	55.611	59.976	31.403	12.378	51.126	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.473	72.014	55.670	59.758	32.218	11.095	53.799	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.471	72.029	55.611	59.976	31.403	12.379	53.150	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.473	72.014	55.670	59.758	32.217	11.095	55.824	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.445	72.185	54.986	63.729	31.080	9.383	51.187	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.447	72.171	55.044	63.510	31.894	8.099	53.861	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.445	72.185	54.986	63.729	31.080	9.383	53.212	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.447	72.171	55.044	63.510	31.894	8.100	55.886	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.451	72.149	55.131	63.183	34.524	12.042	51.139	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.453	72.134	55.189	62.965	35.339	10.759	53.812	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.451	72.149	55.131	63.183	34.524	12.043	53.163	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.453	72.134	55.189	62.965	35.338	10.759	55.837	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.681	70.769	63.296	67.195	26.741	9.957	51.165	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.683	70.754	63.354	66.977	27.555	8.674	53.839	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.681	70.769	63.296	67.195	26.741	9.957	53.190	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.683	70.754	63.354	66.977	27.555	8.674	55.863	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.687	70.733	63.441	66.650	30.185	12.617	51.116	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.689	70.718	63.499	66.431	31.000	11.334	53.790	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.687	70.733	63.441	66.650	30.185	12.617	53.141	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.689	70.718	63.499	66.431	30.999	11.334	55.815	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.661	70.889	62.815	70.402	29.862	9.621	51.178	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.663	70.875	62.874	70.184	30.676	8.338	53.852	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.661	70.889	62.815	70.402	29.862	9.621	53.203	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.663	70.875	62.874	70.184	30.676	8.338	55.876	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.667	70.853	62.961	69.856	33.307	12.281	51.129	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.669	70.838	63.019	69.638	34.121	10.998	53.803	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.667	70.853	62.961	69.857	33.306	12.281	53.154	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.669	70.838	63.019	69.638	34.121	10.998	55.828	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.189	75.127	58.689	60.036	28.084	9.694	51.175	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.191	75.112	58.747	59.818	28.899	8.411	53.849	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.189	75.127	58.689	60.036	28.084	9.694	53.200	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.191	75.112	58.747	59.818	28.898	8.411	55.874	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.195	75.090	58.835	59.490	31.529	12.354	51.127	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.197	75.076	58.893	59.272	32.343	11.071	53.800	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.195	75.090	58.835	59.490	31.529	12.354	53.151	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.197	75.076	58.893	59.272	32.343	11.071	55.825	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	70.169	75.247	58.209	63.243	31.206	9.358	51.188	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.171	75.232	58.267	63.025	32.020	8.075	53.862	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.169	75.247	58.209	63.243	31.205	9.358	53.213	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.171	75.232	58.267	63.025	32.020	8.075	55.887	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.175	75.210	58.354	62.697	34.650	12.018	51.140	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.177	75.196	58.413	62.479	35.464	10.735	53.813	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.175	75.210	58.354	62.697	34.650	12.018	53.164	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.177	75.196	58.413	62.479	35.464	10.735	55.838	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.405	73.830	66.519	66.710	26.867	9.933	51.166	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.407	73.816	66.577	66.492	27.681	8.649	53.840	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.405	73.830	66.519	66.710	26.866	9.933	53.191	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.407	73.816	66.577	66.492	27.681	8.649	55.864	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.411	73.794	66.665	66.164	30.311	12.592	51.117	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.413	73.779	66.723	65.946	31.125	11.309	53.791	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.411	73.794	66.664	66.164	30.311	12.593	53.142	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.413	73.779	66.723	65.946	31.125	11.309	55.816	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.385	73.950	66.039	69.917	29.988	9.597	51.179	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.387	73.936	66.097	69.699	30.802	8.313	53.853	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.385	73.950	66.039	69.917	29.988	9.597	53.204	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.387	73.936	66.097	69.699	30.802	8.314	55.877	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.391	73.914	66.184	69.371	33.432	12.256	51.130	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.393	73.900	66.242	69.153	34.246	10.973	53.804	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.391	73.914	66.184	69.371	33.432	12.257	53.155	
+D+0.750L+0.750S+0.450W+H, LL Comb	70.393	73.900	66.242	69.153	34.246	10.973	55.829	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.412	64.237	56.837	59.821	29.392	7.582	55.831	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.410	64.251	56.779	60.039	28.577	8.866	55.182	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.412	64.237	56.837	59.821	29.392	7.582	57.856	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.416	64.215	56.924	59.493	32.022	11.525	53.108	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.418	64.200	56.982	59.275	32.836	10.242	55.782	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.416	64.215	56.924	59.493	32.022	11.525	55.133	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.418	64.200	56.982	59.275	32.836	10.242	57.807	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.390	64.371	56.298	63.246	31.699	8.529	53.170	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.392	64.357	56.357	63.028	32.513	7.246	55.844	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.390	64.371	56.298	63.246	31.698	8.530	55.195	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.392	64.357	56.357	63.028	32.513	7.246	57.869	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.396	64.335	56.444	62.700	35.143	11.189	53.121	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.398	64.320	56.502	62.482	35.957	9.906	55.795	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.396	64.335	56.444	62.700	35.143	11.189	55.146	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.398	64.320	56.502	62.482	35.957	9.906	57.820	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.626	62.955	64.608	66.713	27.360	9.104	53.148	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.628	62.940	64.667	66.495	28.174	7.820	55.821	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.626	62.955	64.608	66.713	27.359	9.104	55.173	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.628	62.940	64.667	66.495	28.174	7.821	57.846	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.632	62.919	64.754	66.167	30.804	11.764	53.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.634	62.904	64.812	65.949	31.618	10.480	55.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.632	62.919	64.754	66.167	30.804	11.764	55.124	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.634	62.904	64.812	65.949	31.618	10.481	57.798	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.606	63.075	64.128	69.920	30.481	8.768	53.161	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.608	63.060	64.186	69.701	31.295	7.484	55.834	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.606	63.075	64.128	69.920	30.481	8.768	55.186	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.608	63.060	64.186	69.702	31.295	7.485	57.859	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.612	63.039	64.274	69.374	33.925	11.428	53.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.614	63.024	64.332	69.156	34.739	10.144	55.786	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.612	63.039	64.274	69.374	33.925	11.428	55.137	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.614	63.024	64.332	69.156	34.739	10.145	57.811	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.134	67.313	60.002	59.553	28.703	8.841	53.158	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.136	67.298	60.060	59.335	29.517	7.557	55.832	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.134	67.313	60.002	59.553	28.703	8.841	55.183	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.136	67.298	60.060	59.335	29.517	7.558	57.856	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	66.140	67.276	60.147	59.007	32.147	11.501	53.109	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.142	67.262	60.206	58.789	32.962	10.217	55.783	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.140	67.276	60.147	59.007	32.147	11.501	55.134	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.142	67.262	60.206	58.789	32.961	10.218	57.808	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.114	67.433	59.522	62.760	31.824	8.505	53.171	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.116	67.418	59.580	62.542	32.638	7.221	55.845	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.114	67.433	59.522	62.760	31.824	8.505	55.196	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.116	67.418	59.580	62.542	32.638	7.222	57.870	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.120	67.396	59.667	62.214	35.268	11.165	53.122	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.122	67.382	59.725	61.996	36.083	9.881	55.796	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.120	67.396	59.667	62.214	35.268	11.165	55.147	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.122	67.382	59.725	61.996	36.082	9.882	57.821	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.350	66.016	67.832	66.227	27.485	9.079	53.149	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.352	66.002	67.890	66.009	28.299	7.796	55.822	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.350	66.016	67.832	66.227	27.485	9.080	55.174	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.352	66.002	67.890	66.009	28.299	7.796	57.847	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.356	65.980	67.977	65.681	30.929	11.739	53.100	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.358	65.965	68.035	65.463	31.744	10.456	55.774	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.356	65.980	67.977	65.681	30.929	11.739	55.125	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.358	65.965	68.035	65.463	31.743	10.456	57.799	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.330	66.136	67.351	69.434	30.606	8.743	53.162	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.332	66.122	67.410	69.216	31.420	7.460	55.835	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.330	66.136	67.351	69.434	30.606	8.744	55.187	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.332	66.122	67.410	69.216	31.420	7.460	57.860	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.336	66.100	67.497	68.888	34.051	11.403	53.113	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.338	66.085	67.555	68.670	34.865	10.120	55.787	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.336	66.100	67.497	68.888	34.050	11.403	55.138	
+D+0.750L+0.750S+0.5250E+H, LL Com	66.338	66.085	67.555	68.670	34.865	10.120	57.812	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.833	72.306	55.437	60.397	28.485	8.883	53.156	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.835	72.292	55.495	60.179	29.299	7.600	55.830	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.833	72.306	55.437	60.397	28.485	8.884	55.181	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.835	72.292	55.495	60.179	29.299	7.600	57.855	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.839	72.270	55.583	59.851	31.929	11.543	53.108	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.841	72.255	55.641	59.633	32.743	10.260	55.781	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.839	72.270	55.583	59.851	31.929	11.544	55.133	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.841	72.255	55.641	59.633	32.743	10.260	57.806	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.813	72.426	54.957	63.604	31.606	8.547	53.169	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.815	72.412	55.015	63.386	32.420	7.264	55.843	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.813	72.426	54.957	63.604	31.606	8.548	55.194	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.815	72.412	55.015	63.386	32.420	7.264	57.868	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.819	72.390	55.102	63.058	35.050	11.207	53.121	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.821	72.375	55.161	62.840	35.865	9.924	55.794	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.819	72.390	55.102	63.058	35.050	11.208	55.146	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.821	72.375	55.161	62.840	35.864	9.924	57.819	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.049	71.010	63.267	67.071	27.267	9.122	53.147	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.051	70.996	63.325	66.853	28.081	7.839	55.821	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.049	71.010	63.267	67.071	27.267	9.122	55.172	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.051	70.996	63.325	66.853	28.081	7.839	57.846	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.055	70.974	63.412	66.525	30.711	11.782	53.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.057	70.959	63.471	66.307	31.526	10.499	55.772	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.055	70.974	63.412	66.525	30.711	11.782	55.123	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.057	70.959	63.471	66.307	31.525	10.499	57.797	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.029	71.130	62.787	70.278	30.388	8.786	53.160	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.031	71.116	62.845	70.060	31.202	7.503	55.834	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.029	71.130	62.787	70.278	30.388	8.786	55.185	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.031	71.116	62.845	70.060	31.202	7.503	57.859	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.035	71.094	62.932	69.732	33.832	11.446	53.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.037	71.079	62.990	69.514	34.647	10.163	55.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	72.035	71.094	62.932	69.732	33.832	11.446	55.136	

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	72.037	71.079	62.990	69.514	34.646	10.163	57.810	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.557	75.368	58.660	59.912	28.610	8.859	53.157	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.559	75.353	58.718	59.694	29.425	7.575	55.831	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.557	75.368	58.660	59.912	28.610	8.859	55.182	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.559	75.353	58.718	59.694	29.424	7.576	57.856	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.563	75.331	58.806	59.366	32.055	11.519	53.109	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.565	75.317	58.864	59.148	32.869	10.235	55.782	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.563	75.331	58.806	59.366	32.054	11.519	55.134	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.565	75.317	58.864	59.148	32.869	10.236	57.807	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.537	75.488	58.180	63.119	31.731	8.523	53.170	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.539	75.473	58.238	62.901	32.546	7.239	55.844	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.537	75.488	58.180	63.119	31.731	8.523	55.195	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.539	75.473	58.238	62.901	32.545	7.240	57.869	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.543	75.451	58.326	62.573	35.176	11.183	53.122	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.545	75.437	58.384	62.355	35.990	9.899	55.795	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.543	75.451	58.326	62.573	35.176	11.183	55.147	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.545	75.437	58.384	62.355	35.990	9.900	57.820	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.773	74.071	66.490	66.586	27.392	9.097	53.148	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.775	74.057	66.548	66.367	28.207	7.814	55.822	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.773	74.071	66.490	66.586	27.392	9.098	55.173	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.775	74.057	66.548	66.368	28.207	7.814	57.847	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.779	74.035	66.636	66.040	30.837	11.757	53.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.781	74.021	66.694	65.822	31.651	10.474	55.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.779	74.035	66.636	66.040	30.837	11.758	55.124	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.781	74.021	66.694	65.822	31.651	10.474	57.798	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.753	74.192	66.010	69.793	30.514	8.761	53.161	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.755	74.177	66.068	69.574	31.328	7.478	55.835	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.753	74.192	66.010	69.793	30.513	8.762	55.186	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.755	74.177	66.068	69.574	31.328	7.478	57.860	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.759	74.155	66.156	69.247	33.958	11.421	53.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.761	74.141	66.214	69.028	34.772	10.138	55.786	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.759	74.155	66.155	69.247	33.958	11.422	55.137	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.761	74.141	66.214	69.029	34.772	10.138	57.811	
+0.60D+0.60W+0.60H	24.909	23.104	21.205	22.101	4.709	11.562	20.328	
+0.60D+0.70E+0.60H	26.733	23.426	21.167	21.936	5.410	10.449	22.970	
D Only	41.515	38.507	35.342	36.836	7.848	19.270	33.879	
Lr Only, LL Comb Run (******L)								
Lr Only, LL Comb Run (*****L*)								
Lr Only, LL Comb Run (*****LL)								
Lr Only, LL Comb Run (****L**)								
Lr Only, LL Comb Run (****L*L)								
Lr Only, LL Comb Run (****LL*)								
Lr Only, LL Comb Run (****LLL)								
Lr Only, LL Comb Run (***L***)								
Lr Only, LL Comb Run (***L**L)								
Lr Only, LL Comb Run (***L*L*)								
Lr Only, LL Comb Run (***L*LL)								
Lr Only, LL Comb Run (***LL**)								
Lr Only, LL Comb Run (***LL*L)								
Lr Only, LL Comb Run (***LLL*)								
Lr Only, LL Comb Run (***LLLL)								
Lr Only, LL Comb Run (**L****)								
Lr Only, LL Comb Run (**L***L)								
Lr Only, LL Comb Run (**L**L*)								
Lr Only, LL Comb Run (**L**LL)								
Lr Only, LL Comb Run (**L*L**)								
Lr Only, LL Comb Run (**L*L*L)								
Lr Only, LL Comb Run (**L*LL*)								
Lr Only, LL Comb Run (**L*LLL)								

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (**LL***)								
Lr Only, LL Comb Run (**LL**L)								
Lr Only, LL Comb Run (**LL*L*)								
Lr Only, LL Comb Run (**LL*LL)								
Lr Only, LL Comb Run (**LLL**)								
Lr Only, LL Comb Run (**LLL*L)								
Lr Only, LL Comb Run (**LLLL*)								
Lr Only, LL Comb Run (**LLLLL)								
Lr Only, LL Comb Run (*L*****)								
Lr Only, LL Comb Run (*L****L)								
Lr Only, LL Comb Run (*L***L*)								
Lr Only, LL Comb Run (*L***LL)								
Lr Only, LL Comb Run (*L**L**)								
Lr Only, LL Comb Run (*L**L*L)								
Lr Only, LL Comb Run (*L**LL*)								
Lr Only, LL Comb Run (*L**LLL)								
Lr Only, LL Comb Run (*L*L***)								
Lr Only, LL Comb Run (*L*L**L)								
Lr Only, LL Comb Run (*L*L*L*)								
Lr Only, LL Comb Run (*L*L*LL)								
Lr Only, LL Comb Run (*L*LL**)								
Lr Only, LL Comb Run (*L*LL*L)								
Lr Only, LL Comb Run (*L*LLL*)								
Lr Only, LL Comb Run (*L*LLLL)								
Lr Only, LL Comb Run (*LL****)								
Lr Only, LL Comb Run (*LL***L)								
Lr Only, LL Comb Run (*LL**L*)								
Lr Only, LL Comb Run (*LL**LL)								
Lr Only, LL Comb Run (*LL*L**)								
Lr Only, LL Comb Run (*LL*L*L)								
Lr Only, LL Comb Run (*LL*LL*)								
Lr Only, LL Comb Run (*LL*LLL)								
Lr Only, LL Comb Run (*LLL***)								
Lr Only, LL Comb Run (*LLL**L)								
Lr Only, LL Comb Run (*LLL*L*)								
Lr Only, LL Comb Run (*LLL*LL)								
Lr Only, LL Comb Run (*LLLL**)								
Lr Only, LL Comb Run (*LLLL*L)								
Lr Only, LL Comb Run (*LLLLL*)								
Lr Only, LL Comb Run (*LLLLLL)								
Lr Only, LL Comb Run (L******)								
Lr Only, LL Comb Run (L*****L)								
Lr Only, LL Comb Run (L****L*)								
Lr Only, LL Comb Run (L****LL)								
Lr Only, LL Comb Run (L***L**)								
Lr Only, LL Comb Run (L***L*L)								
Lr Only, LL Comb Run (L***LL*)								
Lr Only, LL Comb Run (L***LLL)								
Lr Only, LL Comb Run (L**L***)								
Lr Only, LL Comb Run (L**L**L)								
Lr Only, LL Comb Run (L**L*L*)								
Lr Only, LL Comb Run (L**L*LL)								
Lr Only, LL Comb Run (L**LL**)								
Lr Only, LL Comb Run (L**LL*L)								
Lr Only, LL Comb Run (L**LLL*)								
Lr Only, LL Comb Run (L**LLLL)								
Lr Only, LL Comb Run (L*L****)								
Lr Only, LL Comb Run (L*L***L)								
Lr Only, LL Comb Run (L*L**L*)								

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (L*L**LL)								
Lr Only, LL Comb Run (L*L*L**)								
Lr Only, LL Comb Run (L*L*L*L)								
Lr Only, LL Comb Run (L*L*LL*)								
Lr Only, LL Comb Run (L*L*LLL)								
Lr Only, LL Comb Run (L*LL***)								
Lr Only, LL Comb Run (L*LL**L)								
Lr Only, LL Comb Run (L*LL*L*)								
Lr Only, LL Comb Run (L*LL*LL)								
Lr Only, LL Comb Run (L*LLL**)								
Lr Only, LL Comb Run (L*LLL*L)								
Lr Only, LL Comb Run (L*LLLL*)								
Lr Only, LL Comb Run (L*LLLLL)								
Lr Only, LL Comb Run (LL*****)								
Lr Only, LL Comb Run (LL****L)								
Lr Only, LL Comb Run (LL***L*)								
Lr Only, LL Comb Run (LL***LL)								
Lr Only, LL Comb Run (LL**L**)								
Lr Only, LL Comb Run (LL**L*L)								
Lr Only, LL Comb Run (LL**LL*)								
Lr Only, LL Comb Run (LL**LLL)								
Lr Only, LL Comb Run (LL*L***)								
Lr Only, LL Comb Run (LL*L**L)								
Lr Only, LL Comb Run (LL*L*L*)								
Lr Only, LL Comb Run (LL*L*LL)								
Lr Only, LL Comb Run (LL*LL**)								
Lr Only, LL Comb Run (LL*LL*L)								
Lr Only, LL Comb Run (LL*LLL*)								
Lr Only, LL Comb Run (LL*LLLL)								
Lr Only, LL Comb Run (LLL****)								
Lr Only, LL Comb Run (LLL***L)								
Lr Only, LL Comb Run (LLL**L*)								
Lr Only, LL Comb Run (LLL**LL)								
Lr Only, LL Comb Run (LLL*L**)								
Lr Only, LL Comb Run (LLL*L*L)								
Lr Only, LL Comb Run (LLL*LL*)								
Lr Only, LL Comb Run (LLL*LLL)								
Lr Only, LL Comb Run (LLLL***)								
Lr Only, LL Comb Run (LLLL**L)								
Lr Only, LL Comb Run (LLLL*L*)								
Lr Only, LL Comb Run (LLLL*LL)								
Lr Only, LL Comb Run (LLLLL**)								
Lr Only, LL Comb Run (LLLLL*L)								
Lr Only, LL Comb Run (LLLLLL*)								
Lr Only, LL Comb Run (LLLLLLL)								
L Only, LL Comb Run (******L)	0.003	-0.019	0.078	-0.291	1.086	-1.711	3.565	
L Only, LL Comb Run (*****L*)	-0.000	0.000	-0.000	0.000	-0.000	0.000	2.700	
L Only, LL Comb Run (*****LL)	0.003	-0.019	0.078	-0.291	1.085	-1.711	6.265	
L Only, LL Comb Run (****L**)	0.008	-0.049	0.194	-0.728	4.592	3.547	-0.065	
L Only, LL Comb Run (****L*L)	0.011	-0.068	0.272	-1.019	5.678	1.835	3.500	
L Only, LL Comb Run (****LL*)	0.008	-0.049	0.194	-0.728	4.592	3.547	2.635	
L Only, LL Comb Run (****LLL)	0.011	-0.068	0.272	-1.019	5.678	1.836	6.200	
L Only, LL Comb Run (***L***)	-0.027	0.160	-0.640	4.276	4.162	-0.448	0.017	
L Only, LL Comb Run (***L**L)	-0.023	0.141	-0.563	3.985	5.247	-2.159	3.582	
L Only, LL Comb Run (***L*L*)	-0.027	0.160	-0.640	4.276	4.161	-0.448	2.717	
L Only, LL Comb Run (***L*LL)	-0.023	0.141	-0.563	3.985	5.247	-2.159	6.282	
L Only, LL Comb Run (***LL**)	-0.019	0.112	-0.446	3.548	8.754	3.099	-0.047	
L Only, LL Comb Run (***LL*L)	-0.015	0.092	-0.369	3.257	9.840	1.388	3.517	
L Only, LL Comb Run (***LLL*)	-0.019	0.112	-0.446	3.548	8.754	3.099	2.652	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (***LLLL)	-0.015	0.092	-0.369	3.257	9.839	1.388	6.217	
L Only, LL Comb Run (**L****)	0.288	-1.728	10.440	8.898	-1.624	0.318	-0.012	
L Only, LL Comb Run (**L***L)	0.291	-1.748	10.517	8.608	-0.538	-1.393	3.553	
L Only, LL Comb Run (**L**L*)	0.288	-1.728	10.440	8.899	-1.624	0.319	2.687	
L Only, LL Comb Run (**L**LL)	0.291	-1.748	10.517	8.608	-0.538	-1.393	6.252	
L Only, LL Comb Run (**L*L**)	0.296	-1.777	10.634	8.171	2.969	3.865	-0.077	
L Only, LL Comb Run (**L*L*L)	0.299	-1.796	10.711	7.880	4.054	2.154	3.488	
L Only, LL Comb Run (**L*LL*)	0.296	-1.777	10.634	8.171	2.968	3.865	2.623	
L Only, LL Comb Run (**L*LLL)	0.299	-1.796	10.711	7.880	4.054	2.154	6.188	
L Only, LL Comb Run (**LL***)	0.261	-1.568	9.800	13.174	2.538	-0.130	0.005	
L Only, LL Comb Run (**LL**L)	0.265	-1.588	9.877	12.884	3.623	-1.841	3.570	
L Only, LL Comb Run (**LL*L*)	0.261	-1.568	9.799	13.174	2.537	-0.129	2.705	
L Only, LL Comb Run (**LL*LL)	0.265	-1.588	9.877	12.884	3.623	-1.841	6.270	
L Only, LL Comb Run (**LLL**)	0.269	-1.617	9.994	12.447	7.130	3.417	-0.060	
L Only, LL Comb Run (**LLL*L)	0.273	-1.636	10.071	12.156	8.216	1.706	3.505	
L Only, LL Comb Run (**LLLL*)	0.269	-1.617	9.994	12.447	7.130	3.417	2.640	
L Only, LL Comb Run (**LLLLL)	0.273	-1.636	10.071	12.156	8.216	1.706	6.205	
L Only, LL Comb Run (*L*****)	-0.368	4.082	4.298	-0.647	0.167	-0.033	0.001	
L Only, LL Comb Run (*L****L)	-0.365	4.062	4.375	-0.938	1.253	-1.744	3.566	
L Only, LL Comb Run (*L***L*)	-0.368	4.082	4.298	-0.647	0.167	-0.032	2.701	
L Only, LL Comb Run (*L***LL)	-0.365	4.062	4.375	-0.938	1.253	-1.743	6.266	
L Only, LL Comb Run (*L**L**)	-0.360	4.033	4.492	-1.375	4.760	3.514	-0.064	
L Only, LL Comb Run (*L**L*L)	-0.356	4.014	4.569	-1.666	5.845	1.803	3.501	
L Only, LL Comb Run (*L**LL*)	-0.360	4.033	4.492	-1.375	4.759	3.514	2.636	
L Only, LL Comb Run (*L**LLL)	-0.356	4.014	4.569	-1.666	5.845	1.803	6.201	
L Only, LL Comb Run (*L*L***)	-0.394	4.242	3.657	3.628	4.329	-0.481	0.019	
L Only, LL Comb Run (*L*L**L)	-0.391	4.223	3.735	3.338	5.414	-2.192	3.584	
L Only, LL Comb Run (*L*L*L*)	-0.394	4.242	3.657	3.629	4.329	-0.480	2.718	
L Only, LL Comb Run (*L*L*LL)	-0.391	4.223	3.735	3.338	5.414	-2.191	6.283	
L Only, LL Comb Run (*L*LL**)	-0.386	4.193	3.852	2.901	8.921	3.066	-0.046	
L Only, LL Comb Run (*L*LL*L)	-0.383	4.174	3.929	2.610	10.007	1.355	3.519	
L Only, LL Comb Run (*L*LLL*)	-0.386	4.193	3.851	2.901	8.921	3.066	2.654	
L Only, LL Comb Run (*L*LLLL)	-0.383	4.174	3.929	2.610	10.007	1.355	6.218	
L Only, LL Comb Run (*LL****)	-0.080	2.354	14.737	8.251	-1.456	0.285	-0.011	
L Only, LL Comb Run (*LL***L)	-0.077	2.334	14.815	7.960	-0.371	-1.426	3.554	
L Only, LL Comb Run (*LL**L*)	-0.080	2.354	14.737	8.251	-1.457	0.286	2.689	
L Only, LL Comb Run (*LL**LL)	-0.077	2.334	14.815	7.960	-0.371	-1.425	6.254	
L Only, LL Comb Run (*LL*L**)	-0.072	2.305	14.932	7.523	3.136	3.832	-0.076	
L Only, LL Comb Run (*LL*L*L)	-0.068	2.286	15.009	7.232	4.222	2.121	3.489	
L Only, LL Comb Run (*LL*LL*)	-0.072	2.305	14.932	7.523	3.136	3.832	2.624	
L Only, LL Comb Run (*LL*LLL)	-0.068	2.286	15.009	7.232	4.221	2.121	6.189	
L Only, LL Comb Run (*LLL***)	-0.106	2.514	14.097	12.527	2.705	-0.163	0.006	
L Only, LL Comb Run (*LLL**L)	-0.103	2.494	14.175	12.236	3.791	-1.874	3.571	
L Only, LL Comb Run (*LLL*L*)	-0.106	2.514	14.097	12.527	2.705	-0.162	2.706	
L Only, LL Comb Run (*LLL*LL)	-0.103	2.494	14.175	12.236	3.790	-1.873	6.271	
L Only, LL Comb Run (*LLLL**)	-0.098	2.465	14.291	11.799	7.297	3.384	-0.058	
L Only, LL Comb Run (*LLLL*L)	-0.095	2.446	14.369	11.508	8.383	1.673	3.506	
L Only, LL Comb Run (*LLLLL*)	-0.098	2.465	14.291	11.799	7.297	3.384	2.641	
L Only, LL Comb Run (*LLLLLL)	-0.095	2.446	14.369	11.508	8.383	1.673	6.206	
L Only, LL Comb Run (L******)	7.231	10.740	-1.789	0.478	-0.124	0.024	-0.001	
L Only, LL Comb Run (L*****L)	7.234	10.721	-1.711	0.187	0.962	-1.687	3.564	
L Only, LL Comb Run (L****L*)	7.231	10.740	-1.789	0.478	-0.124	0.025	2.699	
L Only, LL Comb Run (L****LL)	7.234	10.721	-1.711	0.187	0.962	-1.686	6.264	
L Only, LL Comb Run (L***L**)	7.239	10.692	-1.595	-0.250	4.469	3.571	-0.066	
L Only, LL Comb Run (L***L*L)	7.242	10.672	-1.517	-0.541	5.555	1.860	3.499	
L Only, LL Comb Run (L***LL*)	7.239	10.692	-1.595	-0.250	4.469	3.571	2.634	
L Only, LL Comb Run (L***LLL)	7.242	10.672	-1.517	-0.541	5.554	1.860	6.199	
L Only, LL Comb Run (L**L***)	7.204	10.900	-2.429	4.754	4.038	-0.424	0.016	
L Only, LL Comb Run (L**L**L)	7.207	10.881	-2.351	4.463	5.124	-2.135	3.581	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (L**L*L*)	7.204	10.900	-2.429	4.754	4.038	-0.423	2.716	
L Only, LL Comb Run (L**L*LL)	7.207	10.881	-2.351	4.463	5.123	-2.134	6.281	
L Only, LL Comb Run (L**LL**)	7.212	10.852	-2.235	4.026	8.630	3.123	-0.048	
L Only, LL Comb Run (L**LL*L)	7.215	10.832	-2.157	3.735	9.716	1.412	3.516	
L Only, LL Comb Run (L**LLL*)	7.212	10.852	-2.235	4.026	8.630	3.123	2.651	
L Only, LL Comb Run (L**LLLL)	7.215	10.832	-2.157	3.735	9.716	1.412	6.216	
L Only, LL Comb Run (L*L****)	7.519	9.012	8.651	9.377	-1.747	0.342	-0.013	
L Only, LL Comb Run (L*L***L)	7.522	8.993	8.729	9.086	-0.662	-1.369	3.552	
L Only, LL Comb Run (L*L**L*)	7.519	9.012	8.651	9.377	-1.748	0.343	2.687	
L Only, LL Comb Run (L*L**LL)	7.522	8.993	8.729	9.086	-0.662	-1.368	6.251	
L Only, LL Comb Run (L*L*L**)	7.527	8.963	8.845	8.649	2.845	3.889	-0.078	
L Only, LL Comb Run (L*L*L*L)	7.530	8.944	8.923	8.358	3.931	2.178	3.487	
L Only, LL Comb Run (L*L*LL*)	7.527	8.963	8.845	8.649	2.845	3.889	2.622	
L Only, LL Comb Run (L*L*LLL)	7.530	8.944	8.923	8.358	3.931	2.178	6.187	
L Only, LL Comb Run (L*LL***)	7.492	9.172	8.011	13.652	2.414	-0.106	0.004	
L Only, LL Comb Run (L*LL**L)	7.495	9.153	8.088	13.362	3.500	-1.817	3.569	
L Only, LL Comb Run (L*LL*L*)	7.492	9.172	8.011	13.653	2.414	-0.105	2.704	
L Only, LL Comb Run (L*LL*LL)	7.495	9.153	8.088	13.362	3.500	-1.816	6.269	
L Only, LL Comb Run (L*LLL**)	7.500	9.123	8.205	12.925	7.007	3.441	-0.061	
L Only, LL Comb Run (L*LLL*L)	7.503	9.104	8.282	12.634	8.092	1.730	3.504	
L Only, LL Comb Run (L*LLLL*)	7.500	9.123	8.205	12.925	7.006	3.441	2.639	
L Only, LL Comb Run (L*LLLLL)	7.503	9.104	8.282	12.634	8.092	1.730	6.204	
L Only, LL Comb Run (LL*****)	6.863	14.822	2.509	-0.169	0.044	-0.009	0.000	
L Only, LL Comb Run (LL****L)	6.866	14.803	2.586	-0.460	1.129	-1.720	3.565	
L Only, LL Comb Run (LL***L*)	6.863	14.822	2.509	-0.169	0.044	-0.008	2.700	
L Only, LL Comb Run (LL***LL)	6.866	14.803	2.586	-0.460	1.129	-1.719	6.265	
L Only, LL Comb Run (LL**L**)	6.871	14.773	2.703	-0.897	4.636	3.538	-0.064	
L Only, LL Comb Run (LL**L*L)	6.874	14.754	2.781	-1.188	5.722	1.827	3.500	
L Only, LL Comb Run (LL**LL*)	6.871	14.773	2.703	-0.897	4.636	3.538	2.635	
L Only, LL Comb Run (LL**LLL)	6.874	14.754	2.781	-1.188	5.722	1.827	6.200	
L Only, LL Comb Run (LL*L***)	6.836	14.982	1.869	4.107	4.205	-0.457	0.018	
L Only, LL Comb Run (LL*L**L)	6.839	14.963	1.946	3.816	5.291	-2.168	3.583	
L Only, LL Comb Run (LL*L*L*)	6.836	14.982	1.869	4.107	4.205	-0.456	2.717	
L Only, LL Comb Run (LL*L*LL)	6.839	14.963	1.946	3.816	5.291	-2.167	6.282	
L Only, LL Comb Run (LL*LL**)	6.844	14.934	2.063	3.379	8.798	3.090	-0.047	
L Only, LL Comb Run (LL*LL*L)	6.848	14.914	2.140	3.088	9.883	1.379	3.518	
L Only, LL Comb Run (LL*LLL*)	6.844	14.934	2.063	3.379	8.797	3.091	2.653	
L Only, LL Comb Run (LL*LLLL)	6.848	14.914	2.140	3.088	9.883	1.379	6.218	
L Only, LL Comb Run (LLL****)	7.151	13.094	12.949	8.729	-1.580	0.310	-0.012	
L Only, LL Comb Run (LLL***L)	7.154	13.074	13.026	8.438	-0.494	-1.402	3.553	
L Only, LL Comb Run (LLL**L*)	7.151	13.094	12.949	8.729	-1.580	0.310	2.688	
L Only, LL Comb Run (LLL**LL)	7.154	13.074	13.026	8.438	-0.495	-1.401	6.253	
L Only, LL Comb Run (LLL*L**)	7.159	13.045	13.143	8.001	3.012	3.856	-0.077	
L Only, LL Comb Run (LLL*L*L)	7.162	13.026	13.220	7.710	4.098	2.145	3.488	
L Only, LL Comb Run (LLL*LL*)	7.159	13.045	13.143	8.001	3.012	3.857	2.623	
L Only, LL Comb Run (LLL*LLL)	7.162	13.026	13.220	7.710	4.098	2.145	6.188	
L Only, LL Comb Run (LLLL***)	7.124	13.254	12.308	13.005	2.581	-0.138	0.005	
L Only, LL Comb Run (LLLL**L)	7.128	13.234	12.386	12.714	3.667	-1.850	3.570	
L Only, LL Comb Run (LLLL*L*)	7.124	13.254	12.308	13.005	2.581	-0.138	2.705	
L Only, LL Comb Run (LLLL*LL)	7.128	13.234	12.386	12.714	3.667	-1.849	6.270	
L Only, LL Comb Run (LLLLL**)	7.132	13.205	12.503	12.277	7.174	3.408	-0.059	
L Only, LL Comb Run (LLLLL*L)	7.136	13.186	12.580	11.986	8.260	1.697	3.505	
L Only, LL Comb Run (LLLLLL*)	7.132	13.205	12.503	12.277	7.174	3.409	2.640	
L Only, LL Comb Run (LLLLLLL)	7.136	13.186	12.580	11.986	8.259	1.697	6.205	
S Only	31.369	34.004	28.620	31.103	26.939	-12.760	23.061	
W Only								
E Only	2.606	0.459	-0.055	-0.237	1.002	-1.591	3.776	
H Only								

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	56.50	103.77	103.77	0.00	1.00	94.96	PhiVc < Vu	8.816	132.2	10.3	10.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	56.50	34.74	34.74	4.10	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	56.50	33.13	33.13	7.95	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	56.50	31.52	31.52	11.62	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	56.50	29.90	29.90	15.11	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	56.50	28.29	28.29	18.42	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	56.50	26.68	26.68	21.54	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	56.50	25.07	25.07	24.48	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	56.50	23.45	23.45	27.24	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	56.50	21.84	21.84	29.82	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	56.50	20.23	20.23	32.21	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	56.50	18.62	18.62	34.41	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	56.50	17.00	17.00	36.44	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	56.50	15.39	15.39	38.28	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.59	56.50	14.00	14.00	34.02	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.70	56.50	12.95	12.95	35.55	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	56.50	11.90	11.90	36.96	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.93	56.50	10.84	10.84	38.26	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	56.50	10.02	10.02	33.63	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	56.50	9.31	9.31	34.72	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	56.50	8.60	8.60	35.74	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	56.50	7.89	7.89	36.68	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.50	56.50	7.17	7.17	37.53	0.90	94.63	Vu < PhiVc/2	Not Reqd 1	94.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.61	56.50	6.46	6.46	38.31	0.79	94.28	Vu < PhiVc/2	Not Reqd 1	94.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.73	56.50	5.75	5.75	39.00	0.69	93.95	Vu < PhiVc/2	Not Reqd 1	93.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.84	56.50	5.04	5.04	39.61	0.60	93.63	Vu < PhiVc/2	Not Reqd 1	93.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	56.50	-5.97	5.97	41.06	0.69	93.92	Vu < PhiVc/2	Not Reqd 1	93.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	56.50	-7.53	7.53	43.75	0.81	94.33	Vu < PhiVc/2	Not Reqd 1	94.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	56.50	-9.14	9.14	42.80	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	56.50	-10.75	10.75	41.67	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	56.50	-12.36	12.36	40.36	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	56.50	-49.40	49.40	38.05	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	56.50	-51.01	51.01	32.35	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	56.50	-52.62	52.62	26.46	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	56.50	-54.24	54.24	20.39	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	56.50	-55.85	55.85	14.13	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	56.50	-57.46	57.46	7.70	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	56.50	-59.07	59.07	1.07	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	57.00	-60.68	60.68	5.73	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	57.00	-62.30	62.30	12.72	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	57.00	-63.91	63.91	19.89	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	57.00	-65.52	65.52	27.24	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	57.00	-67.13	67.13	34.78	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	57.00	-68.75	68.75	42.50	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	57.00	37.75	37.75	50.40	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	57.00	36.13	36.13	46.21	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	57.00	34.52	34.52	42.19	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	57.00	32.91	32.91	38.36	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	57.00	31.30	31.30	34.71	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	57.00	29.69	29.69	31.25	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	57.00	28.07	28.07	27.97	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	57.00	26.46	26.46	24.87	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	57.00	24.85	24.85	21.95	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	57.00	23.24	23.24	19.22	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	6.14	57.00	21.62	21.62	16.67	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	57.00	20.01	20.01	14.31	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	57.00	18.40	18.40	12.12	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	57.00	16.79	16.79	10.12	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	57.00	15.17	15.17	8.31	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	57.00	13.56	13.56	6.67	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	57.00	11.95	11.95	5.23	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	57.00	10.34	10.34	3.96	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	57.00	8.72	8.72	2.88	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	57.00	7.11	7.11	1.98	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	57.00	5.50	5.50	1.26	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.39	57.00	4.00	4.00	5.35	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.50	57.00	3.01	3.01	9.37	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.61	57.00	-3.08	3.08	8.46	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.73	57.00	-4.02	4.02	6.28	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.84	57.00	-5.07	5.07	6.80	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.95	57.00	-6.12	6.12	7.44	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	57.00	-7.31	7.31	2.44	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	57.00	-8.92	8.92	3.36	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.30	57.00	-10.53	10.53	4.47	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	57.00	-12.14	12.14	5.76	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	57.00	-13.76	13.76	7.23	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	57.00	-15.37	15.37	8.88	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	57.00	-16.98	16.98	10.72	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	57.00	-18.59	18.59	12.74	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	57.00	-20.21	20.21	14.95	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	57.00	-21.82	21.82	17.34	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	57.00	-23.43	23.43	19.91	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	57.00	-25.04	25.04	22.66	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	57.00	-26.66	26.66	25.60	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	57.00	-28.27	28.27	28.72	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	57.00	-29.88	29.88	32.02	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	57.00	-31.49	31.49	35.51	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	57.00	-33.10	33.10	39.18	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	57.00	60.99	60.99	43.03	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	57.00	59.38	59.38	36.19	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	57.00	57.77	57.77	29.54	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	57.00	56.15	56.15	23.07	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	57.00	54.54	54.54	16.78	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	57.00	52.93	52.93	10.67	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	57.00	51.32	51.32	4.75	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	56.50	49.70	49.70	0.99	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	10.91	56.50	48.09	48.09	6.55	1.00	94.96	PhiVc/2 < Vu <=	Min 11.5.6	136.4	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	56.50	46.48	46.48	11.92	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.14	56.50	45.17	45.17	17.98	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.25	56.50	44.11	44.11	23.05	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.36	56.50	43.06	43.06	28.00	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.48	56.50	42.01	42.01	32.84	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.59	56.50	40.96	40.96	37.55	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.70	56.50	39.91	39.91	42.15	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	56.50	38.86	38.86	46.62	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	56.50	37.80	37.80	50.98	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	56.50	36.75	36.75	55.21	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	56.50	35.70	35.70	59.33	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	3	12.27	56.50	-25.65	25.65	55.13	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.39	56.50	-26.36	26.36	52.17	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.50	56.50	-27.28	27.28	52.29	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	56.50	-28.33	28.33	49.13	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	56.50	-29.38	29.38	45.85	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	56.50	-30.43	30.43	42.45	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	56.50	-31.49	31.49	38.93	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	56.50	-32.54	32.54	35.29	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.18	56.50	-33.59	33.59	31.54	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.30	56.50	-34.64	34.64	27.66	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.41	56.50	-35.69	35.69	23.66	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	56.50	-37.06	37.06	19.01	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	56.50	-38.67	38.67	14.71	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	56.50	-40.28	40.28	10.22	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	56.50	-41.89	41.89	5.55	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	56.50	-43.51	43.51	0.70	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	57.00	-45.12	45.12	4.34	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	57.00	-46.73	46.73	9.56	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	57.00	-48.34	48.34	14.96	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.43	57.00	-49.96	49.96	20.54	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	57.00	-51.57	51.57	26.31	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	57.00	-53.18	53.18	32.26	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	57.00	-54.79	54.79	38.40	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	57.00	-56.41	56.41	44.72	1.00	95.77	PhiVc/2 < Vu <=	Min 11.5.6	137.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	57.00	42.78	42.78	51.22	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	57.00	41.16	41.16	46.45	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	57.00	39.55	39.55	41.86	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	57.00	37.94	37.94	37.46	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	57.00	36.33	36.33	33.24	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	57.00	34.71	34.71	29.20	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	57.00	33.10	33.10	25.35	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	57.00	31.49	31.49	21.68	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	57.00	29.88	29.88	18.19	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	57.00	28.27	28.27	14.89	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	57.00	26.65	26.65	11.77	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	57.00	25.04	25.04	8.83	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	57.00	23.43	23.43	6.08	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	57.00	21.82	21.82	3.51	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	57.00	20.20	20.20	1.12	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	56.50	18.59	18.59	1.08	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	56.50	16.98	16.98	3.10	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	56.50	15.37	15.37	4.94	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.05	56.50	13.75	13.75	6.60	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	56.50	12.14	12.14	8.07	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.27	56.50	10.53	10.53	9.36	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.39	56.50	9.10	9.10	3.24	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.50	56.50	8.05	8.05	4.21	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.61	56.50	7.24	7.24	0.70	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	57.00	6.76	6.76	2.11	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	57.00	6.32	6.32	1.37	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	57.00	5.88	5.88	0.67	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	57.00	5.44	5.44	0.03	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.18	56.50	5.01	5.01	0.56	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.30	56.50	-5.16	5.16	12.33	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	18.41	56.50	-6.77	6.77	11.65	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.52	56.50	-8.39	8.39	10.79	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	56.50	-10.00	10.00	9.75	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	56.50	-11.61	11.61	8.52	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	56.50	-13.22	13.22	7.11	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	56.50	-14.83	14.83	5.52	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	56.50	-16.45	16.45	3.74	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	56.50	-18.06	18.06	1.78	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	57.00	-19.67	19.67	0.37	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	57.00	-21.28	21.28	2.69	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	57.00	-37.60	37.60	5.88	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	57.00	-38.06	38.06	10.18	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	57.00	-38.52	38.52	14.53	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	57.00	-38.98	38.98	18.94	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.00	57.00	18.09	18.09	23.39	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.11	57.00	17.63	17.63	21.36	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.23	57.00	17.18	17.18	19.38	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.34	57.00	16.72	16.72	17.46	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.45	57.00	16.26	16.26	15.58	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.57	57.00	15.80	15.80	13.76	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.68	57.00	15.35	15.35	11.99	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.80	57.00	14.89	14.89	10.27	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.91	57.00	14.43	14.43	8.61	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.02	57.00	13.98	13.98	6.99	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.14	57.00	13.52	13.52	5.43	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.25	57.00	13.06	13.06	3.92	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.36	57.00	12.60	12.60	2.46	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.48	57.00	12.15	12.15	1.06	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.59	56.50	11.69	11.69	0.30	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.70	56.50	11.23	11.23	1.60	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.82	56.50	10.78	10.78	2.85	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.93	56.50	10.32	10.32	4.05	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.05	56.50	9.86	9.86	5.20	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.16	56.50	9.40	9.40	6.29	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.27	56.50	8.95	8.95	7.33	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.39	56.50	8.49	8.49	8.32	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.50	56.50	8.03	8.03	9.26	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.61	56.50	7.58	7.58	10.15	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.73	56.50	7.15	7.15	9.43	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.84	56.50	6.78	6.78	10.22	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	22.95	56.50	-6.92	6.92	3.29	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.07	56.50	-7.57	7.57	2.47	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.18	56.50	-8.21	8.21	1.57	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.30	56.50	-8.86	8.86	0.60	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.41	57.00	-9.50	9.50	0.44	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.52	57.00	-10.15	10.15	1.56	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.64	57.00	-10.79	10.79	2.75	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.75	57.00	-11.44	11.44	4.01	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.86	57.00	-12.08	12.08	5.35	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.98	57.00	-12.73	12.73	6.76	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.09	57.00	-13.37	13.37	8.24	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.20	57.00	-14.02	14.02	9.80	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.32	57.00	-14.66	14.66	11.43	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.43	57.00	-15.30	15.30	13.13	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	5	24.55	57.00	-15.95	15.95	14.90	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.66	57.00	-16.59	16.59	16.75	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.77	57.00	-17.24	17.24	18.68	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.89	57.00	-17.88	17.88	20.67	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	25.00	57.00	12.48	12.48	24.45	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	25.32	57.00	11.87	11.87	20.51	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	25.65	57.00	11.25	11.25	16.77	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	25.97	57.00	10.64	10.64	13.22	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	26.30	57.00	10.03	10.03	9.87	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	26.62	57.00	9.42	9.42	6.72	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	26.94	57.00	8.81	8.81	3.77	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	27.27	57.00	8.20	8.20	1.01	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.40D+1.60H	6	27.59	56.50	7.59	7.59	1.54	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.40D+1.60H	6	27.91	56.50	6.98	6.98	3.90	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.40D+1.60H	6	28.24	56.50	6.37	6.37	6.06	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.40D+1.60H	6	28.56	56.50	5.76	5.76	8.03	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.40D+1.60H	6	28.89	56.50	5.15	5.15	9.79	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.21	56.50	-5.48	5.48	8.49	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.53	56.50	-6.00	6.00	6.63	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.86	56.50	-6.53	6.53	4.61	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.18	56.50	-7.05	7.05	2.41	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.51	56.50	-7.57	7.57	0.04	1.00	94.96	Vu < PhiVc/2	Not Reqd 1	95.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.83	57.00	-8.10	8.10	2.50	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.15	57.00	-8.62	8.62	5.21	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.48	57.00	-9.15	9.15	8.08	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.80	57.00	-9.67	9.67	11.13	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.13	57.00	-10.19	10.19	14.35	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.45	57.00	-10.72	10.72	17.73	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.77	57.00	-11.24	11.24	21.29	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.10	57.00	-11.76	11.76	25.01	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.42	57.00	-12.29	12.29	28.91	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.74	57.00	-12.81	12.81	32.97	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.07	57.00	-13.33	13.33	37.21	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.39	57.00	-13.86	13.86	41.61	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.72	57.00	-14.38	14.38	46.18	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.04	57.00	-14.91	14.91	50.93	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.36	57.00	-15.43	15.43	55.84	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.69	57.00	-15.95	15.95	60.92	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.01	57.00	-16.48	16.48	66.17	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.34	57.00	-17.00	17.00	71.59	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.66	57.00	-17.52	17.52	77.18	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.98	57.00	-18.05	18.05	82.94	1.00	95.77	Vu < PhiVc/2	Not Reqd 1	95.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.31	57.00	-18.57	18.57	88.87	0.99	95.74	Vu < PhiVc/2	Not Reqd 1	95.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.63	57.00	-19.10	19.10	94.97	0.96	95.62	Vu < PhiVc/2	Not Reqd 1	95.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.95	57.00	-19.62	19.62	101.24	0.92	95.51	Vu < PhiVc/2	Not Reqd 1	95.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.28	57.00	-20.14	20.14	107.68	0.89	95.40	Vu < PhiVc/2	Not Reqd 1	95.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.60	57.00	-20.67	20.67	114.29	0.86	95.30	Vu < PhiVc/2	Not Reqd 1	95.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.93	57.00	-21.19	21.19	121.07	0.83	95.21	Vu < PhiVc/2	Not Reqd 1	95.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.25	57.00	42.03	42.03	128.03	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.32	57.00	41.91	41.91	124.93	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.40	57.00	41.79	41.79	121.84	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.47	57.00	41.67	41.67	118.75	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.55	57.00	41.55	41.55	115.68	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.62	57.00	41.43	41.43	112.62	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	7	39.69	57.00	41.31	41.31	109.56	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.77	57.00	41.19	41.19	106.51	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.84	57.00	41.07	41.07	103.47	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.91	57.00	40.96	40.96	100.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.99	57.00	40.84	40.84	97.42	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.06	57.00	40.72	40.72	94.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.14	57.00	40.60	40.60	91.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.21	57.00	40.48	40.48	88.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.28	57.00	40.36	40.36	85.43	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.36	57.00	40.24	40.24	82.45	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.43	57.00	40.12	40.12	79.48	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.51	57.00	40.00	40.00	76.53	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.58	57.00	39.88	39.88	73.58	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.65	57.00	39.76	39.76	70.63	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.73	57.00	39.64	39.64	67.70	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.80	57.00	39.52	39.52	64.78	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.88	57.00	39.40	39.40	61.86	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.95	57.00	39.28	39.28	58.96	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.02	57.00	39.16	39.16	56.06	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.10	57.00	39.04	39.04	53.17	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.17	57.00	38.92	38.92	50.29	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.24	57.00	38.81	38.81	47.42	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.32	57.00	38.69	38.69	44.56	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.39	57.00	38.57	38.57	41.71	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.47	57.00	38.45	38.45	38.86	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.54	57.00	38.33	38.33	36.03	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.61	57.00	38.21	38.21	33.20	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.69	57.00	38.09	38.09	30.38	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.76	57.00	37.97	37.97	27.57	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.84	57.00	37.85	37.85	24.77	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.91	57.00	37.73	37.73	21.98	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.98	57.00	37.61	37.61	19.20	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.06	57.00	37.49	37.49	16.43	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.13	57.00	37.37	37.37	13.66	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.20	57.00	37.25	37.25	10.91	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.28	57.00	37.13	37.13	8.16	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.35	57.00	37.01	37.01	5.42	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.43	57.00	36.89	36.89	2.69	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.50	56.50	0.00	0.00	0.00	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.000	46.61	442.78	0.11
Span # 2	2	5.000	-50.40	448.89	0.11
Span # 3	3	5.000	61.87	442.78	0.14
Span # 4	4	5.000	-51.22	448.89	0.11
Span # 5	5	5.000	-23.39	448.89	0.05
Span # 6	6	14.250	-121.08	448.89	0.27
Span # 7	7	3.250	-128.03	245.29	0.52
+1.40D+1.60H					
Span # 1	1	5.000	33.78	442.78	0.08
Span # 2	2	5.000	-24.79	448.89	0.06
Span # 3	3	5.000	47.94	442.78	0.11
Span # 4	4	5.000	-30.21	448.89	0.07
Span # 5	5	5.000	-22.83	448.89	0.05

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-33.63	448.89	0.07
Span # 7	7	3.250	-38.21	245.29	0.16
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.97	442.78	0.07
Span # 2	2	5.000	-21.22	448.89	0.05
Span # 3	3	5.000	41.20	442.78	0.09
Span # 4	4	5.000	-25.50	448.89	0.06
Span # 5	5	5.000	-14.32	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.95	442.78	0.07
Span # 2	2	5.000	-21.25	448.89	0.05
Span # 3	3	5.000	41.09	442.78	0.09
Span # 4	4	5.000	-25.89	448.89	0.06
Span # 5	5	5.000	-19.57	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.97	442.78	0.07
Span # 2	2	5.000	-21.22	448.89	0.05
Span # 3	3	5.000	41.20	442.78	0.09
Span # 4	4	5.000	-25.51	448.89	0.06
Span # 5	5	5.000	-14.32	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	29.00	442.78	0.07
Span # 2	2	5.000	-21.19	448.89	0.05
Span # 3	3	5.000	41.36	442.78	0.09
Span # 4	4	5.000	-24.92	448.89	0.06
Span # 5	5	5.000	-20.43	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	29.02	442.78	0.07
Span # 2	2	5.000	-21.16	448.89	0.05
Span # 3	3	5.000	41.47	442.78	0.09
Span # 4	4	5.000	-24.53	448.89	0.05
Span # 5	5	5.000	-15.18	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	29.00	442.78	0.07
Span # 2	2	5.000	-21.19	448.89	0.05
Span # 3	3	5.000	41.36	442.78	0.09
Span # 4	4	5.000	-24.92	448.89	0.06
Span # 5	5	5.000	-20.43	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	29.02	442.78	0.07
Span # 2	2	5.000	-21.16	448.89	0.05
Span # 3	3	5.000	41.47	442.78	0.09
Span # 4	4	5.000	-24.53	448.89	0.05
Span # 5	5	5.000	-15.18	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.81	442.78	0.07
Span # 2	2	5.000	-21.46	448.89	0.05
Span # 3	3	5.000	40.19	442.78	0.09
Span # 4	4	5.000	-29.09	448.89	0.06
Span # 5	5	5.000	-19.25	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.83	442.78	0.07
Span # 2	2	5.000	-21.44	448.89	0.05

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	40.30	442.78	0.09
Span # 4	4	5.000	-28.71	448.89	0.06
Span # 5	5	5.000	-14.00	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.81	442.78	0.07
Span # 2	2	5.000	-21.46	448.89	0.05
Span # 3	3	5.000	40.19	442.78	0.09
Span # 4	4	5.000	-29.09	448.89	0.06
Span # 5	5	5.000	-19.25	448.89	0.04
Span # 6	6	14.250	-28.81	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.83	442.78	0.07
Span # 2	2	5.000	-21.44	448.89	0.05
Span # 3	3	5.000	40.30	442.78	0.09
Span # 4	4	5.000	-28.71	448.89	0.06
Span # 5	5	5.000	-14.00	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.85	442.78	0.07
Span # 2	2	5.000	-21.40	448.89	0.05
Span # 3	3	5.000	40.47	442.78	0.09
Span # 4	4	5.000	-28.12	448.89	0.06
Span # 5	5	5.000	-20.11	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.87	442.78	0.07
Span # 2	2	5.000	-21.37	448.89	0.05
Span # 3	3	5.000	40.57	442.78	0.09
Span # 4	4	5.000	-27.74	448.89	0.06
Span # 5	5	5.000	-14.86	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.85	442.78	0.07
Span # 2	2	5.000	-21.40	448.89	0.05
Span # 3	3	5.000	40.46	442.78	0.09
Span # 4	4	5.000	-28.12	448.89	0.06
Span # 5	5	5.000	-20.11	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.87	442.78	0.07
Span # 2	2	5.000	-21.37	448.89	0.05
Span # 3	3	5.000	40.57	442.78	0.09
Span # 4	4	5.000	-27.74	448.89	0.06
Span # 5	5	5.000	-14.86	448.89	0.03
Span # 6	6	14.250	-42.49	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.53	442.78	0.07
Span # 2	2	5.000	-28.72	448.89	0.06
Span # 3	3	5.000	57.37	442.78	0.13
Span # 4	4	5.000	-34.27	448.89	0.08
Span # 5	5	5.000	-19.79	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.54	442.78	0.07
Span # 2	2	5.000	-28.82	448.89	0.06
Span # 3	3	5.000	57.48	442.78	0.13
Span # 4	4	5.000	-33.88	448.89	0.08
Span # 5	5	5.000	-14.55	448.89	0.03
Span # 6	6	14.250	-42.48	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.53	442.78	0.07
Span # 2	2	5.000	-28.72	448.89	0.06
Span # 3	3	5.000	57.37	442.78	0.13
Span # 4	4	5.000	-34.27	448.89	0.08
Span # 5	5	5.000	-19.79	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.54	442.78	0.07
Span # 2	2	5.000	-28.82	448.89	0.06
Span # 3	3	5.000	57.48	442.78	0.13
Span # 4	4	5.000	-33.88	448.89	0.08
Span # 5	5	5.000	-14.55	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.57	442.78	0.07
Span # 2	2	5.000	-28.97	448.89	0.06
Span # 3	3	5.000	57.64	442.78	0.13
Span # 4	4	5.000	-33.30	448.89	0.07
Span # 5	5	5.000	-20.65	448.89	0.05
Span # 6	6	14.250	-28.87	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.59	442.78	0.07
Span # 2	2	5.000	-29.07	448.89	0.06
Span # 3	3	5.000	57.75	442.78	0.13
Span # 4	4	5.000	-32.91	448.89	0.07
Span # 5	5	5.000	-15.41	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.57	442.78	0.07
Span # 2	2	5.000	-28.97	448.89	0.06
Span # 3	3	5.000	57.64	442.78	0.13
Span # 4	4	5.000	-33.30	448.89	0.07
Span # 5	5	5.000	-20.65	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.59	442.78	0.07
Span # 2	2	5.000	-29.07	448.89	0.06
Span # 3	3	5.000	57.75	442.78	0.13
Span # 4	4	5.000	-32.91	448.89	0.07
Span # 5	5	5.000	-15.41	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.38	442.78	0.07
Span # 2	2	5.000	-27.89	448.89	0.06
Span # 3	3	5.000	56.47	442.78	0.13
Span # 4	4	5.000	-37.47	448.89	0.08
Span # 5	5	5.000	-19.47	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.40	442.78	0.07
Span # 2	2	5.000	-27.99	448.89	0.06
Span # 3	3	5.000	56.58	442.78	0.13
Span # 4	4	5.000	-37.09	448.89	0.08
Span # 5	5	5.000	-14.23	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.38	442.78	0.07
Span # 2	2	5.000	-27.89	448.89	0.06
Span # 3	3	5.000	56.47	442.78	0.13
Span # 4	4	5.000	-37.47	448.89	0.08

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-19.48	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.40	442.78	0.07
Span # 2	2	5.000	-27.99	448.89	0.06
Span # 3	3	5.000	56.58	442.78	0.13
Span # 4	4	5.000	-37.09	448.89	0.08
Span # 5	5	5.000	-14.23	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.42	442.78	0.07
Span # 2	2	5.000	-28.14	448.89	0.06
Span # 3	3	5.000	56.74	442.78	0.13
Span # 4	4	5.000	-36.50	448.89	0.08
Span # 5	5	5.000	-20.33	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.44	442.78	0.07
Span # 2	2	5.000	-28.24	448.89	0.06
Span # 3	3	5.000	56.85	442.78	0.13
Span # 4	4	5.000	-36.11	448.89	0.08
Span # 5	5	5.000	-15.09	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.42	442.78	0.07
Span # 2	2	5.000	-28.14	448.89	0.06
Span # 3	3	5.000	56.74	442.78	0.13
Span # 4	4	5.000	-36.50	448.89	0.08
Span # 5	5	5.000	-20.34	448.89	0.05
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.44	442.78	0.07
Span # 2	2	5.000	-28.24	448.89	0.06
Span # 3	3	5.000	56.85	442.78	0.13
Span # 4	4	5.000	-36.11	448.89	0.08
Span # 5	5	5.000	-15.09	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.95	442.78	0.06
Span # 2	2	5.000	-24.19	448.89	0.05
Span # 3	3	5.000	39.63	442.78	0.09
Span # 4	4	5.000	-25.03	448.89	0.06
Span # 5	5	5.000	-19.54	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.97	442.78	0.06
Span # 2	2	5.000	-24.17	448.89	0.05
Span # 3	3	5.000	39.74	442.78	0.09
Span # 4	4	5.000	-24.64	448.89	0.05
Span # 5	5	5.000	-14.30	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.95	442.78	0.06
Span # 2	2	5.000	-24.19	448.89	0.05
Span # 3	3	5.000	39.63	442.78	0.09
Span # 4	4	5.000	-25.03	448.89	0.06
Span # 5	5	5.000	-19.55	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.97	442.78	0.06

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-24.17	448.89	0.05
Span # 3	3	5.000	39.74	442.78	0.09
Span # 4	4	5.000	-24.64	448.89	0.05
Span # 5	5	5.000	-14.30	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.99	442.78	0.06
Span # 2	2	5.000	-24.13	448.89	0.05
Span # 3	3	5.000	39.90	442.78	0.09
Span # 4	4	5.000	-24.06	448.89	0.05
Span # 5	5	5.000	-20.40	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	27.01	442.78	0.06
Span # 2	2	5.000	-24.10	448.89	0.05
Span # 3	3	5.000	40.01	442.78	0.09
Span # 4	4	5.000	-23.67	448.89	0.05
Span # 5	5	5.000	-15.16	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.99	442.78	0.06
Span # 2	2	5.000	-24.13	448.89	0.05
Span # 3	3	5.000	39.90	442.78	0.09
Span # 4	4	5.000	-24.06	448.89	0.05
Span # 5	5	5.000	-20.41	448.89	0.05
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	27.01	442.78	0.06
Span # 2	2	5.000	-24.10	448.89	0.05
Span # 3	3	5.000	40.01	442.78	0.09
Span # 4	4	5.000	-23.67	448.89	0.05
Span # 5	5	5.000	-15.16	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.80	442.78	0.06
Span # 2	2	5.000	-24.41	448.89	0.05
Span # 3	3	5.000	38.73	442.78	0.09
Span # 4	4	5.000	-28.23	448.89	0.06
Span # 5	5	5.000	-19.23	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.82	442.78	0.06
Span # 2	2	5.000	-24.38	448.89	0.05
Span # 3	3	5.000	38.84	442.78	0.09
Span # 4	4	5.000	-27.84	448.89	0.06
Span # 5	5	5.000	-13.98	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.80	442.78	0.06
Span # 2	2	5.000	-24.41	448.89	0.05
Span # 3	3	5.000	38.73	442.78	0.09
Span # 4	4	5.000	-28.23	448.89	0.06
Span # 5	5	5.000	-19.23	448.89	0.04
Span # 6	6	14.250	-28.81	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.82	442.78	0.06
Span # 2	2	5.000	-24.38	448.89	0.05
Span # 3	3	5.000	38.84	442.78	0.09
Span # 4	4	5.000	-27.84	448.89	0.06
Span # 5	5	5.000	-13.98	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.85	442.78	0.06
Span # 2	2	5.000	-24.34	448.89	0.05
Span # 3	3	5.000	39.00	442.78	0.09
Span # 4	4	5.000	-27.26	448.89	0.06
Span # 5	5	5.000	-20.09	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.86	442.78	0.06
Span # 2	2	5.000	-24.32	448.89	0.05
Span # 3	3	5.000	39.11	442.78	0.09
Span # 4	4	5.000	-26.87	448.89	0.06
Span # 5	5	5.000	-14.84	448.89	0.03
Span # 6	6	14.250	-42.49	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.85	442.78	0.06
Span # 2	2	5.000	-24.34	448.89	0.05
Span # 3	3	5.000	39.00	442.78	0.09
Span # 4	4	5.000	-27.26	448.89	0.06
Span # 5	5	5.000	-20.09	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.86	442.78	0.06
Span # 2	2	5.000	-24.32	448.89	0.05
Span # 3	3	5.000	39.11	442.78	0.09
Span # 4	4	5.000	-26.87	448.89	0.06
Span # 5	5	5.000	-14.84	448.89	0.03
Span # 6	6	14.250	-42.49	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.52	442.78	0.06
Span # 2	2	5.000	-31.27	448.89	0.07
Span # 3	3	5.000	55.91	442.78	0.13
Span # 4	4	5.000	-33.41	448.89	0.07
Span # 5	5	5.000	-19.77	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.54	442.78	0.06
Span # 2	2	5.000	-31.37	448.89	0.07
Span # 3	3	5.000	56.01	442.78	0.13
Span # 4	4	5.000	-33.02	448.89	0.07
Span # 5	5	5.000	-14.52	448.89	0.03
Span # 6	6	14.250	-42.48	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.52	442.78	0.06
Span # 2	2	5.000	-31.27	448.89	0.07
Span # 3	3	5.000	55.91	442.78	0.13
Span # 4	4	5.000	-33.41	448.89	0.07
Span # 5	5	5.000	-19.77	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.54	442.78	0.06
Span # 2	2	5.000	-31.37	448.89	0.07
Span # 3	3	5.000	56.01	442.78	0.13
Span # 4	4	5.000	-33.02	448.89	0.07
Span # 5	5	5.000	-14.52	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.56	442.78	0.06
Span # 2	2	5.000	-31.53	448.89	0.07
Span # 3	3	5.000	56.18	442.78	0.13

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-32.44	448.89	0.07
Span # 5	5	5.000	-20.63	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.58	442.78	0.06
Span # 2	2	5.000	-31.63	448.89	0.07
Span # 3	3	5.000	56.29	442.78	0.13
Span # 4	4	5.000	-32.05	448.89	0.07
Span # 5	5	5.000	-15.38	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.56	442.78	0.06
Span # 2	2	5.000	-31.53	448.89	0.07
Span # 3	3	5.000	56.18	442.78	0.13
Span # 4	4	5.000	-32.44	448.89	0.07
Span # 5	5	5.000	-20.63	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.58	442.78	0.06
Span # 2	2	5.000	-31.63	448.89	0.07
Span # 3	3	5.000	56.29	442.78	0.13
Span # 4	4	5.000	-32.05	448.89	0.07
Span # 5	5	5.000	-15.38	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	28.37	442.78	0.06
Span # 2	2	5.000	-30.44	448.89	0.07
Span # 3	3	5.000	55.01	442.78	0.12
Span # 4	4	5.000	-36.61	448.89	0.08
Span # 5	5	5.000	-19.45	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	28.39	442.78	0.06
Span # 2	2	5.000	-30.54	448.89	0.07
Span # 3	3	5.000	55.12	442.78	0.12
Span # 4	4	5.000	-36.22	448.89	0.08
Span # 5	5	5.000	-14.20	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	28.37	442.78	0.06
Span # 2	2	5.000	-30.44	448.89	0.07
Span # 3	3	5.000	55.01	442.78	0.12
Span # 4	4	5.000	-36.61	448.89	0.08
Span # 5	5	5.000	-19.45	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	28.39	442.78	0.06
Span # 2	2	5.000	-30.54	448.89	0.07
Span # 3	3	5.000	55.12	442.78	0.12
Span # 4	4	5.000	-36.22	448.89	0.08
Span # 5	5	5.000	-14.21	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	28.42	442.78	0.06
Span # 2	2	5.000	-30.70	448.89	0.07
Span # 3	3	5.000	55.28	442.78	0.12
Span # 4	4	5.000	-35.64	448.89	0.08
Span # 5	5	5.000	-20.31	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	28.44	442.78	0.06
Span # 2	2	5.000	-30.80	448.89	0.07
Span # 3	3	5.000	55.39	442.78	0.13
Span # 4	4	5.000	-35.25	448.89	0.08
Span # 5	5	5.000	-15.06	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	28.42	442.78	0.06
Span # 2	2	5.000	-30.70	448.89	0.07
Span # 3	3	5.000	55.28	442.78	0.12
Span # 4	4	5.000	-35.64	448.89	0.08
Span # 5	5	5.000	-20.31	448.89	0.05
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	28.44	442.78	0.06
Span # 2	2	5.000	-30.80	448.89	0.07
Span # 3	3	5.000	55.39	442.78	0.13
Span # 4	4	5.000	-35.25	448.89	0.08
Span # 5	5	5.000	-15.07	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.83	442.78	0.09
Span # 2	2	5.000	-30.15	448.89	0.07
Span # 3	3	5.000	42.17	442.78	0.10
Span # 4	4	5.000	-26.53	448.89	0.06
Span # 5	5	5.000	-19.58	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.85	442.78	0.09
Span # 2	2	5.000	-30.13	448.89	0.07
Span # 3	3	5.000	42.28	442.78	0.10
Span # 4	4	5.000	-26.14	448.89	0.06
Span # 5	5	5.000	-14.34	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.83	442.78	0.09
Span # 2	2	5.000	-30.15	448.89	0.07
Span # 3	3	5.000	42.17	442.78	0.10
Span # 4	4	5.000	-26.53	448.89	0.06
Span # 5	5	5.000	-19.59	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.85	442.78	0.09
Span # 2	2	5.000	-30.13	448.89	0.07
Span # 3	3	5.000	42.28	442.78	0.10
Span # 4	4	5.000	-26.14	448.89	0.06
Span # 5	5	5.000	-14.34	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.88	442.78	0.09
Span # 2	2	5.000	-30.09	448.89	0.07
Span # 3	3	5.000	42.44	442.78	0.10
Span # 4	4	5.000	-25.56	448.89	0.06
Span # 5	5	5.000	-20.44	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.90	442.78	0.09
Span # 2	2	5.000	-30.06	448.89	0.07
Span # 3	3	5.000	42.55	442.78	0.10
Span # 4	4	5.000	-25.17	448.89	0.06
Span # 5	5	5.000	-15.20	448.89	0.03

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.88	442.78	0.09
Span # 2	2	5.000	-30.09	448.89	0.07
Span # 3	3	5.000	42.44	442.78	0.10
Span # 4	4	5.000	-25.56	448.89	0.06
Span # 5	5	5.000	-20.45	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.90	442.78	0.09
Span # 2	2	5.000	-30.06	448.89	0.07
Span # 3	3	5.000	42.55	442.78	0.10
Span # 4	4	5.000	-25.17	448.89	0.06
Span # 5	5	5.000	-15.20	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.69	442.78	0.09
Span # 2	2	5.000	-30.37	448.89	0.07
Span # 3	3	5.000	41.27	442.78	0.09
Span # 4	4	5.000	-29.73	448.89	0.07
Span # 5	5	5.000	-19.27	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.71	442.78	0.09
Span # 2	2	5.000	-30.34	448.89	0.07
Span # 3	3	5.000	41.38	442.78	0.09
Span # 4	4	5.000	-29.34	448.89	0.07
Span # 5	5	5.000	-14.02	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.69	442.78	0.09
Span # 2	2	5.000	-30.37	448.89	0.07
Span # 3	3	5.000	41.27	442.78	0.09
Span # 4	4	5.000	-29.73	448.89	0.07
Span # 5	5	5.000	-19.27	448.89	0.04
Span # 6	6	14.250	-28.81	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.71	442.78	0.09
Span # 2	2	5.000	-30.34	448.89	0.07
Span # 3	3	5.000	41.38	442.78	0.09
Span # 4	4	5.000	-29.34	448.89	0.07
Span # 5	5	5.000	-14.02	448.89	0.03
Span # 6	6	14.250	-42.46	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.73	442.78	0.09
Span # 2	2	5.000	-30.30	448.89	0.07
Span # 3	3	5.000	41.54	442.78	0.09
Span # 4	4	5.000	-28.76	448.89	0.06
Span # 5	5	5.000	-20.13	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.75	442.78	0.09
Span # 2	2	5.000	-30.28	448.89	0.07
Span # 3	3	5.000	41.65	442.78	0.09
Span # 4	4	5.000	-28.37	448.89	0.06
Span # 5	5	5.000	-14.88	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.73	442.78	0.09
Span # 2	2	5.000	-30.30	448.89	0.07

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	41.54	442.78	0.09
Span # 4	4	5.000	-28.76	448.89	0.06
Span # 5	5	5.000	-20.13	448.89	0.04
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.75	442.78	0.09
Span # 2	2	5.000	-30.28	448.89	0.07
Span # 3	3	5.000	41.65	442.78	0.09
Span # 4	4	5.000	-28.37	448.89	0.06
Span # 5	5	5.000	-14.88	448.89	0.03
Span # 6	6	14.250	-42.49	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.41	442.78	0.09
Span # 2	2	5.000	-27.85	448.89	0.06
Span # 3	3	5.000	58.45	442.78	0.13
Span # 4	4	5.000	-34.91	448.89	0.08
Span # 5	5	5.000	-19.81	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.42	442.78	0.09
Span # 2	2	5.000	-27.82	448.89	0.06
Span # 3	3	5.000	58.56	442.78	0.13
Span # 4	4	5.000	-34.52	448.89	0.08
Span # 5	5	5.000	-14.56	448.89	0.03
Span # 6	6	14.250	-42.48	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.41	442.78	0.09
Span # 2	2	5.000	-27.85	448.89	0.06
Span # 3	3	5.000	58.45	442.78	0.13
Span # 4	4	5.000	-34.91	448.89	0.08
Span # 5	5	5.000	-19.81	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.42	442.78	0.09
Span # 2	2	5.000	-27.82	448.89	0.06
Span # 3	3	5.000	58.56	442.78	0.13
Span # 4	4	5.000	-34.52	448.89	0.08
Span # 5	5	5.000	-14.56	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.45	442.78	0.09
Span # 2	2	5.000	-27.78	448.89	0.06
Span # 3	3	5.000	58.72	442.78	0.13
Span # 4	4	5.000	-33.94	448.89	0.08
Span # 5	5	5.000	-20.67	448.89	0.05
Span # 6	6	14.250	-28.87	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.47	442.78	0.09
Span # 2	2	5.000	-27.76	448.89	0.06
Span # 3	3	5.000	58.83	442.78	0.13
Span # 4	4	5.000	-33.55	448.89	0.07
Span # 5	5	5.000	-15.42	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.45	442.78	0.09
Span # 2	2	5.000	-27.78	448.89	0.06
Span # 3	3	5.000	58.72	442.78	0.13
Span # 4	4	5.000	-33.94	448.89	0.08
Span # 5	5	5.000	-20.67	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.47	442.78	0.09
Span # 2	2	5.000	-27.76	448.89	0.06
Span # 3	3	5.000	58.83	442.78	0.13
Span # 4	4	5.000	-33.55	448.89	0.07
Span # 5	5	5.000	-15.42	448.89	0.03
Span # 6	6	14.250	-42.51	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.26	442.78	0.09
Span # 2	2	5.000	-28.06	448.89	0.06
Span # 3	3	5.000	57.55	442.78	0.13
Span # 4	4	5.000	-38.11	448.89	0.08
Span # 5	5	5.000	-19.49	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.28	442.78	0.09
Span # 2	2	5.000	-28.04	448.89	0.06
Span # 3	3	5.000	57.66	442.78	0.13
Span # 4	4	5.000	-37.72	448.89	0.08
Span # 5	5	5.000	-14.25	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.26	442.78	0.09
Span # 2	2	5.000	-28.06	448.89	0.06
Span # 3	3	5.000	57.55	442.78	0.13
Span # 4	4	5.000	-38.11	448.89	0.08
Span # 5	5	5.000	-19.49	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.28	442.78	0.09
Span # 2	2	5.000	-28.04	448.89	0.06
Span # 3	3	5.000	57.66	442.78	0.13
Span # 4	4	5.000	-37.72	448.89	0.08
Span # 5	5	5.000	-14.25	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.30	442.78	0.09
Span # 2	2	5.000	-28.00	448.89	0.06
Span # 3	3	5.000	57.82	442.78	0.13
Span # 4	4	5.000	-37.14	448.89	0.08
Span # 5	5	5.000	-20.35	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.32	442.78	0.09
Span # 2	2	5.000	-27.97	448.89	0.06
Span # 3	3	5.000	57.93	442.78	0.13
Span # 4	4	5.000	-36.75	448.89	0.08
Span # 5	5	5.000	-15.11	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.30	442.78	0.09
Span # 2	2	5.000	-28.00	448.89	0.06
Span # 3	3	5.000	57.82	442.78	0.13
Span # 4	4	5.000	-37.14	448.89	0.08
Span # 5	5	5.000	-20.35	448.89	0.05
Span # 6	6	14.250	-28.85	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.32	442.78	0.09
Span # 2	2	5.000	-27.97	448.89	0.06
Span # 3	3	5.000	57.93	442.78	0.13
Span # 4	4	5.000	-36.75	448.89	0.08

Description : GB-M (2 units) - option (calc for cantilever portion at exterior)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-15.11	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.83	442.78	0.09
Span # 2	2	5.000	-33.10	448.89	0.07
Span # 3	3	5.000	40.71	442.78	0.09
Span # 4	4	5.000	-25.67	448.89	0.06
Span # 5	5	5.000	-19.56	448.89	0.04
Span # 6	6	14.250	-28.83	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.85	442.78	0.09
Span # 2	2	5.000	-33.07	448.89	0.07
Span # 3	3	5.000	40.82	442.78	0.09
Span # 4	4	5.000	-25.28	448.89	0.06
Span # 5	5	5.000	-14.31	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.83	442.78	0.09
Span # 2	2	5.000	-33.10	448.89	0.07
Span # 3	3	5.000	40.71	442.78	0.09
Span # 4	4	5.000	-25.67	448.89	0.06
Span # 5	5	5.000	-19.56	448.89	0.04
Span # 6	6	14.250	-28.82	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.85	442.78	0.09
Span # 2	2	5.000	-33.07	448.89	0.07
Span # 3	3	5.000	40.82	442.78	0.09
Span # 4	4	5.000	-25.28	448.89	0.06
Span # 5	5	5.000	-14.32	448.89	0.03
Span # 6	6	14.250	-42.47	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.87	442.78	0.09
Span # 2	2	5.000	-33.03	448.89	0.07
Span # 3	3	5.000	40.98	442.78	0.09
Span # 4	4	5.000	-24.70	448.89	0.06
Span # 5	5	5.000	-20.42	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.89	442.78	0.09
Span # 2	2	5.000	-33.01	448.89	0.07
Span # 3	3	5.000	41.09	442.78	0.09
Span # 4	4	5.000	-24.31	448.89	0.05
Span # 5	5	5.000	-15.17	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.87	442.78	0.09
Span # 2	2	5.000	-33.03	448.89	0.07
Span # 3	3	5.000	40.98	442.78	0.09
Span # 4	4	5.000	-24.70	448.89	0.06
Span # 5	5	5.000	-20.42	448.89	0.05
Span # 6	6	14.250	-28.86	448.89	0.06
Span # 7	7	3.250	-32.75	245.29	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.89	442.78	0.09
Span # 2	2	5.000	-33.01	448.89	0.07
Span # 3	3	5.000	41.09	442.78	0.09
Span # 4	4	5.000	-24.31	448.89	0.05
Span # 5	5	5.000	-15.18	448.89	0.03
Span # 6	6	14.250	-42.50	448.89	0.09
Span # 7	7	3.250	-46.84	245.29	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	37.68	442.78	0.09

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

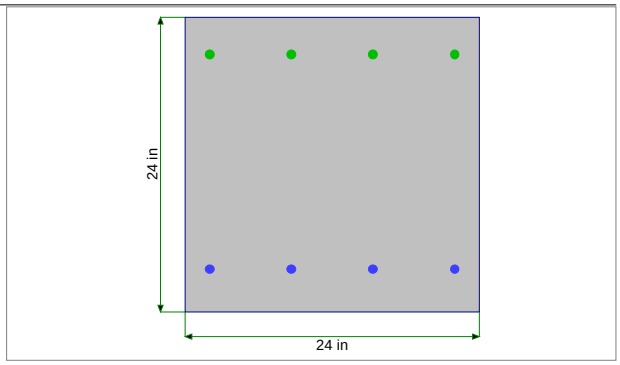
Description : GB-M (2 units) -with cantilever (interior grade beams)

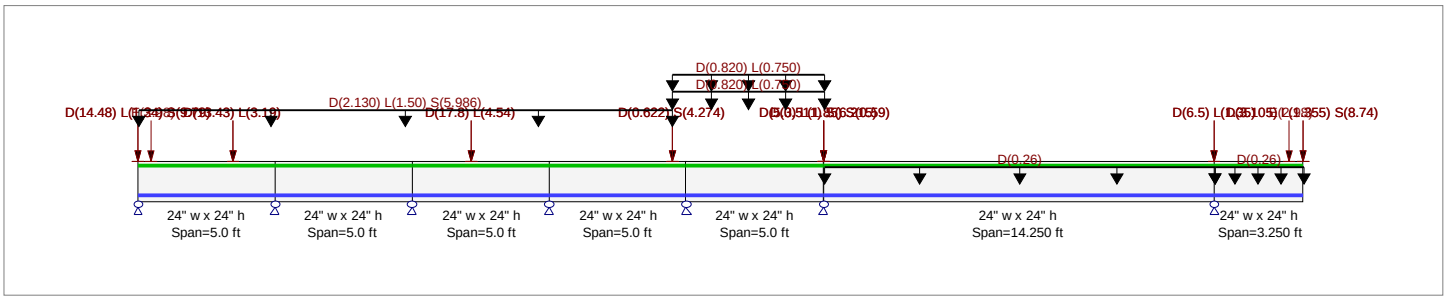
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #5 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #6 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 14.250 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 14.250 ft in this span

Span #7 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 3.250 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 3.250 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 1.065, L = 0.750, S = 2.993 ksf, Extent = 0.0 -->> 19.50 ft, Tributary Width = 2.0 ft
- Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.0 ft
- Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.0 ft

Load for Span Number 1
- Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
- Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
- Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
- Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
- Point Load : E = 2.980 k @ 0.50 ft, (OTM)

Load for Span Number 3
- Point Load : D = 17.80, L = 4.540 k @ 2.167 ft, (GB-E)
- Point Load : D = 17.80, L = 4.540 k @ 2.167 ft, (GB-E)

Load for Span Number 4
- Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P12)

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P12)
Load for Span Number 6
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 0.0 ft, (GB-F)
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 0.0 ft, (GB-F)
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)
Uniform Load : D = 0.260 k/ft, Tributary Width = 1.0 ft, (WALL L3)
Load for Span Number 7
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM LOAD)
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM LOAD)
Uniform Load : D = 0.260 k/ft, Tributary Width = 1.0 ft, (WALL L3)
Point Load : E = 2.980 k @ 2.750 ft, (OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.734** : 1	Maximum Deflection			
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied	-124.812 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	169.996 k-ft	Max Downward Total Deflection	0.022 in	Ratio =	3544 >=24
Location of maximum on span	0.000 ft	Max Upward Total Deflection	-0.010 in	Ratio =	17859 >=24
Span # where maximum occurs	Span # 7				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Overall MAXimum	71.891	72.564	65.802	67.148	36.137	15.784	53.055	
Overall MINimum	24.313	21.350	19.810	19.983	4.741	0.084	17.439	
+D+H	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+L+H, LL Comb Run (******L)	40.525	35.564	33.158	33.291	8.987	10.184	32.629	
+D+L+H, LL Comb Run (*****L*)	40.522	35.584	33.080	33.582	7.901	11.895	31.764	
+D+L+H, LL Comb Run (*****LL)	40.525	35.564	33.158	33.291	8.987	10.184	35.329	
+D+L+H, LL Comb Run (****L**)	40.530	35.535	33.275	32.854	12.494	15.442	29.000	
+D+L+H, LL Comb Run (****L*L)	40.534	35.516	33.352	32.563	13.580	13.731	32.564	
+D+L+H, LL Comb Run (****LL*)	40.530	35.535	33.274	32.854	12.494	15.442	31.699	
+D+L+H, LL Comb Run (****LLL)	40.534	35.516	33.352	32.563	13.580	13.731	35.264	
+D+L+H, LL Comb Run (***L***)	40.496	35.744	32.440	37.857	12.063	11.447	29.082	
+D+L+H, LL Comb Run (***L**L)	40.499	35.724	32.518	37.567	13.149	9.736	32.647	
+D+L+H, LL Comb Run (***L*L*)	40.496	35.744	32.440	37.857	12.063	11.448	31.782	
+D+L+H, LL Comb Run (***L*LL)	40.499	35.724	32.518	37.567	13.149	9.736	35.346	
+D+L+H, LL Comb Run (***LL**)	40.504	35.695	32.634	37.129	16.656	14.994	29.017	
+D+L+H, LL Comb Run (***LL*L)	40.507	35.676	32.712	36.839	17.741	13.283	32.582	
+D+L+H, LL Comb Run (***LLL*)	40.504	35.695	32.634	37.130	16.655	14.994	31.717	
+D+L+H, LL Comb Run (***LLLL)	40.507	35.676	32.712	36.839	17.741	13.283	35.282	
+D+L+H, LL Comb Run (**L****)	40.810	33.856	43.520	42.480	6.278	12.213	29.052	
+D+L+H, LL Comb Run (**L***L)	40.813	33.836	43.598	42.189	7.364	10.502	32.617	
+D+L+H, LL Comb Run (**L**L*)	40.810	33.856	43.520	42.480	6.278	12.214	31.752	
+D+L+H, LL Comb Run (**L**LL)	40.813	33.836	43.598	42.189	7.363	10.502	35.317	
+D+L+H, LL Comb Run (**L*L**)	40.818	33.807	43.714	41.752	10.870	15.760	28.987	
+D+L+H, LL Comb Run (**L*L*L)	40.822	33.788	43.792	41.461	11.956	14.049	32.552	
+D+L+H, LL Comb Run (**L*LL*)	40.818	33.807	43.714	41.752	10.870	15.760	31.687	
+D+L+H, LL Comb Run (**L*LLL)	40.822	33.788	43.792	41.461	11.956	14.049	35.252	
+D+L+H, LL Comb Run (**LL***)	40.784	34.016	42.880	46.756	10.439	11.765	29.069	
+D+L+H, LL Comb Run (**LL**L)	40.787	33.996	42.957	46.465	11.525	10.054	32.634	
+D+L+H, LL Comb Run (**LL*L*)	40.784	34.016	42.880	46.756	10.439	11.766	31.769	
+D+L+H, LL Comb Run (**LL*LL)	40.787	33.996	42.957	46.465	11.525	10.055	35.334	
+D+L+H, LL Comb Run (**LLL**)	40.792	33.967	43.074	46.028	15.032	15.312	29.005	
+D+L+H, LL Comb Run (**LLL*L)	40.795	33.948	43.152	45.737	16.118	13.601	32.569	
+D+L+H, LL Comb Run (**LLLL*)	40.792	33.967	43.074	46.028	15.032	15.312	31.704	
+D+L+H, LL Comb Run (**LLLLL)	40.795	33.948	43.152	45.737	16.117	13.601	35.269	
+D+L+H, LL Comb Run (*L*****)	40.154	39.666	37.378	32.934	8.069	11.862	29.066	
+D+L+H, LL Comb Run (*L****L)	40.158	39.646	37.456	32.643	9.155	10.151	32.631	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (*L***L*)	40.154	39.666	37.378	32.934	8.069	11.863	31.765	
+D+L+H, LL Comb Run (*L***LL)	40.158	39.646	37.456	32.643	9.154	10.152	35.330	
+D+L+H, LL Comb Run (*L**L**)	40.162	39.617	37.572	32.206	12.661	15.409	29.001	
+D+L+H, LL Comb Run (*L**L*L)	40.166	39.598	37.650	31.915	13.747	13.698	32.566	
+D+L+H, LL Comb Run (*L**LL*)	40.162	39.617	37.572	32.206	12.661	15.409	31.701	
+D+L+H, LL Comb Run (*L**LLL)	40.166	39.598	37.650	31.915	13.747	13.698	35.266	
+D+L+H, LL Comb Run (*L*L***)	40.128	39.826	36.738	37.210	12.231	11.414	29.083	
+D+L+H, LL Comb Run (*L*L**L)	40.131	39.806	36.815	36.919	13.316	9.703	32.648	
+D+L+H, LL Comb Run (*L*L*L*)	40.128	39.826	36.738	37.210	12.230	11.415	31.783	
+D+L+H, LL Comb Run (*L*L*LL)	40.131	39.806	36.815	36.919	13.316	9.704	35.348	
+D+L+H, LL Comb Run (*L*LL**)	40.136	39.777	36.932	36.482	16.823	14.961	29.018	
+D+L+H, LL Comb Run (*L*LL*L)	40.139	39.758	37.009	36.191	17.909	13.250	32.583	
+D+L+H, LL Comb Run (*L*LLL*)	40.136	39.777	36.932	36.482	16.823	14.961	31.718	
+D+L+H, LL Comb Run (*L*LLLL)	40.139	39.758	37.009	36.191	17.908	13.250	35.283	
+D+L+H, LL Comb Run (*LL****)	40.442	37.937	47.818	41.832	6.445	12.180	29.053	
+D+L+H, LL Comb Run (*LL***L)	40.446	37.918	47.895	41.542	7.531	10.469	32.618	
+D+L+H, LL Comb Run (*LL**L*)	40.442	37.937	47.818	41.832	6.445	12.181	31.753	
+D+L+H, LL Comb Run (*LL**LL)	40.446	37.918	47.895	41.542	7.531	10.470	35.318	
+D+L+H, LL Comb Run (*LL*L**)	40.451	37.889	48.012	41.105	11.038	15.727	28.989	
+D+L+H, LL Comb Run (*LL*L*L)	40.454	37.869	48.089	40.814	12.123	14.016	32.553	
+D+L+H, LL Comb Run (*LL*LL*)	40.451	37.889	48.012	41.105	11.037	15.727	31.688	
+D+L+H, LL Comb Run (*LL*LLL)	40.454	37.869	48.089	40.814	12.123	14.016	35.253	
+D+L+H, LL Comb Run (*LLL***)	40.416	38.097	47.178	46.108	10.607	11.732	29.071	
+D+L+H, LL Comb Run (*LLL**L)	40.419	38.078	47.255	45.818	11.692	10.021	32.636	
+D+L+H, LL Comb Run (*LLL*L*)	40.416	38.097	47.178	46.108	10.606	11.733	31.770	
+D+L+H, LL Comb Run (*LLL*LL)	40.419	38.078	47.255	45.818	11.692	10.022	35.335	
+D+L+H, LL Comb Run (*LLLL**)	40.424	38.049	47.372	45.380	15.199	15.279	29.006	
+D+L+H, LL Comb Run (*LLLL*L)	40.427	38.029	47.449	45.090	16.285	13.568	32.571	
+D+L+H, LL Comb Run (*LLLLL*)	40.424	38.049	47.372	45.381	15.199	15.279	31.706	
+D+L+H, LL Comb Run (*LLLLLL)	40.427	38.030	47.449	45.090	16.285	13.568	35.271	
+D+L+H, LL Comb Run (L******)	47.753	46.324	31.292	34.059	7.778	11.919	29.063	
+D+L+H, LL Comb Run (L*****L)	47.756	46.305	31.369	33.769	8.864	10.208	32.628	
+D+L+H, LL Comb Run (L****L*)	47.753	46.324	31.292	34.060	7.778	11.920	31.763	
+D+L+H, LL Comb Run (L****LL)	47.756	46.305	31.369	33.769	8.864	10.209	35.328	
+D+L+H, LL Comb Run (L***L**)	47.761	46.275	31.486	33.332	12.371	15.466	28.999	
+D+L+H, LL Comb Run (L***L*L)	47.764	46.256	31.563	33.041	13.456	13.755	32.564	
+D+L+H, LL Comb Run (L***LL*)	47.761	46.275	31.486	33.332	12.370	15.466	31.698	
+D+L+H, LL Comb Run (L***LLL)	47.764	46.256	31.563	33.041	13.456	13.755	35.263	
+D+L+H, LL Comb Run (L**L***)	47.726	46.484	30.651	38.335	11.940	11.471	29.081	
+D+L+H, LL Comb Run (L**L**L)	47.730	46.465	30.729	38.045	13.025	9.760	32.646	
+D+L+H, LL Comb Run (L**L*L*)	47.726	46.484	30.651	38.336	11.939	11.472	31.781	
+D+L+H, LL Comb Run (L**L*LL)	47.730	46.465	30.729	38.045	13.025	9.761	35.345	
+D+L+H, LL Comb Run (L**LL**)	47.734	46.436	30.846	37.608	16.532	15.018	29.016	
+D+L+H, LL Comb Run (L**LL*L)	47.738	46.416	30.923	37.317	17.618	13.307	32.581	
+D+L+H, LL Comb Run (L**LLL*)	47.734	46.436	30.846	37.608	16.532	15.018	31.716	
+D+L+H, LL Comb Run (L**LLLL)	47.738	46.416	30.923	37.317	17.618	13.307	35.281	
+D+L+H, LL Comb Run (L*L****)	48.041	44.596	41.731	42.958	6.154	12.237	29.051	
+D+L+H, LL Comb Run (L*L***L)	48.044	44.576	41.809	42.667	7.240	10.526	32.616	
+D+L+H, LL Comb Run (L*L**L*)	48.041	44.596	41.731	42.958	6.154	12.238	31.751	
+D+L+H, LL Comb Run (L*L**LL)	48.044	44.576	41.809	42.667	7.240	10.527	35.316	
+D+L+H, LL Comb Run (L*L*L**)	48.049	44.547	41.926	42.230	10.747	15.784	28.986	
+D+L+H, LL Comb Run (L*L*L*L)	48.052	44.528	42.003	41.939	11.833	14.073	32.551	
+D+L+H, LL Comb Run (L*L*LL*)	48.049	44.547	41.926	42.230	10.747	15.784	31.686	
+D+L+H, LL Comb Run (L*L*LLL)	48.052	44.528	42.003	41.939	11.832	14.073	35.251	
+D+L+H, LL Comb Run (L*LL***)	48.014	44.756	41.091	47.234	10.316	11.789	29.068	
+D+L+H, LL Comb Run (L*LL**L)	48.018	44.736	41.169	46.943	11.402	10.078	32.633	
+D+L+H, LL Comb Run (L*LL*L*)	48.014	44.756	41.091	47.234	10.316	11.790	31.768	
+D+L+H, LL Comb Run (L*LL*LL)	48.018	44.736	41.169	46.943	11.401	10.079	35.333	
+D+L+H, LL Comb Run (L*LLL**)	48.022	44.707	41.285	46.506	14.908	15.336	29.004	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (L*LLL*L)	48.026	44.688	41.363	46.215	15.994	13.625	32.569	
+D+L+H, LL Comb Run (L*LLLL*)	48.022	44.707	41.285	46.506	14.908	15.336	31.703	
+D+L+H, LL Comb Run (L*LLLLL)	48.026	44.688	41.363	46.215	15.994	13.625	35.268	
+D+L+H, LL Comb Run (LL*****)	47.385	50.406	35.589	33.412	7.945	11.886	29.065	
+D+L+H, LL Comb Run (LL****L)	47.388	50.386	35.667	33.121	9.031	10.175	32.630	
+D+L+H, LL Comb Run (LL***L*)	47.385	50.406	35.589	33.412	7.945	11.887	31.765	
+D+L+H, LL Comb Run (LL***LL)	47.388	50.386	35.667	33.121	9.031	10.176	35.329	
+D+L+H, LL Comb Run (LL**L**)	47.393	50.357	35.783	32.684	12.538	15.433	29.000	
+D+L+H, LL Comb Run (LL**L*L)	47.396	50.338	35.861	32.393	13.624	13.722	32.565	
+D+L+H, LL Comb Run (LL**LL*)	47.393	50.357	35.783	32.684	12.538	15.433	31.700	
+D+L+H, LL Comb Run (LL**LLL)	47.396	50.338	35.861	32.393	13.623	13.722	35.265	
+D+L+H, LL Comb Run (LL*L***)	47.358	50.566	34.949	37.688	12.107	11.439	29.082	
+D+L+H, LL Comb Run (LL*L**L)	47.362	50.546	35.027	37.397	13.193	9.727	32.647	
+D+L+H, LL Comb Run (LL*L*L*)	47.358	50.566	34.949	37.688	12.107	11.439	31.782	
+D+L+H, LL Comb Run (LL*L*LL)	47.362	50.546	35.027	37.397	13.192	9.728	35.347	
+D+L+H, LL Comb Run (LL*LL**)	47.367	50.517	35.143	36.960	16.699	14.985	29.017	
+D+L+H, LL Comb Run (LL*LL*L)	47.370	50.498	35.221	36.669	17.785	13.274	32.582	
+D+L+H, LL Comb Run (LL*LLL*)	47.367	50.517	35.143	36.960	16.699	14.986	31.717	
+D+L+H, LL Comb Run (LL*LLLL)	47.370	50.498	35.221	36.669	17.785	13.274	35.282	
+D+L+H, LL Comb Run (LLL****)	47.673	48.678	46.029	42.310	6.322	12.205	29.052	
+D+L+H, LL Comb Run (LLL***L)	47.676	48.658	46.107	42.020	7.407	10.493	32.617	
+D+L+H, LL Comb Run (LLL**L*)	47.673	48.678	46.029	42.311	6.321	12.205	31.752	
+D+L+H, LL Comb Run (LLL**LL)	47.676	48.658	46.107	42.020	7.407	10.494	35.317	
+D+L+H, LL Comb Run (LLL*L**)	47.681	48.629	46.223	41.583	10.914	15.751	28.988	
+D+L+H, LL Comb Run (LLL*L*L)	47.685	48.610	46.301	41.292	12.000	14.040	32.552	
+D+L+H, LL Comb Run (LLL*LL*)	47.681	48.629	46.223	41.583	10.914	15.752	31.687	
+D+L+H, LL Comb Run (LLL*LLL)	47.685	48.610	46.301	41.292	12.000	14.040	35.252	
+D+L+H, LL Comb Run (LLLL***)	47.647	48.838	45.389	46.586	10.483	11.757	29.070	
+D+L+H, LL Comb Run (LLLL**L)	47.650	48.818	45.466	46.296	11.569	10.046	32.635	
+D+L+H, LL Comb Run (LLLL*L*)	47.647	48.838	45.389	46.586	10.483	11.757	31.770	
+D+L+H, LL Comb Run (LLLL*LL)	47.650	48.818	45.466	46.296	11.569	10.046	35.334	
+D+L+H, LL Comb Run (LLLLL**)	47.655	48.789	45.583	45.859	15.076	15.303	29.005	
+D+L+H, LL Comb Run (LLLLL*L)	47.658	48.770	45.661	45.568	16.161	13.592	32.570	
+D+L+H, LL Comb Run (LLLLLL*)	47.655	48.789	45.583	45.859	15.075	15.304	31.705	
+D+L+H, LL Comb Run (LLLLLLL)	47.658	48.770	45.660	45.568	16.161	13.593	35.270	
+D+Lr+H, LL Comb Run (******L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*****L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*****LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (****L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (****L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (****LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (****LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***L***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***L**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***L*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***L*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***LL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***LL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***LLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (***LLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L***L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L**L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L**LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L*L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L*L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L*LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**L*LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LL***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (**LL**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LL*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LL*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LLL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LLL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LLLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (**LLLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L****L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L***L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L***LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L**L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L**L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L**LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L**LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*L***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*L**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*L*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*L*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*LL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*LL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*LLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*L*LLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL***L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL**L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL**LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL*L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL*L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL*LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LL*LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLL***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLL**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLL*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLL*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLLL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLLL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLLLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (*LLLLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L******)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*****L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L****L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L****LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L***L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L***L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L***LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L***LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**L***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**L**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**L*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**L*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**LL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**LL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**LLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L**LLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L***L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L**L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L**LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (L*L*L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L*L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L*LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*L*LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LL***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LL**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LL*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LL*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LLL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LLL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LLLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (L*LLLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL****L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL***L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL***LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL**L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL**L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL**LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL**LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*L***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*L**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*L*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*L*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*LL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*LL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*LLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LL*LLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL****)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL***L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL**L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL**LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL*L**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL*L*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL*LL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLL*LLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLL***)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLL**L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLL*L*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLL*LL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLLL**)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLLL*L)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLLLL*)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+Lr+H, LL Comb Run (LLLLLLL)	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+S+H	71.891	69.587	61.701	64.684	34.840	-0.865	52.125	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.525	35.569	33.139	33.363	8.716	10.612	31.738	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.522	35.584	33.080	33.581	7.902	11.895	31.089	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.525	35.569	33.139	33.363	8.716	10.612	33.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.528	35.547	33.226	33.036	11.346	14.555	29.016	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.531	35.533	33.284	32.817	12.160	13.272	31.689	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.528	35.547	33.226	33.036	11.346	14.555	31.041	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.531	35.533	33.284	32.817	12.160	13.272	33.714	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.502	35.704	32.600	36.788	11.023	11.559	29.077	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.505	35.689	32.658	36.570	11.837	10.276	31.751	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.502	35.704	32.600	36.788	11.023	11.559	31.102	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.505	35.689	32.658	36.570	11.837	10.276	33.776	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.508	35.667	32.746	36.242	14.467	14.219	29.029	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.511	35.653	32.804	36.024	15.281	12.936	31.702	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.508	35.667	32.746	36.243	14.467	14.219	31.054	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	40.511	35.653	32.804	36.024	15.281	12.936	33.727	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.738	34.288	40.910	40.255	6.684	12.134	29.055	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.741	34.273	40.968	40.037	7.498	10.850	31.729	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.738	34.288	40.910	40.255	6.684	12.134	31.080	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.741	34.273	40.968	40.037	7.498	10.851	33.754	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.744	34.251	41.056	39.709	10.128	14.794	29.007	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.747	34.237	41.114	39.491	10.942	13.510	31.680	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.744	34.251	41.056	39.709	10.128	14.794	31.031	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.747	34.237	41.114	39.491	10.942	13.511	33.705	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.718	34.408	40.430	43.462	9.805	11.798	29.068	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.721	34.393	40.488	43.244	10.619	10.514	31.742	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.718	34.408	40.430	43.462	9.805	11.798	31.093	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.721	34.393	40.488	43.244	10.619	10.515	33.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.724	34.371	40.576	42.916	13.249	14.458	29.020	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.727	34.357	40.634	42.698	14.064	13.174	31.693	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.724	34.371	40.576	42.916	13.249	14.458	31.044	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.727	34.357	40.634	42.698	14.063	13.175	33.718	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.246	38.645	36.304	33.096	8.027	11.870	29.065	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.249	38.631	36.362	32.878	8.841	10.587	31.739	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.246	38.645	36.304	33.096	8.027	11.871	31.090	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.249	38.631	36.362	32.878	8.841	10.587	33.764	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.252	38.609	36.449	32.550	11.472	14.530	29.017	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.255	38.594	36.507	32.332	12.286	13.247	31.690	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.252	38.609	36.449	32.550	11.471	14.531	31.042	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.255	38.594	36.507	32.332	12.286	13.247	33.715	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.226	38.765	35.823	36.303	11.148	11.535	29.078	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.229	38.751	35.882	36.085	11.963	10.251	31.752	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.226	38.765	35.823	36.303	11.148	11.535	31.103	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.229	38.751	35.882	36.085	11.962	10.251	33.777	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.232	38.729	35.969	35.757	14.593	14.194	29.030	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.235	38.714	36.027	35.539	15.407	12.911	31.703	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.232	38.729	35.969	35.757	14.592	14.195	31.055	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.235	38.714	36.027	35.539	15.407	12.911	33.728	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.462	37.349	44.133	39.770	6.809	12.109	29.056	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.465	37.334	44.192	39.552	7.624	10.826	31.730	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.462	37.349	44.133	39.770	6.809	12.109	31.081	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.465	37.334	44.192	39.552	7.623	10.826	33.755	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.468	37.313	44.279	39.224	10.254	14.769	29.007	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.471	37.298	44.337	39.006	11.068	13.486	31.681	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.468	37.313	44.279	39.224	10.253	14.769	31.032	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.471	37.298	44.337	39.006	11.068	13.486	33.706	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.442	37.469	43.653	42.977	9.930	11.773	29.069	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.445	37.454	43.711	42.759	10.745	10.490	31.743	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.442	37.469	43.653	42.977	9.930	11.773	31.094	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.445	37.454	43.711	42.759	10.745	10.490	33.768	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.448	37.433	43.799	42.431	13.375	14.433	29.021	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.451	37.418	43.857	42.213	14.189	13.150	31.694	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.448	37.433	43.799	42.431	13.375	14.433	31.045	
+D+0.750Lr+0.750L+H, LL Comb Run (	40.451	37.418	43.857	42.213	14.189	13.150	33.719	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.945	43.639	31.739	33.940	7.809	11.913	29.064	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.948	43.624	31.797	33.722	8.623	10.630	31.737	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.945	43.639	31.739	33.940	7.809	11.914	31.089	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.948	43.624	31.797	33.722	8.623	10.630	33.762	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.951	43.603	31.884	33.394	11.253	14.573	29.015	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.954	43.588	31.943	33.176	12.068	13.290	31.689	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.951	43.603	31.884	33.394	11.253	14.573	31.040	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.954	43.588	31.943	33.176	12.067	13.290	33.714	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.925	43.759	31.259	37.147	10.930	11.577	29.077	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.928	43.744	31.317	36.929	11.744	10.294	31.750	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	45.925	43.759	31.259	37.147	10.930	11.578	31.102	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.928	43.744	31.317	36.929	11.744	10.294	33.775	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.931	43.723	31.404	36.601	14.375	14.237	29.028	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.934	43.708	31.462	36.383	15.189	12.954	31.702	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.931	43.723	31.404	36.601	14.374	14.238	31.053	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.934	43.708	31.462	36.383	15.189	12.954	33.727	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.161	42.343	39.569	40.614	6.591	12.152	29.054	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.164	42.328	39.627	40.396	7.405	10.868	31.728	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.161	42.343	39.569	40.614	6.591	12.152	31.079	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.164	42.328	39.627	40.396	7.405	10.869	33.753	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.167	42.306	39.714	40.068	10.036	14.812	29.006	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.170	42.292	39.772	39.850	10.850	13.528	31.679	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.167	42.306	39.714	40.068	10.035	14.812	31.031	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.170	42.292	39.772	39.850	10.850	13.529	33.704	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.141	42.463	39.088	43.821	9.712	11.816	29.067	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.144	42.448	39.147	43.603	10.527	10.532	31.741	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.141	42.463	39.088	43.821	9.712	11.816	31.092	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.144	42.448	39.147	43.603	10.526	10.533	33.766	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.147	42.426	39.234	43.275	13.157	14.476	29.019	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.150	42.412	39.292	43.057	13.971	13.192	31.693	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.147	42.426	39.234	43.275	13.156	14.476	31.044	
+D+0.750Lr+0.750L+H, LL Comb Run (	46.150	42.412	39.292	43.057	13.971	13.193	33.717	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.669	46.700	34.962	33.454	7.935	11.889	29.065	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.672	46.686	35.020	33.236	8.749	10.605	31.738	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.669	46.700	34.962	33.454	7.934	11.889	31.089	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.672	46.686	35.020	33.236	8.749	10.606	33.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.675	46.664	35.108	32.908	11.379	14.549	29.016	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.678	46.649	35.166	32.690	12.193	13.265	31.690	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.675	46.664	35.108	32.909	11.379	14.549	31.041	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.678	46.649	35.166	32.690	12.193	13.266	33.715	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.649	46.820	34.482	36.661	11.056	11.553	29.078	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.652	46.806	34.540	36.443	11.870	10.269	31.751	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.649	46.820	34.482	36.661	11.055	11.553	31.103	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.652	46.806	34.540	36.443	11.870	10.270	33.776	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.655	46.784	34.627	36.115	14.500	14.213	29.029	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.658	46.769	34.686	35.897	15.314	12.929	31.703	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.655	46.784	34.627	36.115	14.500	14.213	31.054	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.658	46.769	34.686	35.897	15.314	12.930	33.728	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.885	45.404	42.792	40.128	6.717	12.127	29.055	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.888	45.390	42.850	39.910	7.531	10.844	31.729	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.885	45.404	42.792	40.128	6.716	12.128	31.080	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.888	45.390	42.850	39.910	7.531	10.844	33.754	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.892	45.368	42.938	39.582	10.161	14.787	29.007	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.894	45.353	42.996	39.364	10.975	13.504	31.680	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.892	45.368	42.937	39.582	10.161	14.787	31.032	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.894	45.353	42.996	39.364	10.975	13.504	33.705	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.865	45.524	42.312	43.335	9.838	11.791	29.068	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.868	45.510	42.370	43.117	10.652	10.508	31.742	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.865	45.524	42.312	43.335	9.838	11.792	31.093	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.868	45.510	42.370	43.117	10.652	10.508	33.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.872	45.488	42.457	42.789	13.282	14.451	29.020	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.874	45.473	42.515	42.571	14.096	13.168	31.693	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.872	45.488	42.457	42.789	13.282	14.452	31.045	
+D+0.750Lr+0.750L+H, LL Comb Run (	45.874	45.473	42.515	42.571	14.096	13.168	33.718	
+D+0.750L+0.750S+H, LL Comb Run (*	64.051	61.072	54.604	56.691	28.920	1.042	49.034	
+D+0.750L+0.750S+H, LL Comb Run (*	64.049	61.086	54.546	56.909	28.106	2.325	48.385	
+D+0.750L+0.750S+H, LL Comb Run (*	64.051	61.072	54.604	56.691	28.920	1.042	51.059	
+D+0.750L+0.750S+H, LL Comb Run (*	64.055	61.050	54.691	56.363	31.550	4.985	46.311	
+D+0.750L+0.750S+H, LL Comb Run (*	64.057	61.036	54.749	56.145	32.364	3.702	48.985	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (*	64.055	61.050	54.691	56.363	31.550	4.985	48.336	
+D+0.750L+0.750S+H, LL Comb Run (*	64.057	61.036	54.749	56.145	32.364	3.702	51.010	
+D+0.750L+0.750S+H, LL Comb Run (*	64.029	61.207	54.065	60.116	31.227	1.989	46.373	
+D+0.750L+0.750S+H, LL Comb Run (*	64.031	61.192	54.124	59.898	32.041	0.706	49.047	
+D+0.750L+0.750S+H, LL Comb Run (*	64.029	61.207	54.065	60.116	31.227	1.989	48.398	
+D+0.750L+0.750S+H, LL Comb Run (*	64.031	61.192	54.124	59.898	32.041	0.706	51.072	
+D+0.750L+0.750S+H, LL Comb Run (*	64.035	61.170	54.211	59.570	34.671	4.649	46.324	
+D+0.750L+0.750S+H, LL Comb Run (*	64.037	61.156	54.269	59.352	35.486	3.366	48.998	
+D+0.750L+0.750S+H, LL Comb Run (*	64.035	61.170	54.211	59.570	34.671	4.649	48.349	
+D+0.750L+0.750S+H, LL Comb Run (*	64.037	61.156	54.269	59.352	35.485	3.366	51.023	
+D+0.750L+0.750S+H, LL Comb Run (*	64.265	59.790	62.375	63.583	26.888	2.564	46.351	
+D+0.750L+0.750S+H, LL Comb Run (*	64.267	59.776	62.434	63.364	27.702	1.280	49.024	
+D+0.750L+0.750S+H, LL Comb Run (*	64.265	59.790	62.375	63.583	26.888	2.564	48.376	
+D+0.750L+0.750S+H, LL Comb Run (*	64.267	59.776	62.434	63.364	27.702	1.281	51.049	
+D+0.750L+0.750S+H, LL Comb Run (*	64.271	59.754	62.521	63.037	30.332	5.223	46.302	
+D+0.750L+0.750S+H, LL Comb Run (*	64.273	59.739	62.579	62.819	31.147	3.940	48.976	
+D+0.750L+0.750S+H, LL Comb Run (*	64.271	59.754	62.521	63.037	30.332	5.224	48.327	
+D+0.750L+0.750S+H, LL Comb Run (*	64.273	59.739	62.579	62.819	31.146	3.940	51.001	
+D+0.750L+0.750S+H, LL Comb Run (*	64.245	59.910	61.895	66.789	30.009	2.228	46.364	
+D+0.750L+0.750S+H, LL Comb Run (*	64.247	59.896	61.953	66.571	30.823	0.944	49.037	
+D+0.750L+0.750S+H, LL Comb Run (*	64.245	59.910	61.895	66.790	30.009	2.228	48.389	
+D+0.750L+0.750S+H, LL Comb Run (*	64.247	59.896	61.953	66.571	30.823	0.945	51.062	
+D+0.750L+0.750S+H, LL Comb Run (*	64.251	59.874	62.041	66.244	33.453	4.888	46.315	
+D+0.750L+0.750S+H, LL Comb Run (*	64.253	59.859	62.099	66.025	34.268	3.604	48.989	
+D+0.750L+0.750S+H, LL Comb Run (*	64.251	59.874	62.041	66.244	33.453	4.888	48.340	
+D+0.750L+0.750S+H, LL Comb Run (*	64.253	59.859	62.099	66.026	34.267	3.605	51.014	
+D+0.750L+0.750S+H, LL Comb Run (*	63.773	64.148	57.769	56.423	28.231	2.300	46.361	
+D+0.750L+0.750S+H, LL Comb Run (*	63.775	64.133	57.827	56.205	29.046	1.017	49.035	
+D+0.750L+0.750S+H, LL Comb Run (*	63.773	64.148	57.769	56.423	28.231	2.301	48.386	
+D+0.750L+0.750S+H, LL Comb Run (*	63.775	64.133	57.827	56.205	29.045	1.017	51.059	
+D+0.750L+0.750S+H, LL Comb Run (*	63.779	64.111	57.914	55.877	31.676	4.960	46.312	
+D+0.750L+0.750S+H, LL Comb Run (*	63.781	64.097	57.973	55.659	32.490	3.677	48.986	
+D+0.750L+0.750S+H, LL Comb Run (*	63.779	64.111	57.914	55.877	31.675	4.961	48.337	
+D+0.750L+0.750S+H, LL Comb Run (*	63.781	64.097	57.973	55.659	32.490	3.677	51.011	
+D+0.750L+0.750S+H, LL Comb Run (*	63.753	64.268	57.289	59.630	31.352	1.964	46.374	
+D+0.750L+0.750S+H, LL Comb Run (*	63.755	64.253	57.347	59.412	32.167	0.681	49.048	
+D+0.750L+0.750S+H, LL Comb Run (*	63.753	64.268	57.289	59.630	31.352	1.965	48.399	
+D+0.750L+0.750S+H, LL Comb Run (*	63.755	64.253	57.347	59.412	32.166	0.681	51.072	
+D+0.750L+0.750S+H, LL Comb Run (*	63.759	64.232	57.434	59.084	34.797	4.624	46.325	
+D+0.750L+0.750S+H, LL Comb Run (*	63.761	64.217	57.492	58.866	35.611	3.341	48.999	
+D+0.750L+0.750S+H, LL Comb Run (*	63.759	64.232	57.434	59.084	34.797	4.625	48.350	
+D+0.750L+0.750S+H, LL Comb Run (*	63.761	64.217	57.492	58.866	35.611	3.341	51.024	
+D+0.750L+0.750S+H, LL Comb Run (*	63.989	62.852	65.599	63.097	27.013	2.539	46.352	
+D+0.750L+0.750S+H, LL Comb Run (*	63.991	62.837	65.657	62.879	27.828	1.256	49.025	
+D+0.750L+0.750S+H, LL Comb Run (*	63.989	62.852	65.599	63.097	27.013	2.539	48.377	
+D+0.750L+0.750S+H, LL Comb Run (*	63.991	62.837	65.657	62.879	27.827	1.256	51.050	
+D+0.750L+0.750S+H, LL Comb Run (*	63.995	62.815	65.744	62.551	30.458	5.199	46.303	
+D+0.750L+0.750S+H, LL Comb Run (*	63.997	62.801	65.802	62.333	31.272	3.916	48.977	
+D+0.750L+0.750S+H, LL Comb Run (*	63.995	62.815	65.744	62.551	30.458	5.199	48.328	
+D+0.750L+0.750S+H, LL Comb Run (*	63.997	62.801	65.802	62.333	31.272	3.916	51.002	
+D+0.750L+0.750S+H, LL Comb Run (*	63.969	62.972	65.119	66.304	30.135	2.203	46.365	
+D+0.750L+0.750S+H, LL Comb Run (*	63.971	62.957	65.177	66.086	30.949	0.920	49.038	
+D+0.750L+0.750S+H, LL Comb Run (*	63.969	62.972	65.119	66.304	30.134	2.203	48.390	
+D+0.750L+0.750S+H, LL Comb Run (*	63.971	62.957	65.177	66.086	30.949	0.920	51.063	
+D+0.750L+0.750S+H, LL Comb Run (*	63.975	62.935	65.264	65.758	33.579	4.863	46.316	
+D+0.750L+0.750S+H, LL Comb Run (*	63.977	62.921	65.322	65.540	34.393	3.580	48.990	
+D+0.750L+0.750S+H, LL Comb Run (*	63.975	62.935	65.264	65.758	33.579	4.863	48.341	
+D+0.750L+0.750S+H, LL Comb Run (*	63.977	62.921	65.322	65.540	34.393	3.580	51.015	
+D+0.750L+0.750S+H, LL Comb Run (L	69.472	69.142	53.204	57.267	28.013	2.343	46.359	

Description : GB-M (2 units) -with cantilever (interior grade beams)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	69.474	69.127	53.262	57.049	28.827	1.060	49.033	
+D+0.750L+0.750S+H, LL Comb Run (L	69.472	69.142	53.204	57.267	28.013	2.343	48.384	
+D+0.750L+0.750S+H, LL Comb Run (L	69.474	69.127	53.262	57.049	28.827	1.060	51.058	
+D+0.750L+0.750S+H, LL Comb Run (L	69.478	69.105	53.350	56.721	31.457	5.003	46.311	
+D+0.750L+0.750S+H, LL Comb Run (L	69.480	69.091	53.408	56.503	32.272	3.720	48.984	
+D+0.750L+0.750S+H, LL Comb Run (L	69.478	69.105	53.350	56.721	31.457	5.003	48.336	
+D+0.750L+0.750S+H, LL Comb Run (L	69.480	69.091	53.408	56.503	32.272	3.720	51.009	
+D+0.750L+0.750S+H, LL Comb Run (L	69.452	69.262	52.724	60.474	31.134	2.007	46.372	
+D+0.750L+0.750S+H, LL Comb Run (L	69.454	69.247	52.782	60.256	31.949	0.724	49.046	
+D+0.750L+0.750S+H, LL Comb Run (L	69.452	69.262	52.724	60.474	31.134	2.007	48.397	
+D+0.750L+0.750S+H, LL Comb Run (L	69.454	69.247	52.782	60.256	31.948	0.724	51.071	
+D+0.750L+0.750S+H, LL Comb Run (L	69.458	69.225	52.869	59.928	34.579	4.667	46.324	
+D+0.750L+0.750S+H, LL Comb Run (L	69.460	69.211	52.928	59.710	35.393	3.384	48.997	
+D+0.750L+0.750S+H, LL Comb Run (L	69.458	69.225	52.869	59.928	34.578	4.667	48.349	
+D+0.750L+0.750S+H, LL Comb Run (L	69.460	69.211	52.928	59.710	35.393	3.384	51.022	
+D+0.750L+0.750S+H, LL Comb Run (L	69.688	67.845	61.034	63.941	26.795	2.582	46.350	
+D+0.750L+0.750S+H, LL Comb Run (L	69.690	67.831	61.092	63.723	27.610	1.298	49.024	
+D+0.750L+0.750S+H, LL Comb Run (L	69.688	67.845	61.034	63.941	26.795	2.582	48.375	
+D+0.750L+0.750S+H, LL Comb Run (L	69.690	67.831	61.092	63.723	27.609	1.299	51.049	
+D+0.750L+0.750S+H, LL Comb Run (L	69.694	67.809	61.179	63.395	30.240	5.242	46.301	
+D+0.750L+0.750S+H, LL Comb Run (L	69.696	67.794	61.238	63.177	31.054	3.958	48.975	
+D+0.750L+0.750S+H, LL Comb Run (L	69.694	67.809	61.179	63.395	30.239	5.242	48.326	
+D+0.750L+0.750S+H, LL Comb Run (L	69.696	67.794	61.238	63.177	31.054	3.959	51.000	
+D+0.750L+0.750S+H, LL Comb Run (L	69.668	67.965	60.554	67.148	29.916	2.246	46.363	
+D+0.750L+0.750S+H, LL Comb Run (L	69.670	67.951	60.612	66.930	30.731	0.962	49.037	
+D+0.750L+0.750S+H, LL Comb Run (L	69.668	67.965	60.554	67.148	29.916	2.246	48.388	
+D+0.750L+0.750S+H, LL Comb Run (L	69.670	67.951	60.612	66.930	30.730	0.963	51.062	
+D+0.750L+0.750S+H, LL Comb Run (L	69.674	67.929	60.699	66.602	33.361	4.906	46.314	
+D+0.750L+0.750S+H, LL Comb Run (L	69.676	67.915	60.757	66.384	34.175	3.622	48.988	
+D+0.750L+0.750S+H, LL Comb Run (L	69.674	67.929	60.699	66.602	33.361	4.906	48.339	
+D+0.750L+0.750S+H, LL Comb Run (L	69.676	67.915	60.757	66.384	34.175	3.623	51.013	
+D+0.750L+0.750S+H, LL Comb Run (L	69.196	72.203	56.427	56.782	28.139	2.319	46.360	
+D+0.750L+0.750S+H, LL Comb Run (L	69.198	72.188	56.486	56.564	28.953	1.035	49.034	
+D+0.750L+0.750S+H, LL Comb Run (L	69.196	72.203	56.427	56.782	28.138	2.319	48.385	
+D+0.750L+0.750S+H, LL Comb Run (L	69.198	72.188	56.485	56.564	28.953	1.036	51.059	
+D+0.750L+0.750S+H, LL Comb Run (L	69.202	72.167	56.573	56.236	31.583	4.978	46.312	
+D+0.750L+0.750S+H, LL Comb Run (L	69.204	72.152	56.631	56.018	32.397	3.695	48.985	
+D+0.750L+0.750S+H, LL Comb Run (L	69.202	72.167	56.573	56.236	31.583	4.979	48.337	
+D+0.750L+0.750S+H, LL Comb Run (L	69.204	72.152	56.631	56.018	32.397	3.695	51.010	
+D+0.750L+0.750S+H, LL Comb Run (L	69.176	72.323	55.947	59.989	31.260	1.983	46.373	
+D+0.750L+0.750S+H, LL Comb Run (L	69.178	72.308	56.005	59.770	32.074	0.699	49.047	
+D+0.750L+0.750S+H, LL Comb Run (L	69.176	72.323	55.947	59.989	31.260	1.983	48.398	
+D+0.750L+0.750S+H, LL Comb Run (L	69.178	72.308	56.005	59.771	32.074	0.700	51.072	
+D+0.750L+0.750S+H, LL Comb Run (L	69.182	72.287	56.093	59.443	34.704	4.643	46.325	
+D+0.750L+0.750S+H, LL Comb Run (L	69.184	72.272	56.151	59.225	35.518	3.359	48.998	
+D+0.750L+0.750S+H, LL Comb Run (L	69.182	72.287	56.093	59.443	34.704	4.643	48.350	
+D+0.750L+0.750S+H, LL Comb Run (L	69.184	72.272	56.151	59.225	35.518	3.359	51.023	
+D+0.750L+0.750S+H, LL Comb Run (L	69.412	70.907	64.257	63.455	26.921	2.557	46.351	
+D+0.750L+0.750S+H, LL Comb Run (L	69.414	70.892	64.315	63.237	27.735	1.274	49.025	
+D+0.750L+0.750S+H, LL Comb Run (L	69.412	70.907	64.257	63.456	26.921	2.557	48.376	
+D+0.750L+0.750S+H, LL Comb Run (L	69.414	70.892	64.315	63.237	27.735	1.274	51.050	
+D+0.750L+0.750S+H, LL Comb Run (L	69.418	70.870	64.403	62.910	30.365	5.217	46.302	
+D+0.750L+0.750S+H, LL Comb Run (L	69.420	70.856	64.461	62.691	31.179	3.934	48.976	
+D+0.750L+0.750S+H, LL Comb Run (L	69.418	70.870	64.403	62.910	30.365	5.217	48.327	
+D+0.750L+0.750S+H, LL Comb Run (L	69.420	70.856	64.461	62.692	31.179	3.934	51.001	
+D+0.750L+0.750S+H, LL Comb Run (L	69.392	71.027	63.777	66.662	30.042	2.221	46.364	
+D+0.750L+0.750S+H, LL Comb Run (L	69.394	71.012	63.835	66.444	30.856	0.938	49.038	
+D+0.750L+0.750S+H, LL Comb Run (L	69.392	71.027	63.777	66.662	30.042	2.221	48.389	
+D+0.750L+0.750S+H, LL Comb Run (L	69.394	71.012	63.835	66.444	30.856	0.938	51.063	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	69.398	70.990	63.923	66.117	33.486	4.881	46.315	
+D+0.750L+0.750S+H, LL Comb Run (L	69.400	70.976	63.981	65.898	34.300	3.598	48.989	
+D+0.750L+0.750S+H, LL Comb Run (L	69.398	70.990	63.923	66.117	33.486	4.881	48.340	
+D+0.750L+0.750S+H, LL Comb Run (L	69.400	70.976	63.981	65.898	34.300	3.598	51.014	
+D+0.60W+H	40.522	35.584	33.080	33.581	7.902	11.895	29.064	
+D+0.70E+H	42.346	35.905	33.042	33.416	8.603	10.781	31.707	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.525	35.569	33.139	33.363	8.716	10.612	31.738	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.522	35.584	33.080	33.581	7.902	11.895	31.089	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.525	35.569	33.139	33.363	8.716	10.612	33.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.528	35.547	33.226	33.036	11.346	14.555	29.016	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.531	35.533	33.284	32.817	12.160	13.272	31.689	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.528	35.547	33.226	33.036	11.346	14.555	31.041	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.531	35.533	33.284	32.817	12.160	13.272	33.714	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.502	35.704	32.600	36.788	11.023	11.559	29.077	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.505	35.689	32.658	36.570	11.837	10.276	31.751	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.502	35.704	32.600	36.788	11.023	11.559	31.102	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.505	35.689	32.658	36.570	11.837	10.276	33.776	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.508	35.667	32.746	36.242	14.467	14.219	29.029	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.511	35.653	32.804	36.024	15.281	12.936	31.702	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.508	35.667	32.746	36.243	14.467	14.219	31.054	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.511	35.653	32.804	36.024	15.281	12.936	33.727	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.738	34.288	40.910	40.255	6.684	12.134	29.055	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.741	34.273	40.968	40.037	7.498	10.850	31.729	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.738	34.288	40.910	40.255	6.684	12.134	31.080	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.741	34.273	40.968	40.037	7.498	10.851	33.754	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.744	34.251	41.056	39.709	10.128	14.794	29.007	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.747	34.237	41.114	39.491	10.942	13.510	31.680	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.744	34.251	41.056	39.709	10.128	14.794	31.031	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.747	34.237	41.114	39.491	10.942	13.511	33.705	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.718	34.408	40.430	43.462	9.805	11.798	29.068	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.721	34.393	40.488	43.244	10.619	10.514	31.742	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.718	34.408	40.430	43.462	9.805	11.798	31.093	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.721	34.393	40.488	43.244	10.619	10.515	33.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.724	34.371	40.576	42.916	13.249	14.458	29.020	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.727	34.357	40.634	42.698	14.064	13.174	31.693	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.724	34.371	40.576	42.916	13.249	14.458	31.044	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.727	34.357	40.634	42.698	14.063	13.175	33.718	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.246	38.645	36.304	33.096	8.027	11.870	29.065	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.249	38.631	36.362	32.878	8.841	10.587	31.739	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.246	38.645	36.304	33.096	8.027	11.871	31.090	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.249	38.631	36.362	32.878	8.841	10.587	33.764	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.252	38.609	36.449	32.550	11.472	14.530	29.017	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.255	38.594	36.507	32.332	12.286	13.247	31.690	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.252	38.609	36.449	32.550	11.471	14.531	31.042	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.255	38.594	36.507	32.332	12.286	13.247	33.715	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.226	38.765	35.823	36.303	11.148	11.535	29.078	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.229	38.751	35.882	36.085	11.963	10.251	31.752	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.226	38.765	35.823	36.303	11.148	11.535	31.103	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.229	38.751	35.882	36.085	11.962	10.251	33.777	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.232	38.729	35.969	35.757	14.593	14.194	29.030	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.235	38.714	36.027	35.539	15.407	12.911	31.703	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.232	38.729	35.969	35.757	14.592	14.195	31.055	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.235	38.714	36.027	35.539	15.407	12.911	33.728	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.462	37.349	44.133	39.770	6.809	12.109	29.056	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.465	37.334	44.192	39.552	7.624	10.826	31.730	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.462	37.349	44.133	39.770	6.809	12.109	31.081	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.465	37.334	44.192	39.552	7.623	10.826	33.755	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.468	37.313	44.279	39.224	10.254	14.769	29.007	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.471	37.298	44.337	39.006	11.068	13.486	31.681	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.468	37.313	44.279	39.224	10.253	14.769	31.032	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.471	37.298	44.337	39.006	11.068	13.486	33.706	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.442	37.469	43.653	42.977	9.930	11.773	29.069	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.445	37.454	43.711	42.759	10.745	10.490	31.743	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.442	37.469	43.653	42.977	9.930	11.773	31.094	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.445	37.454	43.711	42.759	10.745	10.490	33.768	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.448	37.433	43.799	42.431	13.375	14.433	29.021	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.451	37.418	43.857	42.213	14.189	13.150	31.694	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.448	37.433	43.799	42.431	13.375	14.433	31.045	
+D+0.750Lr+0.750L+0.450W+H, LL Com	40.451	37.418	43.857	42.213	14.189	13.150	33.719	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.945	43.639	31.739	33.940	7.809	11.913	29.064	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.948	43.624	31.797	33.722	8.623	10.630	31.737	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.945	43.639	31.739	33.940	7.809	11.914	31.089	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.948	43.624	31.797	33.722	8.623	10.630	33.762	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.951	43.603	31.884	33.394	11.253	14.573	29.015	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.954	43.588	31.943	33.176	12.068	13.290	31.689	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.951	43.603	31.884	33.394	11.253	14.573	31.040	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.954	43.588	31.943	33.176	12.067	13.290	33.714	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.925	43.759	31.259	37.147	10.930	11.577	29.077	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.928	43.744	31.317	36.929	11.744	10.294	31.750	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.925	43.759	31.259	37.147	10.930	11.578	31.102	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.928	43.744	31.317	36.929	11.744	10.294	33.775	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.931	43.723	31.404	36.601	14.375	14.237	29.028	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.934	43.708	31.462	36.383	15.189	12.954	31.702	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.931	43.723	31.404	36.601	14.374	14.238	31.053	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.934	43.708	31.462	36.383	15.189	12.954	33.727	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.161	42.343	39.569	40.614	6.591	12.152	29.054	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.164	42.328	39.627	40.396	7.405	10.868	31.728	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.161	42.343	39.569	40.614	6.591	12.152	31.079	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.164	42.328	39.627	40.396	7.405	10.869	33.753	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.167	42.306	39.714	40.068	10.036	14.812	29.006	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.170	42.292	39.772	39.850	10.850	13.528	31.679	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.167	42.306	39.714	40.068	10.035	14.812	31.031	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.170	42.292	39.772	39.850	10.850	13.529	33.704	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.141	42.463	39.088	43.821	9.712	11.816	29.067	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.144	42.448	39.147	43.603	10.527	10.532	31.741	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.141	42.463	39.088	43.821	9.712	11.816	31.092	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.144	42.448	39.147	43.603	10.526	10.533	33.766	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.147	42.426	39.234	43.275	13.157	14.476	29.019	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.150	42.412	39.292	43.057	13.971	13.192	31.693	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.147	42.426	39.234	43.275	13.156	14.476	31.044	
+D+0.750Lr+0.750L+0.450W+H, LL Com	46.150	42.412	39.292	43.057	13.971	13.193	33.717	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.669	46.700	34.962	33.454	7.935	11.889	29.065	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.672	46.686	35.020	33.236	8.749	10.605	31.738	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.669	46.700	34.962	33.454	7.934	11.889	31.089	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.672	46.686	35.020	33.236	8.749	10.606	33.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.675	46.664	35.108	32.908	11.379	14.549	29.016	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.678	46.649	35.166	32.690	12.193	13.265	31.690	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.675	46.664	35.108	32.909	11.379	14.549	31.041	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.678	46.649	35.166	32.690	12.193	13.266	33.715	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.649	46.820	34.482	36.661	11.056	11.553	29.078	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.652	46.806	34.540	36.443	11.870	10.269	31.751	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.649	46.820	34.482	36.661	11.055	11.553	31.103	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.652	46.806	34.540	36.443	11.870	10.270	33.776	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.655	46.784	34.627	36.115	14.500	14.213	29.029	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.658	46.769	34.686	35.897	15.314	12.929	31.703	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.655	46.784	34.627	36.115	14.500	14.213	31.054	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.658	46.769	34.686	35.897	15.314	12.930	33.728	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.885	45.404	42.792	40.128	6.717	12.127	29.055	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.888	45.390	42.850	39.910	7.531	10.844	31.729	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.885	45.404	42.792	40.128	6.716	12.128	31.080	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.888	45.390	42.850	39.910	7.531	10.844	33.754	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.892	45.368	42.938	39.582	10.161	14.787	29.007	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.894	45.353	42.996	39.364	10.975	13.504	31.680	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.892	45.368	42.937	39.582	10.161	14.787	31.032	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.894	45.353	42.996	39.364	10.975	13.504	33.705	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.865	45.524	42.312	43.335	9.838	11.791	29.068	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.868	45.510	42.370	43.117	10.652	10.508	31.742	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.865	45.524	42.312	43.335	9.838	11.792	31.093	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.868	45.510	42.370	43.117	10.652	10.508	33.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.872	45.488	42.457	42.789	13.282	14.451	29.020	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.874	45.473	42.515	42.571	14.096	13.168	31.693	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.872	45.488	42.457	42.789	13.282	14.452	31.045	
+D+0.750Lr+0.750L+0.450W+H, LL Com	45.874	45.473	42.515	42.571	14.096	13.168	33.718	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.051	61.072	54.604	56.691	28.920	1.042	49.034	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.049	61.086	54.546	56.909	28.106	2.325	48.385	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.051	61.072	54.604	56.691	28.920	1.042	51.059	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.055	61.050	54.691	56.363	31.550	4.985	46.311	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.057	61.036	54.749	56.145	32.364	3.702	48.985	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.055	61.050	54.691	56.363	31.550	4.985	48.336	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.057	61.036	54.749	56.145	32.364	3.702	51.010	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.029	61.207	54.065	60.116	31.227	1.989	46.373	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.031	61.192	54.124	59.898	32.041	0.706	49.047	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.029	61.207	54.065	60.116	31.227	1.989	48.398	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.031	61.192	54.124	59.898	32.041	0.706	51.072	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.035	61.170	54.211	59.570	34.671	4.649	46.324	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.037	61.156	54.269	59.352	35.486	3.366	48.998	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.035	61.170	54.211	59.570	34.671	4.649	48.349	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.037	61.156	54.269	59.352	35.485	3.366	51.023	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.265	59.790	62.375	63.583	26.888	2.564	46.351	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.267	59.776	62.434	63.364	27.702	1.280	49.024	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.265	59.790	62.375	63.583	26.888	2.564	48.376	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.267	59.776	62.434	63.364	27.702	1.281	51.049	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.271	59.754	62.521	63.037	30.332	5.223	46.302	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.273	59.739	62.579	62.819	31.147	3.940	48.976	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.271	59.754	62.521	63.037	30.332	5.224	48.327	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.273	59.739	62.579	62.819	31.146	3.940	51.001	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.245	59.910	61.895	66.789	30.009	2.228	46.364	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.247	59.896	61.953	66.571	30.823	0.944	49.037	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.245	59.910	61.895	66.790	30.009	2.228	48.389	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.247	59.896	61.953	66.571	30.823	0.945	51.062	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.251	59.874	62.041	66.244	33.453	4.888	46.315	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.253	59.859	62.099	66.025	34.268	3.604	48.989	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.251	59.874	62.041	66.244	33.453	4.888	48.340	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.253	59.859	62.099	66.026	34.267	3.605	51.014	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.773	64.148	57.769	56.423	28.231	2.300	46.361	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.775	64.133	57.827	56.205	29.046	1.017	49.035	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.773	64.148	57.769	56.423	28.231	2.301	48.386	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.775	64.133	57.827	56.205	29.045	1.017	51.059	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.779	64.111	57.914	55.877	31.676	4.960	46.312	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.781	64.097	57.973	55.659	32.490	3.677	48.986	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.779	64.111	57.914	55.877	31.675	4.961	48.337	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.781	64.097	57.973	55.659	32.490	3.677	51.011	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.753	64.268	57.289	59.630	31.352	1.964	46.374	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.755	64.253	57.347	59.412	32.167	0.681	49.048	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.753	64.268	57.289	59.630	31.352	1.965	48.399	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.755	64.253	57.347	59.412	32.166	0.681	51.072	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.759	64.232	57.434	59.084	34.797	4.624	46.325	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	63.761	64.217	57.492	58.866	35.611	3.341	48.999	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.759	64.232	57.434	59.084	34.797	4.625	48.350	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.761	64.217	57.492	58.866	35.611	3.341	51.024	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.989	62.852	65.599	63.097	27.013	2.539	46.352	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.991	62.837	65.657	62.879	27.828	1.256	49.025	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.989	62.852	65.599	63.097	27.013	2.539	48.377	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.991	62.837	65.657	62.879	27.827	1.256	51.050	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.995	62.815	65.744	62.551	30.458	5.199	46.303	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.997	62.801	65.802	62.333	31.272	3.916	48.977	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.995	62.815	65.744	62.551	30.458	5.199	48.328	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.997	62.801	65.802	62.333	31.272	3.916	51.002	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.969	62.972	65.119	66.304	30.135	2.203	46.365	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.971	62.957	65.177	66.086	30.949	0.920	49.038	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.969	62.972	65.119	66.304	30.134	2.203	48.390	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.971	62.957	65.177	66.086	30.949	0.920	51.063	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.975	62.935	65.264	65.758	33.579	4.863	46.316	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.977	62.921	65.322	65.540	34.393	3.580	48.990	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.975	62.935	65.264	65.758	33.579	4.863	48.341	
+D+0.750L+0.750S+0.450W+H, LL Comb	63.977	62.921	65.322	65.540	34.393	3.580	51.015	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.472	69.142	53.204	57.267	28.013	2.343	46.359	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.474	69.127	53.262	57.049	28.827	1.060	49.033	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.472	69.142	53.204	57.267	28.013	2.343	48.384	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.474	69.127	53.262	57.049	28.827	1.060	51.058	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.478	69.105	53.350	56.721	31.457	5.003	46.311	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.480	69.091	53.408	56.503	32.272	3.720	48.984	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.478	69.105	53.350	56.721	31.457	5.003	48.336	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.480	69.091	53.408	56.503	32.272	3.720	51.009	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.452	69.262	52.724	60.474	31.134	2.007	46.372	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.454	69.247	52.782	60.256	31.949	0.724	49.046	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.452	69.262	52.724	60.474	31.134	2.007	48.397	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.454	69.247	52.782	60.256	31.948	0.724	51.071	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.458	69.225	52.869	59.928	34.579	4.667	46.324	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.460	69.211	52.928	59.710	35.393	3.384	48.997	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.458	69.225	52.869	59.928	34.578	4.667	48.349	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.460	69.211	52.928	59.710	35.393	3.384	51.022	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.688	67.845	61.034	63.941	26.795	2.582	46.350	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.690	67.831	61.092	63.723	27.610	1.298	49.024	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.688	67.845	61.034	63.941	26.795	2.582	48.375	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.690	67.831	61.092	63.723	27.609	1.299	51.049	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.694	67.809	61.179	63.395	30.240	5.242	46.301	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.696	67.794	61.238	63.177	31.054	3.958	48.975	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.694	67.809	61.179	63.395	30.239	5.242	48.326	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.696	67.794	61.238	63.177	31.054	3.959	51.000	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.668	67.965	60.554	67.148	29.916	2.246	46.363	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.670	67.951	60.612	66.930	30.731	0.962	49.037	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.668	67.965	60.554	67.148	29.916	2.246	48.388	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.670	67.951	60.612	66.930	30.730	0.963	51.062	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.674	67.929	60.699	66.602	33.361	4.906	46.314	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.676	67.915	60.757	66.384	34.175	3.622	48.988	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.674	67.929	60.699	66.602	33.361	4.906	48.339	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.676	67.915	60.757	66.384	34.175	3.623	51.013	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.196	72.203	56.427	56.782	28.139	2.319	46.360	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.198	72.188	56.486	56.564	28.953	1.035	49.034	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.196	72.203	56.427	56.782	28.138	2.319	48.385	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.198	72.188	56.485	56.564	28.953	1.036	51.059	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.202	72.167	56.573	56.236	31.583	4.978	46.312	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.204	72.152	56.631	56.018	32.397	3.695	48.985	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.202	72.167	56.573	56.236	31.583	4.979	48.337	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.204	72.152	56.631	56.018	32.397	3.695	51.010	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	69.176	72.323	55.947	59.989	31.260	1.983	46.373	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.178	72.308	56.005	59.770	32.074	0.699	49.047	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.176	72.323	55.947	59.989	31.260	1.983	48.398	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.178	72.308	56.005	59.771	32.074	0.700	51.072	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.182	72.287	56.093	59.443	34.704	4.643	46.325	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.184	72.272	56.151	59.225	35.518	3.359	48.998	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.182	72.287	56.093	59.443	34.704	4.643	48.350	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.184	72.272	56.151	59.225	35.518	3.359	51.023	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.412	70.907	64.257	63.455	26.921	2.557	46.351	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.414	70.892	64.315	63.237	27.735	1.274	49.025	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.412	70.907	64.257	63.456	26.921	2.557	48.376	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.414	70.892	64.315	63.237	27.735	1.274	51.050	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.418	70.870	64.403	62.910	30.365	5.217	46.302	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.420	70.856	64.461	62.691	31.179	3.934	48.976	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.418	70.870	64.403	62.910	30.365	5.217	48.327	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.420	70.856	64.461	62.692	31.179	3.934	51.001	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.392	71.027	63.777	66.662	30.042	2.221	46.364	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.394	71.012	63.835	66.444	30.856	0.938	49.038	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.392	71.027	63.777	66.662	30.042	2.221	48.389	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.394	71.012	63.835	66.444	30.856	0.938	51.063	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.398	70.990	63.923	66.117	33.486	4.881	46.315	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.400	70.976	63.981	65.898	34.300	3.598	48.989	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.398	70.990	63.923	66.117	33.486	4.881	48.340	
+D+0.750L+0.750S+0.450W+H, LL Comb	69.400	70.976	63.981	65.898	34.300	3.598	51.014	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.419	61.313	54.575	56.566	29.446	0.206	51.016	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.417	61.328	54.517	56.784	28.631	1.490	50.367	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.419	61.313	54.575	56.566	29.446	0.207	53.041	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.423	61.291	54.662	56.239	32.076	4.150	48.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.425	61.277	54.721	56.020	32.890	2.866	50.967	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.423	61.291	54.662	56.239	32.076	4.150	50.318	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.425	61.277	54.721	56.020	32.890	2.867	52.992	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.397	61.448	54.037	59.991	31.753	1.154	48.355	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.399	61.433	54.095	59.773	32.567	-0.130	51.029	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.397	61.448	54.037	59.991	31.753	1.154	50.380	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.399	61.433	54.095	59.773	32.567	-0.129	53.054	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.403	61.411	54.182	59.445	35.197	3.814	48.307	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.405	61.397	54.240	59.227	36.011	2.530	50.980	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.403	61.411	54.182	59.446	35.197	3.814	50.331	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.405	61.397	54.240	59.227	36.011	2.531	53.005	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.633	60.031	62.347	63.458	27.414	1.728	48.333	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.635	60.017	62.405	63.240	28.228	0.445	51.007	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.633	60.031	62.347	63.458	27.414	1.729	50.358	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.635	60.017	62.405	63.240	28.228	0.445	53.031	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.639	59.995	62.492	62.912	30.858	4.388	48.284	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.641	59.980	62.550	62.694	31.672	3.105	50.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.639	59.995	62.492	62.912	30.858	4.389	50.309	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.641	59.980	62.550	62.694	31.672	3.105	52.983	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.613	60.151	61.866	66.665	30.535	1.392	48.346	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.615	60.137	61.925	66.447	31.349	0.109	51.020	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.613	60.151	61.866	66.665	30.535	1.393	50.371	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.615	60.137	61.925	66.447	31.349	0.109	53.044	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.619	60.115	62.012	66.119	33.979	4.052	48.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.621	60.100	62.070	65.901	34.794	2.769	50.971	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.619	60.115	62.012	66.119	33.979	4.053	50.322	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.621	60.100	62.070	65.901	34.793	2.769	52.996	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.141	64.389	57.740	56.299	28.757	1.465	48.343	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.143	64.374	57.798	56.081	29.571	0.182	51.017	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.141	64.389	57.740	56.299	28.757	1.466	50.368	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.143	64.374	57.798	56.081	29.571	0.182	53.042	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	65.147	64.353	57.886	55.753	32.201	4.125	48.295	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.149	64.338	57.944	55.535	33.016	2.842	50.968	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.147	64.353	57.886	55.753	32.201	4.125	50.319	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.149	64.338	57.944	55.535	33.016	2.842	52.993	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.121	64.509	57.260	59.506	31.878	1.129	48.356	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.123	64.494	57.318	59.288	32.693	-0.154	51.030	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.121	64.509	57.260	59.506	31.878	1.130	50.381	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.123	64.494	57.318	59.288	32.692	-0.154	53.055	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.127	64.473	57.405	58.960	35.323	3.789	48.308	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.129	64.458	57.464	58.742	36.137	2.506	50.981	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.127	64.473	57.405	58.960	35.322	3.790	50.332	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.129	64.458	57.464	58.742	36.137	2.506	53.006	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.357	63.093	65.570	62.973	27.539	1.704	48.334	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.359	63.078	65.628	62.755	28.354	0.420	51.008	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.357	63.093	65.570	62.973	27.539	1.704	50.359	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.359	63.078	65.628	62.755	28.353	0.421	53.032	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.363	63.056	65.715	62.427	30.984	4.364	48.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.365	63.042	65.774	62.209	31.798	3.080	50.959	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.363	63.056	65.715	62.427	30.983	4.364	50.310	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.365	63.042	65.774	62.209	31.798	3.081	52.984	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.337	63.213	65.090	66.180	30.660	1.368	48.347	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.339	63.198	65.148	65.962	31.475	0.084	51.021	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.337	63.213	65.090	66.180	30.660	1.368	50.372	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.339	63.198	65.148	65.962	31.474	0.085	53.045	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.343	63.176	65.235	65.634	34.105	4.028	48.298	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.345	63.162	65.293	65.416	34.919	2.744	50.972	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.343	63.176	65.235	65.634	34.105	4.028	50.323	
+D+0.750L+0.750S+0.5250E+H, LL Com	65.345	63.162	65.293	65.416	34.919	2.745	52.997	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.840	69.383	53.175	57.143	28.539	1.508	48.341	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.842	69.368	53.233	56.925	29.353	0.225	51.015	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.840	69.383	53.175	57.143	28.539	1.508	50.366	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.842	69.368	53.233	56.925	29.353	0.225	53.040	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.846	69.346	53.321	56.597	31.983	4.168	48.293	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.848	69.332	53.379	56.379	32.798	2.885	50.967	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.846	69.346	53.321	56.597	31.983	4.168	50.318	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.848	69.332	53.379	56.379	32.797	2.885	52.991	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.820	69.503	52.695	60.350	31.660	1.172	48.355	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.822	69.488	52.753	60.132	32.474	-0.111	51.028	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.820	69.503	52.695	60.350	31.660	1.172	50.379	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.822	69.488	52.753	60.132	32.474	-0.111	53.053	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.826	69.466	52.841	59.804	35.104	3.832	48.306	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.828	69.452	52.899	59.586	35.919	2.549	50.980	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.826	69.466	52.841	59.804	35.104	3.832	50.331	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.828	69.452	52.899	59.586	35.919	2.549	53.004	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.056	68.086	61.005	63.817	27.321	1.747	48.332	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.058	68.072	61.063	63.599	28.135	0.463	51.006	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.056	68.086	61.005	63.817	27.321	1.747	50.357	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.058	68.072	61.063	63.599	28.135	0.463	53.031	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.062	68.050	61.151	63.271	30.766	4.406	48.284	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.064	68.036	61.209	63.053	31.580	3.123	50.957	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.062	68.050	61.151	63.271	30.765	4.407	50.308	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.064	68.036	61.209	63.053	31.580	3.123	52.982	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.036	68.207	60.525	67.024	30.442	1.411	48.345	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.038	68.192	60.583	66.806	31.257	0.127	51.019	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.036	68.207	60.525	67.024	30.442	1.411	50.370	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.038	68.192	60.583	66.806	31.256	0.128	53.044	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.042	68.170	60.670	66.478	33.887	4.070	48.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.044	68.156	60.729	66.260	34.701	2.787	50.970	
+D+0.750L+0.750S+0.5250E+H, LL Com	71.042	68.170	60.670	66.478	33.886	4.071	50.321	

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	71.044	68.156	60.729	66.260	34.701	2.787	52.995	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.564	72.444	56.399	56.657	28.665	1.483	48.342	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.566	72.430	56.457	56.439	29.479	0.200	51.016	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.564	72.444	56.399	56.657	28.664	1.484	50.367	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.566	72.430	56.457	56.439	29.479	0.200	53.041	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.570	72.408	56.544	56.111	32.109	4.143	48.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.573	72.393	56.602	55.893	32.923	2.860	50.967	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.570	72.408	56.544	56.111	32.109	4.144	50.319	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.573	72.393	56.602	55.893	32.923	2.860	52.992	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.544	72.564	55.918	59.864	31.786	1.147	48.355	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.546	72.550	55.976	59.646	32.600	-0.136	51.029	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.544	72.564	55.918	59.864	31.785	1.148	50.380	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.546	72.550	55.976	59.646	32.600	-0.136	53.054	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.550	72.528	56.064	59.318	35.230	3.807	48.307	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.553	72.513	56.122	59.100	36.044	2.524	50.981	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.550	72.528	56.064	59.318	35.230	3.808	50.332	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.552	72.513	56.122	59.100	36.044	2.524	53.005	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.780	71.148	64.228	63.331	27.447	1.722	48.333	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.782	71.133	64.287	63.113	28.261	0.439	51.007	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.780	71.148	64.228	63.331	27.446	1.722	50.358	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.782	71.133	64.286	63.113	28.261	0.439	53.032	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.786	71.111	64.374	62.785	30.891	4.382	48.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.789	71.097	64.432	62.567	31.705	3.099	50.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.786	71.111	64.374	62.785	30.891	4.382	50.309	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.789	71.097	64.432	62.567	31.705	3.099	52.983	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.760	71.268	63.748	66.538	30.568	1.386	48.346	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.762	71.253	63.806	66.320	31.382	0.103	51.020	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.760	71.268	63.748	66.538	30.568	1.386	50.371	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.762	71.253	63.806	66.320	31.382	0.103	53.045	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.766	71.232	63.894	65.992	34.012	4.046	48.298	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.769	71.217	63.952	65.774	34.826	2.763	50.971	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.766	71.232	63.894	65.992	34.012	4.046	50.322	
+D+0.750L+0.750S+0.5250E+H, LL Com	70.769	71.217	63.952	65.774	34.826	2.763	52.996	
+0.60D+0.60W+0.60H	24.313	21.350	19.848	20.149	4.741	7.137	17.439	
+0.60D+0.70E+0.60H	26.137	21.672	19.810	19.983	5.442	6.023	20.082	

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	102.58	102.58	0.00	1.00	47.64	PhiVc < Vu	54.940	115.3	2.5	2.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	20.50	33.62	33.62	3.96	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	20.50	32.08	32.08	7.70	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	20.50	30.53	30.53	11.25	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	20.50	28.99	28.99	14.64	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	20.50	27.45	27.45	17.84	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	20.50	25.90	25.90	20.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	20.50	24.36	24.36	23.73	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	20.50	22.82	22.82	26.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	20.50	21.27	21.27	28.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	20.50	19.73	19.73	31.24	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	20.50	18.19	18.19	33.40	0.93	47.41	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	20.50	16.64	16.64	35.38	0.80	46.99	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	20.50	15.10	15.10	37.18	0.69	46.63	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.59	20.50	13.78	13.78	32.90	0.72	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.70	20.50	12.79	12.79	34.41	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	20.50	11.81	11.81	35.80	0.56	46.20	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.93	20.50	10.83	10.83	37.09	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	20.50	10.07	10.07	32.46	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	20.50	9.43	9.43	33.57	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	20.50	8.79	8.79	34.61	0.43	45.77	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	20.50	8.15	8.15	35.57	0.39	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.50	20.50	7.50	7.50	36.46	0.35	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.61	20.50	6.86	6.86	37.27	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.73	20.50	6.22	6.22	38.02	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.84	20.50	5.58	5.58	38.69	0.25	45.15	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	20.50	-5.37	5.37	40.20	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	20.50	-6.85	6.85	42.96	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	20.50	-8.39	8.39	42.09	0.34	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	20.50	-9.94	9.94	41.05	0.41	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	20.50	-11.48	11.48	39.83	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	20.50	-48.44	48.44	37.63	1.00	47.64	PhiVc < Vu	0.8032	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	20.50	-49.99	49.99	32.04	1.00	47.64	PhiVc < Vu	2.346	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	20.50	-51.53	51.53	26.27	1.00	47.64	PhiVc < Vu	3.889	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	20.50	-53.07	53.07	20.33	1.00	47.64	PhiVc < Vu	5.433	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	20.50	-54.62	54.62	14.21	1.00	47.64	PhiVc < Vu	6.976	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	20.50	-56.16	56.16	7.92	1.00	47.64	PhiVc < Vu	8.519	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	20.50	-57.70	57.70	1.45	1.00	47.64	PhiVc < Vu	10.062	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	21.00	-59.25	59.25	5.20	1.00	48.72	PhiVc < Vu	10.524	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	21.00	-60.79	60.79	12.02	1.00	48.72	PhiVc < Vu	12.067	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	21.00	-62.33	62.33	19.01	1.00	48.72	PhiVc < Vu	13.610	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	21.00	-63.88	63.88	26.18	1.00	48.72	PhiVc < Vu	15.153	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	21.00	-65.42	65.42	33.53	1.00	48.72	PhiVc < Vu	16.696	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	21.00	-66.96	66.96	41.05	1.00	48.72	PhiVc < Vu	18.239	68.5	7.6	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	21.00	36.09	36.09	48.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	21.00	34.55	34.55	44.74	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	21.00	33.01	33.01	40.90	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	21.00	31.46	31.46	37.23	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	21.00	29.92	29.92	33.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	21.00	28.38	28.38	30.43	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	21.00	26.83	26.83	27.30	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	21.00	25.29	25.29	24.34	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	21.00	23.75	23.75	21.55	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	21.00	22.20	22.20	18.94	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.14	21.00	20.66	20.66	16.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	21.00	19.12	19.12	14.24	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	21.00	17.57	17.57	12.16	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	21.00	16.03	16.03	10.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	21.00	14.49	14.49	8.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	21.00	12.94	12.94	6.96	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	21.00	11.40	11.40	5.57	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	21.00	9.86	9.86	4.36	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	21.00	8.32	8.32	3.33	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	21.00	6.77	6.77	2.47	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	21.00	5.23	5.23	1.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.39	21.00	3.80	3.80	5.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.50	21.00	2.87	2.87	9.95	0.51	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.61	21.00	-3.14	3.14	9.05	0.61	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.73	21.00	-4.02	4.02	6.88	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.84	21.00	-5.00	5.00	7.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.95	21.00	-5.98	5.98	8.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	21.00	-7.09	7.09	3.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	21.00	-8.64	8.64	3.89	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	8.30	21.00	-10.18	10.18	4.96	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	21.00	-11.72	11.72	6.21	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	21.00	-13.27	13.27	7.63	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	21.00	-14.81	14.81	9.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	21.00	-16.35	16.35	10.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	21.00	-17.90	17.90	12.94	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	21.00	-19.44	19.44	15.06	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	21.00	-20.98	20.98	17.35	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	21.00	-22.52	22.52	19.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	21.00	-24.07	24.07	22.47	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	21.00	-25.61	25.61	25.30	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	21.00	-27.15	27.15	28.29	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	21.00	-28.70	28.70	31.47	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	21.00	-30.24	30.24	34.82	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	21.00	-31.78	31.78	38.34	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	21.00	59.67	59.67	42.04	1.00	48.72	PhiVc < Vu	10.944	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	21.00	58.12	58.12	35.35	1.00	48.72	PhiVc < Vu	9.401	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	21.00	56.58	56.58	28.83	1.00	48.72	PhiVc < Vu	7.858	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	21.00	55.04	55.04	22.49	1.00	48.72	PhiVc < Vu	6.314	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	21.00	53.49	53.49	16.32	1.00	48.72	PhiVc < Vu	4.771	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	21.00	51.95	51.95	10.33	1.00	48.72	PhiVc < Vu	3.228	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	21.00	50.41	50.41	4.51	1.00	48.72	PhiVc < Vu	1.685	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	20.50	48.86	48.86	1.13	1.00	47.64	PhiVc < Vu	1.223	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.91	20.50	47.32	47.32	6.59	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	20.50	45.78	45.78	11.88	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.14	20.50	44.53	44.53	17.86	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.25	20.50	43.55	43.55	22.86	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.36	20.50	42.57	42.57	27.76	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.48	20.50	41.59	41.59	32.54	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.59	20.50	40.60	40.60	37.21	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.70	20.50	39.62	39.62	41.77	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	20.50	38.64	38.64	46.21	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	20.50	37.66	37.66	50.55	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	20.50	36.68	36.68	54.77	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	20.50	35.69	35.69	58.88	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.27	20.50	-25.59	25.59	54.69	0.80	46.98	PhiVc/2 < Vu <=	Min 11.5.6	66.3	7.3	7.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.39	20.50	-26.23	26.23	51.74	0.87	47.20	PhiVc/2 < Vu <=	Min 11.5.6	66.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.50	20.50	-27.08	27.08	51.87	0.89	47.28	PhiVc/2 < Vu <=	Min 11.5.6	66.6	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	20.50	-28.06	28.06	48.74	0.98	47.59	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	20.50	-29.05	29.05	45.49	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	20.50	-30.03	30.03	42.14	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	20.50	-31.01	31.01	38.67	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	20.50	-31.99	31.99	35.09	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.18	20.50	-32.98	32.98	31.40	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.30	20.50	-33.96	33.96	27.60	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.41	20.50	-34.94	34.94	23.68	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	20.50	-36.24	36.24	19.12	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	20.50	-37.78	37.78	14.91	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	20.50	-39.32	39.32	10.53	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	20.50	-40.87	40.87	5.97	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	20.50	-42.41	42.41	1.24	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	21.00	-43.95	43.95	3.66	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	21.00	-45.49	45.49	8.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	21.00	-47.04	47.04	14.00	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	14.43	21.00	-48.58	48.58	19.44	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	21.00	-50.12	50.12	25.05	1.00	48.72	PhiVc < Vu	1.401	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	21.00	-51.67	51.67	30.83	1.00	48.72	PhiVc < Vu	2.944	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	21.00	-53.21	53.21	36.79	1.00	48.72	PhiVc < Vu	4.488	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	21.00	-54.75	54.75	42.92	1.00	48.72	PhiVc < Vu	6.031	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	21.00	40.59	40.59	49.23	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	21.00	39.05	39.05	44.71	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	21.00	37.51	37.51	40.36	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	21.00	35.96	35.96	36.18	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	21.00	34.42	34.42	32.18	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	21.00	32.88	32.88	28.36	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	21.00	31.33	31.33	24.71	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	21.00	29.79	29.79	21.24	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	21.00	28.25	28.25	17.94	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	21.00	26.70	26.70	14.82	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	21.00	25.16	25.16	11.87	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	21.00	23.62	23.62	9.10	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	21.00	22.07	22.07	6.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	21.00	20.53	20.53	4.08	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	21.00	18.99	18.99	1.84	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	20.50	17.44	17.44	0.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	20.50	15.90	15.90	2.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	20.50	14.36	14.36	3.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.05	20.50	12.82	12.82	5.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	20.50	11.27	11.27	6.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.27	20.50	9.73	9.73	7.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.39	20.50	8.37	8.37	1.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.50	20.50	7.39	7.39	2.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.61	21.00	6.65	6.65	0.94	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	21.00	6.24	6.24	3.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	21.00	5.87	5.87	3.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	21.00	5.50	5.50	2.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	21.00	5.13	5.13	1.88	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.18	21.00	4.76	4.76	1.32	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.30	20.50	-5.34	5.34	10.43	0.87	47.23	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.41	20.50	-6.88	6.88	9.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.52	20.50	-8.42	8.42	8.86	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	20.50	-9.97	9.97	7.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	20.50	-11.51	11.51	6.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	20.50	-13.05	13.05	5.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	20.50	-14.60	14.60	3.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	20.50	-16.14	16.14	1.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	21.00	-17.68	17.68	0.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	21.00	-19.23	19.23	2.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	21.00	-20.77	20.77	4.41	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	21.00	-37.02	37.02	7.53	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	21.00	-37.41	37.41	11.76	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	21.00	-37.80	37.80	16.04	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	21.00	-38.18	38.18	20.35	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	5	20.00	21.00	19.02	19.02	24.71	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.11	21.00	18.63	18.63	22.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.23	21.00	18.24	18.24	20.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.34	21.00	17.85	17.85	18.43	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.45	21.00	17.46	17.46	16.42	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	5	20.57	21.00	17.08	17.08	14.46	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.68	21.00	16.69	16.69	12.54	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.80	21.00	16.30	16.30	10.67	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.91	21.00	15.91	15.91	8.84	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.02	21.00	15.52	15.52	7.05	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.14	21.00	15.14	15.14	5.31	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.25	21.00	14.75	14.75	3.61	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.36	21.00	14.36	14.36	1.96	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.48	21.00	13.97	13.97	0.35	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.59	20.50	13.58	13.58	1.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.70	20.50	13.20	13.20	2.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.82	20.50	12.81	12.81	4.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.93	20.50	12.42	12.42	5.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.05	20.50	12.03	12.03	7.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.16	20.50	11.64	11.64	8.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.27	20.50	11.26	11.26	9.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.39	20.50	10.87	10.87	10.94	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.50	20.50	10.48	10.48	12.16	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.61	20.50	10.09	10.09	13.33	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.73	20.50	9.74	9.74	12.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.84	20.50	9.44	9.44	13.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.95	20.50	9.14	9.14	15.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.07	20.50	8.83	8.83	16.06	0.94	47.44	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.18	20.50	8.53	8.53	17.05	0.85	47.16	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.30	20.50	8.23	8.23	18.00	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.41	20.50	7.92	7.92	18.92	0.72	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.52	20.50	7.62	7.62	19.80	0.66	46.51	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.64	20.50	-7.65	7.65	3.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.75	20.50	-8.23	8.23	2.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.86	20.50	-8.80	8.80	1.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.98	20.50	-9.38	9.38	0.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.09	21.00	-9.95	9.95	0.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.20	21.00	-10.53	10.53	1.84	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.32	21.00	-11.10	11.10	3.07	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.43	21.00	-11.68	11.68	4.37	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.55	21.00	-12.26	12.26	5.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.66	21.00	-12.83	12.83	7.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.77	21.00	-13.41	13.41	8.64	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.89	21.00	-13.98	13.98	10.20	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	6	25.00	21.00	6.78	6.78	11.71	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	6	25.32	21.00	6.40	6.40	9.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	6	25.65	21.00	6.02	6.02	7.57	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	6	25.97	21.00	5.64	5.64	5.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	6	26.30	21.00	5.26	5.26	3.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.62	20.50	-5.18	5.18	21.08	0.42	45.73	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.94	20.50	-5.51	5.51	19.35	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.27	20.50	-5.84	5.84	17.51	0.57	46.22	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.59	20.50	-6.16	6.16	15.57	0.68	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.91	20.50	-6.49	6.49	13.52	0.82	47.05	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.24	20.50	-6.82	6.82	11.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.56	20.50	-7.14	7.14	9.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.89	20.50	-7.47	7.47	6.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.21	20.50	-7.80	7.80	4.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.53	20.50	-8.12	8.12	1.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	6	29.86	21.00	-8.45	8.45	0.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.18	21.00	-8.77	8.77	3.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.51	21.00	-9.10	9.10	6.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.83	21.00	-9.43	9.43	9.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.15	21.00	-9.75	9.75	12.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.48	21.00	-10.08	10.08	16.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.80	21.00	-10.41	10.41	19.31	0.94	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.13	21.00	-10.73	10.73	22.74	0.83	48.15	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.45	21.00	-11.06	11.06	26.27	0.74	47.85	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.77	21.00	-11.39	11.39	29.90	0.67	47.62	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.10	21.00	-11.71	11.71	33.64	0.61	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.42	21.00	-12.04	12.04	37.49	0.56	47.28	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.74	21.00	-12.37	12.37	41.44	0.52	47.15	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.07	21.00	-12.69	12.69	45.50	0.49	47.03	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.39	21.00	-13.02	13.02	49.66	0.46	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.72	21.00	-13.34	13.34	53.93	0.43	46.85	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.04	21.00	-13.67	13.67	58.30	0.41	46.78	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.36	21.00	-14.00	14.00	62.79	0.39	46.71	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.69	21.00	-14.32	14.32	67.37	0.37	46.65	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.01	21.00	-14.65	14.65	72.06	0.36	46.60	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.34	21.00	-14.98	14.98	76.86	0.34	46.55	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.66	21.00	-15.30	15.30	81.76	0.33	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.98	21.00	-15.63	15.63	86.77	0.32	46.46	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.31	21.00	-15.96	15.96	91.89	0.30	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.63	21.00	-16.28	16.28	97.11	0.29	46.39	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.95	21.00	-16.61	16.61	102.44	0.28	46.36	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.28	21.00	-16.94	16.94	107.87	0.27	46.33	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.60	21.00	-17.26	17.26	113.41	0.27	46.30	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.93	21.00	-17.59	17.59	119.05	0.26	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.25	21.00	40.05	40.05	124.81	0.56	47.28	PhiVc/2 < Vu <=	Min 11.5.6	67.1	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.32	21.00	39.98	39.98	121.86	0.57	47.32	PhiVc/2 < Vu <=	Min 11.5.6	67.1	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.40	21.00	39.90	39.90	118.91	0.59	47.36	PhiVc/2 < Vu <=	Min 11.5.6	67.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.47	21.00	39.83	39.83	115.96	0.60	47.41	PhiVc/2 < Vu <=	Min 11.5.6	67.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.55	21.00	39.75	39.75	113.02	0.62	47.45	PhiVc/2 < Vu <=	Min 11.5.6	67.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.62	21.00	39.68	39.68	110.09	0.63	47.50	PhiVc/2 < Vu <=	Min 11.5.6	67.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.69	21.00	39.60	39.60	107.16	0.65	47.56	PhiVc/2 < Vu <=	Min 11.5.6	67.4	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.77	21.00	39.53	39.53	104.24	0.66	47.61	PhiVc/2 < Vu <=	Min 11.5.6	67.4	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.84	21.00	39.46	39.46	101.32	0.68	47.67	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.91	21.00	39.38	39.38	98.41	0.70	47.73	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	39.99	21.00	39.31	39.31	95.50	0.72	47.80	PhiVc/2 < Vu <=	Min 11.5.6	67.6	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.06	21.00	39.23	39.23	92.60	0.74	47.87	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.14	21.00	39.16	39.16	89.71	0.76	47.94	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.21	21.00	39.08	39.08	86.82	0.79	48.02	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.28	21.00	39.01	39.01	83.93	0.81	48.11	PhiVc/2 < Vu <=	Min 11.5.6	67.9	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.36	21.00	38.93	38.93	81.06	0.84	48.20	PhiVc/2 < Vu <=	Min 11.5.6	68.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.43	21.00	38.86	38.86	78.18	0.87	48.29	PhiVc/2 < Vu <=	Min 11.5.6	68.1	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.51	21.00	38.79	38.79	75.31	0.90	48.40	PhiVc/2 < Vu <=	Min 11.5.6	68.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.58	21.00	38.71	38.71	72.45	0.94	48.51	PhiVc/2 < Vu <=	Min 11.5.6	68.3	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.65	21.00	38.64	38.64	69.60	0.97	48.63	PhiVc/2 < Vu <=	Min 11.5.6	68.4	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.73	21.00	38.56	38.56	66.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.80	21.00	38.49	38.49	63.90	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.88	21.00	38.41	38.41	61.06	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	40.95	21.00	38.34	38.34	58.23	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.02	21.00	38.26	38.26	55.40	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-M (2 units) -with cantilever (interior grade beams)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	7	41.10	21.00	38.19	38.19	52.57	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.17	21.00	38.12	38.12	49.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.24	21.00	38.04	38.04	46.94	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.32	21.00	37.97	37.97	44.13	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.39	21.00	37.89	37.89	41.33	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.47	21.00	37.82	37.82	38.54	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.54	21.00	37.74	37.74	35.75	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.61	21.00	37.67	37.67	32.96	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.69	21.00	37.59	37.59	30.18	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.76	21.00	37.52	37.52	27.41	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.84	21.00	37.45	37.45	24.64	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.91	21.00	37.37	37.37	21.88	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	41.98	21.00	37.30	37.30	19.12	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.06	21.00	37.22	37.22	16.37	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.13	21.00	37.15	37.15	13.62	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.20	21.00	37.07	37.07	10.88	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.28	21.00	37.00	37.00	8.14	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.35	21.00	36.92	36.92	5.41	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.43	21.00	36.85	36.85	2.69	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	7	42.50	20.50	0.00	0.00	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.000	45.57	162.54	0.28
Span # 2	2	5.000	-48.75	170.00	0.29
Span # 3	3	5.000	61.43	162.54	0.38
Span # 4	4	5.000	-49.23	170.00	0.29
Span # 5	5	5.000	27.72	162.54	0.17
Span # 6	6	14.250	-119.06	170.00	0.70
Span # 7	7	3.250	-124.81	170.00	0.73
+1.40D+1.60H					
Span # 1	1	5.000	33.17	162.54	0.20
Span # 2	2	5.000	-22.86	170.00	0.13
Span # 3	3	5.000	47.42	162.54	0.29
Span # 4	4	5.000	-27.89	170.00	0.16
Span # 5	5	5.000	-10.61	170.00	0.06
Span # 6	6	14.250	-31.28	170.00	0.18
Span # 7	7	3.250	-34.46	170.00	0.20
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.45	162.54	0.18
Span # 2	2	5.000	-19.57	170.00	0.12
Span # 3	3	5.000	40.75	162.54	0.25
Span # 4	4	5.000	-23.52	170.00	0.14
Span # 5	5	5.000	4.79	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.43	162.54	0.17
Span # 2	2	5.000	-19.60	170.00	0.12
Span # 3	3	5.000	40.64	162.54	0.25
Span # 4	4	5.000	-23.91	170.00	0.14
Span # 5	5	5.000	-9.10	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.45	162.54	0.18
Span # 2	2	5.000	-19.57	170.00	0.12
Span # 3	3	5.000	40.75	162.54	0.25
Span # 4	4	5.000	-23.52	170.00	0.14
Span # 5	5	5.000	4.79	162.54	0.03

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.48	162.54	0.18
Span # 2	2	5.000	-19.53	170.00	0.11
Span # 3	3	5.000	40.92	162.54	0.25
Span # 4	4	5.000	-22.94	170.00	0.13
Span # 5	5	5.000	-9.96	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.49	162.54	0.18
Span # 2	2	5.000	-19.51	170.00	0.11
Span # 3	3	5.000	41.02	162.54	0.25
Span # 4	4	5.000	-22.55	170.00	0.13
Span # 5	5	5.000	9.71	162.54	0.06
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.48	162.54	0.18
Span # 2	2	5.000	-19.53	170.00	0.11
Span # 3	3	5.000	40.92	162.54	0.25
Span # 4	4	5.000	-22.94	170.00	0.13
Span # 5	5	5.000	-9.96	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.49	162.54	0.18
Span # 2	2	5.000	-19.51	170.00	0.11
Span # 3	3	5.000	41.02	162.54	0.25
Span # 4	4	5.000	-22.55	170.00	0.13
Span # 5	5	5.000	9.71	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.29	162.54	0.17
Span # 2	2	5.000	-19.81	170.00	0.12
Span # 3	3	5.000	39.75	162.54	0.24
Span # 4	4	5.000	-27.11	170.00	0.16
Span # 5	5	5.000	-8.78	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.30	162.54	0.17
Span # 2	2	5.000	-19.78	170.00	0.12
Span # 3	3	5.000	39.86	162.54	0.25
Span # 4	4	5.000	-26.72	170.00	0.16
Span # 5	5	5.000	-5.54	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.29	162.54	0.17
Span # 2	2	5.000	-19.81	170.00	0.12
Span # 3	3	5.000	39.75	162.54	0.24
Span # 4	4	5.000	-27.11	170.00	0.16
Span # 5	5	5.000	-8.78	170.00	0.05
Span # 6	6	14.250	-26.79	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.30	162.54	0.17
Span # 2	2	5.000	-19.78	170.00	0.12
Span # 3	3	5.000	39.86	162.54	0.25
Span # 4	4	5.000	-26.72	170.00	0.16
Span # 5	5	5.000	-5.54	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.33	162.54	0.17
Span # 2	2	5.000	-19.74	170.00	0.12

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	40.02	162.54	0.25
Span # 4	4	5.000	-26.14	170.00	0.15
Span # 5	5	5.000	-9.64	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.35	162.54	0.17
Span # 2	2	5.000	-19.72	170.00	0.12
Span # 3	3	5.000	40.13	162.54	0.25
Span # 4	4	5.000	-25.75	170.00	0.15
Span # 5	5	5.000	-9.16	170.00	0.05
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.33	162.54	0.17
Span # 2	2	5.000	-19.74	170.00	0.12
Span # 3	3	5.000	40.02	162.54	0.25
Span # 4	4	5.000	-26.14	170.00	0.15
Span # 5	5	5.000	-9.64	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.35	162.54	0.17
Span # 2	2	5.000	-19.72	170.00	0.12
Span # 3	3	5.000	40.13	162.54	0.25
Span # 4	4	5.000	-25.75	170.00	0.15
Span # 5	5	5.000	-9.16	170.00	0.05
Span # 6	6	14.250	-40.47	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.00	162.54	0.18
Span # 2	2	5.000	-27.88	170.00	0.16
Span # 3	3	5.000	56.92	162.54	0.35
Span # 4	4	5.000	-32.29	170.00	0.19
Span # 5	5	5.000	-9.32	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.02	162.54	0.18
Span # 2	2	5.000	-27.98	170.00	0.16
Span # 3	3	5.000	57.03	162.54	0.35
Span # 4	4	5.000	-31.90	170.00	0.19
Span # 5	5	5.000	5.86	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.00	162.54	0.18
Span # 2	2	5.000	-27.88	170.00	0.16
Span # 3	3	5.000	56.92	162.54	0.35
Span # 4	4	5.000	-32.29	170.00	0.19
Span # 5	5	5.000	-9.32	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.02	162.54	0.18
Span # 2	2	5.000	-27.98	170.00	0.16
Span # 3	3	5.000	57.03	162.54	0.35
Span # 4	4	5.000	-31.90	170.00	0.19
Span # 5	5	5.000	5.86	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.05	162.54	0.18
Span # 2	2	5.000	-28.13	170.00	0.17
Span # 3	3	5.000	57.19	162.54	0.35
Span # 4	4	5.000	-31.32	170.00	0.18
Span # 5	5	5.000	-10.18	170.00	0.06
Span # 6	6	14.250	-26.85	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.06	162.54	0.18
Span # 2	2	5.000	-28.23	170.00	0.17
Span # 3	3	5.000	57.30	162.54	0.35
Span # 4	4	5.000	-30.93	170.00	0.18
Span # 5	5	5.000	10.68	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.05	162.54	0.18
Span # 2	2	5.000	-28.13	170.00	0.17
Span # 3	3	5.000	57.19	162.54	0.35
Span # 4	4	5.000	-31.32	170.00	0.18
Span # 5	5	5.000	-10.18	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.06	162.54	0.18
Span # 2	2	5.000	-28.23	170.00	0.17
Span # 3	3	5.000	57.30	162.54	0.35
Span # 4	4	5.000	-30.93	170.00	0.18
Span # 5	5	5.000	10.68	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.86	162.54	0.18
Span # 2	2	5.000	-27.05	170.00	0.16
Span # 3	3	5.000	56.02	162.54	0.34
Span # 4	4	5.000	-35.49	170.00	0.21
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.87	162.54	0.18
Span # 2	2	5.000	-27.15	170.00	0.16
Span # 3	3	5.000	56.13	162.54	0.35
Span # 4	4	5.000	-35.10	170.00	0.21
Span # 5	5	5.000	4.39	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.86	162.54	0.18
Span # 2	2	5.000	-27.05	170.00	0.16
Span # 3	3	5.000	56.02	162.54	0.34
Span # 4	4	5.000	-35.49	170.00	0.21
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.87	162.54	0.18
Span # 2	2	5.000	-27.15	170.00	0.16
Span # 3	3	5.000	56.13	162.54	0.35
Span # 4	4	5.000	-35.10	170.00	0.21
Span # 5	5	5.000	4.39	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.90	162.54	0.18
Span # 2	2	5.000	-27.30	170.00	0.16
Span # 3	3	5.000	56.30	162.54	0.35
Span # 4	4	5.000	-34.52	170.00	0.20
Span # 5	5	5.000	-9.86	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.92	162.54	0.18
Span # 2	2	5.000	-27.40	170.00	0.16
Span # 3	3	5.000	56.41	162.54	0.35
Span # 4	4	5.000	-34.13	170.00	0.20

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	9.33	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.90	162.54	0.18
Span # 2	2	5.000	-27.30	170.00	0.16
Span # 3	3	5.000	56.30	162.54	0.35
Span # 4	4	5.000	-34.52	170.00	0.20
Span # 5	5	5.000	-9.86	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.92	162.54	0.18
Span # 2	2	5.000	-27.40	170.00	0.16
Span # 3	3	5.000	56.41	162.54	0.35
Span # 4	4	5.000	-34.13	170.00	0.20
Span # 5	5	5.000	9.33	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.43	162.54	0.16
Span # 2	2	5.000	-22.54	170.00	0.13
Span # 3	3	5.000	39.18	162.54	0.24
Span # 4	4	5.000	-23.04	170.00	0.14
Span # 5	5	5.000	-9.07	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.44	162.54	0.16
Span # 2	2	5.000	-22.51	170.00	0.13
Span # 3	3	5.000	39.29	162.54	0.24
Span # 4	4	5.000	-22.66	170.00	0.13
Span # 5	5	5.000	4.69	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.43	162.54	0.16
Span # 2	2	5.000	-22.54	170.00	0.13
Span # 3	3	5.000	39.18	162.54	0.24
Span # 4	4	5.000	-23.04	170.00	0.14
Span # 5	5	5.000	-9.07	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	26.44	162.54	0.16
Span # 2	2	5.000	-22.51	170.00	0.13
Span # 3	3	5.000	39.29	162.54	0.24
Span # 4	4	5.000	-22.66	170.00	0.13
Span # 5	5	5.000	4.69	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.47	162.54	0.16
Span # 2	2	5.000	-22.47	170.00	0.13
Span # 3	3	5.000	39.45	162.54	0.24
Span # 4	4	5.000	-22.07	170.00	0.13
Span # 5	5	5.000	-9.93	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.49	162.54	0.16
Span # 2	2	5.000	-22.45	170.00	0.13
Span # 3	3	5.000	39.56	162.54	0.24
Span # 4	4	5.000	-21.69	170.00	0.13
Span # 5	5	5.000	9.61	162.54	0.06
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.47	162.54	0.16

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-22.47	170.00	0.13
Span # 3	3	5.000	39.45	162.54	0.24
Span # 4	4	5.000	-22.07	170.00	0.13
Span # 5	5	5.000	-9.93	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	26.49	162.54	0.16
Span # 2	2	5.000	-22.45	170.00	0.13
Span # 3	3	5.000	39.56	162.54	0.24
Span # 4	4	5.000	-21.69	170.00	0.13
Span # 5	5	5.000	9.61	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.28	162.54	0.16
Span # 2	2	5.000	-22.75	170.00	0.13
Span # 3	3	5.000	38.28	162.54	0.24
Span # 4	4	5.000	-26.25	170.00	0.15
Span # 5	5	5.000	-8.75	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.30	162.54	0.16
Span # 2	2	5.000	-22.73	170.00	0.13
Span # 3	3	5.000	38.39	162.54	0.24
Span # 4	4	5.000	-25.86	170.00	0.15
Span # 5	5	5.000	-5.76	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.28	162.54	0.16
Span # 2	2	5.000	-22.75	170.00	0.13
Span # 3	3	5.000	38.28	162.54	0.24
Span # 4	4	5.000	-26.25	170.00	0.15
Span # 5	5	5.000	-8.76	170.00	0.05
Span # 6	6	14.250	-26.79	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	26.30	162.54	0.16
Span # 2	2	5.000	-22.73	170.00	0.13
Span # 3	3	5.000	38.39	162.54	0.24
Span # 4	4	5.000	-25.86	170.00	0.15
Span # 5	5	5.000	-5.76	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.32	162.54	0.16
Span # 2	2	5.000	-22.69	170.00	0.13
Span # 3	3	5.000	38.56	162.54	0.24
Span # 4	4	5.000	-25.27	170.00	0.15
Span # 5	5	5.000	-9.61	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.34	162.54	0.16
Span # 2	2	5.000	-22.66	170.00	0.13
Span # 3	3	5.000	38.67	162.54	0.24
Span # 4	4	5.000	-24.89	170.00	0.15
Span # 5	5	5.000	-9.39	170.00	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.32	162.54	0.16
Span # 2	2	5.000	-22.69	170.00	0.13
Span # 3	3	5.000	38.56	162.54	0.24
Span # 4	4	5.000	-25.27	170.00	0.15
Span # 5	5	5.000	-9.62	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	26.34	162.54	0.16
Span # 2	2	5.000	-22.66	170.00	0.13
Span # 3	3	5.000	38.67	162.54	0.24
Span # 4	4	5.000	-24.89	170.00	0.15
Span # 5	5	5.000	-9.39	170.00	0.06
Span # 6	6	14.250	-40.47	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.00	162.54	0.17
Span # 2	2	5.000	-30.43	170.00	0.18
Span # 3	3	5.000	55.46	162.54	0.34
Span # 4	4	5.000	-31.42	170.00	0.18
Span # 5	5	5.000	-9.30	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.01	162.54	0.17
Span # 2	2	5.000	-30.54	170.00	0.18
Span # 3	3	5.000	55.57	162.54	0.34
Span # 4	4	5.000	-31.04	170.00	0.18
Span # 5	5	5.000	5.75	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.00	162.54	0.17
Span # 2	2	5.000	-30.43	170.00	0.18
Span # 3	3	5.000	55.46	162.54	0.34
Span # 4	4	5.000	-31.42	170.00	0.18
Span # 5	5	5.000	-9.30	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	28.01	162.54	0.17
Span # 2	2	5.000	-30.54	170.00	0.18
Span # 3	3	5.000	55.57	162.54	0.34
Span # 4	4	5.000	-31.04	170.00	0.18
Span # 5	5	5.000	5.75	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.04	162.54	0.17
Span # 2	2	5.000	-30.69	170.00	0.18
Span # 3	3	5.000	55.73	162.54	0.34
Span # 4	4	5.000	-30.45	170.00	0.18
Span # 5	5	5.000	-10.16	170.00	0.06
Span # 6	6	14.250	-26.85	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.06	162.54	0.17
Span # 2	2	5.000	-30.79	170.00	0.18
Span # 3	3	5.000	55.84	162.54	0.34
Span # 4	4	5.000	-30.06	170.00	0.18
Span # 5	5	5.000	10.57	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.04	162.54	0.17
Span # 2	2	5.000	-30.69	170.00	0.18
Span # 3	3	5.000	55.73	162.54	0.34
Span # 4	4	5.000	-30.45	170.00	0.18
Span # 5	5	5.000	-10.16	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	28.06	162.54	0.17
Span # 2	2	5.000	-30.79	170.00	0.18
Span # 3	3	5.000	55.84	162.54	0.34

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-30.06	170.00	0.18
Span # 5	5	5.000	10.57	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	27.85	162.54	0.17
Span # 2	2	5.000	-29.61	170.00	0.17
Span # 3	3	5.000	54.56	162.54	0.34
Span # 4	4	5.000	-34.62	170.00	0.20
Span # 5	5	5.000	-8.98	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	27.87	162.54	0.17
Span # 2	2	5.000	-29.71	170.00	0.17
Span # 3	3	5.000	54.67	162.54	0.34
Span # 4	4	5.000	-34.24	170.00	0.20
Span # 5	5	5.000	4.28	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	27.85	162.54	0.17
Span # 2	2	5.000	-29.61	170.00	0.17
Span # 3	3	5.000	54.56	162.54	0.34
Span # 4	4	5.000	-34.62	170.00	0.20
Span # 5	5	5.000	-8.98	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	27.87	162.54	0.17
Span # 2	2	5.000	-29.71	170.00	0.17
Span # 3	3	5.000	54.67	162.54	0.34
Span # 4	4	5.000	-34.24	170.00	0.20
Span # 5	5	5.000	4.28	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	27.90	162.54	0.17
Span # 2	2	5.000	-29.86	170.00	0.18
Span # 3	3	5.000	54.83	162.54	0.34
Span # 4	4	5.000	-33.65	170.00	0.20
Span # 5	5	5.000	-9.84	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	27.91	162.54	0.17
Span # 2	2	5.000	-29.96	170.00	0.18
Span # 3	3	5.000	54.94	162.54	0.34
Span # 4	4	5.000	-33.27	170.00	0.20
Span # 5	5	5.000	9.23	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	27.90	162.54	0.17
Span # 2	2	5.000	-29.86	170.00	0.18
Span # 3	3	5.000	54.83	162.54	0.34
Span # 4	4	5.000	-33.65	170.00	0.20
Span # 5	5	5.000	-9.84	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	27.91	162.54	0.17
Span # 2	2	5.000	-29.96	170.00	0.18
Span # 3	3	5.000	54.94	162.54	0.34
Span # 4	4	5.000	-33.27	170.00	0.20
Span # 5	5	5.000	9.23	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	39.31	162.54	0.24
Span # 2	2	5.000	-28.50	170.00	0.17
Span # 3	3	5.000	41.72	162.54	0.26
Span # 4	4	5.000	-24.54	170.00	0.14
Span # 5	5	5.000	-9.11	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.33	162.54	0.24
Span # 2	2	5.000	-28.47	170.00	0.17
Span # 3	3	5.000	41.83	162.54	0.26
Span # 4	4	5.000	-24.16	170.00	0.14
Span # 5	5	5.000	4.87	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.31	162.54	0.24
Span # 2	2	5.000	-28.50	170.00	0.17
Span # 3	3	5.000	41.72	162.54	0.26
Span # 4	4	5.000	-24.54	170.00	0.14
Span # 5	5	5.000	-9.11	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	39.33	162.54	0.24
Span # 2	2	5.000	-28.47	170.00	0.17
Span # 3	3	5.000	41.83	162.54	0.26
Span # 4	4	5.000	-24.16	170.00	0.14
Span # 5	5	5.000	4.87	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.36	162.54	0.24
Span # 2	2	5.000	-28.43	170.00	0.17
Span # 3	3	5.000	42.00	162.54	0.26
Span # 4	4	5.000	-23.57	170.00	0.14
Span # 5	5	5.000	-9.97	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.37	162.54	0.24
Span # 2	2	5.000	-28.41	170.00	0.17
Span # 3	3	5.000	42.10	162.54	0.26
Span # 4	4	5.000	-23.19	170.00	0.14
Span # 5	5	5.000	9.78	162.54	0.06
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.36	162.54	0.24
Span # 2	2	5.000	-28.43	170.00	0.17
Span # 3	3	5.000	42.00	162.54	0.26
Span # 4	4	5.000	-23.57	170.00	0.14
Span # 5	5	5.000	-9.97	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	39.37	162.54	0.24
Span # 2	2	5.000	-28.41	170.00	0.17
Span # 3	3	5.000	42.10	162.54	0.26
Span # 4	4	5.000	-23.19	170.00	0.14
Span # 5	5	5.000	9.78	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.17	162.54	0.24
Span # 2	2	5.000	-28.71	170.00	0.17
Span # 3	3	5.000	40.83	162.54	0.25
Span # 4	4	5.000	-27.75	170.00	0.16
Span # 5	5	5.000	-8.80	170.00	0.05

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.18	162.54	0.24
Span # 2	2	5.000	-28.69	170.00	0.17
Span # 3	3	5.000	40.94	162.54	0.25
Span # 4	4	5.000	-27.36	170.00	0.16
Span # 5	5	5.000	-5.37	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.17	162.54	0.24
Span # 2	2	5.000	-28.71	170.00	0.17
Span # 3	3	5.000	40.83	162.54	0.25
Span # 4	4	5.000	-27.75	170.00	0.16
Span # 5	5	5.000	-8.80	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	39.18	162.54	0.24
Span # 2	2	5.000	-28.69	170.00	0.17
Span # 3	3	5.000	40.94	162.54	0.25
Span # 4	4	5.000	-27.36	170.00	0.16
Span # 5	5	5.000	-5.37	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.21	162.54	0.24
Span # 2	2	5.000	-28.65	170.00	0.17
Span # 3	3	5.000	41.10	162.54	0.25
Span # 4	4	5.000	-26.78	170.00	0.16
Span # 5	5	5.000	-9.66	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.23	162.54	0.24
Span # 2	2	5.000	-28.62	170.00	0.17
Span # 3	3	5.000	41.21	162.54	0.25
Span # 4	4	5.000	-26.39	170.00	0.16
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.21	162.54	0.24
Span # 2	2	5.000	-28.65	170.00	0.17
Span # 3	3	5.000	41.10	162.54	0.25
Span # 4	4	5.000	-26.78	170.00	0.16
Span # 5	5	5.000	-9.66	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	39.23	162.54	0.24
Span # 2	2	5.000	-28.62	170.00	0.17
Span # 3	3	5.000	41.21	162.54	0.25
Span # 4	4	5.000	-26.39	170.00	0.16
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-40.47	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	40.88	162.54	0.25
Span # 2	2	5.000	-26.19	170.00	0.15
Span # 3	3	5.000	58.00	162.54	0.36
Span # 4	4	5.000	-32.92	170.00	0.19
Span # 5	5	5.000	-9.34	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	40.90	162.54	0.25
Span # 2	2	5.000	-26.17	170.00	0.15

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	58.11	162.54	0.36
Span # 4	4	5.000	-32.54	170.00	0.19
Span # 5	5	5.000	5.95	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	40.88	162.54	0.25
Span # 2	2	5.000	-26.19	170.00	0.15
Span # 3	3	5.000	58.00	162.54	0.36
Span # 4	4	5.000	-32.92	170.00	0.19
Span # 5	5	5.000	-9.34	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	40.90	162.54	0.25
Span # 2	2	5.000	-26.17	170.00	0.15
Span # 3	3	5.000	58.11	162.54	0.36
Span # 4	4	5.000	-32.54	170.00	0.19
Span # 5	5	5.000	5.95	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	40.93	162.54	0.25
Span # 2	2	5.000	-26.13	170.00	0.15
Span # 3	3	5.000	58.27	162.54	0.36
Span # 4	4	5.000	-31.95	170.00	0.19
Span # 5	5	5.000	-10.20	170.00	0.06
Span # 6	6	14.250	-26.85	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	40.94	162.54	0.25
Span # 2	2	5.000	-26.10	170.00	0.15
Span # 3	3	5.000	58.38	162.54	0.36
Span # 4	4	5.000	-31.57	170.00	0.19
Span # 5	5	5.000	10.75	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	40.93	162.54	0.25
Span # 2	2	5.000	-26.13	170.00	0.15
Span # 3	3	5.000	58.27	162.54	0.36
Span # 4	4	5.000	-31.95	170.00	0.19
Span # 5	5	5.000	-10.20	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	40.94	162.54	0.25
Span # 2	2	5.000	-26.10	170.00	0.15
Span # 3	3	5.000	58.38	162.54	0.36
Span # 4	4	5.000	-31.57	170.00	0.19
Span # 5	5	5.000	10.75	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	40.74	162.54	0.25
Span # 2	2	5.000	-26.41	170.00	0.16
Span # 3	3	5.000	57.10	162.54	0.35
Span # 4	4	5.000	-36.12	170.00	0.21
Span # 5	5	5.000	-9.02	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	40.75	162.54	0.25
Span # 2	2	5.000	-26.38	170.00	0.16
Span # 3	3	5.000	57.21	162.54	0.35
Span # 4	4	5.000	-35.74	170.00	0.21
Span # 5	5	5.000	4.46	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	40.74	162.54	0.25
Span # 2	2	5.000	-26.41	170.00	0.16
Span # 3	3	5.000	57.10	162.54	0.35
Span # 4	4	5.000	-36.12	170.00	0.21
Span # 5	5	5.000	-9.02	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	40.75	162.54	0.25
Span # 2	2	5.000	-26.38	170.00	0.16
Span # 3	3	5.000	57.21	162.54	0.35
Span # 4	4	5.000	-35.74	170.00	0.21
Span # 5	5	5.000	4.46	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	40.78	162.54	0.25
Span # 2	2	5.000	-26.34	170.00	0.15
Span # 3	3	5.000	57.38	162.54	0.35
Span # 4	4	5.000	-35.15	170.00	0.21
Span # 5	5	5.000	-9.88	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	40.80	162.54	0.25
Span # 2	2	5.000	-26.32	170.00	0.15
Span # 3	3	5.000	57.49	162.54	0.35
Span # 4	4	5.000	-34.77	170.00	0.20
Span # 5	5	5.000	9.40	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	40.78	162.54	0.25
Span # 2	2	5.000	-26.34	170.00	0.15
Span # 3	3	5.000	57.38	162.54	0.35
Span # 4	4	5.000	-35.15	170.00	0.21
Span # 5	5	5.000	-9.88	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	40.80	162.54	0.25
Span # 2	2	5.000	-26.32	170.00	0.15
Span # 3	3	5.000	57.49	162.54	0.35
Span # 4	4	5.000	-34.77	170.00	0.20
Span # 5	5	5.000	9.40	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.31	162.54	0.23
Span # 2	2	5.000	-31.44	170.00	0.18
Span # 3	3	5.000	40.26	162.54	0.25
Span # 4	4	5.000	-23.68	170.00	0.14
Span # 5	5	5.000	-9.09	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.32	162.54	0.23
Span # 2	2	5.000	-31.41	170.00	0.18
Span # 3	3	5.000	40.37	162.54	0.25
Span # 4	4	5.000	-23.29	170.00	0.14
Span # 5	5	5.000	4.77	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.31	162.54	0.23
Span # 2	2	5.000	-31.44	170.00	0.18
Span # 3	3	5.000	40.26	162.54	0.25
Span # 4	4	5.000	-23.68	170.00	0.14

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-9.09	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	37.32	162.54	0.23
Span # 2	2	5.000	-31.41	170.00	0.18
Span # 3	3	5.000	40.37	162.54	0.25
Span # 4	4	5.000	-23.29	170.00	0.14
Span # 5	5	5.000	4.77	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.35	162.54	0.23
Span # 2	2	5.000	-31.38	170.00	0.18
Span # 3	3	5.000	40.53	162.54	0.25
Span # 4	4	5.000	-22.71	170.00	0.13
Span # 5	5	5.000	-9.95	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.37	162.54	0.23
Span # 2	2	5.000	-31.35	170.00	0.18
Span # 3	3	5.000	40.64	162.54	0.25
Span # 4	4	5.000	-22.32	170.00	0.13
Span # 5	5	5.000	9.69	162.54	0.06
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.35	162.54	0.23
Span # 2	2	5.000	-31.38	170.00	0.18
Span # 3	3	5.000	40.53	162.54	0.25
Span # 4	4	5.000	-22.71	170.00	0.13
Span # 5	5	5.000	-9.95	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	37.37	162.54	0.23
Span # 2	2	5.000	-31.35	170.00	0.18
Span # 3	3	5.000	40.64	162.54	0.25
Span # 4	4	5.000	-22.32	170.00	0.13
Span # 5	5	5.000	9.68	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	37.16	162.54	0.23
Span # 2	2	5.000	-31.65	170.00	0.19
Span # 3	3	5.000	39.36	162.54	0.24
Span # 4	4	5.000	-26.88	170.00	0.16
Span # 5	5	5.000	-8.77	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	37.18	162.54	0.23
Span # 2	2	5.000	-31.63	170.00	0.19
Span # 3	3	5.000	39.47	162.54	0.24
Span # 4	4	5.000	-26.49	170.00	0.16
Span # 5	5	5.000	-5.60	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	37.16	162.54	0.23
Span # 2	2	5.000	-31.65	170.00	0.19
Span # 3	3	5.000	39.36	162.54	0.24
Span # 4	4	5.000	-26.88	170.00	0.16
Span # 5	5	5.000	-8.77	170.00	0.05
Span # 6	6	14.250	-26.79	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	37.18	162.54	0.23

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-31.63	170.00	0.19
Span # 3	3	5.000	39.47	162.54	0.24
Span # 4	4	5.000	-26.49	170.00	0.16
Span # 5	5	5.000	-5.60	170.00	0.03
Span # 6	6	14.250	-40.44	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	37.20	162.54	0.23
Span # 2	2	5.000	-31.59	170.00	0.19
Span # 3	3	5.000	39.64	162.54	0.24
Span # 4	4	5.000	-25.91	170.00	0.15
Span # 5	5	5.000	-9.63	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	37.22	162.54	0.23
Span # 2	2	5.000	-31.56	170.00	0.19
Span # 3	3	5.000	39.74	162.54	0.24
Span # 4	4	5.000	-25.52	170.00	0.15
Span # 5	5	5.000	-9.22	170.00	0.05
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	37.20	162.54	0.23
Span # 2	2	5.000	-31.59	170.00	0.19
Span # 3	3	5.000	39.64	162.54	0.24
Span # 4	4	5.000	-25.91	170.00	0.15
Span # 5	5	5.000	-9.63	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	37.22	162.54	0.23
Span # 2	2	5.000	-31.56	170.00	0.19
Span # 3	3	5.000	39.74	162.54	0.24
Span # 4	4	5.000	-25.52	170.00	0.15
Span # 5	5	5.000	-9.22	170.00	0.05
Span # 6	6	14.250	-40.47	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	38.88	162.54	0.24
Span # 2	2	5.000	-29.14	170.00	0.17
Span # 3	3	5.000	56.54	162.54	0.35
Span # 4	4	5.000	-32.06	170.00	0.19
Span # 5	5	5.000	-9.32	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	38.89	162.54	0.24
Span # 2	2	5.000	-29.11	170.00	0.17
Span # 3	3	5.000	56.65	162.54	0.35
Span # 4	4	5.000	-31.67	170.00	0.19
Span # 5	5	5.000	5.83	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	38.88	162.54	0.24
Span # 2	2	5.000	-29.14	170.00	0.17
Span # 3	3	5.000	56.54	162.54	0.35
Span # 4	4	5.000	-32.06	170.00	0.19
Span # 5	5	5.000	-9.32	170.00	0.05
Span # 6	6	14.250	-26.81	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	38.89	162.54	0.24
Span # 2	2	5.000	-29.11	170.00	0.17
Span # 3	3	5.000	56.65	162.54	0.35
Span # 4	4	5.000	-31.67	170.00	0.19
Span # 5	5	5.000	5.83	162.54	0.04
Span # 6	6	14.250	-40.46	170.00	0.24

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	38.92	162.54	0.24
Span # 2	2	5.000	-29.07	170.00	0.17
Span # 3	3	5.000	56.81	162.54	0.35
Span # 4	4	5.000	-31.09	170.00	0.18
Span # 5	5	5.000	-10.17	170.00	0.06
Span # 6	6	14.250	-26.85	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	38.94	162.54	0.24
Span # 2	2	5.000	-29.05	170.00	0.17
Span # 3	3	5.000	56.92	162.54	0.35
Span # 4	4	5.000	-30.70	170.00	0.18
Span # 5	5	5.000	10.65	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	38.92	162.54	0.24
Span # 2	2	5.000	-29.07	170.00	0.17
Span # 3	3	5.000	56.81	162.54	0.35
Span # 4	4	5.000	-31.09	170.00	0.18
Span # 5	5	5.000	-10.18	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	38.94	162.54	0.24
Span # 2	2	5.000	-29.05	170.00	0.17
Span # 3	3	5.000	56.92	162.54	0.35
Span # 4	4	5.000	-30.70	170.00	0.18
Span # 5	5	5.000	10.65	162.54	0.07
Span # 6	6	14.250	-40.49	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	38.73	162.54	0.24
Span # 2	2	5.000	-29.35	170.00	0.17
Span # 3	3	5.000	55.64	162.54	0.34
Span # 4	4	5.000	-35.26	170.00	0.21
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	38.75	162.54	0.24
Span # 2	2	5.000	-29.32	170.00	0.17
Span # 3	3	5.000	55.75	162.54	0.34
Span # 4	4	5.000	-34.87	170.00	0.21
Span # 5	5	5.000	4.36	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	38.73	162.54	0.24
Span # 2	2	5.000	-29.35	170.00	0.17
Span # 3	3	5.000	55.64	162.54	0.34
Span # 4	4	5.000	-35.26	170.00	0.21
Span # 5	5	5.000	-9.00	170.00	0.05
Span # 6	6	14.250	-26.80	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	38.75	162.54	0.24
Span # 2	2	5.000	-29.32	170.00	0.17
Span # 3	3	5.000	55.75	162.54	0.34
Span # 4	4	5.000	-34.87	170.00	0.21
Span # 5	5	5.000	4.36	162.54	0.03
Span # 6	6	14.250	-40.45	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	38.77	162.54	0.24
Span # 2	2	5.000	-29.29	170.00	0.17
Span # 3	3	5.000	55.91	162.54	0.34

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-34.29	170.00	0.20
Span # 5	5	5.000	-9.86	170.00	0.06
Span # 6	6	14.250	-26.84	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	38.79	162.54	0.24
Span # 2	2	5.000	-29.26	170.00	0.17
Span # 3	3	5.000	56.02	162.54	0.34
Span # 4	4	5.000	-33.90	170.00	0.20
Span # 5	5	5.000	9.30	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	38.77	162.54	0.24
Span # 2	2	5.000	-29.29	170.00	0.17
Span # 3	3	5.000	55.91	162.54	0.34
Span # 4	4	5.000	-34.29	170.00	0.20
Span # 5	5	5.000	-9.86	170.00	0.06
Span # 6	6	14.250	-26.83	170.00	0.16
Span # 7	7	3.250	-29.54	170.00	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	38.79	162.54	0.24
Span # 2	2	5.000	-29.26	170.00	0.17
Span # 3	3	5.000	56.02	162.54	0.34
Span # 4	4	5.000	-33.90	170.00	0.20
Span # 5	5	5.000	9.30	162.54	0.06
Span # 6	6	14.250	-40.48	170.00	0.24
Span # 7	7	3.250	-43.62	170.00	0.26
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (******					
Span # 1	1	5.000	31.34	162.54	0.19
Span # 2	2	5.000	-27.50	170.00	0.16
Span # 3	3	5.000	43.80	162.54	0.27
Span # 4	4	5.000	-30.24	170.00	0.18
Span # 5	5	5.000	9.02	162.54	0.06
Span # 6	6	14.250	-67.95	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.000	31.33	162.54	0.19
Span # 2	2	5.000	-27.53	170.00	0.16
Span # 3	3	5.000	43.69	162.54	0.27
Span # 4	4	5.000	-30.63	170.00	0.18
Span # 5	5	5.000	-7.63	170.00	0.04
Span # 6	6	14.250	-54.30	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.000	31.34	162.54	0.19
Span # 2	2	5.000	-27.50	170.00	0.16
Span # 3	3	5.000	43.80	162.54	0.27
Span # 4	4	5.000	-30.24	170.00	0.18
Span # 5	5	5.000	9.02	162.54	0.06
Span # 6	6	14.250	-67.94	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.000	31.37	162.54	0.19
Span # 2	2	5.000	-27.46	170.00	0.16
Span # 3	3	5.000	43.96	162.54	0.27
Span # 4	4	5.000	-29.66	170.00	0.17
Span # 5	5	5.000	-11.25	170.00	0.07
Span # 6	6	14.250	-54.33	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.000	31.38	162.54	0.19
Span # 2	2	5.000	-27.44	170.00	0.16
Span # 3	3	5.000	44.07	162.54	0.27
Span # 4	4	5.000	-29.27	170.00	0.17
Span # 5	5	5.000	13.37	162.54	0.08
Span # 6	6	14.250	-67.98	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					

Description : GB-M (2 units) -with cantilever (interior grade beams)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	31.37	162.54	0.19
Span # 2	2	5.000	-27.46	170.00	0.16
Span # 3	3	5.000	43.96	162.54	0.27
Span # 4	4	5.000	-29.66	170.00	0.17
Span # 5	5	5.000	-11.25	170.00	0.07
Span # 6	6	14.250	-54.33	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	5.000	31.38	162.54	0.19
Span # 2	2	5.000	-27.44	170.00	0.16
Span # 3	3	5.000	44.07	162.54	0.27
Span # 4	4	5.000	-29.27	170.00	0.17
Span # 5	5	5.000	13.37	162.54	0.08
Span # 6	6	14.250	-67.98	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.000	31.19	162.54	0.19
Span # 2	2	5.000	-27.74	170.00	0.16
Span # 3	3	5.000	42.79	162.54	0.26
Span # 4	4	5.000	-33.83	170.00	0.20
Span # 5	5	5.000	-10.67	170.00	0.06
Span # 6	6	14.250	-54.29	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.000	31.21	162.54	0.19
Span # 2	2	5.000	-27.72	170.00	0.16
Span # 3	3	5.000	42.90	162.54	0.26
Span # 4	4	5.000	-33.44	170.00	0.20
Span # 5	5	5.000	-12.12	170.00	0.07
Span # 6	6	14.250	-67.94	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.000	31.19	162.54	0.19
Span # 2	2	5.000	-27.74	170.00	0.16
Span # 3	3	5.000	42.79	162.54	0.26
Span # 4	4	5.000	-33.83	170.00	0.20
Span # 5	5	5.000	-10.67	170.00	0.06
Span # 6	6	14.250	-54.29	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.000	31.21	162.54	0.19
Span # 2	2	5.000	-27.72	170.00	0.16
Span # 3	3	5.000	42.90	162.54	0.26
Span # 4	4	5.000	-33.44	170.00	0.20
Span # 5	5	5.000	-12.12	170.00	0.07
Span # 6	6	14.250	-67.93	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.000	31.23	162.54	0.19
Span # 2	2	5.000	-27.68	170.00	0.16
Span # 3	3	5.000	43.06	162.54	0.26
Span # 4	4	5.000	-32.86	170.00	0.19
Span # 5	5	5.000	-14.30	170.00	0.08
Span # 6	6	14.250	-54.33	170.00	0.32
Span # 7	7	3.250	-57.93	170.00	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.000	31.25	162.54	0.19
Span # 2	2	5.000	-27.65	170.00	0.16
Span # 3	3	5.000	43.17	162.54	0.27
Span # 4	4	5.000	-32.47	170.00	0.19
Span # 5	5	5.000	-15.74	170.00	0.09
Span # 6	6	14.250	-67.97	170.00	0.40
Span # 7	7	3.250	-72.02	170.00	0.42
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	5.000	31.23	162.54	0.19
Span # 2	2	5.000	-27.68	170.00	0.16
Span # 3	3	5.000	43.06	162.54	0.26
Span # 4	4	5.000	-32.86	170.00	0.19
Span # 5	5	5.000	-14.30	170.00	0.08

Title Block Line 1
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and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 2:49PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

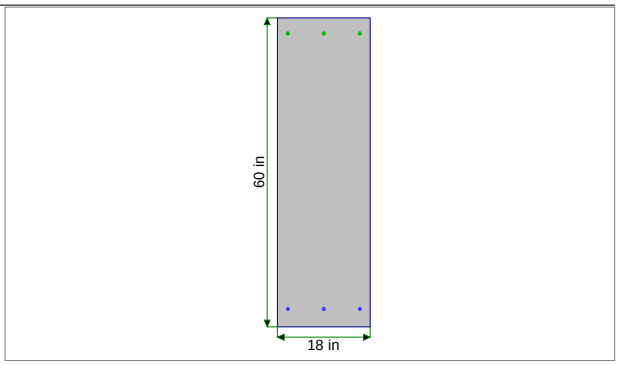
Description : GB-N (AT NORTH WALL GRID 7)

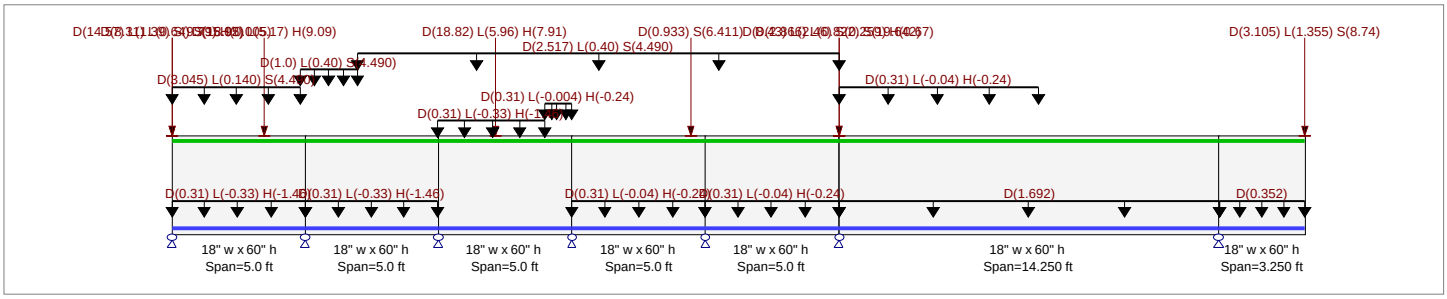
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 60.0 in

Span #1 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #2 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #3 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #4 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #5 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #6 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 17.50 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 17.50 ft in this span

Span #7 Reinforcing....
3-#5 at 3.50 in from Bottom, from 0.0 to 17.50 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 17.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 3.045, L = 0.140, S = 4.490 k/ft, Extent = 0.0 -->> 4.833 ft
Partial Length Uniform Load : D = 1.0, L = 0.40, S = 4.490 k/ft, Extent = 4.833 -->> 7.0 ft
Partial Length Uniform Load : D = 2.517, L = 0.40, S = 4.490 k/ft, Extent = 7.0 -->> 25.0 ft
Load for Span Number 1
Point Load : D = 8.310, L = 0.640, S = 18.950 k @ 0.0 ft, (GB-O)
Point Load : D = 14.570, L = 1.390, S = 9.790, H = 0.0050 k @ 0.0 ft, (GB-W)
Point Load : D = 15.020, L = 5.170, H = 9.090 k @ 3.50 ft, (GB-T)
Uniform Load : D = 0.310, L = -0.330, H = -1.460 k/ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)
Load for Span Number 2
Uniform Load : D = 0.310, L = -0.330, H = -1.460 k/ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)
Load for Span Number 3
Point Load : D = 18.820, L = 5.960, H = 7.910 k @ 2.167 ft, (GB-U)
Uniform Load : D = 0.310, L = -0.330, H = -1.460 k/ft, Extent = 0.0 -->> 4.0 ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)
Uniform Load : D = 0.310, L = -0.0040, H = -0.240 k/ft, Extent = 4.0 -->> 5.0 ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)

Title Block Line 1
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and then using the "Printing &
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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load for Span Number 4
- Point Load : D = 0.9330, S = 6.411 k @ 4.50 ft, (P3)
- Uniform Load : D = 0.310, L = -0.040, H = -0.240 k/ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)

Load for Span Number 5
- Uniform Load : D = 0.310, L = -0.040, H = -0.240 k/ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)

Load for Span Number 6
- Point Load : D = 2.866, L = 0.8220, S = 19.642 k @ 0.0 ft
- Point Load : D = 8.430, L = 2.460, S = 0.2590, H = 0.670 k @ 0.0 ft, (GB-V)
- Uniform Load : D = 1.692 k/ft, Tributary Width = 1.0 ft, (WALL B4)
- Uniform Load : D = 0.310, L = -0.040, H = -0.240 k/ft, Extent = 0.0 -->> 7.50 ft, Tributary Width = 1.0 ft, (REACTION FROM SLAB AT RETAINING)

Load for Span Number 7
- Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM REACTION)
- Uniform Load : D = 0.3520 k/ft, Tributary Width = 1.0 ft, (WALL B5)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.284** : 1

Section used for this span	**Typical Section**	
Mu : Applied	-69.750	k-ft
Mn * Phi : Allowable	245.290	k-ft
Location of maximum on span	0.000	ft
Span # where maximum occurs	Span # 6	

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.001 in	Ratio =	148075 >=24
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Overall MAXimum	72.056	57.128	46.024	57.004	37.099	46.653	36.797	
Overall MINimum	0.000	-0.003	0.011	-0.000	0.008	-0.002	0.000	
+D+H	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+L+H, LL Comb Run (******L)	34.460	31.716	24.168	35.136	3.223	42.049	27.224	
+D+L+H, LL Comb Run (*****L*)	34.459	31.723	24.140	35.241	2.831	42.531	25.396	
+D+L+H, LL Comb Run (*****LL)	34.461	31.714	24.178	35.095	3.374	41.676	27.178	
+D+L+H, LL Comb Run (****L**)	34.461	31.714	24.175	35.106	3.783	43.755	25.426	
+D+L+H, LL Comb Run (****L*L)	34.462	31.705	24.214	34.961	4.326	42.900	27.209	
+D+L+H, LL Comb Run (****LL*)	34.461	31.712	24.186	35.066	3.933	43.383	25.380	
+D+L+H, LL Comb Run (****LLL)	34.463	31.702	24.225	34.920	4.476	42.527	27.163	
+D+L+H, LL Comb Run (***L***)	34.452	31.764	23.975	36.307	3.679	42.797	25.446	
+D+L+H, LL Comb Run (***L**L)	34.454	31.755	24.014	36.162	4.222	41.941	27.229	
+D+L+H, LL Comb Run (***L*L*)	34.453	31.762	23.986	36.267	3.830	42.424	25.400	
+D+L+H, LL Comb Run (***L*LL)	34.455	31.752	24.025	36.121	4.373	41.568	27.183	
+D+L+H, LL Comb Run (***LL**)	34.454	31.753	24.022	36.132	4.781	43.648	25.431	
+D+L+H, LL Comb Run (***LL*L)	34.456	31.743	24.061	35.987	5.324	42.792	27.213	
+D+L+H, LL Comb Run (***LLL*)	34.455	31.750	24.033	36.092	4.932	43.275	25.385	
+D+L+H, LL Comb Run (***LLLL)	34.456	31.740	24.071	35.947	5.475	42.419	27.167	
+D+L+H, LL Comb Run (**L****)	34.589	30.945	28.426	38.848	1.969	43.044	25.437	
+D+L+H, LL Comb Run (**L***L)	34.591	30.935	28.465	38.703	2.512	42.188	27.219	
+D+L+H, LL Comb Run (**L**L*)	34.590	30.942	28.437	38.808	2.120	42.671	25.391	
+D+L+H, LL Comb Run (**L**LL)	34.591	30.932	28.476	38.662	2.662	41.815	27.173	
+D+L+H, LL Comb Run (**L*L**)	34.591	30.933	28.473	38.673	3.071	43.895	25.421	
+D+L+H, LL Comb Run (**L*L*L)	34.593	30.923	28.512	38.528	3.614	43.039	27.204	
+D+L+H, LL Comb Run (**L*LL*)	34.591	30.930	28.484	38.633	3.222	43.522	25.375	
+D+L+H, LL Comb Run (**L*LLL)	34.593	30.921	28.522	38.488	3.765	42.666	27.157	
+D+L+H, LL Comb Run (**LL***)	34.583	30.983	28.273	39.874	2.968	42.936	25.441	
+D+L+H, LL Comb Run (**LL**L)	34.584	30.973	28.311	39.729	3.511	42.080	27.223	
+D+L+H, LL Comb Run (**LL*L*)	34.583	30.980	28.283	39.834	3.118	42.563	25.395	
+D+L+H, LL Comb Run (**LL*LL)	34.585	30.971	28.322	39.689	3.661	41.708	27.177	
+D+L+H, LL Comb Run (**LLL**)	34.585	30.971	28.319	39.700	4.070	43.787	25.425	
+D+L+H, LL Comb Run (**LLL*L)	34.586	30.962	28.358	39.554	4.613	42.932	27.208	
+D+L+H, LL Comb Run (**LLLL*)	34.585	30.969	28.330	39.659	4.221	43.414	25.379	
+D+L+H, LL Comb Run (**LLLLL)	34.587	30.959	28.369	39.514	4.763	42.559	27.162	
+D+L+H, LL Comb Run (*L*****)	34.442	31.916	24.329	35.251	2.688	42.903	25.442	
+D+L+H, LL Comb Run (*L****L)	34.443	31.907	24.368	35.105	3.231	42.047	27.225	
+D+L+H, LL Comb Run (*L***L*)	34.442	31.914	24.340	35.210	2.839	42.530	25.396	
+D+L+H, LL Comb Run (*L***LL)	34.444	31.904	24.379	35.065	3.382	41.674	27.178	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (*L**L**)	34.444	31.905	24.376	35.076	3.791	43.754	25.427	
+D+L+H, LL Comb Run (*L**L*L)	34.445	31.895	24.415	34.931	4.333	42.898	27.209	
+D+L+H, LL Comb Run (*L**LL*)	34.444	31.902	24.387	35.036	3.941	43.381	25.380	
+D+L+H, LL Comb Run (*L**LLL)	34.446	31.892	24.426	34.890	4.484	42.525	27.163	
+D+L+H, LL Comb Run (*L*L***)	34.435	31.955	24.176	36.277	3.687	42.795	25.446	
+D+L+H, LL Comb Run (*L*L**L)	34.437	31.945	24.215	36.132	4.230	41.940	27.229	
+D+L+H, LL Comb Run (*L*L*L*)	34.436	31.952	24.186	36.237	3.838	42.422	25.400	
+D+L+H, LL Comb Run (*L*L*LL)	34.437	31.942	24.225	36.091	4.381	41.567	27.183	
+D+L+H, LL Comb Run (*L*LL**)	34.437	31.943	24.222	36.102	4.789	43.646	25.431	
+D+L+H, LL Comb Run (*L*LL*L)	34.439	31.934	24.261	35.957	5.332	42.791	27.213	
+D+L+H, LL Comb Run (*L*LLL*)	34.438	31.941	24.233	36.062	4.940	43.274	25.385	
+D+L+H, LL Comb Run (*L*LLLL)	34.439	31.931	24.272	35.916	5.483	42.418	27.167	
+D+L+H, LL Comb Run (*LL****)	34.572	31.135	28.627	38.818	1.977	43.042	25.437	
+D+L+H, LL Comb Run (*LL***L)	34.574	31.125	28.666	38.672	2.520	42.186	27.219	
+D+L+H, LL Comb Run (*LL**L*)	34.572	31.132	28.638	38.777	2.127	42.669	25.391	
+D+L+H, LL Comb Run (*LL**LL)	34.574	31.123	28.676	38.632	2.670	41.814	27.173	
+D+L+H, LL Comb Run (*LL*L**)	34.574	31.123	28.674	38.643	3.079	43.893	25.421	
+D+L+H, LL Comb Run (*LL*L*L)	34.575	31.114	28.712	38.498	3.622	43.038	27.204	
+D+L+H, LL Comb Run (*LL*LL*)	34.574	31.121	28.684	38.603	3.230	43.520	25.375	
+D+L+H, LL Comb Run (*LL*LLL)	34.576	31.111	28.723	38.457	3.772	42.665	27.157	
+D+L+H, LL Comb Run (*LLL***)	34.566	31.174	28.473	39.844	2.976	42.934	25.441	
+D+L+H, LL Comb Run (*LLL**L)	34.567	31.164	28.512	39.699	3.518	42.079	27.223	
+D+L+H, LL Comb Run (*LLL*L*)	34.566	31.171	28.484	39.804	3.126	42.562	25.395	
+D+L+H, LL Comb Run (*LLL*LL)	34.568	31.161	28.523	39.658	3.669	41.706	27.177	
+D+L+H, LL Comb Run (*LLLL**)	34.567	31.162	28.520	39.669	4.078	43.786	25.425	
+D+L+H, LL Comb Run (*LLLL*L)	34.569	31.152	28.559	39.524	4.621	42.930	27.208	
+D+L+H, LL Comb Run (*LLLLL*)	34.568	31.159	28.531	39.629	4.228	43.413	25.379	
+D+L+H, LL Comb Run (*LLLLLL)	34.570	31.150	28.569	39.484	4.771	42.557	27.162	
+D+L+H, LL Comb Run (L******)	37.134	35.891	23.435	35.466	2.633	42.913	25.442	
+D+L+H, LL Comb Run (L*****L)	37.135	35.882	23.474	35.321	3.175	42.058	27.224	
+D+L+H, LL Comb Run (L****L*)	37.134	35.889	23.446	35.426	2.783	42.541	25.396	
+D+L+H, LL Comb Run (L****LL)	37.136	35.879	23.485	35.280	3.326	41.685	27.178	
+D+L+H, LL Comb Run (L***L**)	37.136	35.880	23.482	35.292	3.735	43.765	25.426	
+D+L+H, LL Comb Run (L***L*L)	37.137	35.870	23.521	35.146	4.278	42.909	27.209	
+D+L+H, LL Comb Run (L***LL*)	37.136	35.877	23.493	35.251	3.885	43.392	25.380	
+D+L+H, LL Comb Run (L***LLL)	37.138	35.867	23.532	35.106	4.428	42.536	27.162	
+D+L+H, LL Comb Run (L**L***)	37.127	35.930	23.282	36.492	3.631	42.806	25.446	
+D+L+H, LL Comb Run (L**L**L)	37.129	35.920	23.321	36.347	4.174	41.950	27.228	
+D+L+H, LL Comb Run (L**L*L*)	37.128	35.927	23.293	36.452	3.782	42.433	25.400	
+D+L+H, LL Comb Run (L**L*LL)	37.130	35.917	23.331	36.307	4.325	41.578	27.182	
+D+L+H, LL Comb Run (L**LL**)	37.129	35.918	23.328	36.318	4.734	43.657	25.430	
+D+L+H, LL Comb Run (L**LL*L)	37.131	35.908	23.367	36.172	5.276	42.802	27.213	
+D+L+H, LL Comb Run (L**LLL*)	37.130	35.915	23.339	36.277	4.884	43.284	25.384	
+D+L+H, LL Comb Run (L**LLLL)	37.131	35.906	23.378	36.132	5.427	42.429	27.167	
+D+L+H, LL Comb Run (L*L****)	37.264	35.110	27.733	39.033	1.921	43.053	25.436	
+D+L+H, LL Comb Run (L*L***L)	37.266	35.100	27.772	38.888	2.464	42.197	27.219	
+D+L+H, LL Comb Run (L*L**L*)	37.265	35.107	27.744	38.993	2.072	42.680	25.390	
+D+L+H, LL Comb Run (L*L**LL)	37.266	35.098	27.783	38.848	2.615	41.825	27.173	
+D+L+H, LL Comb Run (L*L*L**)	37.266	35.098	27.780	38.859	3.023	43.904	25.421	
+D+L+H, LL Comb Run (L*L*L*L)	37.268	35.089	27.818	38.713	3.566	43.049	27.203	
+D+L+H, LL Comb Run (L*L*LL*)	37.266	35.096	27.790	38.818	3.174	43.531	25.375	
+D+L+H, LL Comb Run (L*L*LLL)	37.268	35.086	27.829	38.673	3.717	42.676	27.157	
+D+L+H, LL Comb Run (L*LL***)	37.258	35.148	27.579	40.060	2.920	42.945	25.440	
+D+L+H, LL Comb Run (L*LL**L)	37.259	35.139	27.618	39.914	3.463	42.090	27.223	
+D+L+H, LL Comb Run (L*LL*L*)	37.258	35.146	27.590	40.019	3.070	42.573	25.394	
+D+L+H, LL Comb Run (L*LL*LL)	37.260	35.136	27.629	39.874	3.613	41.717	27.177	
+D+L+H, LL Comb Run (L*LLL**)	37.260	35.137	27.626	39.885	4.022	43.797	25.425	
+D+L+H, LL Comb Run (L*LLL*L)	37.261	35.127	27.665	39.739	4.565	42.941	27.207	
+D+L+H, LL Comb Run (L*LLLL*)	37.260	35.134	27.637	39.845	4.173	43.424	25.379	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (L*LLLLL)	37.262	35.124	27.675	39.699	4.715	42.568	27.161	
+D+L+H, LL Comb Run (LL*****)	37.117	36.082	23.636	35.436	2.640	42.912	25.442	
+D+L+H, LL Comb Run (LL****L)	37.118	36.072	23.675	35.291	3.183	42.056	27.224	
+D+L+H, LL Comb Run (LL***L*)	37.117	36.079	23.647	35.396	2.791	42.539	25.396	
+D+L+H, LL Comb Run (LL***LL)	37.119	36.069	23.686	35.250	3.334	41.684	27.178	
+D+L+H, LL Comb Run (LL**L**)	37.119	36.070	23.683	35.261	3.743	43.763	25.426	
+D+L+H, LL Comb Run (LL**L*L)	37.120	36.060	23.721	35.116	4.285	42.908	27.209	
+D+L+H, LL Comb Run (LL**LL*)	37.119	36.067	23.693	35.221	3.893	43.390	25.380	
+D+L+H, LL Comb Run (LL**LLL)	37.121	36.058	23.732	35.076	4.436	42.535	27.163	
+D+L+H, LL Comb Run (LL*L***)	37.110	36.120	23.482	36.462	3.639	42.804	25.446	
+D+L+H, LL Comb Run (LL*L**L)	37.112	36.111	23.521	36.317	4.182	41.949	27.228	
+D+L+H, LL Comb Run (LL*L*L*)	37.111	36.118	23.493	36.422	3.790	42.432	25.400	
+D+L+H, LL Comb Run (LL*L*LL)	37.112	36.108	23.532	36.276	4.333	41.576	27.182	
+D+L+H, LL Comb Run (LL*LL**)	37.112	36.109	23.529	36.288	4.741	43.656	25.430	
+D+L+H, LL Comb Run (LL*LL*L)	37.114	36.099	23.568	36.142	5.284	42.800	27.213	
+D+L+H, LL Comb Run (LL*LLL*)	37.113	36.106	23.540	36.247	4.892	43.283	25.384	
+D+L+H, LL Comb Run (LL*LLLL)	37.114	36.096	23.578	36.102	5.435	42.427	27.167	
+D+L+H, LL Comb Run (LLL****)	37.247	35.300	27.934	39.003	1.929	43.051	25.436	
+D+L+H, LL Comb Run (LLL***L)	37.249	35.291	27.972	38.858	2.472	42.196	27.219	
+D+L+H, LL Comb Run (LLL**L*)	37.247	35.298	27.944	38.963	2.080	42.679	25.390	
+D+L+H, LL Comb Run (LLL**LL)	37.249	35.288	27.983	38.817	2.622	41.823	27.173	
+D+L+H, LL Comb Run (LLL*L**)	37.249	35.289	27.980	38.828	3.031	43.903	25.421	
+D+L+H, LL Comb Run (LLL*L*L)	37.250	35.279	28.019	38.683	3.574	43.047	27.203	
+D+L+H, LL Comb Run (LLL*LL*)	37.249	35.286	27.991	38.788	3.182	43.530	25.375	
+D+L+H, LL Comb Run (LLL*LLL)	37.251	35.276	28.030	38.643	3.725	42.674	27.157	
+D+L+H, LL Comb Run (LLLL***)	37.241	35.339	27.780	40.029	2.928	42.944	25.440	
+D+L+H, LL Comb Run (LLLL**L)	37.242	35.329	27.819	39.884	3.470	42.088	27.223	
+D+L+H, LL Comb Run (LLLL*L*)	37.241	35.336	27.791	39.989	3.078	42.571	25.394	
+D+L+H, LL Comb Run (LLLL*LL)	37.243	35.327	27.829	39.844	3.621	41.716	27.177	
+D+L+H, LL Comb Run (LLLLL**)	37.242	35.327	27.826	39.855	4.030	43.795	25.425	
+D+L+H, LL Comb Run (LLLLL*L)	37.244	35.318	27.865	39.709	4.573	42.939	27.207	
+D+L+H, LL Comb Run (LLLLLL*)	37.243	35.325	27.837	39.814	4.180	43.422	25.379	
+D+L+H, LL Comb Run (LLLLLLL)	37.245	35.315	27.876	39.669	4.723	42.567	27.161	
+D+Lr+H, LL Comb Run (******L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*****L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*****LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (****L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (****L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (****LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (****LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***L***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***L**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***L*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***L*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***LL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***LL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***LLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (***LLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L***L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L**L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L**LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L*L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L*L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L*LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**L*LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LL***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LL**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LL*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (**LL*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LLL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LLL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LLLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (**LLLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L****L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L***L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L***LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L**L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L**L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L**LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L**LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*L***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*L**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*L*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*L*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*LL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*LL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*LLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*L*LLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL***L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL**L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL**LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL*L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL*L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL*LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LL*LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLL***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLL**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLL*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLL*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLLL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLLL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLLLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (*LLLLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L******)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*****L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L****L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L****LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L***L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L***L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L***LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L***LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**L***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**L**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**L*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**L*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**LL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**LL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**LLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L**LLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L***L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L**L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L**LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L*L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L*L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (L*L*LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*L*LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LL***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LL**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LL*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LL*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LLL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LLL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LLLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (L*LLLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL****L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL***L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL***LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL**L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL**L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL**LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL**LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*L***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*L**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*L*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*L*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*LL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*LL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*LLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LL*LLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL****)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL***L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL**L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL**LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL*L**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL*L*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL*LL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLL*LLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLL***)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLL**L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLL*L*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLL*LL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLLL**)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLLL*L)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLLLL*)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+Lr+H, LL Comb Run (LLLLLLL)	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+S+H	72.056	57.128	46.024	57.004	37.099	46.653	36.797	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.460	31.719	24.158	35.172	3.088	42.262	26.779	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.459	31.724	24.137	35.251	2.794	42.625	25.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.460	31.717	24.166	35.142	3.201	41.983	26.744	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.460	31.717	24.164	35.150	3.507	43.542	25.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.462	31.710	24.193	35.041	3.914	42.901	26.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.461	31.715	24.172	35.120	3.620	43.263	25.396	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.462	31.708	24.201	35.011	4.027	42.621	26.733	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.454	31.755	24.014	36.051	3.430	42.823	25.445	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.455	31.748	24.043	35.942	3.837	42.182	26.782	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.454	31.753	24.022	36.020	3.543	42.544	25.411	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.456	31.745	24.051	35.911	3.950	41.902	26.747	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.456	31.746	24.049	35.920	4.256	43.462	25.433	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.457	31.739	24.078	35.811	4.663	42.820	26.770	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.456	31.744	24.057	35.889	4.369	43.182	25.399	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.457	31.737	24.086	35.780	4.776	42.541	26.736	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.557	31.140	27.352	37.956	2.147	43.009	25.438	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	34.558	31.133	27.381	37.847	2.554	42.367	26.775	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.557	31.138	27.360	37.926	2.260	42.729	25.403	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.558	31.131	27.389	37.817	2.667	42.087	26.740	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.558	31.131	27.387	37.825	2.973	43.647	25.426	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.559	31.124	27.416	37.716	3.381	43.005	26.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.558	31.129	27.395	37.795	3.086	43.367	25.392	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.560	31.122	27.424	37.686	3.494	42.726	26.729	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.552	31.169	27.237	38.726	2.896	42.928	25.441	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.553	31.162	27.266	38.617	3.303	42.286	26.778	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.552	31.167	27.245	38.696	3.009	42.648	25.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.553	31.160	27.274	38.587	3.416	42.007	26.743	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.553	31.160	27.272	38.595	3.723	43.566	25.429	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.554	31.153	27.301	38.486	4.130	42.925	26.766	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.554	31.158	27.280	38.565	3.836	43.287	25.395	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.555	31.151	27.309	38.456	4.243	42.645	26.732	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.446	31.869	24.279	35.258	2.686	42.903	25.442	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.447	31.862	24.308	35.149	3.094	42.261	26.779	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.446	31.867	24.287	35.228	2.799	42.623	25.408	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.448	31.860	24.316	35.119	3.206	41.982	26.744	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.447	31.860	24.314	35.127	3.513	43.541	25.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.449	31.853	24.343	35.018	3.920	42.900	26.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.448	31.858	24.322	35.097	3.626	43.262	25.396	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.449	31.851	24.351	34.988	4.033	42.620	26.733	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.441	31.898	24.164	36.028	3.435	42.822	25.445	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.442	31.890	24.193	35.919	3.843	42.181	26.782	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.442	31.896	24.172	35.998	3.548	42.543	25.411	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.443	31.888	24.201	35.889	3.956	41.901	26.747	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.443	31.889	24.199	35.897	4.262	43.461	25.434	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.444	31.882	24.228	35.788	4.669	42.819	26.770	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.443	31.887	24.207	35.867	4.375	43.181	25.399	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.444	31.880	24.236	35.758	4.782	42.539	26.736	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.544	31.283	27.502	37.934	2.153	43.008	25.438	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.545	31.276	27.531	37.825	2.560	42.366	26.775	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.544	31.281	27.510	37.903	2.266	42.728	25.403	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.545	31.274	27.540	37.794	2.673	42.086	26.740	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.545	31.274	27.537	37.803	2.979	43.646	25.426	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.546	31.267	27.566	37.694	3.386	43.004	26.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.545	31.272	27.545	37.772	3.092	43.366	25.392	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.547	31.265	27.574	37.663	3.499	42.725	26.729	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.539	31.312	27.387	38.703	2.902	42.927	25.441	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.540	31.304	27.416	38.594	3.309	42.285	26.778	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.539	31.310	27.395	38.673	3.015	42.647	25.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.540	31.302	27.424	38.564	3.422	42.006	26.743	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.540	31.303	27.422	38.572	3.728	43.565	25.429	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.542	31.296	27.451	38.463	4.136	42.924	26.766	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.541	31.301	27.430	38.542	3.841	43.286	25.395	
+D+0.750Lr+0.750L+H, LL Comb Run (	34.542	31.294	27.459	38.433	4.249	42.644	26.732	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.465	34.850	23.609	35.420	2.645	42.911	25.442	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.466	34.843	23.638	35.311	3.052	42.269	26.779	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.465	34.848	23.617	35.390	2.758	42.632	25.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.467	34.841	23.646	35.281	3.165	41.990	26.744	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.467	34.841	23.644	35.289	3.471	43.550	25.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.468	34.834	23.673	35.180	3.878	42.908	26.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.467	34.839	23.652	35.259	3.584	43.270	25.396	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.468	34.832	23.681	35.150	3.991	42.628	26.732	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.460	34.879	23.494	36.190	3.394	42.831	25.445	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.462	34.872	23.523	36.081	3.801	42.189	26.782	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.461	34.877	23.502	36.159	3.507	42.551	25.410	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.462	34.869	23.531	36.050	3.914	41.909	26.747	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	36.462	34.870	23.528	36.059	4.220	43.469	25.433	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.463	34.863	23.558	35.949	4.627	42.827	26.770	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.462	34.868	23.537	36.028	4.333	43.189	25.399	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.463	34.861	23.566	35.919	4.740	42.548	26.735	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.563	34.264	26.832	38.095	2.111	43.016	25.438	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.564	34.257	26.861	37.986	2.518	42.374	26.775	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.563	34.262	26.840	38.065	2.224	42.736	25.403	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.564	34.255	26.869	37.956	2.631	42.094	26.740	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.564	34.255	26.867	37.964	2.938	43.654	25.426	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.565	34.248	26.896	37.855	3.345	43.012	26.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.565	34.253	26.875	37.934	3.051	43.375	25.391	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.566	34.246	26.904	37.825	3.458	42.733	26.728	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.558	34.293	26.717	38.865	2.860	42.935	25.441	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.559	34.286	26.746	38.756	3.267	42.293	26.778	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.558	34.291	26.725	38.835	2.973	42.656	25.406	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.560	34.284	26.754	38.726	3.380	42.014	26.743	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.559	34.284	26.752	38.734	3.687	43.573	25.429	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.561	34.277	26.781	38.625	4.094	42.932	26.766	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.560	34.282	26.760	38.704	3.800	43.294	25.395	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.561	34.275	26.789	38.595	4.207	42.652	26.731	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.452	34.993	23.759	35.397	2.650	42.910	25.442	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.453	34.986	23.788	35.288	3.058	42.268	26.779	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.453	34.991	23.767	35.367	2.763	42.630	25.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.454	34.984	23.796	35.258	3.171	41.989	26.744	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.454	34.984	23.794	35.266	3.477	43.548	25.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.455	34.977	23.823	35.157	3.884	42.907	26.767	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.454	34.982	23.802	35.236	3.590	43.269	25.396	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.455	34.975	23.831	35.127	3.997	42.627	26.732	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.447	35.022	23.644	36.167	3.400	42.829	25.445	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.449	35.014	23.673	36.058	3.807	42.188	26.782	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.448	35.020	23.652	36.137	3.513	42.550	25.410	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.449	35.012	23.681	36.028	3.920	41.908	26.747	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.449	35.013	23.679	36.036	4.226	43.468	25.433	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.450	35.006	23.708	35.927	4.633	42.826	26.770	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.449	35.011	23.687	36.006	4.339	43.188	25.399	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.450	35.004	23.716	35.897	4.746	42.547	26.736	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.550	34.407	26.982	38.073	2.117	43.015	25.438	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.551	34.400	27.011	37.964	2.524	42.373	26.775	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.550	34.405	26.990	38.042	2.230	42.735	25.403	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.551	34.398	27.020	37.933	2.637	42.093	26.740	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.551	34.398	27.017	37.942	2.943	43.653	25.426	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.553	34.391	27.046	37.833	3.351	43.011	26.763	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.552	34.396	27.025	37.911	3.056	43.373	25.392	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.553	34.389	27.054	37.802	3.464	42.732	26.728	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.545	34.436	26.867	38.842	2.866	42.934	25.441	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.546	34.428	26.896	38.733	3.273	42.292	26.778	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.545	34.434	26.875	38.812	2.979	42.654	25.406	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.547	34.426	26.904	38.703	3.386	42.013	26.743	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.547	34.427	26.902	38.711	3.693	43.572	25.429	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.548	34.420	26.931	38.602	4.100	42.931	26.766	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.547	34.425	26.910	38.681	3.805	43.293	25.395	
+D+0.750Lr+0.750L+H, LL Comb Run (	36.548	34.418	26.939	38.572	4.213	42.651	26.731	
+D+0.750L+0.750S+H, LL Comb Run (*	62.658	50.770	40.579	51.464	28.902	45.074	35.295	
+D+0.750L+0.750S+H, LL Comb Run (*	62.657	50.776	40.558	51.543	28.608	45.436	33.924	
+D+0.750L+0.750S+H, LL Comb Run (*	62.658	50.768	40.587	51.434	29.015	44.795	35.261	
+D+0.750L+0.750S+H, LL Comb Run (*	62.658	50.769	40.585	51.442	29.321	46.354	33.947	
+D+0.750L+0.750S+H, LL Comb Run (*	62.660	50.762	40.614	51.333	29.728	45.712	35.284	
+D+0.750L+0.750S+H, LL Comb Run (*	62.659	50.767	40.593	51.412	29.434	46.075	33.912	
+D+0.750L+0.750S+H, LL Comb Run (*	62.660	50.760	40.622	51.303	29.841	45.433	35.249	

Concrete Beam

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (*	62.652	50.806	40.435	52.343	29.244	45.635	33.962	
+D+0.750L+0.750S+H, LL Comb Run (*	62.653	50.799	40.464	52.234	29.651	44.993	35.298	
+D+0.750L+0.750S+H, LL Comb Run (*	62.652	50.804	40.443	52.313	29.357	45.356	33.927	
+D+0.750L+0.750S+H, LL Comb Run (*	62.654	50.797	40.472	52.204	29.764	44.714	35.264	
+D+0.750L+0.750S+H, LL Comb Run (*	62.654	50.798	40.470	52.212	30.070	46.273	33.950	
+D+0.750L+0.750S+H, LL Comb Run (*	62.655	50.790	40.499	52.103	30.477	45.632	35.287	
+D+0.750L+0.750S+H, LL Comb Run (*	62.654	50.796	40.478	52.182	30.183	45.994	33.915	
+D+0.750L+0.750S+H, LL Comb Run (*	62.655	50.788	40.507	52.073	30.590	45.352	35.252	
+D+0.750L+0.750S+H, LL Comb Run (*	62.755	50.192	43.773	54.249	27.961	45.820	33.954	
+D+0.750L+0.750S+H, LL Comb Run (*	62.756	50.184	43.802	54.140	28.368	45.179	35.291	
+D+0.750L+0.750S+H, LL Comb Run (*	62.755	50.190	43.781	54.219	28.074	45.541	33.920	
+D+0.750L+0.750S+H, LL Comb Run (*	62.756	50.182	43.811	54.109	28.481	44.899	35.257	
+D+0.750L+0.750S+H, LL Comb Run (*	62.756	50.183	43.808	54.118	28.788	46.459	33.943	
+D+0.750L+0.750S+H, LL Comb Run (*	62.757	50.176	43.837	54.009	29.195	45.817	35.280	
+D+0.750L+0.750S+H, LL Comb Run (*	62.756	50.181	43.816	54.087	28.901	46.179	33.908	
+D+0.750L+0.750S+H, LL Comb Run (*	62.758	50.174	43.845	53.978	29.308	45.537	35.245	
+D+0.750L+0.750S+H, LL Comb Run (*	62.750	50.220	43.658	55.018	28.710	45.740	33.958	
+D+0.750L+0.750S+H, LL Comb Run (*	62.751	50.213	43.687	54.909	29.117	45.098	35.294	
+D+0.750L+0.750S+H, LL Comb Run (*	62.750	50.218	43.666	54.988	28.823	45.460	33.923	
+D+0.750L+0.750S+H, LL Comb Run (*	62.751	50.211	43.695	54.879	29.230	44.818	35.260	
+D+0.750L+0.750S+H, LL Comb Run (*	62.751	50.212	43.693	54.887	29.537	46.378	33.946	
+D+0.750L+0.750S+H, LL Comb Run (*	62.752	50.204	43.722	54.778	29.944	45.736	35.283	
+D+0.750L+0.750S+H, LL Comb Run (*	62.752	50.210	43.701	54.857	29.650	46.099	33.911	
+D+0.750L+0.750S+H, LL Comb Run (*	62.753	50.202	43.730	54.748	30.057	45.457	35.248	
+D+0.750L+0.750S+H, LL Comb Run (*	62.644	50.920	40.701	51.551	28.500	45.715	33.959	
+D+0.750L+0.750S+H, LL Comb Run (*	62.645	50.913	40.730	51.442	28.908	45.073	35.295	
+D+0.750L+0.750S+H, LL Comb Run (*	62.644	50.918	40.709	51.521	28.613	45.435	33.924	
+D+0.750L+0.750S+H, LL Comb Run (*	62.646	50.911	40.738	51.411	29.021	44.793	35.261	
+D+0.750L+0.750S+H, LL Comb Run (*	62.645	50.912	40.736	51.420	29.327	46.353	33.947	
+D+0.750L+0.750S+H, LL Comb Run (*	62.647	50.904	40.765	51.311	29.734	45.711	35.284	
+D+0.750L+0.750S+H, LL Comb Run (*	62.646	50.910	40.744	51.389	29.440	46.073	33.912	
+D+0.750L+0.750S+H, LL Comb Run (*	62.647	50.902	40.773	51.280	29.847	45.432	35.249	
+D+0.750L+0.750S+H, LL Comb Run (*	62.639	50.949	40.585	52.320	29.250	45.634	33.962	
+D+0.750L+0.750S+H, LL Comb Run (*	62.640	50.942	40.615	52.211	29.657	44.992	35.299	
+D+0.750L+0.750S+H, LL Comb Run (*	62.640	50.947	40.593	52.290	29.362	45.354	33.927	
+D+0.750L+0.750S+H, LL Comb Run (*	62.641	50.940	40.623	52.181	29.770	44.713	35.264	
+D+0.750L+0.750S+H, LL Comb Run (*	62.641	50.941	40.620	52.189	30.076	46.272	33.950	
+D+0.750L+0.750S+H, LL Comb Run (*	62.642	50.933	40.649	52.080	30.483	45.631	35.287	
+D+0.750L+0.750S+H, LL Comb Run (*	62.641	50.938	40.628	52.159	30.189	45.993	33.915	
+D+0.750L+0.750S+H, LL Comb Run (*	62.642	50.931	40.658	52.050	30.596	45.351	35.252	
+D+0.750L+0.750S+H, LL Comb Run (*	62.742	50.334	43.924	54.226	27.967	45.819	33.955	
+D+0.750L+0.750S+H, LL Comb Run (*	62.743	50.327	43.953	54.117	28.374	45.177	35.291	
+D+0.750L+0.750S+H, LL Comb Run (*	62.742	50.332	43.932	54.196	28.080	45.540	33.920	
+D+0.750L+0.750S+H, LL Comb Run (*	62.743	50.325	43.961	54.087	28.487	44.898	35.257	
+D+0.750L+0.750S+H, LL Comb Run (*	62.743	50.326	43.959	54.095	28.793	46.458	33.943	
+D+0.750L+0.750S+H, LL Comb Run (*	62.744	50.318	43.988	53.986	29.201	45.816	35.280	
+D+0.750L+0.750S+H, LL Comb Run (*	62.743	50.324	43.967	54.065	28.906	46.178	33.908	
+D+0.750L+0.750S+H, LL Comb Run (*	62.745	50.316	43.996	53.956	29.314	45.536	35.245	
+D+0.750L+0.750S+H, LL Comb Run (*	62.737	50.363	43.809	54.996	28.716	45.739	33.958	
+D+0.750L+0.750S+H, LL Comb Run (*	62.738	50.356	43.838	54.887	29.123	45.097	35.294	
+D+0.750L+0.750S+H, LL Comb Run (*	62.737	50.361	43.817	54.966	28.829	45.459	33.923	
+D+0.750L+0.750S+H, LL Comb Run (*	62.738	50.354	43.846	54.856	29.236	44.817	35.260	
+D+0.750L+0.750S+H, LL Comb Run (*	62.738	50.355	43.844	54.865	29.542	46.377	33.946	
+D+0.750L+0.750S+H, LL Comb Run (*	62.740	50.347	43.873	54.756	29.950	45.735	35.283	
+D+0.750L+0.750S+H, LL Comb Run (*	62.739	50.353	43.852	54.835	29.655	46.097	33.911	
+D+0.750L+0.750S+H, LL Comb Run (*	62.740	50.345	43.881	54.725	30.063	45.456	35.248	
+D+0.750L+0.750S+H, LL Comb Run (L	64.663	53.902	40.030	51.712	28.459	45.723	33.958	
+D+0.750L+0.750S+H, LL Comb Run (L	64.664	53.894	40.059	51.603	28.866	45.081	35.295	
+D+0.750L+0.750S+H, LL Comb Run (L	64.663	53.900	40.038	51.682	28.572	45.443	33.924	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	64.665	53.892	40.067	51.573	28.979	44.802	35.261	
+D+0.750L+0.750S+H, LL Comb Run (L	64.665	53.893	40.065	51.581	29.285	46.361	33.947	
+D+0.750L+0.750S+H, LL Comb Run (L	64.666	53.886	40.094	51.472	29.692	45.719	35.283	
+D+0.750L+0.750S+H, LL Comb Run (L	64.665	53.891	40.073	51.551	29.398	46.082	33.912	
+D+0.750L+0.750S+H, LL Comb Run (L	64.666	53.884	40.102	51.442	29.805	45.440	35.249	
+D+0.750L+0.750S+H, LL Comb Run (L	64.658	53.930	39.915	52.482	29.208	45.642	33.961	
+D+0.750L+0.750S+H, LL Comb Run (L	64.660	53.923	39.944	52.373	29.615	45.000	35.298	
+D+0.750L+0.750S+H, LL Comb Run (L	64.659	53.928	39.923	52.452	29.321	45.363	33.927	
+D+0.750L+0.750S+H, LL Comb Run (L	64.660	53.921	39.952	52.343	29.728	44.721	35.264	
+D+0.750L+0.750S+H, LL Comb Run (L	64.660	53.922	39.950	52.351	30.034	46.281	33.950	
+D+0.750L+0.750S+H, LL Comb Run (L	64.661	53.914	39.979	52.242	30.442	45.639	35.287	
+D+0.750L+0.750S+H, LL Comb Run (L	64.660	53.920	39.958	52.321	30.147	46.001	33.915	
+D+0.750L+0.750S+H, LL Comb Run (L	64.661	53.912	39.987	52.212	30.554	45.359	35.252	
+D+0.750L+0.750S+H, LL Comb Run (L	64.761	53.316	43.253	54.388	27.925	45.827	33.954	
+D+0.750L+0.750S+H, LL Comb Run (L	64.762	53.308	43.282	54.279	28.332	45.186	35.291	
+D+0.750L+0.750S+H, LL Comb Run (L	64.761	53.314	43.261	54.358	28.038	45.548	33.920	
+D+0.750L+0.750S+H, LL Comb Run (L	64.762	53.306	43.291	54.248	28.445	44.906	35.256	
+D+0.750L+0.750S+H, LL Comb Run (L	64.762	53.307	43.288	54.257	28.752	46.466	33.943	
+D+0.750L+0.750S+H, LL Comb Run (L	64.763	53.300	43.317	54.148	29.159	45.824	35.279	
+D+0.750L+0.750S+H, LL Comb Run (L	64.763	53.305	43.296	54.226	28.865	46.186	33.908	
+D+0.750L+0.750S+H, LL Comb Run (L	64.764	53.298	43.325	54.117	29.272	45.544	35.245	
+D+0.750L+0.750S+H, LL Comb Run (L	64.756	53.344	43.138	55.157	28.674	45.747	33.957	
+D+0.750L+0.750S+H, LL Comb Run (L	64.757	53.337	43.167	55.048	29.081	45.105	35.294	
+D+0.750L+0.750S+H, LL Comb Run (L	64.756	53.342	43.146	55.127	28.787	45.467	33.923	
+D+0.750L+0.750S+H, LL Comb Run (L	64.758	53.335	43.175	55.018	29.194	44.825	35.260	
+D+0.750L+0.750S+H, LL Comb Run (L	64.757	53.336	43.173	55.026	29.501	46.385	33.946	
+D+0.750L+0.750S+H, LL Comb Run (L	64.759	53.328	43.202	54.917	29.908	45.743	35.282	
+D+0.750L+0.750S+H, LL Comb Run (L	64.758	53.334	43.181	54.996	29.614	46.106	33.911	
+D+0.750L+0.750S+H, LL Comb Run (L	64.759	53.326	43.210	54.887	30.021	45.464	35.248	
+D+0.750L+0.750S+H, LL Comb Run (L	64.650	54.044	40.181	51.690	28.465	45.722	33.958	
+D+0.750L+0.750S+H, LL Comb Run (L	64.651	54.037	40.210	51.581	28.872	45.080	35.295	
+D+0.750L+0.750S+H, LL Comb Run (L	64.651	54.042	40.189	51.659	28.578	45.442	33.924	
+D+0.750L+0.750S+H, LL Comb Run (L	64.652	54.035	40.218	51.550	28.985	44.800	35.261	
+D+0.750L+0.750S+H, LL Comb Run (L	64.652	54.036	40.216	51.559	29.291	46.360	33.947	
+D+0.750L+0.750S+H, LL Comb Run (L	64.653	54.028	40.245	51.450	29.698	45.718	35.283	
+D+0.750L+0.750S+H, LL Comb Run (L	64.652	54.034	40.224	51.528	29.404	46.080	33.912	
+D+0.750L+0.750S+H, LL Comb Run (L	64.653	54.026	40.253	51.419	29.811	45.439	35.249	
+D+0.750L+0.750S+H, LL Comb Run (L	64.645	54.073	40.065	52.459	29.214	45.641	33.961	
+D+0.750L+0.750S+H, LL Comb Run (L	64.647	54.066	40.094	52.350	29.621	44.999	35.298	
+D+0.750L+0.750S+H, LL Comb Run (L	64.646	54.071	40.073	52.429	29.327	45.361	33.927	
+D+0.750L+0.750S+H, LL Comb Run (L	64.647	54.064	40.103	52.320	29.734	44.720	35.264	
+D+0.750L+0.750S+H, LL Comb Run (L	64.647	54.065	40.100	52.328	30.040	46.279	33.950	
+D+0.750L+0.750S+H, LL Comb Run (L	64.648	54.057	40.129	52.219	30.447	45.638	35.287	
+D+0.750L+0.750S+H, LL Comb Run (L	64.647	54.062	40.108	52.298	30.153	46.000	33.915	
+D+0.750L+0.750S+H, LL Comb Run (L	64.648	54.055	40.137	52.189	30.560	45.358	35.252	
+D+0.750L+0.750S+H, LL Comb Run (L	64.748	53.458	43.404	54.365	27.931	45.826	33.954	
+D+0.750L+0.750S+H, LL Comb Run (L	64.749	53.451	43.433	54.256	28.338	45.185	35.291	
+D+0.750L+0.750S+H, LL Comb Run (L	64.748	53.456	43.412	54.335	28.044	45.547	33.920	
+D+0.750L+0.750S+H, LL Comb Run (L	64.749	53.449	43.441	54.226	28.451	44.905	35.257	
+D+0.750L+0.750S+H, LL Comb Run (L	64.749	53.450	43.439	54.234	28.758	46.465	33.943	
+D+0.750L+0.750S+H, LL Comb Run (L	64.751	53.442	43.468	54.125	29.165	45.823	35.279	
+D+0.750L+0.750S+H, LL Comb Run (L	64.750	53.448	43.447	54.204	28.870	46.185	33.908	
+D+0.750L+0.750S+H, LL Comb Run (L	64.751	53.440	43.476	54.095	29.278	45.543	35.245	
+D+0.750L+0.750S+H, LL Comb Run (L	64.743	53.487	43.289	55.135	28.680	45.746	33.957	
+D+0.750L+0.750S+H, LL Comb Run (L	64.744	53.480	43.318	55.026	29.087	45.104	35.294	
+D+0.750L+0.750S+H, LL Comb Run (L	64.743	53.485	43.297	55.105	28.793	45.466	33.923	
+D+0.750L+0.750S+H, LL Comb Run (L	64.745	53.478	43.326	54.995	29.200	44.824	35.260	
+D+0.750L+0.750S+H, LL Comb Run (L	64.745	53.479	43.323	55.004	29.507	46.384	33.946	
+D+0.750L+0.750S+H, LL Comb Run (L	64.746	53.471	43.353	54.895	29.914	45.742	35.283	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	64.745	53.477	43.332	54.973	29.620	46.104	33.911	
+D+0.750L+0.750S+H, LL Comb Run (L	64.746	53.469	43.361	54.864	30.027	45.463	35.248	
+D+0.60W+H	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+0.70E+H	34.459	31.726	24.129	35.281	2.681	42.904	25.442	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.460	31.719	24.158	35.172	3.088	42.262	26.779	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.459	31.724	24.137	35.251	2.794	42.625	25.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.460	31.717	24.166	35.142	3.201	41.983	26.744	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.460	31.717	24.164	35.150	3.507	43.542	25.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.462	31.710	24.193	35.041	3.914	42.901	26.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.461	31.715	24.172	35.120	3.620	43.263	25.396	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.462	31.708	24.201	35.011	4.027	42.621	26.733	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.454	31.755	24.014	36.051	3.430	42.823	25.445	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.455	31.748	24.043	35.942	3.837	42.182	26.782	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.454	31.753	24.022	36.020	3.543	42.544	25.411	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.456	31.745	24.051	35.911	3.950	41.902	26.747	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.456	31.746	24.049	35.920	4.256	43.462	25.433	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.457	31.739	24.078	35.811	4.663	42.820	26.770	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.456	31.744	24.057	35.889	4.369	43.182	25.399	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.457	31.737	24.086	35.780	4.776	42.541	26.736	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.557	31.140	27.352	37.956	2.147	43.009	25.438	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.558	31.133	27.381	37.847	2.554	42.367	26.775	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.557	31.138	27.360	37.926	2.260	42.729	25.403	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.558	31.131	27.389	37.817	2.667	42.087	26.740	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.558	31.131	27.387	37.825	2.973	43.647	25.426	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.559	31.124	27.416	37.716	3.381	43.005	26.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.558	31.129	27.395	37.795	3.086	43.367	25.392	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.560	31.122	27.424	37.686	3.494	42.726	26.729	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.552	31.169	27.237	38.726	2.896	42.928	25.441	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.553	31.162	27.266	38.617	3.303	42.286	26.778	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.552	31.167	27.245	38.696	3.009	42.648	25.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.553	31.160	27.274	38.587	3.416	42.007	26.743	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.553	31.160	27.272	38.595	3.723	43.566	25.429	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.554	31.153	27.301	38.486	4.130	42.925	26.766	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.554	31.158	27.280	38.565	3.836	43.287	25.395	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.555	31.151	27.309	38.456	4.243	42.645	26.732	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.446	31.869	24.279	35.258	2.686	42.903	25.442	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.447	31.862	24.308	35.149	3.094	42.261	26.779	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.446	31.867	24.287	35.228	2.799	42.623	25.408	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.448	31.860	24.316	35.119	3.206	41.982	26.744	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.447	31.860	24.314	35.127	3.513	43.541	25.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.449	31.853	24.343	35.018	3.920	42.900	26.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.448	31.858	24.322	35.097	3.626	43.262	25.396	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.449	31.851	24.351	34.988	4.033	42.620	26.733	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.441	31.898	24.164	36.028	3.435	42.822	25.445	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.442	31.890	24.193	35.919	3.843	42.181	26.782	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.442	31.896	24.172	35.998	3.548	42.543	25.411	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.443	31.888	24.201	35.889	3.956	41.901	26.747	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.443	31.889	24.199	35.897	4.262	43.461	25.434	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.444	31.882	24.228	35.788	4.669	42.819	26.770	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.443	31.887	24.207	35.867	4.375	43.181	25.399	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.444	31.880	24.236	35.758	4.782	42.539	26.736	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.544	31.283	27.502	37.934	2.153	43.008	25.438	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.545	31.276	27.531	37.825	2.560	42.366	26.775	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.544	31.281	27.510	37.903	2.266	42.728	25.403	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.545	31.274	27.540	37.794	2.673	42.086	26.740	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.545	31.274	27.537	37.803	2.979	43.646	25.426	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.546	31.267	27.566	37.694	3.386	43.004	26.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.545	31.272	27.545	37.772	3.092	43.366	25.392	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.547	31.265	27.574	37.663	3.499	42.725	26.729	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.539	31.312	27.387	38.703	2.902	42.927	25.441	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.540	31.304	27.416	38.594	3.309	42.285	26.778	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.539	31.310	27.395	38.673	3.015	42.647	25.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.540	31.302	27.424	38.564	3.422	42.006	26.743	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.540	31.303	27.422	38.572	3.728	43.565	25.429	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.542	31.296	27.451	38.463	4.136	42.924	26.766	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.541	31.301	27.430	38.542	3.841	43.286	25.395	
+D+0.750Lr+0.750L+0.450W+H, LL Com	34.542	31.294	27.459	38.433	4.249	42.644	26.732	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.465	34.850	23.609	35.420	2.645	42.911	25.442	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.466	34.843	23.638	35.311	3.052	42.269	26.779	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.465	34.848	23.617	35.390	2.758	42.632	25.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.467	34.841	23.646	35.281	3.165	41.990	26.744	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.467	34.841	23.644	35.289	3.471	43.550	25.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.468	34.834	23.673	35.180	3.878	42.908	26.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.467	34.839	23.652	35.259	3.584	43.270	25.396	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.468	34.832	23.681	35.150	3.991	42.628	26.732	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.460	34.879	23.494	36.190	3.394	42.831	25.445	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.462	34.872	23.523	36.081	3.801	42.189	26.782	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.461	34.877	23.502	36.159	3.507	42.551	25.410	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.462	34.869	23.531	36.050	3.914	41.909	26.747	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.462	34.870	23.528	36.059	4.220	43.469	25.433	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.463	34.863	23.558	35.949	4.627	42.827	26.770	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.462	34.868	23.537	36.028	4.333	43.189	25.399	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.463	34.861	23.566	35.919	4.740	42.548	26.735	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.563	34.264	26.832	38.095	2.111	43.016	25.438	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.564	34.257	26.861	37.986	2.518	42.374	26.775	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.563	34.262	26.840	38.065	2.224	42.736	25.403	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.564	34.255	26.869	37.956	2.631	42.094	26.740	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.564	34.255	26.867	37.964	2.938	43.654	25.426	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.565	34.248	26.896	37.855	3.345	43.012	26.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.565	34.253	26.875	37.934	3.051	43.375	25.391	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.566	34.246	26.904	37.825	3.458	42.733	26.728	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.558	34.293	26.717	38.865	2.860	42.935	25.441	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.559	34.286	26.746	38.756	3.267	42.293	26.778	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.558	34.291	26.725	38.835	2.973	42.656	25.406	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.560	34.284	26.754	38.726	3.380	42.014	26.743	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.559	34.284	26.752	38.734	3.687	43.573	25.429	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.561	34.277	26.781	38.625	4.094	42.932	26.766	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.560	34.282	26.760	38.704	3.800	43.294	25.395	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.561	34.275	26.789	38.595	4.207	42.652	26.731	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.452	34.993	23.759	35.397	2.650	42.910	25.442	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.453	34.986	23.788	35.288	3.058	42.268	26.779	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.453	34.991	23.767	35.367	2.763	42.630	25.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.454	34.984	23.796	35.258	3.171	41.989	26.744	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.454	34.984	23.794	35.266	3.477	43.548	25.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.455	34.977	23.823	35.157	3.884	42.907	26.767	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.454	34.982	23.802	35.236	3.590	43.269	25.396	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.455	34.975	23.831	35.127	3.997	42.627	26.732	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.447	35.022	23.644	36.167	3.400	42.829	25.445	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.449	35.014	23.673	36.058	3.807	42.188	26.782	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.448	35.020	23.652	36.137	3.513	42.550	25.410	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.449	35.012	23.681	36.028	3.920	41.908	26.747	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.449	35.013	23.679	36.036	4.226	43.468	25.433	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.450	35.006	23.708	35.927	4.633	42.826	26.770	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.449	35.011	23.687	36.006	4.339	43.188	25.399	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.450	35.004	23.716	35.897	4.746	42.547	26.736	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.550	34.407	26.982	38.073	2.117	43.015	25.438	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.551	34.400	27.011	37.964	2.524	42.373	26.775	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.550	34.405	26.990	38.042	2.230	42.735	25.403	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.551	34.398	27.020	37.933	2.637	42.093	26.740	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.551	34.398	27.017	37.942	2.943	43.653	25.426	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.553	34.391	27.046	37.833	3.351	43.011	26.763	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.552	34.396	27.025	37.911	3.056	43.373	25.392	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.553	34.389	27.054	37.802	3.464	42.732	26.728	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.545	34.436	26.867	38.842	2.866	42.934	25.441	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.546	34.428	26.896	38.733	3.273	42.292	26.778	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.545	34.434	26.875	38.812	2.979	42.654	25.406	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.547	34.426	26.904	38.703	3.386	42.013	26.743	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.547	34.427	26.902	38.711	3.693	43.572	25.429	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.548	34.420	26.931	38.602	4.100	42.931	26.766	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.547	34.425	26.910	38.681	3.805	43.293	25.395	
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.548	34.418	26.939	38.572	4.213	42.651	26.731	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.658	50.770	40.579	51.464	28.902	45.074	35.295	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.657	50.776	40.558	51.543	28.608	45.436	33.924	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.658	50.768	40.587	51.434	29.015	44.795	35.261	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.658	50.769	40.585	51.442	29.321	46.354	33.947	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.660	50.762	40.614	51.333	29.728	45.712	35.284	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.659	50.767	40.593	51.412	29.434	46.075	33.912	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.660	50.760	40.622	51.303	29.841	45.433	35.249	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.652	50.806	40.435	52.343	29.244	45.635	33.962	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.653	50.799	40.464	52.234	29.651	44.993	35.298	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.652	50.804	40.443	52.313	29.357	45.356	33.927	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.654	50.797	40.472	52.204	29.764	44.714	35.264	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.654	50.798	40.470	52.212	30.070	46.273	33.950	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.655	50.790	40.499	52.103	30.477	45.632	35.287	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.654	50.796	40.478	52.182	30.183	45.994	33.915	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.655	50.788	40.507	52.073	30.590	45.352	35.252	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.755	50.192	43.773	54.249	27.961	45.820	33.954	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.756	50.184	43.802	54.140	28.368	45.179	35.291	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.755	50.190	43.781	54.219	28.074	45.541	33.920	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.756	50.182	43.811	54.109	28.481	44.899	35.257	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.756	50.183	43.808	54.118	28.788	46.459	33.943	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.757	50.176	43.837	54.009	29.195	45.817	35.280	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.756	50.181	43.816	54.087	28.901	46.179	33.908	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.758	50.174	43.845	53.978	29.308	45.537	35.245	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.750	50.220	43.658	55.018	28.710	45.740	33.958	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.751	50.213	43.687	54.909	29.117	45.098	35.294	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.750	50.218	43.666	54.988	28.823	45.460	33.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.751	50.211	43.695	54.879	29.230	44.818	35.260	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.751	50.212	43.693	54.887	29.537	46.378	33.946	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.752	50.204	43.722	54.778	29.944	45.736	35.283	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.752	50.210	43.701	54.857	29.650	46.099	33.911	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.753	50.202	43.730	54.748	30.057	45.457	35.248	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.644	50.920	40.701	51.551	28.500	45.715	33.959	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.645	50.913	40.730	51.442	28.908	45.073	35.295	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.644	50.918	40.709	51.521	28.613	45.435	33.924	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.646	50.911	40.738	51.411	29.021	44.793	35.261	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.645	50.912	40.736	51.420	29.327	46.353	33.947	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.647	50.904	40.765	51.311	29.734	45.711	35.284	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.646	50.910	40.744	51.389	29.440	46.073	33.912	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.647	50.902	40.773	51.280	29.847	45.432	35.249	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.639	50.949	40.585	52.320	29.250	45.634	33.962	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.640	50.942	40.615	52.211	29.657	44.992	35.299	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.640	50.947	40.593	52.290	29.362	45.354	33.927	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.641	50.940	40.623	52.181	29.770	44.713	35.264	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.641	50.941	40.620	52.189	30.076	46.272	33.950	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.642	50.933	40.649	52.080	30.483	45.631	35.287	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.641	50.938	40.628	52.159	30.189	45.993	33.915	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	62.642	50.931	40.658	52.050	30.596	45.351	35.252	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.742	50.334	43.924	54.226	27.967	45.819	33.955	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.743	50.327	43.953	54.117	28.374	45.177	35.291	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.742	50.332	43.932	54.196	28.080	45.540	33.920	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.743	50.325	43.961	54.087	28.487	44.898	35.257	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.743	50.326	43.959	54.095	28.793	46.458	33.943	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.744	50.318	43.988	53.986	29.201	45.816	35.280	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.743	50.324	43.967	54.065	28.906	46.178	33.908	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.745	50.316	43.996	53.956	29.314	45.536	35.245	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.737	50.363	43.809	54.996	28.716	45.739	33.958	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.738	50.356	43.838	54.887	29.123	45.097	35.294	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.737	50.361	43.817	54.966	28.829	45.459	33.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.738	50.354	43.846	54.856	29.236	44.817	35.260	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.738	50.355	43.844	54.865	29.542	46.377	33.946	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.740	50.347	43.873	54.756	29.950	45.735	35.283	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.739	50.353	43.852	54.835	29.655	46.097	33.911	
+D+0.750L+0.750S+0.450W+H, LL Comb	62.740	50.345	43.881	54.725	30.063	45.456	35.248	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.663	53.902	40.030	51.712	28.459	45.723	33.958	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.664	53.894	40.059	51.603	28.866	45.081	35.295	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.663	53.900	40.038	51.682	28.572	45.443	33.924	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.665	53.892	40.067	51.573	28.979	44.802	35.261	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.665	53.893	40.065	51.581	29.285	46.361	33.947	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.666	53.886	40.094	51.472	29.692	45.719	35.283	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.665	53.891	40.073	51.551	29.398	46.082	33.912	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.666	53.884	40.102	51.442	29.805	45.440	35.249	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.658	53.930	39.915	52.482	29.208	45.642	33.961	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.660	53.923	39.944	52.373	29.615	45.000	35.298	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.659	53.928	39.923	52.452	29.321	45.363	33.927	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.660	53.921	39.952	52.343	29.728	44.721	35.264	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.660	53.922	39.950	52.351	30.034	46.281	33.950	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.661	53.914	39.979	52.242	30.442	45.639	35.287	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.660	53.920	39.958	52.321	30.147	46.001	33.915	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.661	53.912	39.987	52.212	30.554	45.359	35.252	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.761	53.316	43.253	54.388	27.925	45.827	33.954	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.762	53.308	43.282	54.279	28.332	45.186	35.291	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.761	53.314	43.261	54.358	28.038	45.548	33.920	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.762	53.306	43.291	54.248	28.445	44.906	35.256	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.762	53.307	43.288	54.257	28.752	46.466	33.943	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.763	53.300	43.317	54.148	29.159	45.824	35.279	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.763	53.305	43.296	54.226	28.865	46.186	33.908	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.764	53.298	43.325	54.117	29.272	45.544	35.245	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.756	53.344	43.138	55.157	28.674	45.747	33.957	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.757	53.337	43.167	55.048	29.081	45.105	35.294	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.756	53.342	43.146	55.127	28.787	45.467	33.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.758	53.335	43.175	55.018	29.194	44.825	35.260	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.757	53.336	43.173	55.026	29.501	46.385	33.946	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.759	53.328	43.202	54.917	29.908	45.743	35.282	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.758	53.334	43.181	54.996	29.614	46.106	33.911	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.759	53.326	43.210	54.887	30.021	45.464	35.248	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.650	54.044	40.181	51.690	28.465	45.722	33.958	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.651	54.037	40.210	51.581	28.872	45.080	35.295	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.651	54.042	40.189	51.659	28.578	45.442	33.924	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.652	54.035	40.218	51.550	28.985	44.800	35.261	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.652	54.036	40.216	51.559	29.291	46.360	33.947	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.653	54.028	40.245	51.450	29.698	45.718	35.283	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.652	54.034	40.224	51.528	29.404	46.080	33.912	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.653	54.026	40.253	51.419	29.811	45.439	35.249	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.645	54.073	40.065	52.459	29.214	45.641	33.961	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.647	54.066	40.094	52.350	29.621	44.999	35.298	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	64.646	54.071	40.073	52.429	29.327	45.361	33.927	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.647	54.064	40.103	52.320	29.734	44.720	35.264	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.647	54.065	40.100	52.328	30.040	46.279	33.950	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.648	54.057	40.129	52.219	30.447	45.638	35.287	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.647	54.062	40.108	52.298	30.153	46.000	33.915	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.648	54.055	40.137	52.189	30.560	45.358	35.252	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.748	53.458	43.404	54.365	27.931	45.826	33.954	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.749	53.451	43.433	54.256	28.338	45.185	35.291	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.748	53.456	43.412	54.335	28.044	45.547	33.920	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.749	53.449	43.441	54.226	28.451	44.905	35.257	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.749	53.450	43.439	54.234	28.758	46.465	33.943	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.751	53.442	43.468	54.125	29.165	45.823	35.279	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.750	53.448	43.447	54.204	28.870	46.185	33.908	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.751	53.440	43.476	54.095	29.278	45.543	35.245	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.743	53.487	43.289	55.135	28.680	45.746	33.957	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.744	53.480	43.318	55.026	29.087	45.104	35.294	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.743	53.485	43.297	55.105	28.793	45.466	33.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.745	53.478	43.326	54.995	29.200	44.824	35.260	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.745	53.479	43.323	55.004	29.507	46.384	33.946	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.746	53.471	43.353	54.895	29.914	45.742	35.283	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.745	53.477	43.332	54.973	29.620	46.104	33.911	
+D+0.750L+0.750S+0.450W+H, LL Comb	64.746	53.469	43.361	54.864	30.027	45.463	35.248	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.658	50.770	40.579	51.464	28.902	45.074	35.295	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.657	50.776	40.558	51.543	28.608	45.436	33.924	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.658	50.768	40.587	51.434	29.015	44.795	35.261	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.658	50.769	40.585	51.442	29.321	46.354	33.947	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.660	50.762	40.614	51.333	29.728	45.712	35.284	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.659	50.767	40.593	51.412	29.434	46.075	33.912	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.660	50.760	40.622	51.303	29.841	45.433	35.249	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.652	50.806	40.435	52.343	29.244	45.635	33.962	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.653	50.799	40.464	52.234	29.651	44.993	35.298	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.652	50.804	40.443	52.313	29.357	45.356	33.927	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.654	50.797	40.472	52.204	29.764	44.714	35.264	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.654	50.798	40.470	52.212	30.070	46.273	33.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.655	50.790	40.499	52.103	30.477	45.632	35.287	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.654	50.796	40.478	52.182	30.183	45.994	33.915	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.655	50.788	40.507	52.073	30.590	45.352	35.252	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.755	50.192	43.773	54.249	27.961	45.820	33.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.756	50.184	43.802	54.140	28.368	45.179	35.291	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.755	50.190	43.781	54.219	28.074	45.541	33.920	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.756	50.182	43.811	54.109	28.481	44.899	35.257	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.756	50.183	43.808	54.118	28.788	46.459	33.943	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.757	50.176	43.837	54.009	29.195	45.817	35.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.756	50.181	43.816	54.087	28.901	46.179	33.908	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.758	50.174	43.845	53.978	29.308	45.537	35.245	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.750	50.220	43.658	55.018	28.710	45.740	33.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.751	50.213	43.687	54.909	29.117	45.098	35.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.750	50.218	43.666	54.988	28.823	45.460	33.923	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.751	50.211	43.695	54.879	29.230	44.818	35.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.751	50.212	43.693	54.887	29.537	46.378	33.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.752	50.204	43.722	54.778	29.944	45.736	35.283	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.752	50.210	43.701	54.857	29.650	46.099	33.911	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.753	50.202	43.730	54.748	30.057	45.457	35.248	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.644	50.920	40.701	51.551	28.500	45.715	33.959	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.645	50.913	40.730	51.442	28.908	45.073	35.295	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.644	50.918	40.709	51.521	28.613	45.435	33.924	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.646	50.911	40.738	51.411	29.021	44.793	35.261	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.645	50.912	40.736	51.420	29.327	46.353	33.947	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.647	50.904	40.765	51.311	29.734	45.711	35.284	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	62.646	50.910	40.744	51.389	29.440	46.073	33.912	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.647	50.902	40.773	51.280	29.847	45.432	35.249	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.639	50.949	40.585	52.320	29.250	45.634	33.962	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.640	50.942	40.615	52.211	29.657	44.992	35.299	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.640	50.947	40.593	52.290	29.362	45.354	33.927	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.641	50.940	40.623	52.181	29.770	44.713	35.264	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.641	50.941	40.620	52.189	30.076	46.272	33.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.642	50.933	40.649	52.080	30.483	45.631	35.287	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.641	50.938	40.628	52.159	30.189	45.993	33.915	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.642	50.931	40.658	52.050	30.596	45.351	35.252	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.742	50.334	43.924	54.226	27.967	45.819	33.955	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.743	50.327	43.953	54.117	28.374	45.177	35.291	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.742	50.332	43.932	54.196	28.080	45.540	33.920	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.743	50.325	43.961	54.087	28.487	44.898	35.257	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.743	50.326	43.959	54.095	28.793	46.458	33.943	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.744	50.318	43.988	53.986	29.201	45.816	35.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.743	50.324	43.967	54.065	28.906	46.178	33.908	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.745	50.316	43.996	53.956	29.314	45.536	35.245	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.737	50.363	43.809	54.996	28.716	45.739	33.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.738	50.356	43.838	54.887	29.123	45.097	35.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.737	50.361	43.817	54.966	28.829	45.459	33.923	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.738	50.354	43.846	54.856	29.236	44.817	35.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.738	50.355	43.844	54.865	29.542	46.377	33.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.740	50.347	43.873	54.756	29.950	45.735	35.283	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.739	50.353	43.852	54.835	29.655	46.097	33.911	
+D+0.750L+0.750S+0.5250E+H, LL Com	62.740	50.345	43.881	54.725	30.063	45.456	35.248	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.663	53.902	40.030	51.712	28.459	45.723	33.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.664	53.894	40.059	51.603	28.866	45.081	35.295	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.663	53.900	40.038	51.682	28.572	45.443	33.924	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.665	53.892	40.067	51.573	28.979	44.802	35.261	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.665	53.893	40.065	51.581	29.285	46.361	33.947	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.666	53.886	40.094	51.472	29.692	45.719	35.283	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.665	53.891	40.073	51.551	29.398	46.082	33.912	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.666	53.884	40.102	51.442	29.805	45.440	35.249	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.658	53.930	39.915	52.482	29.208	45.642	33.961	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.660	53.923	39.944	52.373	29.615	45.000	35.298	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.659	53.928	39.923	52.452	29.321	45.363	33.927	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.660	53.921	39.952	52.343	29.728	44.721	35.264	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.660	53.922	39.950	52.351	30.034	46.281	33.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.661	53.914	39.979	52.242	30.442	45.639	35.287	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.660	53.920	39.958	52.321	30.147	46.001	33.915	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.661	53.912	39.987	52.212	30.554	45.359	35.252	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.761	53.316	43.253	54.388	27.925	45.827	33.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.762	53.308	43.282	54.279	28.332	45.186	35.291	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.761	53.314	43.261	54.358	28.038	45.548	33.920	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.762	53.306	43.291	54.248	28.445	44.906	35.256	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.762	53.307	43.288	54.257	28.752	46.466	33.943	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.763	53.300	43.317	54.148	29.159	45.824	35.279	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.763	53.305	43.296	54.226	28.865	46.186	33.908	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.764	53.298	43.325	54.117	29.272	45.544	35.245	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.756	53.344	43.138	55.157	28.674	45.747	33.957	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.757	53.337	43.167	55.048	29.081	45.105	35.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.756	53.342	43.146	55.127	28.787	45.467	33.923	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.758	53.335	43.175	55.018	29.194	44.825	35.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.757	53.336	43.173	55.026	29.501	46.385	33.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.759	53.328	43.202	54.917	29.908	45.743	35.282	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.758	53.334	43.181	54.996	29.614	46.106	33.911	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.759	53.326	43.210	54.887	30.021	45.464	35.248	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.650	54.044	40.181	51.690	28.465	45.722	33.958	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	64.651	54.037	40.210	51.581	28.872	45.080	35.295	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.651	54.042	40.189	51.659	28.578	45.442	33.924	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.652	54.035	40.218	51.550	28.985	44.800	35.261	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.652	54.036	40.216	51.559	29.291	46.360	33.947	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.653	54.028	40.245	51.450	29.698	45.718	35.283	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.652	54.034	40.224	51.528	29.404	46.080	33.912	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.653	54.026	40.253	51.419	29.811	45.439	35.249	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.645	54.073	40.065	52.459	29.214	45.641	33.961	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.647	54.066	40.094	52.350	29.621	44.999	35.298	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.646	54.071	40.073	52.429	29.327	45.361	33.927	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.647	54.064	40.103	52.320	29.734	44.720	35.264	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.647	54.065	40.100	52.328	30.040	46.279	33.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.648	54.057	40.129	52.219	30.447	45.638	35.287	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.647	54.062	40.108	52.298	30.153	46.000	33.915	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.648	54.055	40.137	52.189	30.560	45.358	35.252	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.748	53.458	43.404	54.365	27.931	45.826	33.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.749	53.451	43.433	54.256	28.338	45.185	35.291	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.748	53.456	43.412	54.335	28.044	45.547	33.920	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.749	53.449	43.441	54.226	28.451	44.905	35.257	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.749	53.450	43.439	54.234	28.758	46.465	33.943	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.751	53.442	43.468	54.125	29.165	45.823	35.279	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.750	53.448	43.447	54.204	28.870	46.185	33.908	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.751	53.440	43.476	54.095	29.278	45.543	35.245	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.743	53.487	43.289	55.135	28.680	45.746	33.957	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.744	53.480	43.318	55.026	29.087	45.104	35.294	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.743	53.485	43.297	55.105	28.793	45.466	33.923	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.745	53.478	43.326	54.995	29.200	44.824	35.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.745	53.479	43.323	55.004	29.507	46.384	33.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.746	53.471	43.353	54.895	29.914	45.742	35.283	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.745	53.477	43.332	54.973	29.620	46.104	33.911	
+D+0.750L+0.750S+0.5250E+H, LL Com	64.746	53.469	43.361	54.864	30.027	45.463	35.248	
+0.60D+0.60W+0.60H	20.675	19.036	14.477	21.169	1.608	25.742	15.265	
+0.60D+0.70E+0.60H	20.675	19.036	14.477	21.169	1.608	25.742	15.265	
D Only	35.320	32.600	27.400	34.196	3.740	45.526	25.715	
Lr Only, LL Comb Run (******L)								
Lr Only, LL Comb Run (*****L*)								
Lr Only, LL Comb Run (*****LL)								
Lr Only, LL Comb Run (****L**)								
Lr Only, LL Comb Run (****L*L)								
Lr Only, LL Comb Run (****LL*)								
Lr Only, LL Comb Run (****LLL)								
Lr Only, LL Comb Run (***L***)								
Lr Only, LL Comb Run (***L**L)								
Lr Only, LL Comb Run (***L*L*)								
Lr Only, LL Comb Run (***L*LL)								
Lr Only, LL Comb Run (***LL**)								
Lr Only, LL Comb Run (***LL*L)								
Lr Only, LL Comb Run (***LLL*)								
Lr Only, LL Comb Run (***LLLL)								
Lr Only, LL Comb Run (**L****)								
Lr Only, LL Comb Run (**L***L)								
Lr Only, LL Comb Run (**L**L*)								
Lr Only, LL Comb Run (**L**LL)								
Lr Only, LL Comb Run (**L*L**)								
Lr Only, LL Comb Run (**L*L*L)								
Lr Only, LL Comb Run (**L*LL*)								
Lr Only, LL Comb Run (**L*LLL)								
Lr Only, LL Comb Run (**LL***)								
Lr Only, LL Comb Run (**LL**L)								

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (**LL*L*)								
Lr Only, LL Comb Run (**LL*LL)								
Lr Only, LL Comb Run (**LLL**)								
Lr Only, LL Comb Run (**LLL*L)								
Lr Only, LL Comb Run (**LLLL*)								
Lr Only, LL Comb Run (**LLLLL)								
Lr Only, LL Comb Run (*L*****)								
Lr Only, LL Comb Run (*L****L)								
Lr Only, LL Comb Run (*L***L*)								
Lr Only, LL Comb Run (*L***LL)								
Lr Only, LL Comb Run (*L**L**)								
Lr Only, LL Comb Run (*L**L*L)								
Lr Only, LL Comb Run (*L**LL*)								
Lr Only, LL Comb Run (*L**LLL)								
Lr Only, LL Comb Run (*L*L***)								
Lr Only, LL Comb Run (*L*L**L)								
Lr Only, LL Comb Run (*L*L*L*)								
Lr Only, LL Comb Run (*L*L*LL)								
Lr Only, LL Comb Run (*L*LL**)								
Lr Only, LL Comb Run (*L*LL*L)								
Lr Only, LL Comb Run (*L*LLL*)								
Lr Only, LL Comb Run (*L*LLLL)								
Lr Only, LL Comb Run (*LL****)								
Lr Only, LL Comb Run (*LL***L)								
Lr Only, LL Comb Run (*LL**L*)								
Lr Only, LL Comb Run (*LL**LL)								
Lr Only, LL Comb Run (*LL*L**)								
Lr Only, LL Comb Run (*LL*L*L)								
Lr Only, LL Comb Run (*LL*LL*)								
Lr Only, LL Comb Run (*LL*LLL)								
Lr Only, LL Comb Run (*LLL***)								
Lr Only, LL Comb Run (*LLL**L)								
Lr Only, LL Comb Run (*LLL*L*)								
Lr Only, LL Comb Run (*LLL*LL)								
Lr Only, LL Comb Run (*LLLL**)								
Lr Only, LL Comb Run (*LLLL*L)								
Lr Only, LL Comb Run (*LLLLL*)								
Lr Only, LL Comb Run (*LLLLLL)								
Lr Only, LL Comb Run (L******)								
Lr Only, LL Comb Run (L*****L)								
Lr Only, LL Comb Run (L****L*)								
Lr Only, LL Comb Run (L****LL)								
Lr Only, LL Comb Run (L***L**)								
Lr Only, LL Comb Run (L***L*L)								
Lr Only, LL Comb Run (L***LL*)								
Lr Only, LL Comb Run (L***LLL)								
Lr Only, LL Comb Run (L**L***)								
Lr Only, LL Comb Run (L**L**L)								
Lr Only, LL Comb Run (L**L*L*)								
Lr Only, LL Comb Run (L**L*LL)								
Lr Only, LL Comb Run (L**LL**)								
Lr Only, LL Comb Run (L**LL*L)								
Lr Only, LL Comb Run (L**LLL*)								
Lr Only, LL Comb Run (L**LLLL)								
Lr Only, LL Comb Run (L*L****)								
Lr Only, LL Comb Run (L*L***L)								
Lr Only, LL Comb Run (L*L**L*)								
Lr Only, LL Comb Run (L*L**LL)								
Lr Only, LL Comb Run (L*L*L**)								

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (L*L*L*L)								
Lr Only, LL Comb Run (L*L*LL*)								
Lr Only, LL Comb Run (L*L*LLL)								
Lr Only, LL Comb Run (L*LL***)								
Lr Only, LL Comb Run (L*LL**L)								
Lr Only, LL Comb Run (L*LL*L*)								
Lr Only, LL Comb Run (L*LL*LL)								
Lr Only, LL Comb Run (L*LLL**)								
Lr Only, LL Comb Run (L*LLL*L)								
Lr Only, LL Comb Run (L*LLLL*)								
Lr Only, LL Comb Run (L*LLLLL)								
Lr Only, LL Comb Run (LL*****)								
Lr Only, LL Comb Run (LL****L)								
Lr Only, LL Comb Run (LL***L*)								
Lr Only, LL Comb Run (LL***LL)								
Lr Only, LL Comb Run (LL**L**)								
Lr Only, LL Comb Run (LL**L*L)								
Lr Only, LL Comb Run (LL**LL*)								
Lr Only, LL Comb Run (LL**LLL)								
Lr Only, LL Comb Run (LL*L***)								
Lr Only, LL Comb Run (LL*L**L)								
Lr Only, LL Comb Run (LL*L*L*)								
Lr Only, LL Comb Run (LL*L*LL)								
Lr Only, LL Comb Run (LL*LL**)								
Lr Only, LL Comb Run (LL*LL*L)								
Lr Only, LL Comb Run (LL*LLL*)								
Lr Only, LL Comb Run (LL*LLLL)								
Lr Only, LL Comb Run (LLL****)								
Lr Only, LL Comb Run (LLL***L)								
Lr Only, LL Comb Run (LLL**L*)								
Lr Only, LL Comb Run (LLL**LL)								
Lr Only, LL Comb Run (LLL*L**)								
Lr Only, LL Comb Run (LLL*L*L)								
Lr Only, LL Comb Run (LLL*LL*)								
Lr Only, LL Comb Run (LLL*LLL)								
Lr Only, LL Comb Run (LLLL***)								
Lr Only, LL Comb Run (LLLL**L)								
Lr Only, LL Comb Run (LLLL*L*)								
Lr Only, LL Comb Run (LLLL*LL)								
Lr Only, LL Comb Run (LLLLL**)								
Lr Only, LL Comb Run (LLLLL*L)								
Lr Only, LL Comb Run (LLLLLL*)								
Lr Only, LL Comb Run (LLLLLLL)								
L Only, LL Comb Run (******L)	0.002	-0.010	0.039	-0.145	0.543	-0.856	1.782	
L Only, LL Comb Run (*****L*)	0.000	-0.003	0.011	-0.040	0.151	-0.373	-0.046	
L Only, LL Comb Run (*****LL)	0.002	-0.012	0.050	-0.186	0.693	-1.228	1.736	
L Only, LL Comb Run (****L**)	0.002	-0.012	0.047	-0.175	1.102	0.851	-0.016	
L Only, LL Comb Run (****L*L)	0.004	-0.021	0.085	-0.320	1.645	-0.004	1.767	
L Only, LL Comb Run (****LL*)	0.002	-0.014	0.057	-0.215	1.253	0.478	-0.062	
L Only, LL Comb Run (****LLL)	0.004	-0.024	0.096	-0.360	1.796	-0.377	1.721	
L Only, LL Comb Run (***L***)	-0.006	0.038	-0.154	1.026	0.999	-0.108	0.004	
L Only, LL Comb Run (***L**L)	-0.005	0.029	-0.115	0.881	1.542	-0.963	1.787	
L Only, LL Comb Run (***L*L*)	-0.006	0.036	-0.143	0.986	1.149	-0.480	-0.042	
L Only, LL Comb Run (***L*LL)	-0.004	0.026	-0.104	0.840	1.692	-1.336	1.741	
L Only, LL Comb Run (***LL**)	-0.004	0.027	-0.107	0.852	2.101	0.744	-0.011	
L Only, LL Comb Run (***LL*L)	-0.003	0.017	-0.068	0.706	2.644	-0.112	1.771	
L Only, LL Comb Run (***LLL*)	-0.004	0.024	-0.096	0.811	2.252	0.371	-0.057	
L Only, LL Comb Run (***LLLL)	-0.002	0.014	-0.058	0.666	2.794	-0.485	1.725	
L Only, LL Comb Run (**L****)	0.130	-0.781	4.298	3.567	-0.712	0.139	-0.005	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (**L***L)	0.132	-0.791	4.336	3.422	-0.169	-0.716	1.777	
L Only, LL Comb Run (**L**L*)	0.131	-0.784	4.308	3.527	-0.561	-0.233	-0.051	
L Only, LL Comb Run (**L**LL)	0.132	-0.794	4.347	3.381	-0.018	-1.089	1.731	
L Only, LL Comb Run (**L*L**)	0.132	-0.793	4.344	3.392	0.391	0.991	-0.021	
L Only, LL Comb Run (**L*L*L)	0.134	-0.803	4.383	3.247	0.933	0.135	1.761	
L Only, LL Comb Run (**L*LL*)	0.133	-0.796	4.355	3.352	0.541	0.618	-0.067	
L Only, LL Comb Run (**L*LLL)	0.134	-0.805	4.394	3.207	1.084	-0.238	1.715	
L Only, LL Comb Run (**LL***)	0.124	-0.743	4.144	4.593	0.287	0.032	-0.001	
L Only, LL Comb Run (**LL**L)	0.125	-0.753	4.183	4.448	0.830	-0.824	1.781	
L Only, LL Comb Run (**LL*L*)	0.124	-0.746	4.155	4.553	0.438	-0.341	-0.047	
L Only, LL Comb Run (**LL*LL)	0.126	-0.755	4.193	4.408	0.981	-1.196	1.735	
L Only, LL Comb Run (**LLL**)	0.126	-0.755	4.190	4.419	1.389	0.883	-0.017	
L Only, LL Comb Run (**LLL*L)	0.127	-0.764	4.229	4.273	1.932	0.028	1.766	
L Only, LL Comb Run (**LLLL*)	0.126	-0.757	4.201	4.378	1.540	0.510	-0.063	
L Only, LL Comb Run (**LLLLL)	0.128	-0.767	4.240	4.233	2.083	-0.345	1.720	
L Only, LL Comb Run (*L*****)	-0.017	0.190	0.201	-0.030	0.008	-0.002	0.000	
L Only, LL Comb Run (*L****L)	-0.016	0.181	0.239	-0.176	0.551	-0.857	1.782	
L Only, LL Comb Run (*L***L*)	-0.017	0.188	0.211	-0.071	0.158	-0.374	-0.046	
L Only, LL Comb Run (*L***LL)	-0.015	0.178	0.250	-0.216	0.701	-1.230	1.736	
L Only, LL Comb Run (*L**L**)	-0.015	0.179	0.247	-0.205	1.110	0.850	-0.015	
L Only, LL Comb Run (*L**L*L)	-0.014	0.169	0.286	-0.350	1.653	-0.006	1.767	
L Only, LL Comb Run (*L**LL*)	-0.015	0.176	0.258	-0.245	1.261	0.477	-0.062	
L Only, LL Comb Run (*L**LLL)	-0.013	0.166	0.297	-0.391	1.803	-0.379	1.721	
L Only, LL Comb Run (*L*L***)	-0.024	0.229	0.047	0.996	1.007	-0.109	0.004	
L Only, LL Comb Run (*L*L**L)	-0.022	0.219	0.086	0.851	1.549	-0.965	1.787	
L Only, LL Comb Run (*L*L*L*)	-0.023	0.226	0.058	0.956	1.157	-0.482	-0.042	
L Only, LL Comb Run (*L*L*LL)	-0.022	0.217	0.096	0.810	1.700	-1.337	1.741	
L Only, LL Comb Run (*L*LL**)	-0.022	0.217	0.093	0.821	2.109	0.742	-0.011	
L Only, LL Comb Run (*L*LL*L)	-0.020	0.208	0.132	0.676	2.652	-0.113	1.771	
L Only, LL Comb Run (*L*LLL*)	-0.021	0.215	0.104	0.781	2.259	0.369	-0.057	
L Only, LL Comb Run (*L*LLLL)	-0.020	0.205	0.143	0.636	2.802	-0.486	1.725	
L Only, LL Comb Run (*LL****)	0.113	-0.591	4.498	3.537	-0.704	0.138	-0.005	
L Only, LL Comb Run (*LL***L)	0.115	-0.601	4.537	3.392	-0.161	-0.718	1.777	
L Only, LL Comb Run (*LL**L*)	0.114	-0.594	4.509	3.497	-0.553	-0.235	-0.051	
L Only, LL Comb Run (*LL**LL)	0.115	-0.603	4.548	3.351	-0.010	-1.090	1.731	
L Only, LL Comb Run (*LL*L**)	0.115	-0.602	4.545	3.362	0.398	0.989	-0.021	
L Only, LL Comb Run (*LL*L*L)	0.117	-0.612	4.583	3.217	0.941	0.133	1.762	
L Only, LL Comb Run (*LL*LL*)	0.115	-0.605	4.555	3.322	0.549	0.616	-0.067	
L Only, LL Comb Run (*LL*LLL)	0.117	-0.615	4.594	3.176	1.092	-0.239	1.715	
L Only, LL Comb Run (*LLL***)	0.107	-0.552	4.344	4.563	0.295	0.030	-0.001	
L Only, LL Comb Run (*LLL**L)	0.108	-0.562	4.383	4.418	0.838	-0.825	1.781	
L Only, LL Comb Run (*LLL*L*)	0.107	-0.555	4.355	4.523	0.446	-0.342	-0.047	
L Only, LL Comb Run (*LLL*LL)	0.109	-0.565	4.394	4.377	0.988	-1.198	1.735	
L Only, LL Comb Run (*LLLL**)	0.109	-0.564	4.391	4.388	1.397	0.882	-0.017	
L Only, LL Comb Run (*LLLL*L)	0.110	-0.574	4.430	4.243	1.940	0.026	1.766	
L Only, LL Comb Run (*LLLLL*)	0.109	-0.567	4.402	4.348	1.548	0.509	-0.063	
L Only, LL Comb Run (*LLLLLL)	0.111	-0.576	4.441	4.203	2.091	-0.347	1.720	
L Only, LL Comb Run (L******)	2.675	4.165	-0.693	0.185	-0.048	0.009	-0.000	
L Only, LL Comb Run (L*****L)	2.677	4.156	-0.655	0.040	0.495	-0.846	1.782	
L Only, LL Comb Run (L****L*)	2.675	4.163	-0.683	0.145	0.103	-0.363	-0.046	
L Only, LL Comb Run (L****LL)	2.677	4.153	-0.644	-0.000	0.646	-1.219	1.736	
L Only, LL Comb Run (L***L**)	2.677	4.154	-0.647	0.011	1.054	0.861	-0.016	
L Only, LL Comb Run (L***L*L)	2.679	4.144	-0.608	-0.135	1.597	0.005	1.767	
L Only, LL Comb Run (L***LL*)	2.677	4.151	-0.636	-0.030	1.205	0.488	-0.062	
L Only, LL Comb Run (L***LLL)	2.679	4.141	-0.597	-0.175	1.748	-0.368	1.720	
L Only, LL Comb Run (L**L***)	2.669	4.204	-0.847	1.212	0.951	-0.098	0.004	
L Only, LL Comb Run (L**L**L)	2.670	4.194	-0.808	1.066	1.494	-0.954	1.786	
L Only, LL Comb Run (L**L*L*)	2.669	4.201	-0.836	1.171	1.101	-0.471	-0.042	
L Only, LL Comb Run (L**L*LL)	2.671	4.191	-0.798	1.026	1.644	-1.326	1.740	

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (L**LL**)	2.671	4.192	-0.800	1.037	2.053	0.753	-0.012	
L Only, LL Comb Run (L**LL*L)	2.672	4.182	-0.762	0.891	2.596	-0.103	1.771	
L Only, LL Comb Run (L**LLL*)	2.671	4.189	-0.790	0.997	2.204	0.380	-0.058	
L Only, LL Comb Run (L**LLLL)	2.673	4.180	-0.751	0.851	2.747	-0.475	1.725	
L Only, LL Comb Run (L*L****)	2.805	3.384	3.604	3.752	-0.759	0.149	-0.006	
L Only, LL Comb Run (L*L***L)	2.807	3.374	3.643	3.607	-0.217	-0.707	1.777	
L Only, LL Comb Run (L*L**L*)	2.806	3.381	3.615	3.712	-0.609	-0.224	-0.052	
L Only, LL Comb Run (L*L**LL)	2.807	3.372	3.654	3.567	-0.066	-1.080	1.731	
L Only, LL Comb Run (L*L*L**)	2.807	3.372	3.651	3.578	0.343	1.000	-0.021	
L Only, LL Comb Run (L*L*L*L)	2.809	3.363	3.690	3.432	0.886	0.144	1.761	
L Only, LL Comb Run (L*L*LL*)	2.808	3.370	3.661	3.537	0.493	0.627	-0.067	
L Only, LL Comb Run (L*L*LLL)	2.809	3.360	3.700	3.392	1.036	-0.228	1.715	
L Only, LL Comb Run (L*LL***)	2.799	3.422	3.450	4.779	0.239	0.041	-0.002	
L Only, LL Comb Run (L*LL**L)	2.800	3.413	3.489	4.633	0.782	-0.814	1.781	
L Only, LL Comb Run (L*LL*L*)	2.799	3.420	3.461	4.738	0.390	-0.331	-0.048	
L Only, LL Comb Run (L*LL*LL)	2.801	3.410	3.500	4.593	0.933	-1.187	1.735	
L Only, LL Comb Run (L*LLL**)	2.801	3.411	3.497	4.604	1.341	0.892	-0.017	
L Only, LL Comb Run (L*LLL*L)	2.802	3.401	3.536	4.459	1.884	0.037	1.765	
L Only, LL Comb Run (L*LLLL*)	2.801	3.408	3.508	4.564	1.492	0.520	-0.063	
L Only, LL Comb Run (L*LLLLL)	2.803	3.398	3.547	4.418	2.035	-0.336	1.719	
L Only, LL Comb Run (LL*****)	2.658	4.356	-0.493	0.155	-0.040	0.008	-0.000	
L Only, LL Comb Run (LL****L)	2.659	4.346	-0.454	0.010	0.503	-0.848	1.782	
L Only, LL Comb Run (LL***L*)	2.658	4.353	-0.482	0.115	0.111	-0.365	-0.046	
L Only, LL Comb Run (LL***LL)	2.660	4.343	-0.443	-0.031	0.653	-1.220	1.736	
L Only, LL Comb Run (LL**L**)	2.660	4.344	-0.446	-0.020	1.062	0.859	-0.016	
L Only, LL Comb Run (LL**L*L)	2.661	4.334	-0.407	-0.165	1.605	0.003	1.767	
L Only, LL Comb Run (LL**LL*)	2.660	4.341	-0.435	-0.060	1.213	0.486	-0.062	
L Only, LL Comb Run (LL**LLL)	2.662	4.332	-0.397	-0.205	1.756	-0.369	1.721	
L Only, LL Comb Run (LL*L***)	2.651	4.394	-0.646	1.181	0.959	-0.100	0.004	
L Only, LL Comb Run (LL*L**L)	2.653	4.385	-0.608	1.036	1.502	-0.955	1.786	
L Only, LL Comb Run (LL*L*L*)	2.652	4.392	-0.636	1.141	1.109	-0.472	-0.042	
L Only, LL Comb Run (LL*L*LL)	2.654	4.382	-0.597	0.996	1.652	-1.328	1.740	
L Only, LL Comb Run (LL*LL**)	2.653	4.383	-0.600	1.007	2.061	0.752	-0.012	
L Only, LL Comb Run (LL*LL*L)	2.655	4.373	-0.561	0.861	2.604	-0.104	1.771	
L Only, LL Comb Run (LL*LLL*)	2.654	4.380	-0.589	0.966	2.211	0.379	-0.058	
L Only, LL Comb Run (LL*LLLL)	2.655	4.370	-0.550	0.821	2.754	-0.477	1.725	
L Only, LL Comb Run (LLL****)	2.788	3.575	3.805	3.722	-0.752	0.147	-0.006	
L Only, LL Comb Run (LLL***L)	2.790	3.565	3.843	3.577	-0.209	-0.708	1.777	
L Only, LL Comb Run (LLL**L*)	2.789	3.572	3.815	3.682	-0.601	-0.225	-0.052	
L Only, LL Comb Run (LLL**LL)	2.790	3.562	3.854	3.536	-0.058	-1.081	1.731	
L Only, LL Comb Run (LLL*L**)	2.790	3.563	3.851	3.548	0.351	0.998	-0.021	
L Only, LL Comb Run (LLL*L*L)	2.792	3.553	3.890	3.402	0.893	0.143	1.761	
L Only, LL Comb Run (LLL*LL*)	2.790	3.560	3.862	3.507	0.501	0.626	-0.067	
L Only, LL Comb Run (LLL*LLL)	2.792	3.550	3.901	3.362	1.044	-0.230	1.715	
L Only, LL Comb Run (LLLL***)	2.782	3.613	3.651	4.748	0.247	0.040	-0.002	
L Only, LL Comb Run (LLLL**L)	2.783	3.603	3.690	4.603	0.790	-0.816	1.781	
L Only, LL Comb Run (LLLL*L*)	2.782	3.610	3.662	4.708	0.398	-0.333	-0.048	
L Only, LL Comb Run (LLLL*LL)	2.784	3.601	3.701	4.563	0.941	-1.189	1.735	
L Only, LL Comb Run (LLLLL**)	2.784	3.601	3.698	4.574	1.349	0.891	-0.017	
L Only, LL Comb Run (LLLLL*L)	2.785	3.592	3.736	4.428	1.892	0.035	1.765	
L Only, LL Comb Run (LLLLLL*)	2.784	3.599	3.708	4.533	1.500	0.518	-0.063	
L Only, LL Comb Run (LLLLLLL)	2.786	3.589	3.747	4.388	2.043	-0.337	1.719	
S Only	37.597	25.402	21.895	21.723	34.419	3.749	11.355	
W Only								
E Only								
H Only	-0.861	-0.874	-3.271	1.085	-1.059	-2.622	-0.273	

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	56.50	102.57	102.57	0.00	1.00	93.40	PhiVc < Vu	9.166	130.7	10.3	10.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	56.50	26.96	26.96	3.19	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	56.50	25.81	25.81	6.19	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	56.50	24.67	24.67	9.06	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	56.50	23.52	23.52	11.79	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	56.50	22.37	22.37	14.40	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	56.50	21.23	21.23	16.88	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	56.50	20.08	20.08	19.23	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	56.50	18.94	18.94	21.44	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	56.50	17.79	17.79	23.53	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	56.50	16.64	16.64	25.49	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	56.50	15.50	15.50	27.31	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	56.50	14.35	14.35	29.01	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	56.50	13.21	13.21	30.58	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	56.50	12.06	12.06	32.01	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.70	56.50	10.91	10.91	33.32	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	56.50	10.24	10.24	26.82	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.93	56.50	9.68	9.68	27.95	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	56.50	9.28	9.28	24.65	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	56.50	8.98	8.98	25.68	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	56.50	8.67	8.67	26.69	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	56.50	8.37	8.37	27.66	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.50	56.50	8.06	8.06	28.59	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.61	56.50	7.76	7.76	29.49	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.73	56.50	7.45	7.45	30.35	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.84	56.50	7.14	7.14	31.18	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.95	56.50	6.84	6.84	31.98	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.07	56.50	6.53	6.53	32.73	0.94	93.30	Vu < PhiVc/2	Not Reqd 1	93.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.18	56.50	6.23	6.23	33.46	0.88	93.18	Vu < PhiVc/2	Not Reqd 1	93.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.30	56.50	5.92	5.92	34.15	0.82	93.08	Vu < PhiVc/2	Not Reqd 1	93.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	56.50	-7.00	7.00	35.35	0.93	93.28	Vu < PhiVc/2	Not Reqd 1	93.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	56.50	-42.65	42.65	35.42	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	56.50	-43.80	43.80	30.51	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	56.50	-44.94	44.94	25.46	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	56.50	-46.09	46.09	20.29	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	56.50	-47.24	47.24	14.99	1.00	93.40	PhiVc/2 < Vu <=	Min 11.5.6	134.8	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	56.50	-48.38	48.38	9.56	1.00	93.40	PhiVc/2 < Vu <=	Min 11.5.6	134.8	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	56.50	-49.53	49.53	3.99	1.00	93.40	PhiVc/2 < Vu <=	Min 11.5.6	134.8	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	57.00	-50.67	50.67	1.70	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	57.00	-51.82	51.82	7.52	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	57.00	-52.96	52.96	13.48	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	57.00	-54.11	54.11	19.56	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	57.00	-55.26	55.26	25.78	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	57.00	-56.28	56.28	32.12	1.00	94.21	PhiVc/2 < Vu <=	Min 11.5.6	136.0	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	57.00	23.40	23.40	38.56	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	57.00	22.52	22.52	35.95	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	57.00	21.64	21.64	33.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	57.00	20.76	20.76	31.03	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	57.00	19.87	19.87	28.73	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	57.00	18.99	18.99	26.52	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	57.00	18.11	18.11	24.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	57.00	17.23	17.23	22.40	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	57.00	16.35	16.35	20.49	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	57.00	15.47	15.47	18.69	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	6.14	57.00	14.58	14.58	16.98	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	57.00	13.70	13.70	15.37	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	57.00	12.82	12.82	13.86	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	57.00	11.94	11.94	12.46	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	57.00	11.06	11.06	11.15	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	57.00	10.17	10.17	9.95	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	57.00	9.29	9.29	8.84	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	57.00	8.41	8.41	7.83	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	57.00	7.45	7.45	6.93	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	57.00	6.36	6.36	6.14	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	57.00	5.27	5.27	5.48	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.39	57.00	4.18	4.18	4.95	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.50	57.00	3.09	3.09	4.60	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.61	57.00	2.56	2.56	9.14	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.73	57.00	2.26	2.26	10.73	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.84	57.00	1.99	1.99	10.48	0.90	94.04	Vu < PhiVc/2	Not Reqd 1	94.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.95	57.00	-1.89	1.89	4.54	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	57.00	-2.98	2.98	4.81	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	57.00	-4.07	4.07	5.21	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.30	57.00	-5.15	5.15	5.74	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	57.00	-6.24	6.24	6.38	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	57.00	-7.33	7.33	7.15	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	57.00	-8.42	8.42	8.05	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	57.00	-9.51	9.51	9.07	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	57.00	-10.60	10.60	10.21	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	57.00	-11.69	11.69	11.48	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	57.00	-12.77	12.77	12.87	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	57.00	-13.86	13.86	14.38	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	57.00	-14.95	14.95	16.02	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	57.00	-16.04	16.04	17.78	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	57.00	-17.13	17.13	19.66	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	57.00	-18.22	18.22	21.67	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	57.00	-19.31	19.31	23.80	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	57.00	-20.40	20.40	26.06	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	57.00	43.49	43.49	28.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	57.00	42.40	42.40	23.56	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	57.00	41.31	41.31	18.80	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	57.00	40.23	40.23	14.17	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	57.00	39.14	39.14	9.66	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	57.00	38.05	38.05	5.27	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	57.00	36.96	36.96	1.01	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	56.50	35.87	35.87	3.13	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.91	56.50	34.78	34.78	7.14	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	56.50	33.69	33.69	11.03	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.14	56.50	32.60	32.60	14.80	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.25	56.50	31.52	31.52	18.44	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.36	56.50	30.43	30.43	21.96	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.48	56.50	29.34	29.34	25.36	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.59	56.50	28.25	28.25	28.63	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.70	56.50	27.19	27.19	31.49	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	56.50	26.65	26.65	34.55	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	56.50	26.12	26.12	37.54	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	56.50	25.58	25.58	40.48	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	56.50	25.04	25.04	43.36	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	3	12.27	56.50	-21.38	21.38	38.96	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.39	56.50	-21.66	21.66	36.52	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.50	56.50	-21.94	21.94	34.04	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	56.50	-22.46	22.46	34.12	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	56.50	-23.00	23.00	31.54	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	56.50	-23.54	23.54	28.90	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	56.50	-24.07	24.07	26.19	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	56.50	-24.61	24.61	23.43	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.18	56.50	-25.40	25.40	22.52	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.30	56.50	-26.48	26.48	19.57	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.41	56.50	-27.57	27.57	16.50	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	56.50	-28.66	28.66	13.30	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	56.50	-29.75	29.75	9.98	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	56.50	-30.84	30.84	6.54	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	56.50	-31.93	31.93	2.97	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	57.00	-33.02	33.02	0.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	57.00	-34.30	34.30	4.54	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	57.00	-35.63	35.63	8.51	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	57.00	-36.96	36.96	12.64	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.43	57.00	-38.28	38.28	16.91	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	57.00	-39.61	39.61	21.34	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	57.00	-40.94	40.94	25.91	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	57.00	-42.27	42.27	30.64	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	57.00	-43.60	43.60	35.52	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	57.00	34.99	34.99	40.55	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	57.00	33.66	33.66	36.65	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	57.00	32.33	32.33	32.90	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	57.00	31.01	31.01	29.30	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	57.00	29.68	29.68	25.85	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	57.00	28.35	28.35	22.56	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	57.00	27.03	27.03	19.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	57.00	25.70	25.70	16.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	57.00	24.37	24.37	13.57	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	57.00	23.05	23.05	10.88	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	57.00	21.72	21.72	8.33	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	57.00	20.39	20.39	5.94	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	57.00	19.06	19.06	3.70	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	57.00	17.74	17.74	1.61	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	56.50	16.41	16.41	0.33	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	56.50	15.08	15.08	2.12	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	56.50	13.76	13.76	3.76	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	56.50	12.43	12.43	5.25	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.05	56.50	11.10	11.10	6.59	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	56.50	9.78	9.78	7.77	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.27	56.50	8.87	8.87	4.42	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	4	17.39	56.50	8.18	8.18	5.13	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	4	17.50	56.50	7.60	7.60	6.03	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.61	56.50	7.10	7.10	4.26	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	56.50	6.61	6.61	5.04	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	56.50	6.12	6.12	5.76	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	56.50	5.62	5.62	6.43	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	56.50	5.13	5.13	7.04	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.18	56.50	4.64	4.64	7.60	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.30	56.50	4.15	4.15	8.10	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	4	18.41	56.50	-5.27	5.27	10.71	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.52	56.50	-6.60	6.60	10.04	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	56.50	-7.93	7.93	9.21	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	56.50	-9.26	9.26	8.23	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	56.50	-10.58	10.58	7.11	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	56.50	-11.91	11.91	5.83	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	56.50	-13.24	13.24	4.40	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	56.50	-14.56	14.56	2.82	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	56.50	-15.89	15.89	1.09	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	57.00	-17.22	17.22	0.79	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	57.00	-29.92	29.92	3.34	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	57.00	-31.25	31.25	6.82	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	57.00	-32.58	32.58	10.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	57.00	-33.90	33.90	14.22	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.00	57.00	24.03	24.03	18.15	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.11	57.00	22.71	22.71	15.49	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.23	57.00	21.38	21.38	12.99	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.34	57.00	20.05	20.05	10.63	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.45	57.00	18.73	18.73	8.43	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.57	57.00	17.40	17.40	6.38	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.68	57.00	16.07	16.07	4.47	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.80	57.00	14.75	14.75	2.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.91	57.00	13.42	13.42	1.12	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.02	56.50	12.09	12.09	0.33	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.14	56.50	10.76	10.76	1.63	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.25	56.50	9.44	9.44	2.77	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	5	21.36	57.00	-9.85	9.85	0.23	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	21.48	57.00	-10.43	10.43	1.39	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	21.59	57.00	-11.01	11.01	2.61	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	21.70	57.00	-11.59	11.59	3.89	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	21.82	57.00	-12.17	12.17	5.24	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	21.93	57.00	-12.75	12.75	6.65	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.05	57.00	-13.33	13.33	8.14	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.16	57.00	-13.90	13.90	9.68	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.27	57.00	-14.48	14.48	11.30	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.39	57.00	-15.06	15.06	12.97	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.50	57.00	-15.64	15.64	14.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.61	57.00	-16.22	16.22	16.53	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.73	57.00	-16.80	16.80	18.41	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.84	57.00	-17.38	17.38	20.35	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	22.95	57.00	-17.96	17.96	22.36	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.07	57.00	-18.54	18.54	24.43	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.18	57.00	-19.12	19.12	26.57	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.30	57.00	-19.70	19.70	28.77	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.41	57.00	-20.28	20.28	31.05	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.52	57.00	-20.85	20.85	33.38	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.64	57.00	-21.43	21.43	35.78	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.75	57.00	-22.01	22.01	38.25	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.86	57.00	-22.59	22.59	40.79	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	5	23.98	57.00	-23.17	23.17	43.39	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.09	57.00	-24.13	24.13	18.33	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.20	57.00	-25.46	25.46	21.14	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.32	57.00	-26.79	26.79	24.11	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.43	57.00	-28.11	28.11	27.23	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	5	24.55	57.00	-29.44	29.44	30.50	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.66	57.00	-30.77	30.77	33.92	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.77	57.00	-32.10	32.10	37.50	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.89	57.00	-33.42	33.42	41.22	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	25.00	57.00	31.16	31.16	69.75	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	25.32	57.00	29.88	29.88	59.87	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	25.65	57.00	28.61	28.61	50.39	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	25.97	57.00	27.33	27.33	41.34	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	26.30	57.00	26.05	26.05	32.69	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	26.62	57.00	24.78	24.78	24.46	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	26.94	57.00	23.50	23.50	16.64	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	27.27	57.00	22.22	22.22	9.24	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	27.59	57.00	20.95	20.95	2.25	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.40D+1.60H	6	27.91	56.50	19.67	19.67	4.33	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	28.24	56.50	18.39	18.39	10.49	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	28.56	56.50	17.12	17.12	16.24	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	28.89	56.50	15.84	15.84	21.58	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	29.21	56.50	14.56	14.56	26.50	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	29.53	56.50	13.29	13.29	31.01	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	29.86	56.50	12.01	12.01	35.11	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	30.18	56.50	10.74	10.74	38.79	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	30.51	56.50	9.46	9.46	42.06	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.40D+1.60H	6	30.83	56.50	8.18	8.18	44.92	0.86	93.15	Vu < PhiVc/2	Not Reqd 1	93.2	0.0	0.0
+1.40D+1.60H	6	31.15	56.50	6.91	6.91	47.36	0.69	92.85	Vu < PhiVc/2	Not Reqd 1	92.9	0.0	0.0
+1.40D+1.60H	6	31.48	56.50	5.63	5.63	49.39	0.54	92.59	Vu < PhiVc/2	Not Reqd 1	92.6	0.0	0.0
+1.40D+1.60H	6	31.80	56.50	4.35	4.35	51.01	0.40	92.36	Vu < PhiVc/2	Not Reqd 1	92.4	0.0	0.0
+1.40D+1.60H	6	32.13	56.50	3.08	3.08	52.21	0.28	92.14	Vu < PhiVc/2	Not Reqd 1	92.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.45	56.50	-2.80	2.80	27.30	0.48	92.50	Vu < PhiVc/2	Not Reqd 1	92.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.77	56.50	-3.88	3.88	26.22	0.70	92.87	Vu < PhiVc/2	Not Reqd 1	92.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.10	56.50	-4.96	4.96	24.78	0.94	93.30	Vu < PhiVc/2	Not Reqd 1	93.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.42	56.50	-6.04	6.04	23.00	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.74	56.50	-7.12	7.12	20.87	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.07	56.50	-8.20	8.20	18.39	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.39	56.50	-9.28	9.28	15.56	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.72	56.50	-10.36	10.36	12.38	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.04	56.50	-11.44	11.44	8.85	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.36	56.50	-12.52	12.52	4.97	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.69	56.50	-13.60	13.60	0.75	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.01	57.00	-14.68	14.68	3.83	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.34	57.00	-15.76	15.76	8.76	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.66	57.00	-16.84	16.84	14.04	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.98	57.00	-17.92	17.92	19.67	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.31	57.00	-19.00	19.00	25.65	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.63	57.00	-20.08	20.08	31.98	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.95	57.00	-21.16	21.16	38.66	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.28	57.00	-22.24	22.24	45.68	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.60	57.00	-23.32	23.32	53.06	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.93	57.00	-24.40	24.40	60.79	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.25	57.00	24.00	24.00	68.87	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.32	57.00	23.87	23.87	67.10	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.40	57.00	23.75	23.75	65.34	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.47	57.00	23.62	23.62	63.59	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.55	57.00	23.49	23.49	61.85	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.62	57.00	23.36	23.36	60.12	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	7	39.69	57.00	23.24	23.24	58.40	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.77	57.00	23.11	23.11	56.69	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.84	57.00	22.98	22.98	54.99	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.91	57.00	22.85	22.85	53.29	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.99	57.00	22.73	22.73	51.61	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.06	57.00	22.60	22.60	49.94	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.14	57.00	22.47	22.47	48.27	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.21	57.00	22.34	22.34	46.62	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.28	57.00	22.22	22.22	44.97	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.36	57.00	22.09	22.09	43.33	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.43	57.00	21.96	21.96	41.71	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.51	57.00	21.83	21.83	40.09	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.58	57.00	21.70	21.70	38.48	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.65	57.00	21.58	21.58	36.88	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.73	57.00	21.45	21.45	35.29	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.80	57.00	21.32	21.32	33.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.88	57.00	21.19	21.19	32.15	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.95	57.00	21.07	21.07	30.58	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.02	57.00	20.94	20.94	29.03	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.10	57.00	20.81	20.81	27.49	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.17	57.00	20.68	20.68	25.96	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.24	57.00	20.56	20.56	24.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.32	57.00	20.43	20.43	22.92	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.39	57.00	20.30	20.30	21.42	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.47	57.00	20.17	20.17	19.92	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.54	57.00	20.05	20.05	18.44	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.61	57.00	19.92	19.92	16.96	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.69	57.00	19.79	19.79	15.49	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.76	57.00	19.66	19.66	14.04	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.84	57.00	19.54	19.54	12.59	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.91	57.00	19.41	19.41	11.15	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.98	57.00	19.28	19.28	9.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.06	57.00	19.15	19.15	8.30	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.13	57.00	19.03	19.03	6.89	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.20	57.00	18.90	18.90	5.49	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.28	57.00	18.77	18.77	4.10	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.35	57.00	18.64	18.64	2.72	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.43	57.00	18.52	18.52	1.35	1.00	94.21	Vu < PhiVc/2	Not Reqd 1	94.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.50	56.50	0.00	0.00	0.00	1.00	93.40	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.000	39.21	240.32	0.16
Span # 2	2	5.000	-38.56	245.29	0.16
Span # 3	3	5.000	43.84	240.32	0.18
Span # 4	4	5.000	-40.55	245.29	0.17
Span # 5	5	5.000	-66.56	245.29	0.27
Span # 6	6	14.250	-69.75	245.29	0.28
Span # 7	7	3.250	-68.87	245.29	0.28
+1.40D+1.60H					
Span # 1	1	5.000	32.11	240.32	0.13
Span # 2	2	5.000	-21.68	245.29	0.09
Span # 3	3	5.000	36.66	240.32	0.15
Span # 4	4	5.000	-28.91	245.29	0.12
Span # 5	5	5.000	-66.56	245.29	0.27

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-69.75	245.29	0.28
Span # 7	7	3.250	-24.77	245.29	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.79	240.32	0.12
Span # 2	2	5.000	-18.51	245.29	0.08
Span # 3	3	5.000	32.71	240.32	0.14
Span # 4	4	5.000	-24.90	245.29	0.10
Span # 5	5	5.000	-53.80	245.29	0.22
Span # 6	6	14.250	-56.43	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.79	240.32	0.12
Span # 2	2	5.000	-18.52	245.29	0.08
Span # 3	3	5.000	32.67	240.32	0.14
Span # 4	4	5.000	-25.04	245.29	0.10
Span # 5	5	5.000	-55.70	245.29	0.23
Span # 6	6	14.250	-58.38	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	28.80	240.32	0.12
Span # 2	2	5.000	-18.50	245.29	0.08
Span # 3	3	5.000	32.72	240.32	0.14
Span # 4	4	5.000	-24.85	245.29	0.10
Span # 5	5	5.000	-53.07	245.29	0.22
Span # 6	6	14.250	-55.68	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.80	240.32	0.12
Span # 2	2	5.000	-18.51	245.29	0.08
Span # 3	3	5.000	32.72	240.32	0.14
Span # 4	4	5.000	-24.86	245.29	0.10
Span # 5	5	5.000	-56.63	245.29	0.23
Span # 6	6	14.250	-59.49	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.81	240.32	0.12
Span # 2	2	5.000	-18.49	245.29	0.08
Span # 3	3	5.000	32.77	240.32	0.14
Span # 4	4	5.000	-24.67	245.29	0.10
Span # 5	5	5.000	-54.01	245.29	0.22
Span # 6	6	14.250	-56.79	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.80	240.32	0.12
Span # 2	2	5.000	-18.50	245.29	0.08
Span # 3	3	5.000	32.73	240.32	0.14
Span # 4	4	5.000	-24.81	245.29	0.10
Span # 5	5	5.000	-55.90	245.29	0.23
Span # 6	6	14.250	-58.74	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	28.81	240.32	0.12
Span # 2	2	5.000	-18.49	245.29	0.08
Span # 3	3	5.000	32.79	240.32	0.14
Span # 4	4	5.000	-24.62	245.29	0.10
Span # 5	5	5.000	-53.28	245.29	0.22
Span # 6	6	14.250	-56.04	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.75	240.32	0.12
Span # 2	2	5.000	-18.57	245.29	0.08
Span # 3	3	5.000	32.44	240.32	0.13
Span # 4	4	5.000	-25.87	245.29	0.11
Span # 5	5	5.000	-56.35	245.29	0.23
Span # 6	6	14.250	-59.04	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.76	240.32	0.12
Span # 2	2	5.000	-18.56	245.29	0.08

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	32.49	240.32	0.14
Span # 4	4	5.000	-25.67	245.29	0.10
Span # 5	5	5.000	-53.72	245.29	0.22
Span # 6	6	14.250	-56.34	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.75	240.32	0.12
Span # 2	2	5.000	-18.57	245.29	0.08
Span # 3	3	5.000	32.45	240.32	0.14
Span # 4	4	5.000	-25.81	245.29	0.11
Span # 5	5	5.000	-55.62	245.29	0.23
Span # 6	6	14.250	-58.29	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	28.76	240.32	0.12
Span # 2	2	5.000	-18.56	245.29	0.08
Span # 3	3	5.000	32.51	240.32	0.14
Span # 4	4	5.000	-25.62	245.29	0.10
Span # 5	5	5.000	-53.00	245.29	0.22
Span # 6	6	14.250	-55.59	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.76	240.32	0.12
Span # 2	2	5.000	-18.56	245.29	0.08
Span # 3	3	5.000	32.50	240.32	0.14
Span # 4	4	5.000	-25.63	245.29	0.10
Span # 5	5	5.000	-56.55	245.29	0.23
Span # 6	6	14.250	-59.39	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.77	240.32	0.12
Span # 2	2	5.000	-18.54	245.29	0.08
Span # 3	3	5.000	32.56	240.32	0.14
Span # 4	4	5.000	-25.44	245.29	0.10
Span # 5	5	5.000	-53.93	245.29	0.22
Span # 6	6	14.250	-56.69	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.76	240.32	0.12
Span # 2	2	5.000	-18.55	245.29	0.08
Span # 3	3	5.000	32.52	240.32	0.14
Span # 4	4	5.000	-25.58	245.29	0.10
Span # 5	5	5.000	-55.83	245.29	0.23
Span # 6	6	14.250	-58.64	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	28.77	240.32	0.12
Span # 2	2	5.000	-18.54	245.29	0.08
Span # 3	3	5.000	32.57	240.32	0.14
Span # 4	4	5.000	-25.39	245.29	0.10
Span # 5	5	5.000	-53.20	245.29	0.22
Span # 6	6	14.250	-55.94	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	29.50	240.32	0.12
Span # 2	2	5.000	-17.48	245.29	0.07
Span # 3	3	5.000	40.82	240.32	0.17
Span # 4	4	5.000	-28.77	245.29	0.12
Span # 5	5	5.000	-56.52	245.29	0.23
Span # 6	6	14.250	-59.26	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	29.50	240.32	0.12
Span # 2	2	5.000	-17.47	245.29	0.07
Span # 3	3	5.000	40.87	240.32	0.17
Span # 4	4	5.000	-28.58	245.29	0.12
Span # 5	5	5.000	-53.90	245.29	0.22
Span # 6	6	14.250	-56.55	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	29.50	240.32	0.12
Span # 2	2	5.000	-17.48	245.29	0.07
Span # 3	3	5.000	40.83	240.32	0.17
Span # 4	4	5.000	-28.72	245.29	0.12
Span # 5	5	5.000	-55.80	245.29	0.23
Span # 6	6	14.250	-58.51	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	29.51	240.32	0.12
Span # 2	2	5.000	-17.46	245.29	0.07
Span # 3	3	5.000	40.89	240.32	0.17
Span # 4	4	5.000	-28.52	245.29	0.12
Span # 5	5	5.000	-53.17	245.29	0.22
Span # 6	6	14.250	-55.81	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	29.51	240.32	0.12
Span # 2	2	5.000	-17.46	245.29	0.07
Span # 3	3	5.000	40.89	240.32	0.17
Span # 4	4	5.000	-28.54	245.29	0.12
Span # 5	5	5.000	-56.73	245.29	0.23
Span # 6	6	14.250	-59.61	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	29.52	240.32	0.12
Span # 2	2	5.000	-17.45	245.29	0.07
Span # 3	3	5.000	40.94	240.32	0.17
Span # 4	4	5.000	-28.34	245.29	0.12
Span # 5	5	5.000	-54.11	245.29	0.22
Span # 6	6	14.250	-56.91	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	29.51	240.32	0.12
Span # 2	2	5.000	-17.46	245.29	0.07
Span # 3	3	5.000	40.90	240.32	0.17
Span # 4	4	5.000	-28.48	245.29	0.12
Span # 5	5	5.000	-56.00	245.29	0.23
Span # 6	6	14.250	-58.86	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	29.52	240.32	0.12
Span # 2	2	5.000	-17.45	245.29	0.07
Span # 3	3	5.000	40.95	240.32	0.17
Span # 4	4	5.000	-28.29	245.29	0.12
Span # 5	5	5.000	-53.38	245.29	0.22
Span # 6	6	14.250	-56.16	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.46	240.32	0.12
Span # 2	2	5.000	-17.53	245.29	0.07
Span # 3	3	5.000	40.60	240.32	0.17
Span # 4	4	5.000	-29.54	245.29	0.12
Span # 5	5	5.000	-56.45	245.29	0.23
Span # 6	6	14.250	-59.16	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.47	240.32	0.12
Span # 2	2	5.000	-17.52	245.29	0.07
Span # 3	3	5.000	40.66	240.32	0.17
Span # 4	4	5.000	-29.34	245.29	0.12
Span # 5	5	5.000	-53.82	245.29	0.22
Span # 6	6	14.250	-56.46	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.46	240.32	0.12
Span # 2	2	5.000	-17.53	245.29	0.07
Span # 3	3	5.000	40.62	240.32	0.17
Span # 4	4	5.000	-29.48	245.29	0.12

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-55.72	245.29	0.23
Span # 6	6	14.250	-58.41	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	29.47	240.32	0.12
Span # 2	2	5.000	-17.51	245.29	0.07
Span # 3	3	5.000	40.67	240.32	0.17
Span # 4	4	5.000	-29.29	245.29	0.12
Span # 5	5	5.000	-53.10	245.29	0.22
Span # 6	6	14.250	-55.71	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.47	240.32	0.12
Span # 2	2	5.000	-17.52	245.29	0.07
Span # 3	3	5.000	40.67	240.32	0.17
Span # 4	4	5.000	-29.30	245.29	0.12
Span # 5	5	5.000	-56.65	245.29	0.23
Span # 6	6	14.250	-59.52	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.48	240.32	0.12
Span # 2	2	5.000	-17.50	245.29	0.07
Span # 3	3	5.000	40.72	240.32	0.17
Span # 4	4	5.000	-29.11	245.29	0.12
Span # 5	5	5.000	-54.03	245.29	0.22
Span # 6	6	14.250	-56.81	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.47	240.32	0.12
Span # 2	2	5.000	-17.51	245.29	0.07
Span # 3	3	5.000	40.68	240.32	0.17
Span # 4	4	5.000	-29.25	245.29	0.12
Span # 5	5	5.000	-55.93	245.29	0.23
Span # 6	6	14.250	-58.77	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	29.48	240.32	0.12
Span # 2	2	5.000	-17.50	245.29	0.07
Span # 3	3	5.000	40.74	240.32	0.17
Span # 4	4	5.000	-29.06	245.29	0.12
Span # 5	5	5.000	-53.30	245.29	0.22
Span # 6	6	14.250	-56.06	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.69	240.32	0.12
Span # 2	2	5.000	-18.66	245.29	0.08
Span # 3	3	5.000	32.58	240.32	0.14
Span # 4	4	5.000	-25.06	245.29	0.10
Span # 5	5	5.000	-56.42	245.29	0.23
Span # 6	6	14.250	-59.13	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.70	240.32	0.12
Span # 2	2	5.000	-18.65	245.29	0.08
Span # 3	3	5.000	32.64	240.32	0.14
Span # 4	4	5.000	-24.86	245.29	0.10
Span # 5	5	5.000	-53.80	245.29	0.22
Span # 6	6	14.250	-56.43	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.69	240.32	0.12
Span # 2	2	5.000	-18.66	245.29	0.08
Span # 3	3	5.000	32.60	240.32	0.14
Span # 4	4	5.000	-25.00	245.29	0.10
Span # 5	5	5.000	-55.70	245.29	0.23
Span # 6	6	14.250	-58.38	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.70	240.32	0.12

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-18.64	245.29	0.08
Span # 3	3	5.000	32.65	240.32	0.14
Span # 4	4	5.000	-24.81	245.29	0.10
Span # 5	5	5.000	-53.07	245.29	0.22
Span # 6	6	14.250	-55.68	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.70	240.32	0.12
Span # 2	2	5.000	-18.64	245.29	0.08
Span # 3	3	5.000	32.65	240.32	0.14
Span # 4	4	5.000	-24.82	245.29	0.10
Span # 5	5	5.000	-56.63	245.29	0.23
Span # 6	6	14.250	-59.49	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.71	240.32	0.12
Span # 2	2	5.000	-18.63	245.29	0.08
Span # 3	3	5.000	32.70	240.32	0.14
Span # 4	4	5.000	-24.63	245.29	0.10
Span # 5	5	5.000	-54.01	245.29	0.22
Span # 6	6	14.250	-56.78	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.71	240.32	0.12
Span # 2	2	5.000	-18.64	245.29	0.08
Span # 3	3	5.000	32.66	240.32	0.14
Span # 4	4	5.000	-24.77	245.29	0.10
Span # 5	5	5.000	-55.90	245.29	0.23
Span # 6	6	14.250	-58.74	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.71	240.32	0.12
Span # 2	2	5.000	-18.63	245.29	0.08
Span # 3	3	5.000	32.72	240.32	0.14
Span # 4	4	5.000	-24.58	245.29	0.10
Span # 5	5	5.000	-53.28	245.29	0.22
Span # 6	6	14.250	-56.04	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	28.66	240.32	0.12
Span # 2	2	5.000	-18.71	245.29	0.08
Span # 3	3	5.000	32.37	240.32	0.13
Span # 4	4	5.000	-25.83	245.29	0.11
Span # 5	5	5.000	-56.35	245.29	0.23
Span # 6	6	14.250	-59.04	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	28.67	240.32	0.12
Span # 2	2	5.000	-18.70	245.29	0.08
Span # 3	3	5.000	32.42	240.32	0.13
Span # 4	4	5.000	-25.63	245.29	0.10
Span # 5	5	5.000	-53.72	245.29	0.22
Span # 6	6	14.250	-56.34	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	28.66	240.32	0.12
Span # 2	2	5.000	-18.71	245.29	0.08
Span # 3	3	5.000	32.38	240.32	0.13
Span # 4	4	5.000	-25.77	245.29	0.11
Span # 5	5	5.000	-55.62	245.29	0.23
Span # 6	6	14.250	-58.29	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	28.67	240.32	0.12
Span # 2	2	5.000	-18.69	245.29	0.08
Span # 3	3	5.000	32.44	240.32	0.13
Span # 4	4	5.000	-25.58	245.29	0.10
Span # 5	5	5.000	-53.00	245.29	0.22
Span # 6	6	14.250	-55.59	245.29	0.23

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	28.67	240.32	0.12
Span # 2	2	5.000	-18.69	245.29	0.08
Span # 3	3	5.000	32.43	240.32	0.13
Span # 4	4	5.000	-25.59	245.29	0.10
Span # 5	5	5.000	-56.55	245.29	0.23
Span # 6	6	14.250	-59.39	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	28.68	240.32	0.12
Span # 2	2	5.000	-18.68	245.29	0.08
Span # 3	3	5.000	32.49	240.32	0.14
Span # 4	4	5.000	-25.40	245.29	0.10
Span # 5	5	5.000	-53.93	245.29	0.22
Span # 6	6	14.250	-56.69	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	28.67	240.32	0.12
Span # 2	2	5.000	-18.69	245.29	0.08
Span # 3	3	5.000	32.45	240.32	0.14
Span # 4	4	5.000	-25.54	245.29	0.10
Span # 5	5	5.000	-55.83	245.29	0.23
Span # 6	6	14.250	-58.64	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	28.68	240.32	0.12
Span # 2	2	5.000	-18.68	245.29	0.08
Span # 3	3	5.000	32.50	240.32	0.14
Span # 4	4	5.000	-25.34	245.29	0.10
Span # 5	5	5.000	-53.20	245.29	0.22
Span # 6	6	14.250	-55.94	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.40	240.32	0.12
Span # 2	2	5.000	-17.62	245.29	0.07
Span # 3	3	5.000	40.75	240.32	0.17
Span # 4	4	5.000	-28.73	245.29	0.12
Span # 5	5	5.000	-56.52	245.29	0.23
Span # 6	6	14.250	-59.25	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.41	240.32	0.12
Span # 2	2	5.000	-17.60	245.29	0.07
Span # 3	3	5.000	40.81	240.32	0.17
Span # 4	4	5.000	-28.54	245.29	0.12
Span # 5	5	5.000	-53.90	245.29	0.22
Span # 6	6	14.250	-56.55	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.40	240.32	0.12
Span # 2	2	5.000	-17.61	245.29	0.07
Span # 3	3	5.000	40.77	240.32	0.17
Span # 4	4	5.000	-28.68	245.29	0.12
Span # 5	5	5.000	-55.79	245.29	0.23
Span # 6	6	14.250	-58.51	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.41	240.32	0.12
Span # 2	2	5.000	-17.60	245.29	0.07
Span # 3	3	5.000	40.82	240.32	0.17
Span # 4	4	5.000	-28.48	245.29	0.12
Span # 5	5	5.000	-53.17	245.29	0.22
Span # 6	6	14.250	-55.80	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.41	240.32	0.12
Span # 2	2	5.000	-17.60	245.29	0.07
Span # 3	3	5.000	40.82	240.32	0.17

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-28.50	245.29	0.12
Span # 5	5	5.000	-56.73	245.29	0.23
Span # 6	6	14.250	-59.61	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.42	240.32	0.12
Span # 2	2	5.000	-17.59	245.29	0.07
Span # 3	3	5.000	40.87	240.32	0.17
Span # 4	4	5.000	-28.30	245.29	0.12
Span # 5	5	5.000	-54.11	245.29	0.22
Span # 6	6	14.250	-56.91	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.42	240.32	0.12
Span # 2	2	5.000	-17.60	245.29	0.07
Span # 3	3	5.000	40.83	240.32	0.17
Span # 4	4	5.000	-28.44	245.29	0.12
Span # 5	5	5.000	-56.00	245.29	0.23
Span # 6	6	14.250	-58.86	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.42	240.32	0.12
Span # 2	2	5.000	-17.58	245.29	0.07
Span # 3	3	5.000	40.89	240.32	0.17
Span # 4	4	5.000	-28.25	245.29	0.12
Span # 5	5	5.000	-53.38	245.29	0.22
Span # 6	6	14.250	-56.16	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.37	240.32	0.12
Span # 2	2	5.000	-17.67	245.29	0.07
Span # 3	3	5.000	40.54	240.32	0.17
Span # 4	4	5.000	-29.50	245.29	0.12
Span # 5	5	5.000	-56.45	245.29	0.23
Span # 6	6	14.250	-59.16	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.38	240.32	0.12
Span # 2	2	5.000	-17.66	245.29	0.07
Span # 3	3	5.000	40.59	240.32	0.17
Span # 4	4	5.000	-29.30	245.29	0.12
Span # 5	5	5.000	-53.82	245.29	0.22
Span # 6	6	14.250	-56.46	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.37	240.32	0.12
Span # 2	2	5.000	-17.66	245.29	0.07
Span # 3	3	5.000	40.55	240.32	0.17
Span # 4	4	5.000	-29.44	245.29	0.12
Span # 5	5	5.000	-55.72	245.29	0.23
Span # 6	6	14.250	-58.41	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.38	240.32	0.12
Span # 2	2	5.000	-17.65	245.29	0.07
Span # 3	3	5.000	40.61	240.32	0.17
Span # 4	4	5.000	-29.25	245.29	0.12
Span # 5	5	5.000	-53.09	245.29	0.22
Span # 6	6	14.250	-55.71	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.38	240.32	0.12
Span # 2	2	5.000	-17.65	245.29	0.07
Span # 3	3	5.000	40.60	240.32	0.17
Span # 4	4	5.000	-29.26	245.29	0.12
Span # 5	5	5.000	-56.65	245.29	0.23
Span # 6	6	14.250	-59.51	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	29.39	240.32	0.12
Span # 2	2	5.000	-17.64	245.29	0.07
Span # 3	3	5.000	40.66	240.32	0.17
Span # 4	4	5.000	-29.07	245.29	0.12
Span # 5	5	5.000	-54.03	245.29	0.22
Span # 6	6	14.250	-56.81	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.38	240.32	0.12
Span # 2	2	5.000	-17.65	245.29	0.07
Span # 3	3	5.000	40.62	240.32	0.17
Span # 4	4	5.000	-29.21	245.29	0.12
Span # 5	5	5.000	-55.92	245.29	0.23
Span # 6	6	14.250	-58.76	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.39	240.32	0.12
Span # 2	2	5.000	-17.64	245.29	0.07
Span # 3	3	5.000	40.67	240.32	0.17
Span # 4	4	5.000	-29.02	245.29	0.12
Span # 5	5	5.000	-53.30	245.29	0.22
Span # 6	6	14.250	-56.06	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	34.07	240.32	0.14
Span # 2	2	5.000	-21.97	245.29	0.09
Span # 3	3	5.000	33.07	240.32	0.14
Span # 4	4	5.000	-25.34	245.29	0.10
Span # 5	5	5.000	-56.43	245.29	0.23
Span # 6	6	14.250	-59.14	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	34.08	240.32	0.14
Span # 2	2	5.000	-21.96	245.29	0.09
Span # 3	3	5.000	33.12	240.32	0.14
Span # 4	4	5.000	-25.15	245.29	0.10
Span # 5	5	5.000	-53.81	245.29	0.22
Span # 6	6	14.250	-56.44	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	34.08	240.32	0.14
Span # 2	2	5.000	-21.97	245.29	0.09
Span # 3	3	5.000	33.08	240.32	0.14
Span # 4	4	5.000	-25.29	245.29	0.10
Span # 5	5	5.000	-55.70	245.29	0.23
Span # 6	6	14.250	-58.39	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	34.08	240.32	0.14
Span # 2	2	5.000	-21.96	245.29	0.09
Span # 3	3	5.000	33.14	240.32	0.14
Span # 4	4	5.000	-25.10	245.29	0.10
Span # 5	5	5.000	-53.08	245.29	0.22
Span # 6	6	14.250	-55.69	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	34.08	240.32	0.14
Span # 2	2	5.000	-21.96	245.29	0.09
Span # 3	3	5.000	33.13	240.32	0.14
Span # 4	4	5.000	-25.11	245.29	0.10
Span # 5	5	5.000	-56.64	245.29	0.23
Span # 6	6	14.250	-59.50	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	34.09	240.32	0.14
Span # 2	2	5.000	-21.94	245.29	0.09
Span # 3	3	5.000	33.19	240.32	0.14
Span # 4	4	5.000	-24.92	245.29	0.10
Span # 5	5	5.000	-54.01	245.29	0.22

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-56.79	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	34.09	240.32	0.14
Span # 2	2	5.000	-21.95	245.29	0.09
Span # 3	3	5.000	33.15	240.32	0.14
Span # 4	4	5.000	-25.06	245.29	0.10
Span # 5	5	5.000	-55.91	245.29	0.23
Span # 6	6	14.250	-58.75	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	34.10	240.32	0.14
Span # 2	2	5.000	-21.94	245.29	0.09
Span # 3	3	5.000	33.20	240.32	0.14
Span # 4	4	5.000	-24.86	245.29	0.10
Span # 5	5	5.000	-53.29	245.29	0.22
Span # 6	6	14.250	-56.04	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	34.04	240.32	0.14
Span # 2	2	5.000	-22.02	245.29	0.09
Span # 3	3	5.000	32.85	240.32	0.14
Span # 4	4	5.000	-26.11	245.29	0.11
Span # 5	5	5.000	-56.35	245.29	0.23
Span # 6	6	14.250	-59.05	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	34.05	240.32	0.14
Span # 2	2	5.000	-22.01	245.29	0.09
Span # 3	3	5.000	32.91	240.32	0.14
Span # 4	4	5.000	-25.92	245.29	0.11
Span # 5	5	5.000	-53.73	245.29	0.22
Span # 6	6	14.250	-56.34	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	34.04	240.32	0.14
Span # 2	2	5.000	-22.02	245.29	0.09
Span # 3	3	5.000	32.87	240.32	0.14
Span # 4	4	5.000	-26.06	245.29	0.11
Span # 5	5	5.000	-55.63	245.29	0.23
Span # 6	6	14.250	-58.30	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	34.05	240.32	0.14
Span # 2	2	5.000	-22.01	245.29	0.09
Span # 3	3	5.000	32.92	240.32	0.14
Span # 4	4	5.000	-25.87	245.29	0.11
Span # 5	5	5.000	-53.00	245.29	0.22
Span # 6	6	14.250	-55.60	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	34.05	240.32	0.14
Span # 2	2	5.000	-22.01	245.29	0.09
Span # 3	3	5.000	32.92	240.32	0.14
Span # 4	4	5.000	-25.88	245.29	0.11
Span # 5	5	5.000	-56.56	245.29	0.23
Span # 6	6	14.250	-59.40	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	34.06	240.32	0.14
Span # 2	2	5.000	-22.00	245.29	0.09
Span # 3	3	5.000	32.97	240.32	0.14
Span # 4	4	5.000	-25.69	245.29	0.10
Span # 5	5	5.000	-53.94	245.29	0.22
Span # 6	6	14.250	-56.70	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	34.05	240.32	0.14
Span # 2	2	5.000	-22.00	245.29	0.09

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	32.93	240.32	0.14
Span # 4	4	5.000	-25.83	245.29	0.11
Span # 5	5	5.000	-55.83	245.29	0.23
Span # 6	6	14.250	-58.65	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	34.06	240.32	0.14
Span # 2	2	5.000	-21.99	245.29	0.09
Span # 3	3	5.000	32.99	240.32	0.14
Span # 4	4	5.000	-25.63	245.29	0.10
Span # 5	5	5.000	-53.21	245.29	0.22
Span # 6	6	14.250	-55.95	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	34.78	240.32	0.14
Span # 2	2	5.000	-20.93	245.29	0.09
Span # 3	3	5.000	41.24	240.32	0.17
Span # 4	4	5.000	-29.02	245.29	0.12
Span # 5	5	5.000	-56.53	245.29	0.23
Span # 6	6	14.250	-59.26	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	34.79	240.32	0.14
Span # 2	2	5.000	-20.92	245.29	0.09
Span # 3	3	5.000	41.29	240.32	0.17
Span # 4	4	5.000	-28.82	245.29	0.12
Span # 5	5	5.000	-53.91	245.29	0.22
Span # 6	6	14.250	-56.56	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	34.79	240.32	0.14
Span # 2	2	5.000	-20.93	245.29	0.09
Span # 3	3	5.000	41.25	240.32	0.17
Span # 4	4	5.000	-28.96	245.29	0.12
Span # 5	5	5.000	-55.80	245.29	0.23
Span # 6	6	14.250	-58.51	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	34.79	240.32	0.14
Span # 2	2	5.000	-20.91	245.29	0.09
Span # 3	3	5.000	41.31	240.32	0.17
Span # 4	4	5.000	-28.77	245.29	0.12
Span # 5	5	5.000	-53.18	245.29	0.22
Span # 6	6	14.250	-55.81	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	34.79	240.32	0.14
Span # 2	2	5.000	-20.92	245.29	0.09
Span # 3	3	5.000	41.30	240.32	0.17
Span # 4	4	5.000	-28.78	245.29	0.12
Span # 5	5	5.000	-56.74	245.29	0.23
Span # 6	6	14.250	-59.62	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	34.80	240.32	0.14
Span # 2	2	5.000	-20.90	245.29	0.09
Span # 3	3	5.000	41.36	240.32	0.17
Span # 4	4	5.000	-28.59	245.29	0.12
Span # 5	5	5.000	-54.11	245.29	0.22
Span # 6	6	14.250	-56.92	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	34.80	240.32	0.14
Span # 2	2	5.000	-20.91	245.29	0.09
Span # 3	3	5.000	41.32	240.32	0.17
Span # 4	4	5.000	-28.73	245.29	0.12
Span # 5	5	5.000	-56.01	245.29	0.23
Span # 6	6	14.250	-58.87	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09

Concrete Beam

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	34.81	240.32	0.14
Span # 2	2	5.000	-20.90	245.29	0.09
Span # 3	3	5.000	41.37	240.32	0.17
Span # 4	4	5.000	-28.54	245.29	0.12
Span # 5	5	5.000	-53.39	245.29	0.22
Span # 6	6	14.250	-56.17	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	34.75	240.32	0.14
Span # 2	2	5.000	-20.98	245.29	0.09
Span # 3	3	5.000	41.02	240.32	0.17
Span # 4	4	5.000	-29.78	245.29	0.12
Span # 5	5	5.000	-56.45	245.29	0.23
Span # 6	6	14.250	-59.17	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	34.76	240.32	0.14
Span # 2	2	5.000	-20.97	245.29	0.09
Span # 3	3	5.000	41.08	240.32	0.17
Span # 4	4	5.000	-29.59	245.29	0.12
Span # 5	5	5.000	-53.83	245.29	0.22
Span # 6	6	14.250	-56.47	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	34.75	240.32	0.14
Span # 2	2	5.000	-20.98	245.29	0.09
Span # 3	3	5.000	41.04	240.32	0.17
Span # 4	4	5.000	-29.73	245.29	0.12
Span # 5	5	5.000	-55.73	245.29	0.23
Span # 6	6	14.250	-58.42	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	34.76	240.32	0.14
Span # 2	2	5.000	-20.97	245.29	0.09
Span # 3	3	5.000	41.09	240.32	0.17
Span # 4	4	5.000	-29.54	245.29	0.12
Span # 5	5	5.000	-53.10	245.29	0.22
Span # 6	6	14.250	-55.72	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	34.76	240.32	0.14
Span # 2	2	5.000	-20.97	245.29	0.09
Span # 3	3	5.000	41.09	240.32	0.17
Span # 4	4	5.000	-29.55	245.29	0.12
Span # 5	5	5.000	-56.66	245.29	0.23
Span # 6	6	14.250	-59.52	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	34.77	240.32	0.14
Span # 2	2	5.000	-20.95	245.29	0.09
Span # 3	3	5.000	41.14	240.32	0.17
Span # 4	4	5.000	-29.36	245.29	0.12
Span # 5	5	5.000	-54.04	245.29	0.22
Span # 6	6	14.250	-56.82	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	34.76	240.32	0.14
Span # 2	2	5.000	-20.96	245.29	0.09
Span # 3	3	5.000	41.10	240.32	0.17
Span # 4	4	5.000	-29.50	245.29	0.12
Span # 5	5	5.000	-55.93	245.29	0.23
Span # 6	6	14.250	-58.77	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	34.77	240.32	0.14
Span # 2	2	5.000	-20.95	245.29	0.09
Span # 3	3	5.000	41.16	240.32	0.17
Span # 4	4	5.000	-29.30	245.29	0.12

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-N (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-53.31	245.29	0.22
Span # 6	6	14.250	-56.07	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	33.98	240.32	0.14
Span # 2	2	5.000	-22.11	245.29	0.09
Span # 3	3	5.000	33.00	240.32	0.14
Span # 4	4	5.000	-25.30	245.29	0.10
Span # 5	5	5.000	-56.43	245.29	0.23
Span # 6	6	14.250	-59.14	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	33.99	240.32	0.14
Span # 2	2	5.000	-22.10	245.29	0.09
Span # 3	3	5.000	33.06	240.32	0.14
Span # 4	4	5.000	-25.11	245.29	0.10
Span # 5	5	5.000	-53.81	245.29	0.22
Span # 6	6	14.250	-56.44	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	33.98	240.32	0.14
Span # 2	2	5.000	-22.11	245.29	0.09
Span # 3	3	5.000	33.02	240.32	0.14
Span # 4	4	5.000	-25.25	245.29	0.10
Span # 5	5	5.000	-55.70	245.29	0.23
Span # 6	6	14.250	-58.39	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	33.99	240.32	0.14
Span # 2	2	5.000	-22.09	245.29	0.09
Span # 3	3	5.000	33.07	240.32	0.14
Span # 4	4	5.000	-25.06	245.29	0.10
Span # 5	5	5.000	-53.08	245.29	0.22
Span # 6	6	14.250	-55.69	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	33.99	240.32	0.14
Span # 2	2	5.000	-22.09	245.29	0.09
Span # 3	3	5.000	33.07	240.32	0.14
Span # 4	4	5.000	-25.07	245.29	0.10
Span # 5	5	5.000	-56.64	245.29	0.23
Span # 6	6	14.250	-59.49	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	34.00	240.32	0.14
Span # 2	2	5.000	-22.08	245.29	0.09
Span # 3	3	5.000	33.12	240.32	0.14
Span # 4	4	5.000	-24.88	245.29	0.10
Span # 5	5	5.000	-54.01	245.29	0.22
Span # 6	6	14.250	-56.79	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	33.99	240.32	0.14
Span # 2	2	5.000	-22.09	245.29	0.09
Span # 3	3	5.000	33.08	240.32	0.14
Span # 4	4	5.000	-25.02	245.29	0.10
Span # 5	5	5.000	-55.91	245.29	0.23
Span # 6	6	14.250	-58.74	245.29	0.24
Span # 7	7	3.250	-21.23	245.29	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	34.00	240.32	0.14
Span # 2	2	5.000	-22.08	245.29	0.09
Span # 3	3	5.000	33.14	240.32	0.14
Span # 4	4	5.000	-24.82	245.29	0.10
Span # 5	5	5.000	-53.29	245.29	0.22
Span # 6	6	14.250	-56.04	245.29	0.23
Span # 7	7	3.250	-28.27	245.29	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	33.94	240.32	0.14

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

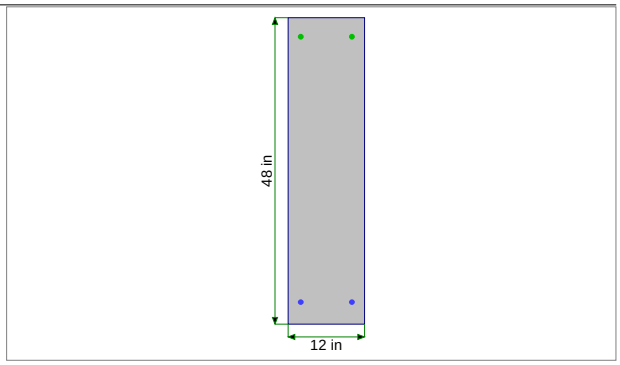
Description : GB-O (AT NORTH WALL GRID 7)

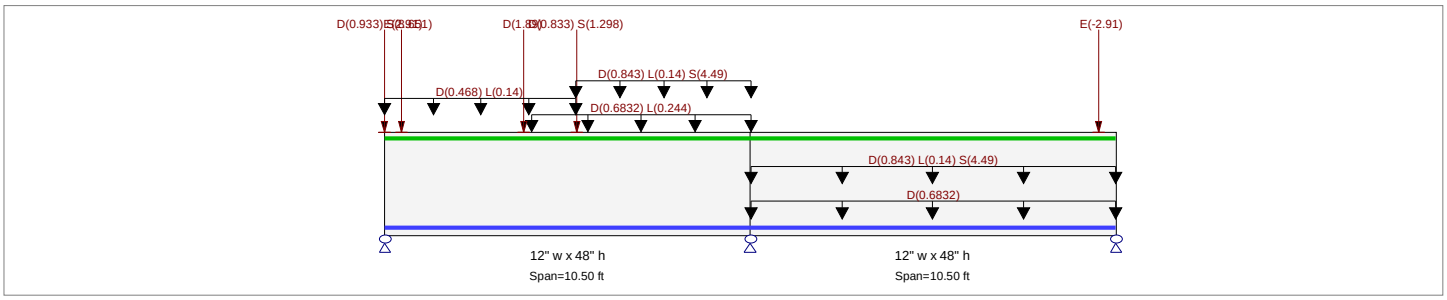
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in

Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Span #2 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.250 -->> 10.50 ft, Tributary Width = 6.10 ft, (slab weight)
Point Load : D = 0.9330, S = 8.651 k @ 0.0 ft, (P1)
Point Load : D = 0.8330, S = 1.298 k @ 5.50 ft, (P2)
Uniform Load : D = 0.4680, L = 0.140 k/ft, Extent = 0.0 -->> 5.50 ft, Tributary Width = 1.0 ft, (WALL A)
Uniform Load : D = 0.8430, L = 0.140, S = 4.490 k/ft, Extent = 5.50 -->> 10.50 ft, Tributary Width = 1.0 ft, (WALL A2)
Point Load : D = 1.890 k @ 4.0 ft, (GB-P)
Point Load : E = 2.910 k @ 0.50 ft, (OTM)
Load for Span Number 2
Uniform Load : D = 0.1120 ksf, Tributary Width = 6.10 ft, (slab weight)
Uniform Load : D = 0.8430, L = 0.140, S = 4.490 k/ft, Tributary Width = 1.0 ft, (wall A2)
Point Load : E = -2.910 k @ 10.0 ft, (OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.632** : 1		Maximum Deflection			
Section used for this span	**Typical Section**		Max Downward Transient Deflection	0.002 in	Ratio =	65968 >=36
Mu : Applied	-113.794 k-ft		Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	180.038 k-ft		Max Downward Total Deflection	0.003 in	Ratio =	48324 >=24
Location of maximum on span	0.000 ft		Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 2					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	16.965	78.237	27.262
Overall MINimum	-0.092	0.000	-0.204

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

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Description : GB-O (AT NORTH WALL GRID 7)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
+D+H	6.973	27.636	8.312
+D+L+H, LL Comb Run (*L)	6.881	28.555	8.955
+D+L+H, LL Comb Run (L*)	7.958	29.850	8.108
+D+L+H, LL Comb Run (LL)	7.866	30.768	8.751
+D+Lr+H, LL Comb Run (*L)	6.973	27.636	8.312
+D+Lr+H, LL Comb Run (L*)	6.973	27.636	8.312
+D+Lr+H, LL Comb Run (LL)	6.973	27.636	8.312
+D+S+H	16.965	78.237	27.262
+D+0.750Lr+0.750L+H, LL Comb Run (	6.904	28.325	8.794
+D+0.750Lr+0.750L+H, LL Comb Run (	7.712	29.296	8.159
+D+0.750Lr+0.750L+H, LL Comb Run (	7.643	29.985	8.641
+D+0.750L+0.750S+H, LL Comb Run (*	14.398	66.276	23.007
+D+0.750L+0.750S+H, LL Comb Run (L	15.206	67.247	22.372
+D+0.750L+0.750S+H, LL Comb Run (L	15.137	67.936	22.854
+D+0.60W+H	6.973	27.636	8.312
+D+0.70E+H	8.913	27.636	6.372
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.904	28.325	8.794
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.712	29.296	8.159
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.643	29.985	8.641
+D+0.750L+0.750S+0.450W+H, LL Comb	14.398	66.276	23.007
+D+0.750L+0.750S+0.450W+H, LL Comb	15.206	67.247	22.372
+D+0.750L+0.750S+0.450W+H, LL Comb	15.137	67.936	22.854
+D+0.750L+0.750S+0.5250E+H, LL Com	15.853	66.276	21.552
+D+0.750L+0.750S+0.5250E+H, LL Com	16.661	67.247	20.917
+D+0.750L+0.750S+0.5250E+H, LL Com	16.592	67.936	21.399
+0.60D+0.60W+0.60H	4.184	16.581	4.987
+0.60D+0.70E+0.60H	6.124	16.581	3.047
D Only	6.973	27.636	8.312
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.092	0.919	0.643
L Only, LL Comb Run (L*)	0.985	2.214	-0.204
L Only, LL Comb Run (LL)	0.893	3.133	0.439
S Only	9.992	50.601	18.951
W Only			
E Only	2.771	0.000	-2.771
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	44.50	24.85	24.85	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.04	44.50	11.39	11.39	0.50	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.09	44.50	11.34	11.34	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.13	44.50	11.28	11.28	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.17	44.50	11.22	11.22	1.95	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.21	44.50	11.17	11.17	2.43	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.26	44.50	11.11	11.11	2.91	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.30	44.50	11.05	11.05	3.38	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.34	44.50	11.00	11.00	3.85	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.39	44.50	10.94	10.94	4.32	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.43	44.50	10.88	10.88	4.79	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.47	44.50	10.82	10.82	5.26	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.51	44.50	9.20	9.20	4.92	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.56	44.50	9.15	9.15	5.31	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.60	44.50	9.09	9.09	5.71	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.64	44.50	9.03	9.03	6.09	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.69	44.50	8.98	8.98	6.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.73	44.50	8.92	8.92	6.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.77	44.50	8.86	8.86	7.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.81	44.50	8.81	8.81	7.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.86	44.50	8.75	8.75	8.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.90	44.50	8.69	8.69	8.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.94	44.50	8.63	8.63	8.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.99	44.50	8.58	8.58	9.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.03	44.50	8.52	8.52	9.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.07	44.50	8.46	8.46	9.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.11	44.50	8.41	8.41	10.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.16	44.50	8.35	8.35	10.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.20	44.50	8.29	8.29	10.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.24	44.50	8.24	8.24	11.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.29	44.50	8.18	8.18	11.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.33	44.50	8.12	8.12	11.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.37	44.50	8.07	8.07	12.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.41	44.50	8.01	8.01	12.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.46	44.50	7.95	7.95	13.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.50	44.50	7.89	7.89	13.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.54	44.50	7.84	7.84	13.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	44.50	7.78	7.78	14.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.63	44.50	7.72	7.72	14.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.67	44.50	7.67	7.67	14.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.71	44.50	7.61	7.61	15.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.76	44.50	7.55	7.55	15.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.80	44.50	7.50	7.50	15.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.84	44.50	7.44	7.44	15.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.89	44.50	7.38	7.38	16.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.93	44.50	7.33	7.33	16.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.97	44.50	7.27	7.27	16.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.01	44.50	7.21	7.21	17.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.06	44.50	7.16	7.16	17.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.10	44.50	7.10	7.10	17.85	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.14	44.50	7.04	7.04	18.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.19	44.50	6.98	6.98	18.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.23	44.50	6.93	6.93	18.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.27	44.50	6.87	6.87	19.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.31	44.50	6.81	6.81	19.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.36	44.50	6.76	6.76	19.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.40	44.50	6.70	6.70	19.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.44	44.50	6.64	6.64	20.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.49	44.50	6.59	6.59	20.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.53	44.50	6.53	6.53	20.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.57	44.50	6.47	6.47	21.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.61	44.50	6.42	6.42	21.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.66	44.50	6.36	6.36	21.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.70	44.50	6.30	6.30	21.87	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.74	44.50	6.24	6.24	22.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.79	44.50	6.19	6.19	22.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.83	44.50	6.13	6.13	22.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.87	44.50	6.07	6.07	22.93	0.98	49.75	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.91	44.50	6.02	6.02	23.19	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.96	44.50	5.96	5.96	23.44	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H, I	1	3.00	44.50	5.90	5.90	23.70	0.92	49.65	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.04	44.50	5.85	5.85	23.95	0.91	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.09	44.50	5.79	5.79	24.20	0.89	49.59	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.13	44.50	5.73	5.73	24.44	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.17	44.50	5.68	5.68	24.69	0.85	49.53	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.21	44.50	5.62	5.62	24.93	0.84	49.51	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.26	44.50	5.56	5.56	25.17	0.82	49.48	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.30	44.50	5.51	5.51	25.41	0.80	49.45	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.34	44.50	5.45	5.45	25.64	0.79	49.43	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.39	44.50	5.39	5.39	25.87	0.77	49.40	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.43	44.50	5.33	5.33	26.10	0.76	49.38	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.47	44.50	5.28	5.28	26.33	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.51	44.50	5.22	5.22	26.56	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.56	44.50	5.16	5.16	26.78	0.72	49.31	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.60	44.50	5.11	5.11	27.00	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.64	44.50	5.05	5.05	27.22	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.69	44.50	4.99	4.99	27.43	0.67	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.73	44.50	4.94	4.94	27.65	0.66	49.22	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.77	44.50	4.88	4.88	27.86	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.81	44.50	4.82	4.82	28.06	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.86	44.50	4.77	4.77	28.27	0.63	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.90	44.50	4.71	4.71	28.47	0.61	49.14	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.94	44.50	4.65	4.65	28.67	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	3.99	44.50	4.59	4.59	28.87	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.03	44.50	2.27	2.27	29.00	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.07	44.50	2.21	2.21	29.10	0.28	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.11	44.50	2.16	2.16	29.19	0.27	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.16	44.50	2.10	2.10	29.28	0.27	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.20	44.50	2.04	2.04	29.37	0.26	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.24	44.50	1.99	1.99	29.46	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.29	44.50	1.89	1.89	29.54	0.24	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.33	44.50	1.80	1.80	29.62	0.23	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.37	44.50	1.70	1.70	29.69	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.41	44.50	1.60	1.60	29.77	0.20	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.46	44.50	1.51	1.51	29.83	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.50	44.50	1.41	1.41	29.89	0.17	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	4.54	44.50	1.31	1.31	29.95	0.16	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	4.59	44.50	-1.24	1.24	21.75	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	4.63	44.50	-1.34	1.34	21.69	0.23	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	4.67	44.50	-1.45	1.45	21.63	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	4.71	44.50	-1.55	1.55	21.57	0.27	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	4.76	44.50	-1.66	1.66	21.50	0.29	48.60	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	4.80	44.50	-1.76	1.76	21.42	0.30	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	4.84	44.50	-1.86	1.86	21.35	0.32	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	4.89	44.50	-1.97	1.97	21.27	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	4.93	44.50	-2.07	2.07	21.18	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	4.97	44.50	-2.17	2.17	21.09	0.38	48.76	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	5.01	44.50	-2.28	2.28	20.99	0.40	48.79	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	5.06	44.50	-2.38	2.38	20.89	0.42	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	5.10	44.50	-2.49	2.49	20.79	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	5.14	44.50	-2.59	2.59	20.68	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	5.19	44.50	-2.69	2.69	20.57	0.49	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	5.23	44.50	-2.80	2.80	20.45	0.51	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	5.27	44.50	-2.90	2.90	20.33	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	5.31	44.50	-3.01	3.01	20.20	0.55	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	5.36	44.50	-3.11	3.11	20.07	0.57	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	5.40	44.50	-3.21	3.21	19.93	0.60	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	5.44	44.50	-3.32	3.32	19.79	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	5.49	44.50	-3.42	3.42	19.65	0.65	49.19	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	5.53	44.50	-4.71	4.71	19.47	0.90	49.61	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	5.57	44.50	-4.83	4.83	19.26	0.93	49.66	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.61	44.50	-5.12	5.12	29.40	0.65	49.19	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.66	44.50	-5.54	5.54	29.17	0.70	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.70	44.50	-5.96	5.96	28.92	0.76	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.74	44.50	-6.39	6.39	28.66	0.83	49.49	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.79	44.50	-6.81	6.81	28.37	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.83	44.50	-7.24	7.24	28.07	0.96	49.70	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.87	44.50	-7.66	7.66	27.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.91	44.50	-8.09	8.09	27.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	5.96	44.50	-8.51	8.51	27.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.00	44.50	-8.94	8.94	26.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.04	44.50	-9.36	9.36	26.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.09	44.50	-9.78	9.78	25.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.13	44.50	-10.21	10.21	25.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.17	44.50	-10.63	10.63	25.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.21	44.50	-11.06	11.06	24.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.26	44.50	-11.48	11.48	24.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.30	44.50	-11.91	11.91	23.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.34	44.50	-12.33	12.33	23.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.39	44.50	-12.75	12.75	22.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.43	44.50	-13.18	13.18	21.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.47	44.50	-13.60	13.60	21.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.51	44.50	-14.03	14.03	20.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.56	44.50	-14.45	14.45	20.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.60	44.50	-14.88	14.88	19.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.64	44.50	-15.30	15.30	18.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.69	44.50	-15.73	15.73	18.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.73	44.50	-16.15	16.15	17.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.77	44.50	-16.57	16.57	16.85	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.81	44.50	-17.00	17.00	16.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.86	44.50	-17.42	17.42	15.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.90	44.50	-17.85	17.85	14.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.94	44.50	-18.27	18.27	13.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.99	44.50	-18.70	18.70	13.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.03	44.50	-19.12	19.12	12.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.07	44.50	-19.55	19.55	11.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.11	44.50	-19.97	19.97	10.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.16	44.50	-20.39	20.39	9.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.20	44.50	-20.82	20.82	8.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.24	44.50	-21.24	21.24	7.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.29	44.50	-21.67	21.67	7.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.33	44.50	-22.09	22.09	6.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.37	44.50	-22.52	22.52	5.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.41	44.50	-22.94	22.94	4.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.46	44.50	-23.37	23.37	3.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.50	44.50	-23.79	23.79	2.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.54	44.50	-24.21	24.21	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.59	44.50	-24.64	24.64	0.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	7.63	45.00	-25.06	25.06	1.00	1.00	50.32	Vu < PhiVc/2	Not Reqd 1	50.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.67	45.00	-25.49	25.49	2.08	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.71	45.00	-25.91	25.91	3.18	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.76	45.00	-26.34	26.34	4.30	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.80	45.00	-26.76	26.76	5.44	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.84	45.00	-27.19	27.19	6.60	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.89	45.00	-27.61	27.61	7.77	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.93	45.00	-28.03	28.03	8.96	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	7.97	45.00	-28.46	28.46	10.17	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.01	45.00	-28.88	28.88	11.40	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.06	45.00	-29.31	29.31	12.65	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.10	45.00	-29.73	29.73	13.91	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.14	45.00	-30.16	30.16	15.20	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.19	45.00	-30.58	30.58	16.50	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.23	45.00	-31.01	31.01	17.82	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.27	45.00	-31.43	31.43	19.16	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.31	45.00	-31.85	31.85	20.51	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.36	45.00	-32.28	32.28	21.89	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.40	45.00	-32.70	32.70	23.28	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.44	45.00	-33.13	33.13	24.69	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.49	45.00	-33.55	33.55	26.12	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.53	45.00	-33.98	33.98	27.57	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.57	45.00	-34.40	34.40	29.03	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.61	45.00	-34.83	34.83	30.52	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.66	45.00	-35.25	35.25	32.02	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.70	45.00	-35.67	35.67	33.54	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.74	45.00	-36.10	36.10	35.07	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.79	45.00	-36.52	36.52	36.63	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.83	45.00	-36.95	36.95	38.21	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.87	45.00	-37.37	37.37	39.80	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.91	45.00	-37.80	37.80	41.41	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	8.96	45.00	-38.22	38.22	43.04	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.00	45.00	-38.65	38.65	44.68	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.04	45.00	-39.07	39.07	46.35	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.09	45.00	-39.49	39.49	48.03	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.13	45.00	-39.92	39.92	49.74	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.17	45.00	-40.34	40.34	51.46	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.21	45.00	-40.77	40.77	53.19	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.26	45.00	-41.19	41.19	54.95	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.30	45.00	-41.62	41.62	56.72	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.34	45.00	-42.04	42.04	58.52	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.39	45.00	-42.47	42.47	60.33	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.43	45.00	-42.89	42.89	62.16	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.47	45.00	-43.31	43.31	64.00	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.51	45.00	-43.74	43.74	65.87	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.56	45.00	-44.16	44.16	67.75	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.60	45.00	-44.59	44.59	69.65	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.64	45.00	-45.01	45.01	71.57	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.69	45.00	-45.44	45.44	73.51	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.73	45.00	-45.86	45.86	75.47	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.77	45.00	-46.29	46.29	77.44	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.81	45.00	-46.71	46.71	79.44	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.86	45.00	-47.13	47.13	81.45	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.90	45.00	-47.56	47.56	83.48	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	9.94	45.00	-47.98	47.98	85.52	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	9.99	45.00	-48.41	48.41	87.59	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	10.03	45.00	-48.83	48.83	89.67	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	10.07	45.00	-49.26	49.26	91.77	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	10.11	45.00	-49.68	49.68	93.90	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	10.16	45.00	-50.11	50.11	96.03	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	1	10.20	45.00	-50.53	50.53	98.19	1.00	50.32	PhiVc < Vu	0.2121	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.24	45.00	-50.95	50.95	100.36	1.00	50.32	PhiVc < Vu	0.6365	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.29	45.00	-51.38	51.38	102.56	1.00	50.32	PhiVc < Vu	1.061	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.33	45.00	-51.80	51.80	104.77	1.00	50.32	PhiVc < Vu	1.485	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.37	45.00	-52.23	52.23	107.00	1.00	50.32	PhiVc < Vu	1.910	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.41	45.00	-52.65	52.65	109.24	1.00	50.32	PhiVc < Vu	2.334	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	1	10.46	45.00	-53.08	53.08	111.51	1.00	50.32	PhiVc < Vu	2.759	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	45.00	62.19	62.19	113.79	1.00	50.32	PhiVc < Vu	11.873	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.54	45.00	61.77	61.77	111.14	1.00	50.32	PhiVc < Vu	11.453	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.59	45.00	61.35	61.35	108.50	1.00	50.32	PhiVc < Vu	11.034	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.63	45.00	60.93	60.93	105.88	1.00	50.32	PhiVc < Vu	10.615	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.67	45.00	60.51	60.51	103.28	1.00	50.32	PhiVc < Vu	10.196	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.71	45.00	60.09	60.09	100.69	1.00	50.32	PhiVc < Vu	9.777	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.76	45.00	59.67	59.67	98.13	1.00	50.32	PhiVc < Vu	9.357	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.80	45.00	59.26	59.26	95.58	1.00	50.32	PhiVc < Vu	8.938	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.84	45.00	58.84	58.84	93.05	1.00	50.32	PhiVc < Vu	8.519	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.89	45.00	58.42	58.42	90.53	1.00	50.32	PhiVc < Vu	8.10	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.93	45.00	58.00	58.00	88.04	1.00	50.32	PhiVc < Vu	7.681	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	45.00	57.58	57.58	85.56	1.00	50.32	PhiVc < Vu	7.261	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.01	45.00	57.16	57.16	83.10	1.00	50.32	PhiVc < Vu	6.842	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.06	45.00	56.74	56.74	80.66	1.00	50.32	PhiVc < Vu	6.423	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.10	45.00	56.32	56.32	78.24	1.00	50.32	PhiVc < Vu	6.004	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.14	45.00	55.90	55.90	75.84	1.00	50.32	PhiVc < Vu	5.585	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.19	45.00	55.48	55.48	73.45	1.00	50.32	PhiVc < Vu	5.165	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.23	45.00	55.06	55.06	71.08	1.00	50.32	PhiVc < Vu	4.746	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.27	45.00	54.64	54.64	68.73	1.00	50.32	PhiVc < Vu	4.327	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.31	45.00	54.23	54.23	66.40	1.00	50.32	PhiVc < Vu	3.908	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.36	45.00	53.81	53.81	64.08	1.00	50.32	PhiVc < Vu	3.489	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.40	45.00	53.39	53.39	61.78	1.00	50.32	PhiVc < Vu	3.069	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.44	45.00	52.97	52.97	59.51	1.00	50.32	PhiVc < Vu	2.650	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.49	45.00	52.55	52.55	57.24	1.00	50.32	PhiVc < Vu	2.231	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	45.00	52.13	52.13	55.00	1.00	50.32	PhiVc < Vu	1.812	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	45.00	51.71	51.71	52.78	1.00	50.32	PhiVc < Vu	1.393	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.61	45.00	51.29	51.29	50.57	1.00	50.32	PhiVc < Vu	0.9733	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.66	45.00	50.87	50.87	48.38	1.00	50.32	PhiVc < Vu	0.5541	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.70	45.00	50.45	50.45	46.21	1.00	50.32	PhiVc < Vu	0.1349	70.1	15.5	15.0
+1.20D+0.50L+1.60S+1.60H,	2	11.74	45.00	50.03	50.03	44.06	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	11.79	45.00	49.61	49.61	41.92	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	11.83	45.00	49.19	49.19	39.80	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	11.87	45.00	48.78	48.78	37.70	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	11.91	45.00	48.36	48.36	35.62	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	11.96	45.00	47.94	47.94	33.56	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.00	45.00	47.52	47.52	31.51	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	45.00	47.10	47.10	29.49	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.09	45.00	46.68	46.68	27.48	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.13	45.00	46.26	46.26	25.48	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.17	45.00	45.84	45.84	23.51	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.21	45.00	45.42	45.42	21.56	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	12.26	45.00	45.00	45.00	19.62	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.30	45.00	44.58	44.58	17.70	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.34	45.00	44.16	44.16	15.80	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.39	45.00	43.75	43.75	13.91	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.43	45.00	43.33	43.33	12.05	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.47	45.00	42.91	42.91	10.20	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	45.00	42.49	42.49	8.37	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.56	45.00	42.07	42.07	6.56	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.60	45.00	41.65	41.65	4.76	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.64	45.00	41.23	41.23	2.99	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.69	45.00	40.81	40.81	1.23	1.00	50.32	PhiVc/2 < Vu <=	Min 11.5.6	71.5	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.73	44.50	40.39	40.39	0.51	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.77	44.50	39.97	39.97	2.23	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.81	44.50	39.55	39.55	3.94	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.86	44.50	39.13	39.13	5.62	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.90	44.50	38.71	38.71	7.29	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.94	44.50	38.30	38.30	8.94	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	12.99	44.50	37.88	37.88	10.57	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.03	44.50	37.46	37.46	12.19	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.07	44.50	37.04	37.04	13.78	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.11	44.50	36.62	36.62	15.36	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.16	44.50	36.20	36.20	16.92	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.20	44.50	35.78	35.78	18.47	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.24	44.50	35.36	35.36	19.99	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.29	44.50	34.94	34.94	21.50	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.33	44.50	34.52	34.52	22.99	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.37	44.50	34.10	34.10	24.46	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.41	44.50	33.68	33.68	25.91	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.46	44.50	33.26	33.26	27.34	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.50	44.50	32.85	32.85	28.76	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.54	44.50	32.43	32.43	30.16	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.59	44.50	32.01	32.01	31.54	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.63	44.50	31.59	31.59	32.90	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.67	44.50	31.17	31.17	34.25	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.71	44.50	30.75	30.75	35.57	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.76	44.50	30.33	30.33	36.88	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.80	44.50	29.91	29.91	38.17	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.84	44.50	29.49	29.49	39.45	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.89	44.50	29.07	29.07	40.70	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.93	44.50	28.65	28.65	41.94	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	13.97	44.50	28.23	28.23	43.16	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.01	44.50	27.82	27.82	44.36	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.06	44.50	27.40	27.40	45.54	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.10	44.50	26.98	26.98	46.71	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.14	44.50	26.56	26.56	47.85	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.19	44.50	26.14	26.14	48.98	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.23	44.50	25.72	25.72	50.09	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.27	44.50	25.30	25.30	51.19	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	14.31	44.50	24.88	24.88	52.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.36	44.50	24.46	24.46	53.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.40	44.50	24.04	24.04	54.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.44	44.50	23.62	23.62	55.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.49	44.50	23.20	23.20	56.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.53	44.50	22.78	22.78	57.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	14.57	44.50	22.37	22.37	58.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.61	44.50	21.95	21.95	59.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.66	44.50	21.53	21.53	60.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.70	44.50	21.11	21.11	61.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.74	44.50	20.69	20.69	62.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.79	44.50	20.27	20.27	62.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.83	44.50	19.85	19.85	63.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.87	44.50	19.43	19.43	64.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.91	44.50	19.01	19.01	65.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.96	44.50	18.59	18.59	66.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.00	44.50	18.17	18.17	67.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.04	44.50	17.75	17.75	67.79	0.97	49.73	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.09	44.50	17.34	17.34	68.55	0.94	49.67	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.13	44.50	16.92	16.92	69.28	0.91	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.17	44.50	16.50	16.50	70.00	0.87	49.57	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.21	44.50	16.08	16.08	70.69	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.26	44.50	15.66	15.66	71.37	0.81	49.47	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.30	44.50	15.24	15.24	72.04	0.78	49.42	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.34	44.50	14.82	14.82	72.68	0.76	49.37	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.39	44.50	14.40	14.40	73.31	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.43	44.50	13.98	13.98	73.91	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.47	44.50	13.56	13.56	74.50	0.68	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.51	44.50	13.14	13.14	75.08	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.56	44.50	12.72	12.72	75.63	0.62	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.60	44.50	12.30	12.30	76.17	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.64	44.50	11.89	11.89	76.69	0.57	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.69	44.50	11.47	11.47	77.19	0.55	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.73	44.50	11.05	11.05	77.67	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.77	44.50	10.63	10.63	78.13	0.50	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.81	44.50	10.21	10.21	78.58	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.86	44.50	9.79	9.79	79.01	0.46	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.90	44.50	9.37	9.37	79.42	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.94	44.50	8.95	8.95	79.81	0.42	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.99	44.50	8.53	8.53	80.19	0.39	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.03	44.50	8.11	8.11	80.54	0.37	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.07	44.50	7.69	7.69	80.88	0.35	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.11	44.50	7.27	7.27	81.20	0.33	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.16	44.50	6.86	6.86	81.51	0.31	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.20	44.50	6.44	6.44	81.79	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.24	44.50	6.02	6.02	82.06	0.27	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.29	44.50	5.60	5.60	82.31	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.33	44.50	5.18	5.18	82.54	0.23	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.37	44.50	4.76	4.76	82.75	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.41	44.50	4.34	4.34	82.21	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.46	44.50	3.92	3.92	82.38	0.18	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.50	44.50	3.51	3.51	82.54	0.16	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.54	44.50	3.09	3.09	82.68	0.14	48.36	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.59	44.50	2.68	2.68	82.81	0.12	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.63	44.50	2.26	2.26	82.91	0.10	48.29	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.67	44.50	1.84	1.84	83.00	0.08	48.26	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.71	44.50	1.43	1.43	83.07	0.06	48.23	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.76	44.50	1.13	1.13	38.18	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.80	44.50	0.97	0.97	18.23	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.84	44.50	0.86	0.86	18.27	0.17	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	16.89	44.50	0.75	0.75	18.30	0.15	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.93	44.50	-0.79	0.79	84.30	0.03	48.18	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.97	44.50	-1.21	1.21	84.25	0.05	48.21	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.01	44.50	-1.63	1.63	84.19	0.07	48.25	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.06	44.50	-2.05	2.05	84.12	0.09	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.10	44.50	-2.47	2.47	84.02	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.14	44.50	-2.89	2.89	83.90	0.13	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.19	44.50	-3.31	3.31	83.77	0.15	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.23	44.50	-3.73	3.73	83.62	0.17	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.27	44.50	-4.15	4.15	83.45	0.18	48.43	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.31	44.50	-4.57	4.57	83.26	0.20	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.36	44.50	-4.98	4.98	83.06	0.22	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.40	44.50	-5.40	5.40	82.84	0.24	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.44	44.50	-5.82	5.82	82.60	0.26	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.49	44.50	-6.24	6.24	82.34	0.28	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.53	44.50	-6.66	6.66	82.06	0.30	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.57	44.50	-7.08	7.08	81.77	0.32	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.61	44.50	-7.50	7.50	81.45	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.66	44.50	-7.92	7.92	81.12	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.70	44.50	-8.34	8.34	80.78	0.38	48.76	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.74	44.50	-8.76	8.76	80.41	0.40	48.79	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.79	44.50	-9.18	9.18	80.03	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.83	44.50	-9.60	9.60	79.62	0.45	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.87	44.50	-10.01	10.01	79.20	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.91	44.50	-10.43	10.43	78.76	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.96	44.50	-10.85	10.85	78.31	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.00	44.50	-11.27	11.27	77.83	0.54	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.04	44.50	-11.69	11.69	77.34	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.09	44.50	-12.11	12.11	76.83	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.13	44.50	-12.53	12.53	76.30	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.17	44.50	-12.95	12.95	75.76	0.63	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.21	44.50	-13.37	13.37	75.19	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.26	44.50	-13.79	13.79	74.61	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.30	44.50	-14.21	14.21	74.01	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.34	44.50	-14.63	14.63	73.39	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.39	44.50	-15.05	15.05	72.76	0.77	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.43	44.50	-15.46	15.46	72.10	0.80	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.47	44.50	-15.88	15.88	71.43	0.82	49.49	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.51	44.50	-16.30	16.30	70.74	0.85	49.54	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.56	44.50	-16.72	16.72	70.04	0.89	49.59	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.60	44.50	-17.14	17.14	69.31	0.92	49.64	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.64	44.50	-17.56	17.56	68.57	0.95	49.69	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.69	44.50	-17.98	17.98	67.80	0.98	49.75	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.73	44.50	-18.40	18.40	67.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.77	44.50	-18.82	18.82	66.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.81	44.50	-19.24	19.24	65.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.86	44.50	-19.66	19.66	64.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.90	44.50	-20.08	20.08	63.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.94	44.50	-20.50	20.50	62.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.99	44.50	-20.91	20.91	61.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.03	44.50	-21.33	21.33	61.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.07	44.50	-21.75	21.75	60.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.11	44.50	-22.17	22.17	59.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.16	44.50	-22.59	22.59	58.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-O (AT NORTH WALL GRID 7)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	19.20	44.50	-23.01	23.01	57.26	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.24	44.50	-23.43	23.43	56.27	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.29	44.50	-23.85	23.85	55.26	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.33	44.50	-24.27	24.27	54.23	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.37	44.50	-24.69	24.69	53.18	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.41	44.50	-25.11	25.11	52.11	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.46	44.50	-25.53	25.53	51.02	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.50	44.50	-25.94	25.94	49.92	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.54	44.50	-26.36	26.36	48.80	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.59	44.50	-26.78	26.78	47.66	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.63	44.50	-27.20	27.20	46.50	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.67	44.50	-27.62	27.62	45.33	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.71	44.50	-28.04	28.04	44.14	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.76	44.50	-28.46	28.46	42.93	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.80	44.50	-28.88	28.88	41.70	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.84	44.50	-29.30	29.30	40.45	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.89	44.50	-29.72	29.72	39.19	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.93	44.50	-30.14	30.14	37.90	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	19.97	44.50	-30.56	30.56	36.60	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.01	44.50	-30.98	30.98	35.28	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.06	44.50	-31.39	31.39	33.95	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.10	44.50	-31.81	31.81	32.59	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.14	44.50	-32.23	32.23	31.22	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.19	44.50	-32.65	32.65	29.83	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.23	44.50	-33.07	33.07	28.42	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.27	44.50	-33.49	33.49	27.00	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.31	44.50	-33.91	33.91	25.55	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.36	44.50	-34.33	34.33	24.09	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.40	44.50	-34.75	34.75	22.61	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.44	44.50	-35.17	35.17	21.11	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.49	44.50	-35.59	35.59	19.60	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.53	44.50	-36.01	36.01	18.06	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.57	44.50	-36.42	36.42	16.51	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.61	44.50	-36.84	36.84	14.94	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.66	44.50	-37.26	37.26	13.35	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.70	44.50	-37.68	37.68	11.74	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.74	44.50	-38.10	38.10	10.12	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.79	44.50	-38.52	38.52	8.48	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.83	44.50	-38.94	38.94	6.82	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.87	44.50	-39.36	39.36	5.14	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.91	44.50	-39.78	39.78	3.45	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	20.96	44.50	-40.20	40.20	1.73	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	2	21.00	44.50	-40.62	40.62	0.00	1.00	49.78	PhiVc/2 < Vu <=	Min 11.5.6	70.8	14.7	14.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	10.500	-111.51	180.04	0.62
Span # 2	2	10.500	-113.79	180.04	0.63
+1.40D+1.60H					
Span # 1	1	10.500	-39.54	180.04	0.22
Span # 2	2	10.500	-40.37	180.04	0.22
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-35.43	180.04	0.20
Span # 2	2	10.500	-36.14	180.04	0.20

Description : GB-O (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-37.18	180.04	0.21
Span # 2	2	10.500	-38.02	180.04	0.21
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-38.72	180.04	0.22
Span # 2	2	10.500	-39.57	180.04	0.22
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-59.21	180.04	0.33
Span # 2	2	10.500	-60.41	180.04	0.34
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-60.96	180.04	0.34
Span # 2	2	10.500	-62.29	180.04	0.35
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-62.50	180.04	0.35
Span # 2	2	10.500	-63.83	180.04	0.35
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-34.37	180.04	0.19
Span # 2	2	10.500	-35.08	180.04	0.19
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-34.92	180.04	0.19
Span # 2	2	10.500	-35.67	180.04	0.20
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-35.40	180.04	0.20
Span # 2	2	10.500	-36.15	180.04	0.20
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-33.89	180.04	0.19
Span # 2	2	10.500	-34.60	180.04	0.19
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-33.89	180.04	0.19
Span # 2	2	10.500	-34.60	180.04	0.19
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-33.89	180.04	0.19
Span # 2	2	10.500	-34.60	180.04	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-110.48	180.04	0.61
Span # 2	2	10.500	-112.72	180.04	0.63
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-111.03	180.04	0.62
Span # 2	2	10.500	-113.31	180.04	0.63
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-111.51	180.04	0.62
Span # 2	2	10.500	-113.79	180.04	0.63
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	10.500	-110.00	180.04	0.61
Span # 2	2	10.500	-112.24	180.04	0.62
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-34.37	180.04	0.19
Span # 2	2	10.500	-35.08	180.04	0.19
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-34.92	180.04	0.19
Span # 2	2	10.500	-35.67	180.04	0.20
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-35.40	180.04	0.20
Span # 2	2	10.500	-36.15	180.04	0.20
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-58.16	180.04	0.32
Span # 2	2	10.500	-59.35	180.04	0.33
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-58.70	180.04	0.33
Span # 2	2	10.500	-59.93	180.04	0.33
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-59.18	180.04	0.33
Span # 2	2	10.500	-60.42	180.04	0.34
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-67.66	180.04	0.38
Span # 2	2	10.500	-69.05	180.04	0.38
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-68.21	180.04	0.38
Span # 2	2	10.500	-69.64	180.04	0.39

Concrete Beam

Lic. # : KW-06007096 **Licensee : JM WILLIAMS & ASSOCIATES INC**

Description : GB-O (AT NORTH WALL GRID 7)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-68.69	180.04	0.38
Span # 2	2	10.500	-70.12	180.04	0.39
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-67.68	180.04	0.38
Span # 2	2	10.500	-69.05	180.04	0.38
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-68.22	180.04	0.38
Span # 2	2	10.500	-69.64	180.04	0.39
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-68.70	180.04	0.38
Span # 2	2	10.500	-70.12	180.04	0.39
+0.90D+W+0.90H					
Span # 1	1	10.500	-25.42	180.04	0.14
Span # 2	2	10.500	-25.95	180.04	0.14
+0.90D+E+0.90H					
Span # 1	1	10.500	-25.41	180.04	0.14
Span # 2	2	10.500	-25.95	180.04	0.14
+0.90D-E+0.90H					
Span # 1	1	10.500	-25.42	180.04	0.14
Span # 2	2	10.500	-25.95	180.04	0.14

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0009	4.350	S Only	-0.0001	9.450
+D+S+H	2	0.0026	5.850		0.0000	9.450

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

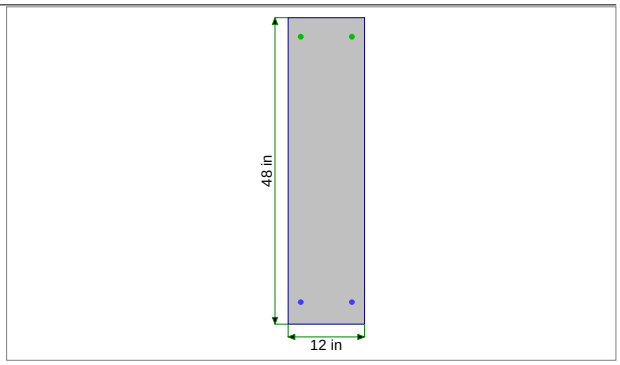
Description : GB-P

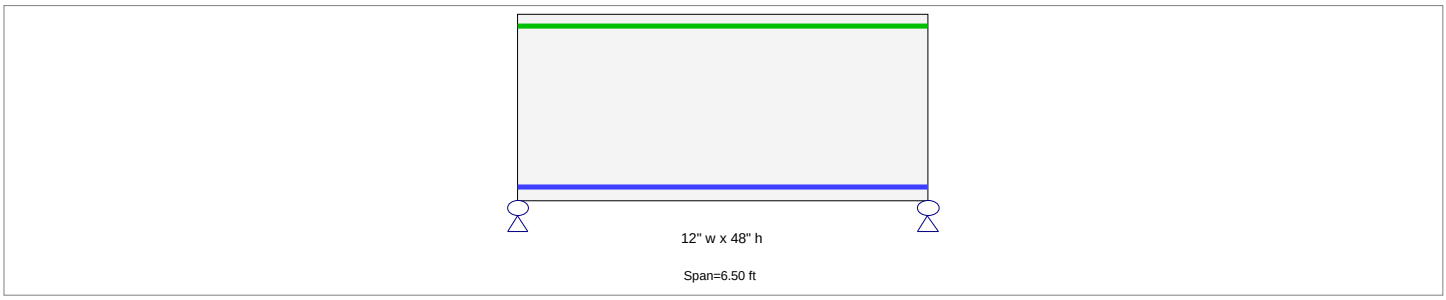
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in
Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 6.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 6.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.024** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in Ratio = 0 <360
Mu : Applied	4.288 k-ft	Max Upward Transient Deflection	0.000 in Ratio = 0 <360
Mn * Phi : Allowable	176.311 k-ft	Max Downward Total Deflection	0.000 in Ratio = 999 <240
Location of maximum on span	3.244 ft	Max Upward Total Deflection	0.000 in Ratio = 999 <240
Span # where maximum occurs	Span # 1		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	1.885	1.885
Overall MINimum	1.131	1.131
+D+H	1.885	1.885
+D+L+H	1.885	1.885
+D+Lr+H	1.885	1.885
+D+S+H	1.885	1.885
+D+0.750Lr+0.750L+H	1.885	1.885
+D+0.750L+0.750S+H	1.885	1.885
+D+0.60W+H	1.885	1.885
+D+0.70E+H	1.885	1.885
+D+0.750Lr+0.750L+0.450W+H	1.885	1.885
+D+0.750L+0.750S+0.450W+H	1.885	1.885
+D+0.750L+0.750S+0.5250E+H	1.885	1.885
+0.60D+0.60W+0.60H	1.131	1.131
+0.60D+0.70E+0.60H	1.131	1.131

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
D Only	1.885	1.885
Lr Only		
L Only		
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	0.00	44.50	2.64	2.64	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.01	44.50	2.63	2.63	0.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.02	44.50	2.62	2.62	0.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.04	44.50	2.61	2.61	0.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.05	44.50	2.60	2.60	0.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.06	44.50	2.59	2.59	0.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.07	44.50	2.58	2.58	0.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.08	44.50	2.57	2.57	0.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.09	44.50	2.56	2.56	0.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.11	44.50	2.55	2.55	0.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.12	44.50	2.54	2.54	0.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.13	44.50	2.53	2.53	0.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.14	44.50	2.52	2.52	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.15	44.50	2.51	2.51	0.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.17	44.50	2.50	2.50	0.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.18	44.50	2.49	2.49	0.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.19	44.50	2.49	2.49	0.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.20	44.50	2.48	2.48	0.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.21	44.50	2.47	2.47	0.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.22	44.50	2.46	2.46	0.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.24	44.50	2.45	2.45	0.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.25	44.50	2.44	2.44	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.26	44.50	2.43	2.43	0.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.27	44.50	2.42	2.42	0.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.28	44.50	2.41	2.41	0.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.30	44.50	2.40	2.40	0.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.31	44.50	2.39	2.39	0.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.32	44.50	2.38	2.38	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.33	44.50	2.37	2.37	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.34	44.50	2.36	2.36	0.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.36	44.50	2.35	2.35	0.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.37	44.50	2.34	2.34	0.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.38	44.50	2.33	2.33	0.94	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.39	44.50	2.32	2.32	0.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.40	44.50	2.31	2.31	1.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.41	44.50	2.30	2.30	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.43	44.50	2.29	2.29	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.44	44.50	2.28	2.28	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.45	44.50	2.27	2.27	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.46	44.50	2.26	2.26	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.47	44.50	2.25	2.25	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.49	44.50	2.24	2.24	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.50	44.50	2.24	2.24	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.51	44.50	2.23	2.23	1.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.52	44.50	2.22	2.22	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	0.53	44.50	2.21	2.21	1.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.54	44.50	2.20	2.20	1.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.56	44.50	2.19	2.19	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.57	44.50	2.18	2.18	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.58	44.50	2.17	2.17	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.59	44.50	2.16	2.16	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.60	44.50	2.15	2.15	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.62	44.50	2.14	2.14	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.63	44.50	2.13	2.13	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.64	44.50	2.12	2.12	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.65	44.50	2.11	2.11	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.66	44.50	2.10	2.10	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.67	44.50	2.09	2.09	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.69	44.50	2.08	2.08	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.70	44.50	2.07	2.07	1.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.71	44.50	2.06	2.06	1.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.72	44.50	2.05	2.05	1.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.73	44.50	2.04	2.04	1.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.75	44.50	2.03	2.03	1.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.76	44.50	2.02	2.02	1.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.77	44.50	2.01	2.01	1.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.78	44.50	2.00	2.00	1.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.79	44.50	1.99	1.99	1.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.81	44.50	1.99	1.99	1.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.82	44.50	1.98	1.98	1.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.83	44.50	1.97	1.97	1.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.84	44.50	1.96	1.96	1.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.85	44.50	1.95	1.95	1.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.86	44.50	1.94	1.94	1.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.88	44.50	1.93	1.93	2.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.89	44.50	1.92	1.92	2.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.90	44.50	1.91	1.91	2.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.91	44.50	1.90	1.90	2.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.92	44.50	1.89	1.89	2.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.94	44.50	1.88	1.88	2.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.95	44.50	1.87	1.87	2.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.96	44.50	1.86	1.86	2.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.97	44.50	1.85	1.85	2.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.98	44.50	1.84	1.84	2.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	0.99	44.50	1.83	1.83	2.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.01	44.50	1.82	1.82	2.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.02	44.50	1.81	1.81	2.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.03	44.50	1.80	1.80	2.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.04	44.50	1.79	1.79	2.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.05	44.50	1.78	1.78	2.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.07	44.50	1.77	1.77	2.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.08	44.50	1.76	1.76	2.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.09	44.50	1.75	1.75	2.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.10	44.50	1.74	1.74	2.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.11	44.50	1.74	1.74	2.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.12	44.50	1.73	1.73	2.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.14	44.50	1.72	1.72	2.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.15	44.50	1.71	1.71	2.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.16	44.50	1.70	1.70	2.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	1.17	44.50	1.69	1.69	2.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.18	44.50	1.68	1.68	2.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.20	44.50	1.67	1.67	2.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.21	44.50	1.66	1.66	2.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.22	44.50	1.65	1.65	2.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.23	44.50	1.64	1.64	2.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.24	44.50	1.63	1.63	2.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.26	44.50	1.62	1.62	2.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.27	44.50	1.61	1.61	2.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.28	44.50	1.60	1.60	2.71	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.29	44.50	1.59	1.59	2.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.30	44.50	1.58	1.58	2.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.31	44.50	1.57	1.57	2.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.33	44.50	1.56	1.56	2.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.34	44.50	1.55	1.55	2.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.35	44.50	1.54	1.54	2.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.36	44.50	1.53	1.53	2.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.37	44.50	1.52	1.52	2.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.39	44.50	1.51	1.51	2.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.40	44.50	1.50	1.50	2.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.41	44.50	1.49	1.49	2.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.42	44.50	1.49	1.49	2.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.43	44.50	1.48	1.48	2.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.44	44.50	1.47	1.47	2.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.46	44.50	1.46	1.46	2.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.47	44.50	1.45	1.45	3.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.48	44.50	1.44	1.44	3.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.49	44.50	1.43	1.43	3.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.50	44.50	1.42	1.42	3.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.52	44.50	1.41	1.41	3.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.53	44.50	1.40	1.40	3.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.54	44.50	1.39	1.39	3.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.55	44.50	1.38	1.38	3.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.56	44.50	1.37	1.37	3.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.57	44.50	1.36	1.36	3.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.59	44.50	1.35	1.35	3.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.60	44.50	1.34	1.34	3.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.61	44.50	1.33	1.33	3.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.62	44.50	1.32	1.32	3.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.63	44.50	1.31	1.31	3.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.65	44.50	1.30	1.30	3.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.66	44.50	1.29	1.29	3.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.67	44.50	1.28	1.28	3.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.68	44.50	1.27	1.27	3.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.69	44.50	1.26	1.26	3.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.70	44.50	1.25	1.25	3.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.72	44.50	1.24	1.24	3.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.73	44.50	1.24	1.24	3.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.74	44.50	1.23	1.23	3.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.75	44.50	1.22	1.22	3.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.76	44.50	1.21	1.21	3.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.78	44.50	1.20	1.20	3.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.79	44.50	1.19	1.19	3.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.80	44.50	1.18	1.18	3.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	1.81	44.50	1.17	1.17	3.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.82	44.50	1.16	1.16	3.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.84	44.50	1.15	1.15	3.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.85	44.50	1.14	1.14	3.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.86	44.50	1.13	1.13	3.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.87	44.50	1.12	1.12	3.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.88	44.50	1.11	1.11	3.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.89	44.50	1.10	1.10	3.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.91	44.50	1.09	1.09	3.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.92	44.50	1.08	1.08	3.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.93	44.50	1.07	1.07	3.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.94	44.50	1.06	1.06	3.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.95	44.50	1.05	1.05	3.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.97	44.50	1.04	1.04	3.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.98	44.50	1.03	1.03	3.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	1.99	44.50	1.02	1.02	3.64	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	2.00	44.50	1.01	1.01	3.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	2.01	44.50	1.00	1.00	3.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	2.02	44.50	1.00	1.00	3.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	2.04	44.50	0.99	0.99	3.69	0.99	49.76	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	2.05	44.50	0.98	0.98	3.70	0.98	49.74	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	2.06	44.50	0.97	0.97	3.71	0.96	49.72	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	2.07	44.50	0.96	0.96	3.72	0.95	49.70	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	2.08	44.50	0.95	0.95	3.74	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	2.10	44.50	0.94	0.94	3.75	0.93	49.66	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	2.11	44.50	0.93	0.93	3.76	0.92	49.64	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	2.12	44.50	0.92	0.92	3.77	0.90	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	2.13	44.50	0.91	0.91	3.78	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	2.14	44.50	0.90	0.90	3.79	0.88	49.58	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	2.15	44.50	0.89	0.89	3.80	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	2.17	44.50	0.88	0.88	3.81	0.86	49.54	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	2.18	44.50	0.87	0.87	3.82	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	2.19	44.50	0.86	0.86	3.83	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	2.20	44.50	0.85	0.85	3.84	0.82	49.48	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	2.21	44.50	0.84	0.84	3.85	0.81	49.46	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	2.23	44.50	0.83	0.83	3.86	0.80	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.24	44.50	0.82	0.82	3.87	0.79	49.43	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.25	44.50	0.81	0.81	3.88	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.26	44.50	0.80	0.80	3.89	0.76	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.27	44.50	0.79	0.79	3.90	0.75	49.37	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.29	44.50	0.78	0.78	3.91	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	2.30	44.50	0.77	0.77	3.92	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	2.31	44.50	0.76	0.76	3.93	0.72	49.32	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	2.32	44.50	0.75	0.75	3.94	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	2.33	44.50	0.75	0.75	3.95	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	2.34	44.50	0.74	0.74	3.96	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	2.36	44.50	0.73	0.73	3.96	0.68	49.25	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.37	44.50	0.72	0.72	3.97	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.38	44.50	0.71	0.71	3.98	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.39	44.50	0.70	0.70	3.99	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.40	44.50	0.69	0.69	4.00	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.42	44.50	0.68	0.68	4.01	0.63	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	2.43	44.50	0.67	0.67	4.01	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	2.44	44.50	0.66	0.66	4.02	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	2.45	44.50	0.65	0.65	4.03	0.60	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	2.46	44.50	0.64	0.64	4.04	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	2.47	44.50	0.63	0.63	4.04	0.58	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	2.49	44.50	0.62	0.62	4.05	0.57	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	2.50	44.50	0.61	0.61	4.06	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.51	44.50	0.60	0.60	4.07	0.55	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.52	44.50	0.59	0.59	4.07	0.54	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.53	44.50	0.58	0.58	4.08	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.55	44.50	0.57	0.57	4.09	0.52	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.56	44.50	0.56	0.56	4.09	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.57	44.50	0.55	0.55	4.10	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	2.58	44.50	0.54	0.54	4.11	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.59	44.50	0.53	0.53	4.11	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.60	44.50	0.52	0.52	4.12	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.62	44.50	0.51	0.51	4.13	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.63	44.50	0.50	0.50	4.13	0.45	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.64	44.50	0.50	0.50	4.14	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	2.65	44.50	0.49	0.49	4.14	0.43	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.66	44.50	0.48	0.48	4.15	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.68	44.50	0.47	0.47	4.15	0.42	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.69	44.50	0.46	0.46	4.16	0.41	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.70	44.50	0.45	0.45	4.17	0.40	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.71	44.50	0.44	0.44	4.17	0.39	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.72	44.50	0.43	0.43	4.18	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	2.73	44.50	0.42	0.42	4.18	0.37	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.75	44.50	0.41	0.41	4.19	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.76	44.50	0.40	0.40	4.19	0.35	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.77	44.50	0.39	0.39	4.20	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.78	44.50	0.38	0.38	4.20	0.34	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.79	44.50	0.37	0.37	4.20	0.33	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.81	44.50	0.36	0.36	4.21	0.32	48.65	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	2.82	44.50	0.35	0.35	4.21	0.31	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.83	44.50	0.34	0.34	4.22	0.30	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.84	44.50	0.33	0.33	4.22	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.85	44.50	0.32	0.32	4.22	0.28	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.87	44.50	0.31	0.31	4.23	0.27	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.88	44.50	0.30	0.30	4.23	0.27	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.89	44.50	0.29	0.29	4.24	0.26	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	2.90	44.50	0.28	0.28	4.24	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.91	44.50	0.27	0.27	4.24	0.24	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.92	44.50	0.26	0.26	4.25	0.23	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.94	44.50	0.25	0.25	4.25	0.22	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.95	44.50	0.25	0.25	4.25	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.96	44.50	0.24	0.24	4.25	0.21	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.97	44.50	0.23	0.23	4.26	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	2.98	44.50	0.22	0.22	4.26	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.00	44.50	0.21	0.21	4.26	0.18	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.01	44.50	0.20	0.20	4.26	0.17	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.02	44.50	0.19	0.19	4.27	0.16	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.03	44.50	0.18	0.18	4.27	0.15	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.04	44.50	0.17	0.17	4.27	0.15	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.05	44.50	0.16	0.16	4.27	0.14	48.35	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.07	44.50	0.15	0.15	4.27	0.13	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.08	44.50	0.14	0.14	4.28	0.12	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.09	44.50	0.13	0.13	4.28	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.10	44.50	0.12	0.12	4.28	0.10	48.30	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.11	44.50	0.11	0.11	4.28	0.10	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.13	44.50	0.10	0.10	4.28	0.09	48.27	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.14	44.50	0.09	0.09	4.28	0.08	48.26	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.15	44.50	0.08	0.08	4.28	0.07	48.24	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.16	44.50	0.07	0.07	4.29	0.06	48.23	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.17	44.50	0.06	0.06	4.29	0.05	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.18	44.50	0.05	0.05	4.29	0.05	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.20	44.50	0.04	0.04	4.29	0.04	48.19	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.21	44.50	0.03	0.03	4.29	0.03	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.22	44.50	0.02	0.02	4.29	0.02	48.16	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.23	44.50	0.01	0.01	4.29	0.01	48.15	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.40D+1.60H	1	3.24	44.50	0.00	0.00	4.29	0.00	48.13	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.40D+1.60H	1	3.26	44.50	-0.00	0.00	4.29	0.00	48.13	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.40D+1.60H	1	3.27	44.50	-0.01	0.01	4.29	0.01	48.15	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.40D+1.60H	1	3.28	44.50	-0.02	0.02	4.29	0.02	48.16	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.29	44.50	-0.03	0.03	4.29	0.03	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.30	44.50	-0.04	0.04	4.29	0.04	48.19	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.32	44.50	-0.05	0.05	4.29	0.05	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.33	44.50	-0.06	0.06	4.29	0.05	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.34	44.50	-0.07	0.07	4.29	0.06	48.23	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.35	44.50	-0.08	0.08	4.28	0.07	48.24	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	3.36	44.50	-0.09	0.09	4.28	0.08	48.26	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.37	44.50	-0.10	0.10	4.28	0.09	48.27	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.39	44.50	-0.11	0.11	4.28	0.10	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.40	44.50	-0.12	0.12	4.28	0.10	48.30	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.41	44.50	-0.13	0.13	4.28	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.42	44.50	-0.14	0.14	4.28	0.12	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.43	44.50	-0.15	0.15	4.27	0.13	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.40D+1.60H	1	3.45	44.50	-0.16	0.16	4.27	0.14	48.35	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.46	44.50	-0.17	0.17	4.27	0.15	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.47	44.50	-0.18	0.18	4.27	0.15	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.48	44.50	-0.19	0.19	4.27	0.16	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.49	44.50	-0.20	0.20	4.26	0.17	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.50	44.50	-0.21	0.21	4.26	0.18	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.52	44.50	-0.22	0.22	4.26	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.40D+1.60H	1	3.53	44.50	-0.23	0.23	4.26	0.20	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.54	44.50	-0.24	0.24	4.25	0.21	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.55	44.50	-0.25	0.25	4.25	0.21	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.56	44.50	-0.25	0.25	4.25	0.22	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.58	44.50	-0.26	0.26	4.25	0.23	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.59	44.50	-0.27	0.27	4.24	0.24	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.60	44.50	-0.28	0.28	4.24	0.25	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.40D+1.60H	1	3.61	44.50	-0.29	0.29	4.24	0.26	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.62	44.50	-0.30	0.30	4.23	0.27	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.63	44.50	-0.31	0.31	4.23	0.27	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.65	44.50	-0.32	0.32	4.22	0.28	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.66	44.50	-0.33	0.33	4.22	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.67	44.50	-0.34	0.34	4.22	0.30	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.68	44.50	-0.35	0.35	4.21	0.31	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.40D+1.60H	1	3.69	44.50	-0.36	0.36	4.21	0.32	48.65	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.71	44.50	-0.37	0.37	4.20	0.33	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.72	44.50	-0.38	0.38	4.20	0.34	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.73	44.50	-0.39	0.39	4.20	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.74	44.50	-0.40	0.40	4.19	0.35	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.75	44.50	-0.41	0.41	4.19	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.77	44.50	-0.42	0.42	4.18	0.37	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	3.78	44.50	-0.43	0.43	4.18	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.79	44.50	-0.44	0.44	4.17	0.39	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.80	44.50	-0.45	0.45	4.17	0.40	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.81	44.50	-0.46	0.46	4.16	0.41	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.82	44.50	-0.47	0.47	4.15	0.42	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.84	44.50	-0.48	0.48	4.15	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.85	44.50	-0.49	0.49	4.14	0.43	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.40D+1.60H	1	3.86	44.50	-0.50	0.50	4.14	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.87	44.50	-0.50	0.50	4.13	0.45	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.88	44.50	-0.51	0.51	4.13	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.90	44.50	-0.52	0.52	4.12	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.91	44.50	-0.53	0.53	4.11	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.92	44.50	-0.54	0.54	4.11	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.40D+1.60H	1	3.93	44.50	-0.55	0.55	4.10	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	3.94	44.50	-0.56	0.56	4.09	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	3.95	44.50	-0.57	0.57	4.09	0.52	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	3.97	44.50	-0.58	0.58	4.08	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	3.98	44.50	-0.59	0.59	4.07	0.54	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	3.99	44.50	-0.60	0.60	4.07	0.55	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	4.00	44.50	-0.61	0.61	4.06	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.40D+1.60H	1	4.01	44.50	-0.62	0.62	4.05	0.57	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.03	44.50	-0.63	0.63	4.04	0.58	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.04	44.50	-0.64	0.64	4.04	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.05	44.50	-0.65	0.65	4.03	0.60	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.06	44.50	-0.66	0.66	4.02	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.07	44.50	-0.67	0.67	4.01	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.40D+1.60H	1	4.08	44.50	-0.68	0.68	4.01	0.63	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.10	44.50	-0.69	0.69	4.00	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.11	44.50	-0.70	0.70	3.99	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.12	44.50	-0.71	0.71	3.98	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.13	44.50	-0.72	0.72	3.97	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.14	44.50	-0.73	0.73	3.96	0.68	49.25	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.40D+1.60H	1	4.16	44.50	-0.74	0.74	3.96	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	4.17	44.50	-0.75	0.75	3.95	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	4.18	44.50	-0.75	0.75	3.94	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	4.19	44.50	-0.76	0.76	3.93	0.72	49.32	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	4.20	44.50	-0.77	0.77	3.92	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.40D+1.60H	1	4.21	44.50	-0.78	0.78	3.91	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.23	44.50	-0.79	0.79	3.90	0.75	49.37	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.24	44.50	-0.80	0.80	3.89	0.76	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.25	44.50	-0.81	0.81	3.88	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.26	44.50	-0.82	0.82	3.87	0.79	49.43	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.27	44.50	-0.83	0.83	3.86	0.80	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.40D+1.60H	1	4.29	44.50	-0.84	0.84	3.85	0.81	49.46	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	4.30	44.50	-0.85	0.85	3.84	0.82	49.48	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	4.31	44.50	-0.86	0.86	3.83	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	4.32	44.50	-0.87	0.87	3.82	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	4.33	44.50	-0.88	0.88	3.81	0.86	49.54	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.40D+1.60H	1	4.35	44.50	-0.89	0.89	3.80	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	4.36	44.50	-0.90	0.90	3.79	0.88	49.58	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	4.37	44.50	-0.91	0.91	3.78	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	4.38	44.50	-0.92	0.92	3.77	0.90	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	4.39	44.50	-0.93	0.93	3.76	0.92	49.64	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.40D+1.60H	1	4.40	44.50	-0.94	0.94	3.75	0.93	49.66	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	4.42	44.50	-0.95	0.95	3.74	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	4.43	44.50	-0.96	0.96	3.72	0.95	49.70	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	4.44	44.50	-0.97	0.97	3.71	0.96	49.72	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	4.45	44.50	-0.98	0.98	3.70	0.98	49.74	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.40D+1.60H	1	4.46	44.50	-0.99	0.99	3.69	0.99	49.76	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.48	44.50	-1.00	1.00	3.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.49	44.50	-1.00	1.00	3.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.50	44.50	-1.01	1.01	3.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.51	44.50	-1.02	1.02	3.64	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.52	44.50	-1.03	1.03	3.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.53	44.50	-1.04	1.04	3.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.55	44.50	-1.05	1.05	3.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.56	44.50	-1.06	1.06	3.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.57	44.50	-1.07	1.07	3.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.58	44.50	-1.08	1.08	3.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.59	44.50	-1.09	1.09	3.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.61	44.50	-1.10	1.10	3.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.62	44.50	-1.11	1.11	3.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.63	44.50	-1.12	1.12	3.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.64	44.50	-1.13	1.13	3.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.65	44.50	-1.14	1.14	3.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.66	44.50	-1.15	1.15	3.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.68	44.50	-1.16	1.16	3.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.69	44.50	-1.17	1.17	3.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.70	44.50	-1.18	1.18	3.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.71	44.50	-1.19	1.19	3.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.72	44.50	-1.20	1.20	3.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.74	44.50	-1.21	1.21	3.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.75	44.50	-1.22	1.22	3.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.76	44.50	-1.23	1.23	3.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.77	44.50	-1.24	1.24	3.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.78	44.50	-1.24	1.24	3.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.80	44.50	-1.25	1.25	3.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.81	44.50	-1.26	1.26	3.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.82	44.50	-1.27	1.27	3.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.83	44.50	-1.28	1.28	3.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.84	44.50	-1.29	1.29	3.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.85	44.50	-1.30	1.30	3.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.87	44.50	-1.31	1.31	3.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.88	44.50	-1.32	1.32	3.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.89	44.50	-1.33	1.33	3.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.90	44.50	-1.34	1.34	3.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.91	44.50	-1.35	1.35	3.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.93	44.50	-1.36	1.36	3.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.94	44.50	-1.37	1.37	3.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.95	44.50	-1.38	1.38	3.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.96	44.50	-1.39	1.39	3.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.97	44.50	-1.40	1.40	3.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	4.98	44.50	-1.41	1.41	3.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.00	44.50	-1.42	1.42	3.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	5.01	44.50	-1.43	1.43	3.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.02	44.50	-1.44	1.44	3.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.03	44.50	-1.45	1.45	3.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.04	44.50	-1.46	1.46	2.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.06	44.50	-1.47	1.47	2.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.07	44.50	-1.48	1.48	2.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.08	44.50	-1.49	1.49	2.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.09	44.50	-1.49	1.49	2.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.10	44.50	-1.50	1.50	2.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.11	44.50	-1.51	1.51	2.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.13	44.50	-1.52	1.52	2.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.14	44.50	-1.53	1.53	2.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.15	44.50	-1.54	1.54	2.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.16	44.50	-1.55	1.55	2.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.17	44.50	-1.56	1.56	2.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.19	44.50	-1.57	1.57	2.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.20	44.50	-1.58	1.58	2.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.21	44.50	-1.59	1.59	2.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.22	44.50	-1.60	1.60	2.71	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.23	44.50	-1.61	1.61	2.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.24	44.50	-1.62	1.62	2.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.26	44.50	-1.63	1.63	2.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.27	44.50	-1.64	1.64	2.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.28	44.50	-1.65	1.65	2.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.29	44.50	-1.66	1.66	2.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.30	44.50	-1.67	1.67	2.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.32	44.50	-1.68	1.68	2.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.33	44.50	-1.69	1.69	2.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.34	44.50	-1.70	1.70	2.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.35	44.50	-1.71	1.71	2.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.36	44.50	-1.72	1.72	2.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.38	44.50	-1.73	1.73	2.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.39	44.50	-1.74	1.74	2.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.40	44.50	-1.74	1.74	2.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.41	44.50	-1.75	1.75	2.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.42	44.50	-1.76	1.76	2.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.43	44.50	-1.77	1.77	2.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.45	44.50	-1.78	1.78	2.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.46	44.50	-1.79	1.79	2.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.47	44.50	-1.80	1.80	2.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.48	44.50	-1.81	1.81	2.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.49	44.50	-1.82	1.82	2.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.51	44.50	-1.83	1.83	2.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.52	44.50	-1.84	1.84	2.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.53	44.50	-1.85	1.85	2.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.54	44.50	-1.86	1.86	2.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.55	44.50	-1.87	1.87	2.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.56	44.50	-1.88	1.88	2.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.58	44.50	-1.89	1.89	2.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.59	44.50	-1.90	1.90	2.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.60	44.50	-1.91	1.91	2.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.61	44.50	-1.92	1.92	2.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.62	44.50	-1.93	1.93	2.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.64	44.50	-1.94	1.94	1.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	5.65	44.50	-1.95	1.95	1.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.66	44.50	-1.96	1.96	1.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.67	44.50	-1.97	1.97	1.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.68	44.50	-1.98	1.98	1.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.69	44.50	-1.99	1.99	1.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.71	44.50	-1.99	1.99	1.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.72	44.50	-2.00	2.00	1.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.73	44.50	-2.01	2.01	1.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.74	44.50	-2.02	2.02	1.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.75	44.50	-2.03	2.03	1.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.77	44.50	-2.04	2.04	1.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.78	44.50	-2.05	2.05	1.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.79	44.50	-2.06	2.06	1.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.80	44.50	-2.07	2.07	1.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.81	44.50	-2.08	2.08	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.83	44.50	-2.09	2.09	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.84	44.50	-2.10	2.10	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.85	44.50	-2.11	2.11	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.86	44.50	-2.12	2.12	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.87	44.50	-2.13	2.13	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.88	44.50	-2.14	2.14	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.90	44.50	-2.15	2.15	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.91	44.50	-2.16	2.16	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.92	44.50	-2.17	2.17	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.93	44.50	-2.18	2.18	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.94	44.50	-2.19	2.19	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.96	44.50	-2.20	2.20	1.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.97	44.50	-2.21	2.21	1.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.98	44.50	-2.22	2.22	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	5.99	44.50	-2.23	2.23	1.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.00	44.50	-2.24	2.24	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.01	44.50	-2.24	2.24	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.03	44.50	-2.25	2.25	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.04	44.50	-2.26	2.26	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.05	44.50	-2.27	2.27	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.06	44.50	-2.28	2.28	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.07	44.50	-2.29	2.29	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.09	44.50	-2.30	2.30	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.10	44.50	-2.31	2.31	1.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.11	44.50	-2.32	2.32	0.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.12	44.50	-2.33	2.33	0.94	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.13	44.50	-2.34	2.34	0.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.14	44.50	-2.35	2.35	0.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.16	44.50	-2.36	2.36	0.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.17	44.50	-2.37	2.37	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.18	44.50	-2.38	2.38	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.19	44.50	-2.39	2.39	0.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.20	44.50	-2.40	2.40	0.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.22	44.50	-2.41	2.41	0.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.23	44.50	-2.42	2.42	0.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.24	44.50	-2.43	2.43	0.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.25	44.50	-2.44	2.44	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.26	44.50	-2.45	2.45	0.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.28	44.50	-2.46	2.46	0.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

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Description : GB-P

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	6.29	44.50	-2.47	2.47	0.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.30	44.50	-2.48	2.48	0.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.31	44.50	-2.49	2.49	0.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.32	44.50	-2.49	2.49	0.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.33	44.50	-2.50	2.50	0.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.35	44.50	-2.51	2.51	0.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.36	44.50	-2.52	2.52	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.37	44.50	-2.53	2.53	0.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.38	44.50	-2.54	2.54	0.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.39	44.50	-2.55	2.55	0.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.41	44.50	-2.56	2.56	0.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.42	44.50	-2.57	2.57	0.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.43	44.50	-2.58	2.58	0.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.44	44.50	-2.59	2.59	0.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.45	44.50	-2.60	2.60	0.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.46	44.50	-2.61	2.61	0.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.48	44.50	-2.62	2.62	0.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.49	44.50	-2.63	2.63	0.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.40D+1.60H	1	6.50	44.50	-2.64	2.64	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.500	4.29	176.31	0.02
+1.40D+1.60H					
Span # 1	1	6.500	4.29	176.31	0.02
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	6.500	3.68	176.31	0.02
+0.90D+W+0.90H					
Span # 1	1	6.500	2.76	176.31	0.02
+0.90D+E+0.90H					
Span # 1	1	6.500	2.76	176.31	0.02

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D Only	1	0.0001	3.250		0.0000	0.000

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

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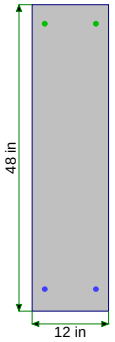
Description : GB-Q

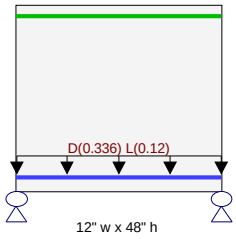
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in
Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 6.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 6.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 3.0 ft, (SLAB)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.010** : 1	Maximum Deflection				
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0	<360
Mu : Applied	1.705 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Mn * Phi : Allowable	176.311 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999	<240
Location of maximum on span	1.622 ft	Max Upward Total Deflection	0.000 in	Ratio =	999	<240
Span # where maximum occurs	Span # 1					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	1.684	1.684
Overall MINimum	0.195	0.195
+D+H	1.489	1.489
+D+L+H	1.684	1.684
+D+Lr+H	1.489	1.489
+D+S+H	1.489	1.489
+D+0.750Lr+0.750L+H	1.635	1.635
+D+0.750L+0.750S+H	1.635	1.635
+D+0.60W+H	1.489	1.489
+D+0.70E+H	1.489	1.489
+D+0.750Lr+0.750L+0.450W+H	1.635	1.635
+D+0.750L+0.750S+0.450W+H	1.635	1.635
+D+0.750L+0.750S+0.5250E+H	1.635	1.635

Concrete Beam

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Description : GB-Q

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+0.60D+0.60W+0.60H	0.893	0.893
+0.60D+0.70E+0.60H	0.893	0.893
D Only	1.489	1.489
Lr Only		
L Only	0.195	0.195
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	44.50	2.10	2.10	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.01	44.50	2.09	2.09	0.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.01	44.50	2.08	2.08	0.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.02	44.50	2.08	2.08	0.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.02	44.50	2.07	2.07	0.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	44.50	2.06	2.06	0.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	44.50	2.05	2.05	0.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	44.50	2.04	2.04	0.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	44.50	2.04	2.04	0.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	44.50	2.03	2.03	0.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.06	44.50	2.02	2.02	0.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	44.50	2.01	2.01	0.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	44.50	2.01	2.01	0.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.08	44.50	2.00	2.00	0.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.08	44.50	1.99	1.99	0.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.09	44.50	1.98	1.98	0.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.09	44.50	1.98	1.98	0.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	44.50	1.97	1.97	0.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	44.50	1.96	1.96	0.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	44.50	1.95	1.95	0.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	44.50	1.95	1.95	0.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	44.50	1.94	1.94	0.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.13	44.50	1.93	1.93	0.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	44.50	1.92	1.92	0.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	44.50	1.91	1.91	0.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	44.50	1.91	1.91	0.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	44.50	1.90	1.90	0.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.16	44.50	1.89	1.89	0.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	44.50	1.88	1.88	0.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	44.50	1.88	1.88	0.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	44.50	1.87	1.87	0.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	44.50	1.86	1.86	0.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	44.50	1.85	1.85	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	44.50	1.85	1.85	0.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	44.50	1.84	1.84	0.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	44.50	1.83	1.83	0.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	44.50	1.82	1.82	0.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	44.50	1.82	1.82	0.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	44.50	1.81	1.81	0.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.23	44.50	1.80	1.80	0.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	44.50	1.79	1.79	0.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	44.50	1.78	1.78	0.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.25	44.50	1.78	1.78	0.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.25	44.50	1.77	1.77	0.49	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	44.50	1.76	1.76	0.50	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	44.50	1.75	1.75	0.51	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	44.50	1.75	1.75	0.52	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	44.50	1.74	1.74	0.53	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	44.50	1.73	1.73	0.54	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	44.50	1.72	1.72	0.55	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	44.50	1.72	1.72	0.56	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	44.50	1.71	1.71	0.57	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	44.50	1.70	1.70	0.58	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	44.50	1.69	1.69	0.59	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.32	44.50	1.69	1.69	0.60	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	44.50	1.68	1.68	0.61	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	44.50	1.67	1.67	0.62	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	44.50	1.66	1.66	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	44.50	1.65	1.65	0.64	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.35	44.50	1.65	1.65	0.65	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	44.50	1.64	1.64	0.66	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	44.50	1.63	1.63	0.67	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	44.50	1.62	1.62	0.68	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	44.50	1.62	1.62	0.69	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	44.50	1.61	1.61	0.70	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	44.50	1.60	1.60	0.71	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.39	44.50	1.59	1.59	0.72	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	44.50	1.59	1.59	0.73	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	44.50	1.58	1.58	0.74	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	44.50	1.57	1.57	0.75	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	44.50	1.56	1.56	0.76	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.42	44.50	1.56	1.56	0.77	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.43	44.50	1.55	1.55	0.78	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.43	44.50	1.54	1.54	0.79	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	44.50	1.53	1.53	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	44.50	1.52	1.52	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	44.50	1.52	1.52	0.81	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.46	44.50	1.51	1.51	0.82	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.46	44.50	1.50	1.50	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.47	44.50	1.49	1.49	0.84	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.47	44.50	1.49	1.49	0.85	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	44.50	1.48	1.48	0.86	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	44.50	1.47	1.47	0.87	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	44.50	1.46	1.46	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.50	44.50	1.46	1.46	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.50	44.50	1.45	1.45	0.89	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.51	44.50	1.44	1.44	0.90	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	44.50	1.43	1.43	0.91	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	44.50	1.43	1.43	0.92	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.53	44.50	1.42	1.42	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.53	44.50	1.41	1.41	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	44.50	1.40	1.40	0.94	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	44.50	1.39	1.39	0.95	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	44.50	1.39	1.39	0.96	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.56	44.50	1.38	1.38	0.97	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.56	44.50	1.37	1.37	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	44.50	1.36	1.36	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.57	44.50	1.36	1.36	0.99	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	44.50	1.35	1.35	1.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	44.50	1.34	1.34	1.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	44.50	1.33	1.33	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.60	44.50	1.33	1.33	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.60	44.50	1.32	1.32	1.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	44.50	1.31	1.31	1.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	44.50	1.30	1.30	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	44.50	1.30	1.30	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	44.50	1.29	1.29	1.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	44.50	1.28	1.28	1.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	44.50	1.27	1.27	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	44.50	1.27	1.27	1.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	44.50	1.26	1.26	1.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	44.50	1.25	1.25	1.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	44.50	1.24	1.24	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	44.50	1.23	1.23	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	44.50	1.23	1.23	1.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.68	44.50	1.22	1.22	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	44.50	1.21	1.21	1.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	44.50	1.20	1.20	1.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	44.50	1.20	1.20	1.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	44.50	1.19	1.19	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	44.50	1.18	1.18	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	44.50	1.17	1.17	1.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	44.50	1.17	1.17	1.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.73	44.50	1.16	1.16	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.73	44.50	1.15	1.15	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	44.50	1.14	1.14	1.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.75	44.50	1.14	1.14	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.75	44.50	1.13	1.13	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	44.50	1.12	1.12	1.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	44.50	1.11	1.11	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	44.50	1.10	1.10	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	44.50	1.10	1.10	1.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	44.50	1.09	1.09	1.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	44.50	1.08	1.08	1.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	44.50	1.07	1.07	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.80	44.50	1.07	1.07	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	44.50	1.06	1.06	1.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	44.50	1.05	1.05	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.82	44.50	1.04	1.04	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.82	44.50	1.04	1.04	1.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	44.50	1.03	1.03	1.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	44.50	1.02	1.02	1.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.84	44.50	1.01	1.01	1.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	44.50	1.01	1.01	1.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	44.50	1.00	1.00	1.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	44.50	0.99	0.99	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	44.50	0.98	0.98	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.87	44.50	0.97	0.97	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.88	44.50	0.97	0.97	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.88	44.50	0.96	0.96	1.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	44.50	0.95	0.95	1.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.89	44.50	0.94	0.94	1.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.90	44.50	0.94	0.94	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.91	44.50	0.93	0.93	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.91	44.50	0.92	0.92	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	44.50	0.91	0.91	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	44.50	0.91	0.91	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	44.50	0.90	0.90	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.94	44.50	0.89	0.89	1.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.94	44.50	0.88	0.88	1.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.95	44.50	0.88	0.88	1.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.95	44.50	0.87	0.87	1.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	44.50	0.86	0.86	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	44.50	0.85	0.85	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.97	44.50	0.84	0.84	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	44.50	0.84	0.84	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	44.50	0.83	0.83	1.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	44.50	0.82	0.82	1.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	44.50	0.81	0.81	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	44.50	0.81	0.81	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	44.50	0.80	0.80	1.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	44.50	0.79	0.79	1.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	44.50	0.78	0.78	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	44.50	0.78	0.78	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	44.50	0.77	0.77	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	44.50	0.76	0.76	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	44.50	0.75	0.75	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	44.50	0.75	0.75	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	44.50	0.74	0.74	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.06	44.50	0.73	0.73	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	44.50	0.72	0.72	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	44.50	0.71	0.71	1.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	44.50	0.71	0.71	1.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	44.50	0.70	0.70	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.09	44.50	0.69	0.69	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	44.50	0.68	0.68	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	44.50	0.68	0.68	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	44.50	0.67	0.67	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	44.50	0.66	0.66	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	44.50	0.65	0.65	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	44.50	0.65	0.65	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	44.50	0.64	0.64	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.14	44.50	0.63	0.63	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.14	44.50	0.62	0.62	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	44.50	0.62	0.62	1.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	44.50	0.61	0.61	1.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	44.50	0.60	0.60	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	44.50	0.59	0.59	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	44.50	0.58	0.58	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	44.50	0.58	0.58	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	44.50	0.57	0.57	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.19	44.50	0.56	0.56	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	44.50	0.55	0.55	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	44.50	0.55	0.55	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.21	44.50	0.54	0.54	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.21	44.50	0.53	0.53	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.22	44.50	0.52	0.52	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	44.50	0.52	0.52	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	44.50	0.51	0.51	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	44.50	0.50	0.50	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	44.50	0.49	0.49	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.25	44.50	0.49	0.49	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	44.50	0.48	0.48	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	44.50	0.47	0.47	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	44.50	0.46	0.46	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	44.50	0.45	0.45	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	44.50	0.45	0.45	1.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	44.50	0.44	0.44	1.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.29	44.50	0.43	0.43	1.63	0.98	49.75	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	44.50	0.42	0.42	1.64	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	44.50	0.42	0.42	1.64	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	44.50	0.41	0.41	1.64	0.92	49.65	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	44.50	0.40	0.40	1.64	0.91	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.32	44.50	0.39	0.39	1.64	0.89	49.59	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	44.50	0.39	0.39	1.65	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	44.50	0.38	0.38	1.65	0.85	49.53	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	44.50	0.37	0.37	1.65	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	44.50	0.36	0.36	1.65	0.81	49.47	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	44.50	0.36	0.36	1.66	0.80	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.36	44.50	0.35	0.35	1.66	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.36	44.50	0.34	0.34	1.66	0.76	49.38	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	44.50	0.33	0.33	1.66	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	44.50	0.32	0.32	1.66	0.72	49.32	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	44.50	0.32	0.32	1.67	0.71	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.39	44.50	0.31	0.31	1.67	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.39	44.50	0.30	0.30	1.67	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	44.50	0.29	0.29	1.67	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	44.50	0.29	0.29	1.67	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	44.50	0.28	0.28	1.67	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	44.50	0.27	0.27	1.68	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.42	44.50	0.26	0.26	1.68	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	44.50	0.26	0.26	1.68	0.57	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	44.50	0.25	0.25	1.68	0.55	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	44.50	0.24	0.24	1.68	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	44.50	0.23	0.23	1.68	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	44.50	0.23	0.23	1.69	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.46	44.50	0.22	0.22	1.69	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.46	44.50	0.21	0.21	1.69	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	44.50	0.20	0.20	1.69	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	44.50	0.19	0.19	1.69	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	44.50	0.19	0.19	1.69	0.41	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	44.50	0.18	0.18	1.69	0.39	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	44.50	0.17	0.17	1.69	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	44.50	0.16	0.16	1.69	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	44.50	0.16	0.16	1.70	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	44.50	0.15	0.15	1.70	0.33	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	44.50	0.14	0.14	1.70	0.31	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	44.50	0.13	0.13	1.70	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.53	44.50	0.13	0.13	1.70	0.28	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0

Concrete Beam

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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.53	44.50	0.12	0.12	1.70	0.26	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	44.50	0.11	0.11	1.70	0.24	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	44.50	0.10	0.10	1.70	0.23	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	44.50	0.10	0.10	1.70	0.21	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	44.50	0.09	0.09	1.70	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	44.50	0.08	0.08	1.70	0.17	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	44.50	0.07	0.07	1.70	0.16	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	44.50	0.06	0.06	1.70	0.14	48.36	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	44.50	0.06	0.06	1.70	0.12	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.59	44.50	0.05	0.05	1.70	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.59	44.50	0.04	0.04	1.70	0.09	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	44.50	0.03	0.03	1.70	0.07	48.25	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	44.50	0.03	0.03	1.70	0.06	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.61	44.50	0.02	0.02	1.70	0.04	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	44.50	0.01	0.01	1.70	0.02	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	44.50	0.00	0.00	1.70	0.01	48.14	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	44.50	-0.00	0.00	1.70	0.01	48.14	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	44.50	-0.01	0.01	1.70	0.02	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.64	44.50	-0.02	0.02	1.70	0.04	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	44.50	-0.03	0.03	1.70	0.06	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	44.50	-0.03	0.03	1.70	0.07	48.25	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.66	44.50	-0.04	0.04	1.70	0.09	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.66	44.50	-0.05	0.05	1.70	0.11	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.67	44.50	-0.06	0.06	1.70	0.12	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	44.50	-0.06	0.06	1.70	0.14	48.36	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	44.50	-0.07	0.07	1.70	0.16	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	44.50	-0.08	0.08	1.70	0.17	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	44.50	-0.09	0.09	1.70	0.19	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.70	44.50	-0.10	0.10	1.70	0.21	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.70	44.50	-0.10	0.10	1.70	0.23	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.71	44.50	-0.11	0.11	1.70	0.24	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	44.50	-0.12	0.12	1.70	0.26	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	44.50	-0.13	0.13	1.70	0.28	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	44.50	-0.13	0.13	1.70	0.29	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	44.50	-0.14	0.14	1.70	0.31	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.74	44.50	-0.15	0.15	1.70	0.33	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	44.50	-0.16	0.16	1.70	0.34	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	44.50	-0.16	0.16	1.69	0.36	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.76	44.50	-0.17	0.17	1.69	0.38	48.75	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.76	44.50	-0.18	0.18	1.69	0.39	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.77	44.50	-0.19	0.19	1.69	0.41	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.78	44.50	-0.19	0.19	1.69	0.43	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.78	44.50	-0.20	0.20	1.69	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	44.50	-0.21	0.21	1.69	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	44.50	-0.22	0.22	1.69	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	44.50	-0.23	0.23	1.69	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.81	44.50	-0.23	0.23	1.68	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.81	44.50	-0.24	0.24	1.68	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	44.50	-0.25	0.25	1.68	0.55	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	44.50	-0.26	0.26	1.68	0.57	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.83	44.50	-0.26	0.26	1.68	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	44.50	-0.27	0.27	1.68	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	44.50	-0.28	0.28	1.67	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.85	44.50	-0.29	0.29	1.67	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.85	44.50	-0.29	0.29	1.67	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	44.50	-0.30	0.30	1.67	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	44.50	-0.31	0.31	1.67	0.69	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	44.50	-0.32	0.32	1.67	0.71	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.88	44.50	-0.32	0.32	1.66	0.72	49.32	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.88	44.50	-0.33	0.33	1.66	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	44.50	-0.34	0.34	1.66	0.76	49.38	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	44.50	-0.35	0.35	1.66	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.90	44.50	-0.36	0.36	1.66	0.80	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	44.50	-0.36	0.36	1.65	0.81	49.47	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	44.50	-0.37	0.37	1.65	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	44.50	-0.38	0.38	1.65	0.85	49.53	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	44.50	-0.39	0.39	1.65	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	44.50	-0.39	0.39	1.64	0.89	49.59	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	44.50	-0.40	0.40	1.64	0.91	49.62	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	44.50	-0.41	0.41	1.64	0.92	49.65	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	44.50	-0.42	0.42	1.64	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	44.50	-0.42	0.42	1.64	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	44.50	-0.43	0.43	1.63	0.98	49.75	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	44.50	-0.44	0.44	1.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	44.50	-0.45	0.45	1.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	44.50	-0.45	0.45	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	44.50	-0.46	0.46	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	44.50	-0.47	0.47	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	44.50	-0.48	0.48	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.00	44.50	-0.49	0.49	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	44.50	-0.49	0.49	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	44.50	-0.50	0.50	1.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	44.50	-0.51	0.51	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	44.50	-0.52	0.52	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	44.50	-0.52	0.52	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	44.50	-0.53	0.53	1.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	44.50	-0.54	0.54	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.05	44.50	-0.55	0.55	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.05	44.50	-0.55	0.55	1.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	44.50	-0.56	0.56	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.07	44.50	-0.57	0.57	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.07	44.50	-0.58	0.58	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	44.50	-0.58	0.58	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	44.50	-0.59	0.59	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.09	44.50	-0.60	0.60	1.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	44.50	-0.61	0.61	1.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	44.50	-0.62	0.62	1.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.11	44.50	-0.62	0.62	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.11	44.50	-0.63	0.63	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.12	44.50	-0.64	0.64	1.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	44.50	-0.65	0.65	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	44.50	-0.65	0.65	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	44.50	-0.66	0.66	1.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	44.50	-0.67	0.67	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.15	44.50	-0.68	0.68	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.15	44.50	-0.68	0.68	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.16	44.50	-0.69	0.69	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	44.50	-0.70	0.70	1.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.17	44.50	-0.71	0.71	1.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.18	44.50	-0.71	0.71	1.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.18	44.50	-0.72	0.72	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.19	44.50	-0.73	0.73	1.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	44.50	-0.74	0.74	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	44.50	-0.75	0.75	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	44.50	-0.75	0.75	1.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	44.50	-0.76	0.76	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.22	44.50	-0.77	0.77	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	44.50	-0.78	0.78	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	44.50	-0.78	0.78	1.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	44.50	-0.79	0.79	1.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	44.50	-0.80	0.80	1.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	44.50	-0.81	0.81	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.26	44.50	-0.81	0.81	1.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.26	44.50	-0.82	0.82	1.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	44.50	-0.83	0.83	1.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	44.50	-0.84	0.84	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.28	44.50	-0.84	0.84	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.29	44.50	-0.85	0.85	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.29	44.50	-0.86	0.86	1.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	44.50	-0.87	0.87	1.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	44.50	-0.88	0.88	1.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	44.50	-0.88	0.88	1.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	44.50	-0.89	0.89	1.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	44.50	-0.90	0.90	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.33	44.50	-0.91	0.91	1.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.33	44.50	-0.91	0.91	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	44.50	-0.92	0.92	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	44.50	-0.93	0.93	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.35	44.50	-0.94	0.94	1.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	44.50	-0.94	0.94	1.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	44.50	-0.95	0.95	1.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	44.50	-0.96	0.96	1.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	44.50	-0.97	0.97	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.38	44.50	-0.97	0.97	1.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	44.50	-0.98	0.98	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	44.50	-0.99	0.99	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.40	44.50	-1.00	1.00	1.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.40	44.50	-1.01	1.01	1.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	44.50	-1.01	1.01	1.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	44.50	-1.02	1.02	1.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	44.50	-1.03	1.03	1.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	44.50	-1.04	1.04	1.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	44.50	-1.04	1.04	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	44.50	-1.05	1.05	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	44.50	-1.06	1.06	1.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.45	44.50	-1.07	1.07	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	44.50	-1.07	1.07	1.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	44.50	-1.08	1.08	1.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	44.50	-1.09	1.09	1.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	44.50	-1.10	1.10	1.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	44.50	-1.10	1.10	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	44.50	-1.11	1.11	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.49	44.50	-1.12	1.12	1.22	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.50	44.50	-1.13	1.13	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.50	44.50	-1.14	1.14	1.21	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	44.50	-1.14	1.14	1.20	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.52	44.50	-1.15	1.15	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.52	44.50	-1.16	1.16	1.19	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	44.50	-1.17	1.17	1.18	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	44.50	-1.17	1.17	1.17	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	44.50	-1.18	1.18	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	44.50	-1.19	1.19	1.16	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	44.50	-1.20	1.20	1.15	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.56	44.50	-1.20	1.20	1.14	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.56	44.50	-1.21	1.21	1.14	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.57	44.50	-1.22	1.22	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	44.50	-1.23	1.23	1.12	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	44.50	-1.23	1.23	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.59	44.50	-1.24	1.24	1.11	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.59	44.50	-1.25	1.25	1.10	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.60	44.50	-1.26	1.26	1.09	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.60	44.50	-1.27	1.27	1.09	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	44.50	-1.27	1.27	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	44.50	-1.28	1.28	1.07	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	44.50	-1.29	1.29	1.06	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.63	44.50	-1.30	1.30	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.63	44.50	-1.30	1.30	1.05	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.64	44.50	-1.31	1.31	1.04	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	44.50	-1.32	1.32	1.03	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	44.50	-1.33	1.33	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	44.50	-1.33	1.33	1.02	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	44.50	-1.34	1.34	1.01	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.67	44.50	-1.35	1.35	1.00	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	44.50	-1.36	1.36	0.99	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	44.50	-1.36	1.36	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	44.50	-1.37	1.37	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	44.50	-1.38	1.38	0.97	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	44.50	-1.39	1.39	0.96	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.71	44.50	-1.39	1.39	0.95	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.71	44.50	-1.40	1.40	0.94	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	44.50	-1.41	1.41	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	44.50	-1.42	1.42	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	44.50	-1.43	1.43	0.92	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	44.50	-1.43	1.43	0.91	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.74	44.50	-1.44	1.44	0.90	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	44.50	-1.45	1.45	0.89	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	44.50	-1.46	1.46	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	44.50	-1.46	1.46	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	44.50	-1.47	1.47	0.87	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	44.50	-1.48	1.48	0.86	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	44.50	-1.49	1.49	0.85	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	44.50	-1.49	1.49	0.84	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.79	44.50	-1.50	1.50	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.79	44.50	-1.51	1.51	0.82	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	44.50	-1.52	1.52	0.81	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.81	44.50	-1.52	1.52	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd	1 49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.81	44.50	-1.53	1.53	0.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	44.50	-1.54	1.54	0.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	44.50	-1.55	1.55	0.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.83	44.50	-1.56	1.56	0.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	44.50	-1.56	1.56	0.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	44.50	-1.57	1.57	0.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	44.50	-1.58	1.58	0.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	44.50	-1.59	1.59	0.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.86	44.50	-1.59	1.59	0.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	44.50	-1.60	1.60	0.71	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	44.50	-1.61	1.61	0.70	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	44.50	-1.62	1.62	0.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	44.50	-1.62	1.62	0.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	44.50	-1.63	1.63	0.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	44.50	-1.64	1.64	0.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	44.50	-1.65	1.65	0.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	44.50	-1.65	1.65	0.64	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	44.50	-1.66	1.66	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	44.50	-1.67	1.67	0.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	44.50	-1.68	1.68	0.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.93	44.50	-1.69	1.69	0.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	44.50	-1.69	1.69	0.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	44.50	-1.70	1.70	0.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	44.50	-1.71	1.71	0.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	44.50	-1.72	1.72	0.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	44.50	-1.72	1.72	0.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.97	44.50	-1.73	1.73	0.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.97	44.50	-1.74	1.74	0.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	44.50	-1.75	1.75	0.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	44.50	-1.75	1.75	0.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	44.50	-1.76	1.76	0.50	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.00	44.50	-1.77	1.77	0.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.00	44.50	-1.78	1.78	0.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	44.50	-1.78	1.78	0.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	44.50	-1.79	1.79	0.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	44.50	-1.80	1.80	0.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	44.50	-1.81	1.81	0.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	44.50	-1.82	1.82	0.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.04	44.50	-1.82	1.82	0.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.04	44.50	-1.83	1.83	0.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	44.50	-1.84	1.84	0.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	44.50	-1.85	1.85	0.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	44.50	-1.85	1.85	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	44.50	-1.86	1.86	0.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	44.50	-1.87	1.87	0.35	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.08	44.50	-1.88	1.88	0.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.08	44.50	-1.88	1.88	0.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	44.50	-1.89	1.89	0.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	44.50	-1.90	1.90	0.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	44.50	-1.91	1.91	0.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	44.50	-1.91	1.91	0.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	44.50	-1.92	1.92	0.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.12	44.50	-1.93	1.93	0.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	44.50	-1.94	1.94	0.25	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

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Description : GB-Q

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.13	44.50	-1.95	1.95	0.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.14	44.50	-1.95	1.95	0.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.14	44.50	-1.96	1.96	0.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.15	44.50	-1.97	1.97	0.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	44.50	-1.98	1.98	0.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	44.50	-1.98	1.98	0.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	44.50	-1.99	1.99	0.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	44.50	-2.00	2.00	0.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	44.50	-2.01	2.01	0.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	44.50	-2.01	2.01	0.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.19	44.50	-2.02	2.02	0.12	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	44.50	-2.03	2.03	0.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	44.50	-2.04	2.04	0.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	44.50	-2.04	2.04	0.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	44.50	-2.05	2.05	0.07	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	44.50	-2.06	2.06	0.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	44.50	-2.07	2.07	0.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	44.50	-2.08	2.08	0.04	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	44.50	-2.08	2.08	0.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	44.50	-2.09	2.09	0.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	44.50	-2.10	2.10	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	3.250	1.70	176.31	0.01
+1.40D+1.60H					
Span # 1	1	3.250	1.69	176.31	0.01
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	3.250	1.70	176.31	0.01
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	3.250	1.70	176.31	0.01
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	3.250	1.53	176.31	0.01
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	3.250	1.45	176.31	0.01
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	3.250	1.53	176.31	0.01
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	3.250	1.45	176.31	0.01
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	3.250	1.53	176.31	0.01
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	3.250	1.53	176.31	0.01
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	3.250	1.53	176.31	0.01
+0.90D+W+0.90H					
Span # 1	1	3.250	1.09	176.31	0.01
+0.90D+E+0.90H					
Span # 1	1	3.250	1.09	176.31	0.01

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0000	1.625		0.0000	0.000

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

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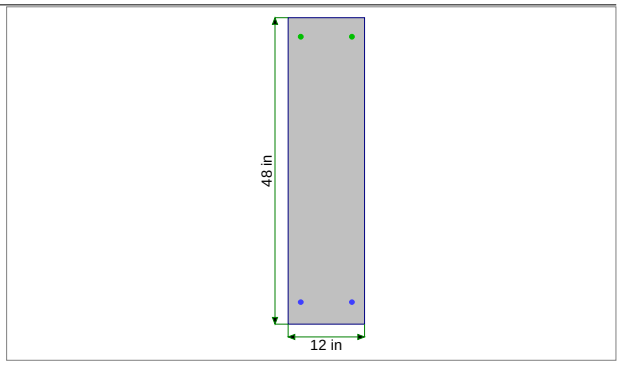
Description : GB-R

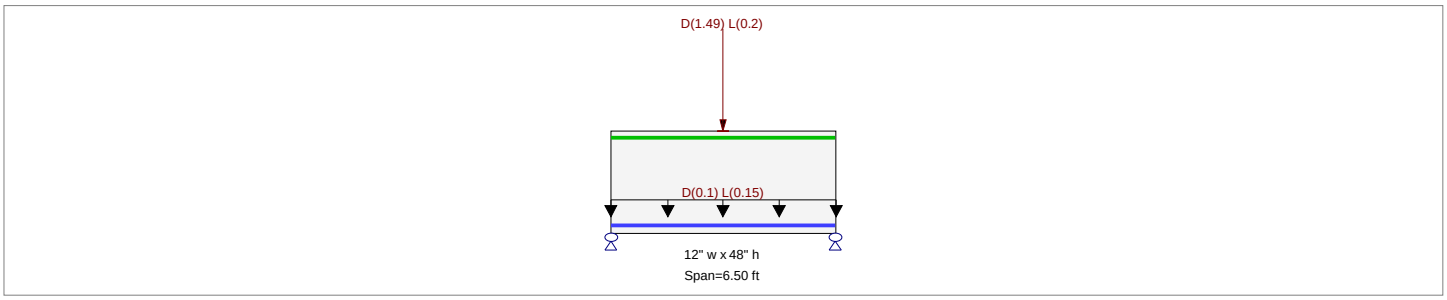
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in
Span #1 Reinforcing....
2-#6 at 3.50 in from Bottom, from 0.0 to 6.50 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 6.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.10, L = 0.150 k/ft, Tributary Width = 1.0 ft, (WALL E)
Point Load : D = 1.490, L = 0.20 k @ 3.250 ft, (GB-Q)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.051** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in Ratio = 0 <360
Mu : Applied	8.996 k-ft	Max Upward Transient Deflection	0.000 in Ratio = 0 <360
Mn * Phi : Allowable	176.311 k-ft	Max Downward Total Deflection	0.000 in Ratio = 999 <240
Location of maximum on span	3.244 ft	Max Upward Total Deflection	0.000 in Ratio = 999 <240
Span # where maximum occurs	Span # 1		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	3.543	3.543
Overall MINimum	0.588	0.588
+D+H	2.955	2.955
+D+L+H	3.543	3.543
+D+Lr+H	2.955	2.955
+D+S+H	2.955	2.955
+D+0.750Lr+0.750L+H	3.396	3.396
+D+0.750L+0.750S+H	3.396	3.396
+D+0.60W+H	2.955	2.955
+D+0.70E+H	2.955	2.955
+D+0.750Lr+0.750L+0.450W+H	3.396	3.396
+D+0.750L+0.750S+0.450W+H	3.396	3.396

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.750L+0.750S+0.5250E+H	3.396	3.396
+0.60D+0.60W+0.60H	1.773	1.773
+0.60D+0.70E+0.60H	1.773	1.773
D Only	2.955	2.955
Lr Only		
L Only	0.588	0.588
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	44.50	4.49	4.49	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.01	44.50	4.47	4.47	0.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.02	44.50	4.46	4.46	0.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	44.50	4.45	4.45	0.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	44.50	4.44	4.44	0.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.06	44.50	4.42	4.42	0.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	44.50	4.41	4.41	0.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.08	44.50	4.40	4.40	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.09	44.50	4.39	4.39	0.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	44.50	4.37	4.37	0.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	44.50	4.36	4.36	0.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.13	44.50	4.35	4.35	0.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	44.50	4.34	4.34	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	44.50	4.32	4.32	0.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	44.50	4.31	4.31	0.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	44.50	4.30	4.30	0.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	44.50	4.29	4.29	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	44.50	4.27	4.27	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	44.50	4.26	4.26	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	44.50	4.25	4.25	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	44.50	4.24	4.24	1.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.25	44.50	4.22	4.22	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	44.50	4.21	4.21	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	44.50	4.20	4.20	1.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	44.50	4.19	4.19	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	44.50	4.17	4.17	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	44.50	4.16	4.16	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.32	44.50	4.15	4.15	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	44.50	4.14	4.14	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	44.50	4.12	4.12	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	44.50	4.11	4.11	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	44.50	4.10	4.10	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	44.50	4.09	4.09	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.39	44.50	4.07	4.07	1.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	44.50	4.06	4.06	1.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	44.50	4.05	4.05	1.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.43	44.50	4.04	4.04	1.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	44.50	4.02	4.02	1.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	44.50	4.01	4.01	1.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.46	44.50	4.00	4.00	1.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.47	44.50	3.99	3.99	2.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	44.50	3.97	3.97	2.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.50	44.50	3.96	3.96	2.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.51	44.50	3.95	3.95	2.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	44.50	3.94	3.94	2.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.53	44.50	3.92	3.92	2.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	44.50	3.91	3.91	2.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.56	44.50	3.90	3.90	2.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	44.50	3.89	3.89	2.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	44.50	3.87	3.87	2.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	44.50	3.86	3.86	2.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.60	44.50	3.85	3.85	2.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	44.50	3.84	3.84	2.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	44.50	3.82	3.82	2.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	44.50	3.81	3.81	2.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	44.50	3.80	3.80	2.70	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	44.50	3.79	3.79	2.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	44.50	3.77	3.77	2.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	44.50	3.76	3.76	2.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	44.50	3.75	3.75	2.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	44.50	3.74	3.74	2.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	44.50	3.72	3.72	2.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.73	44.50	3.71	3.71	3.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.75	44.50	3.70	3.70	3.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	44.50	3.69	3.69	3.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	44.50	3.67	3.67	3.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	44.50	3.66	3.66	3.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	44.50	3.65	3.65	3.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	44.50	3.64	3.64	3.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.82	44.50	3.62	3.62	3.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	44.50	3.61	3.61	3.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.84	44.50	3.60	3.60	3.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	44.50	3.59	3.59	3.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	44.50	3.57	3.57	3.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.88	44.50	3.56	3.56	3.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	44.50	3.55	3.55	3.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.90	44.50	3.54	3.54	3.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.91	44.50	3.52	3.52	3.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	44.50	3.51	3.51	3.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.94	44.50	3.50	3.50	3.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.95	44.50	3.49	3.49	3.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	44.50	3.47	3.47	3.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.97	44.50	3.46	3.46	3.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	44.50	3.45	3.45	3.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	44.50	3.44	3.44	3.94	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	44.50	3.42	3.42	3.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	44.50	3.41	3.41	4.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	44.50	3.40	3.40	4.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	44.50	3.39	3.39	4.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	44.50	3.37	3.37	4.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	44.50	3.36	3.36	4.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	44.50	3.35	3.35	4.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.09	44.50	3.34	3.34	4.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	44.50	3.32	3.32	4.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	44.50	3.31	3.31	4.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	44.50	3.30	3.30	4.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.14	44.50	3.29	3.29	4.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	44.50	3.27	3.27	4.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	44.50	3.26	3.26	4.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	44.50	3.25	3.25	4.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	44.50	3.24	3.24	4.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	44.50	3.22	3.22	4.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.21	44.50	3.21	3.21	4.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.22	44.50	3.20	3.20	4.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	44.50	3.19	3.19	4.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	44.50	3.17	3.17	4.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	44.50	3.16	3.16	4.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	44.50	3.15	3.15	4.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	44.50	3.14	3.14	4.87	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.29	44.50	3.12	3.12	4.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	44.50	3.11	3.11	4.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	44.50	3.10	3.10	4.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	44.50	3.09	3.09	5.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	44.50	3.07	3.07	5.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	44.50	3.06	3.06	5.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.36	44.50	3.05	3.05	5.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	44.50	3.04	3.04	5.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.39	44.50	3.02	3.02	5.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	44.50	3.01	3.01	5.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	44.50	3.00	3.00	5.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.42	44.50	2.99	2.99	5.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	44.50	2.97	2.97	5.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	44.50	2.96	2.96	5.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.46	44.50	2.95	2.95	5.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	44.50	2.94	2.94	5.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	44.50	2.92	2.92	5.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	44.50	2.91	2.91	5.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	44.50	2.90	2.90	5.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	44.50	2.89	2.89	5.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.53	44.50	2.87	2.87	5.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	44.50	2.86	2.86	5.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	44.50	2.85	2.85	5.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	44.50	2.84	2.84	5.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	44.50	2.82	2.82	5.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.59	44.50	2.81	2.81	5.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	44.50	2.80	2.80	5.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.61	44.50	2.79	2.79	5.85	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	44.50	2.77	2.77	5.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	44.50	2.76	2.76	5.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	44.50	2.75	2.75	5.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.66	44.50	2.74	2.74	5.99	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.67	44.50	2.72	2.72	6.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	44.50	2.71	2.71	6.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	44.50	2.70	2.70	6.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.70	44.50	2.69	2.69	6.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	44.50	2.67	2.67	6.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	44.50	2.66	2.66	6.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.74	44.50	2.65	2.65	6.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	44.50	2.64	2.64	6.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.76	44.50	2.62	2.62	6.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.78	44.50	2.61	2.61	6.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	44.50	2.60	2.60	6.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	44.50	2.59	2.59	6.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.81	44.50	2.57	2.57	6.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	44.50	2.56	2.56	6.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	44.50	2.55	2.55	6.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.85	44.50	2.54	2.54	6.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	44.50	2.52	2.52	6.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	44.50	2.51	2.51	6.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.88	44.50	2.50	2.50	6.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	44.50	2.49	2.49	6.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	44.50	2.47	2.47	6.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	44.50	2.46	2.46	6.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	44.50	2.45	2.45	6.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	44.50	2.44	2.44	6.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	44.50	2.42	2.42	6.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	44.50	2.41	2.41	6.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	44.50	2.40	2.40	6.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	44.50	2.39	2.39	6.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.00	44.50	2.37	2.37	6.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	44.50	2.36	2.36	6.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	44.50	2.35	2.35	6.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	44.50	2.34	2.34	6.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.05	44.50	2.32	2.32	6.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	44.50	2.31	2.31	7.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.07	44.50	2.30	2.30	7.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	44.50	2.29	2.29	7.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	44.50	2.27	2.27	7.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.11	44.50	2.26	2.26	7.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.12	44.50	2.25	2.25	7.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	44.50	2.24	2.24	7.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	44.50	2.22	2.22	7.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.15	44.50	2.21	2.21	7.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	44.50	2.20	2.20	7.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.18	44.50	2.19	2.19	7.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.19	44.50	2.17	2.17	7.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	44.50	2.16	2.16	7.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	44.50	2.15	2.15	7.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	44.50	2.14	2.14	7.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	44.50	2.12	2.12	7.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	44.50	2.11	2.11	7.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.26	44.50	2.10	2.10	7.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	44.50	2.09	2.09	7.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.29	44.50	2.07	2.07	7.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	44.50	2.06	2.06	7.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	44.50	2.05	2.05	7.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	44.50	2.04	2.04	7.57	1.00	49.77	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.33	44.50	2.02	2.02	7.59	0.99	49.76	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	44.50	2.01	2.01	7.61	0.98	49.74	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	44.50	2.00	2.00	7.64	0.97	49.73	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	44.50	1.99	1.99	7.66	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.38	44.50	1.97	1.97	7.69	0.95	49.70	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	44.50	1.96	1.96	7.71	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.40	44.50	1.95	1.95	7.73	0.93	49.67	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.42	44.50	1.94	1.94	7.75	0.93	49.65	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	44.50	1.92	1.92	7.78	0.92	49.64	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	44.50	1.91	1.91	7.80	0.91	49.63	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.45	44.50	1.90	1.90	7.82	0.90	49.61	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	44.50	1.89	1.89	7.85	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	44.50	1.87	1.87	7.87	0.88	49.58	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	44.50	1.86	1.86	7.89	0.87	49.57	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.50	44.50	1.85	1.85	7.91	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	44.50	1.84	1.84	7.93	0.86	49.54	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.52	44.50	1.82	1.82	7.96	0.85	49.53	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	44.50	1.81	1.81	7.98	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	44.50	1.80	1.80	8.00	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.56	44.50	1.79	1.79	8.02	0.83	49.49	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.57	44.50	1.77	1.77	8.04	0.82	49.48	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	44.50	1.76	1.76	8.06	0.81	49.46	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.59	44.50	1.75	1.75	8.08	0.80	49.45	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.60	44.50	1.74	1.74	8.10	0.79	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	44.50	1.72	1.72	8.12	0.79	49.42	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.63	44.50	1.71	1.71	8.14	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.64	44.50	1.70	1.70	8.16	0.77	49.40	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	44.50	1.69	1.69	8.18	0.76	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	44.50	1.67	1.67	8.20	0.76	49.37	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	44.50	1.66	1.66	8.22	0.75	49.36	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	44.50	1.65	1.65	8.24	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	44.50	1.64	1.64	8.26	0.73	49.34	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.71	44.50	1.62	1.62	8.28	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	44.50	1.61	1.61	8.30	0.72	49.31	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	44.50	1.60	1.60	8.32	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	44.50	1.59	1.59	8.34	0.71	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	44.50	1.57	1.57	8.36	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	44.50	1.56	1.56	8.38	0.69	49.27	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	44.50	1.55	1.55	8.39	0.68	49.25	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.79	44.50	1.54	1.54	8.41	0.68	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.81	44.50	1.52	1.52	8.43	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	44.50	1.51	1.51	8.45	0.66	49.22	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.83	44.50	1.50	1.50	8.47	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	44.50	1.49	1.49	8.48	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	44.50	1.47	1.47	8.50	0.64	49.19	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	44.50	1.46	1.46	8.52	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	44.50	1.45	1.45	8.54	0.63	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	44.50	1.44	1.44	8.55	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	44.50	1.42	1.42	8.57	0.62	49.14	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	44.50	1.41	1.41	8.59	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	44.50	1.40	1.40	8.60	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	44.50	1.39	1.39	8.62	0.60	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	44.50	1.37	1.37	8.64	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	44.50	1.36	1.36	8.65	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.97	44.50	1.35	1.35	8.67	0.58	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	44.50	1.34	1.34	8.68	0.57	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.00	44.50	1.32	1.32	8.70	0.56	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	44.50	1.31	1.31	8.72	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	44.50	1.30	1.30	8.73	0.55	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	44.50	1.29	1.29	8.75	0.54	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.04	44.50	1.27	1.27	8.76	0.54	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0

Concrete Beam

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Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.05	44.50	1.26	1.26	8.78	0.53	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	44.50	1.25	1.25	8.79	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.08	44.50	1.24	1.24	8.81	0.52	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	44.50	1.22	1.22	8.82	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	44.50	1.21	1.21	8.83	0.51	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	44.50	1.20	1.20	8.85	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	44.50	1.19	1.19	8.86	0.50	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.14	44.50	1.17	1.17	8.88	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.15	44.50	1.16	1.16	8.89	0.48	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	44.50	1.15	1.15	8.90	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	44.50	1.14	1.14	8.92	0.47	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	44.50	1.12	1.12	8.93	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	44.50	1.11	1.11	8.94	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	44.50	1.10	1.10	8.96	0.45	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	44.50	1.09	1.09	8.97	0.45	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	44.50	1.07	1.07	8.98	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	44.50	1.06	1.06	9.00	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.26	44.50	-1.06	1.06	9.00	0.44	48.85	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	44.50	-1.07	1.07	8.98	0.44	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	44.50	-1.09	1.09	8.97	0.45	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.29	44.50	-1.10	1.10	8.96	0.45	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	44.50	-1.11	1.11	8.94	0.46	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	44.50	-1.12	1.12	8.93	0.47	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	44.50	-1.14	1.14	8.92	0.47	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.34	44.50	-1.15	1.15	8.90	0.48	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.35	44.50	-1.16	1.16	8.89	0.48	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.36	44.50	-1.17	1.17	8.88	0.49	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	44.50	-1.19	1.19	8.86	0.50	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	44.50	-1.20	1.20	8.85	0.50	48.95	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	44.50	-1.21	1.21	8.83	0.51	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.41	44.50	-1.22	1.22	8.82	0.51	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.42	44.50	-1.24	1.24	8.81	0.52	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.43	44.50	-1.25	1.25	8.79	0.53	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.45	44.50	-1.26	1.26	8.78	0.53	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.46	44.50	-1.27	1.27	8.76	0.54	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	44.50	-1.29	1.29	8.75	0.54	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.48	44.50	-1.30	1.30	8.73	0.55	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.49	44.50	-1.31	1.31	8.72	0.56	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.50	44.50	-1.32	1.32	8.70	0.56	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.52	44.50	-1.34	1.34	8.68	0.57	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.53	44.50	-1.35	1.35	8.67	0.58	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	44.50	-1.36	1.36	8.65	0.58	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.55	44.50	-1.37	1.37	8.64	0.59	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.56	44.50	-1.39	1.39	8.62	0.60	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	44.50	-1.40	1.40	8.60	0.60	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.59	44.50	-1.41	1.41	8.59	0.61	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.60	44.50	-1.42	1.42	8.57	0.62	49.14	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	44.50	-1.44	1.44	8.55	0.62	49.15	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.62	44.50	-1.45	1.45	8.54	0.63	49.16	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.63	44.50	-1.46	1.46	8.52	0.64	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.65	44.50	-1.47	1.47	8.50	0.64	49.19	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.66	44.50	-1.49	1.49	8.48	0.65	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.67	44.50	-1.50	1.50	8.47	0.66	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.68	44.50	-1.51	1.51	8.45	0.66	49.22	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.69	44.50	-1.52	1.52	8.43	0.67	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	44.50	-1.54	1.54	8.41	0.68	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.72	44.50	-1.55	1.55	8.39	0.68	49.25	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.73	44.50	-1.56	1.56	8.38	0.69	49.27	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.74	44.50	-1.57	1.57	8.36	0.70	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.75	44.50	-1.59	1.59	8.34	0.71	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.77	44.50	-1.60	1.60	8.32	0.71	49.30	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	44.50	-1.61	1.61	8.30	0.72	49.31	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.79	44.50	-1.62	1.62	8.28	0.73	49.33	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.80	44.50	-1.64	1.64	8.26	0.73	49.34	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.81	44.50	-1.65	1.65	8.24	0.74	49.35	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	44.50	-1.66	1.66	8.22	0.75	49.36	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.84	44.50	-1.67	1.67	8.20	0.76	49.37	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	44.50	-1.69	1.69	8.18	0.76	49.39	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.86	44.50	-1.70	1.70	8.16	0.77	49.40	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.87	44.50	-1.71	1.71	8.14	0.78	49.41	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.88	44.50	-1.72	1.72	8.12	0.79	49.42	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.90	44.50	-1.74	1.74	8.10	0.79	49.44	Vu < PhiVc/2	Not Reqd 1	49.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.91	44.50	-1.75	1.75	8.08	0.80	49.45	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	44.50	-1.76	1.76	8.06	0.81	49.46	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.93	44.50	-1.77	1.77	8.04	0.82	49.48	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.94	44.50	-1.79	1.79	8.02	0.83	49.49	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	44.50	-1.80	1.80	8.00	0.83	49.50	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.97	44.50	-1.81	1.81	7.98	0.84	49.52	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.98	44.50	-1.82	1.82	7.96	0.85	49.53	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	44.50	-1.84	1.84	7.93	0.86	49.54	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.00	44.50	-1.85	1.85	7.91	0.87	49.56	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.01	44.50	-1.86	1.86	7.89	0.87	49.57	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.03	44.50	-1.87	1.87	7.87	0.88	49.58	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.04	44.50	-1.89	1.89	7.85	0.89	49.60	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.05	44.50	-1.90	1.90	7.82	0.90	49.61	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	44.50	-1.91	1.91	7.80	0.91	49.63	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.07	44.50	-1.92	1.92	7.78	0.92	49.64	Vu < PhiVc/2	Not Reqd 1	49.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	44.50	-1.94	1.94	7.75	0.93	49.65	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.10	44.50	-1.95	1.95	7.73	0.93	49.67	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.11	44.50	-1.96	1.96	7.71	0.94	49.68	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.12	44.50	-1.97	1.97	7.69	0.95	49.70	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	44.50	-1.99	1.99	7.66	0.96	49.71	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.14	44.50	-2.00	2.00	7.64	0.97	49.73	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	44.50	-2.01	2.01	7.61	0.98	49.74	Vu < PhiVc/2	Not Reqd 1	49.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.17	44.50	-2.02	2.02	7.59	0.99	49.76	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.18	44.50	-2.04	2.04	7.57	1.00	49.77	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	44.50	-2.05	2.05	7.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.20	44.50	-2.06	2.06	7.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.21	44.50	-2.07	2.07	7.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	44.50	-2.09	2.09	7.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.24	44.50	-2.10	2.10	7.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.25	44.50	-2.11	2.11	7.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	44.50	-2.12	2.12	7.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.27	44.50	-2.14	2.14	7.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.29	44.50	-2.15	2.15	7.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	44.50	-2.16	2.16	7.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.31	44.50	-2.17	2.17	7.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.32	44.50	-2.19	2.19	7.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.33	44.50	-2.20	2.20	7.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.35	44.50	-2.21	2.21	7.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.36	44.50	-2.22	2.22	7.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	44.50	-2.24	2.24	7.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.38	44.50	-2.25	2.25	7.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.39	44.50	-2.26	2.26	7.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	44.50	-2.27	2.27	7.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.42	44.50	-2.29	2.29	7.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	44.50	-2.30	2.30	7.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	44.50	-2.31	2.31	7.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.45	44.50	-2.32	2.32	6.97	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.46	44.50	-2.34	2.34	6.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.48	44.50	-2.35	2.35	6.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.49	44.50	-2.36	2.36	6.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	44.50	-2.37	2.37	6.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.51	44.50	-2.39	2.39	6.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.52	44.50	-2.40	2.40	6.81	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.53	44.50	-2.41	2.41	6.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.55	44.50	-2.42	2.42	6.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.56	44.50	-2.44	2.44	6.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	44.50	-2.45	2.45	6.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.58	44.50	-2.46	2.46	6.66	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.59	44.50	-2.47	2.47	6.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.61	44.50	-2.49	2.49	6.60	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	44.50	-2.50	2.50	6.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.63	44.50	-2.51	2.51	6.54	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	44.50	-2.52	2.52	6.51	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.65	44.50	-2.54	2.54	6.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.66	44.50	-2.55	2.55	6.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.68	44.50	-2.56	2.56	6.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.69	44.50	-2.57	2.57	6.39	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.70	44.50	-2.59	2.59	6.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	44.50	-2.60	2.60	6.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.72	44.50	-2.61	2.61	6.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	44.50	-2.62	2.62	6.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.75	44.50	-2.64	2.64	6.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.76	44.50	-2.65	2.65	6.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.77	44.50	-2.66	2.66	6.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	44.50	-2.67	2.67	6.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.80	44.50	-2.69	2.69	6.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	44.50	-2.70	2.70	6.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.82	44.50	-2.71	2.71	6.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.83	44.50	-2.72	2.72	6.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.84	44.50	-2.74	2.74	5.99	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	44.50	-2.75	2.75	5.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.87	44.50	-2.76	2.76	5.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	44.50	-2.77	2.77	5.89	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.89	44.50	-2.79	2.79	5.85	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.90	44.50	-2.80	2.80	5.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.91	44.50	-2.81	2.81	5.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.93	44.50	-2.82	2.82	5.75	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.94	44.50	-2.84	2.84	5.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	44.50	-2.85	2.85	5.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.96	44.50	-2.86	2.86	5.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.97	44.50	-2.87	2.87	5.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.98	44.50	-2.89	2.89	5.59	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.00	44.50	-2.90	2.90	5.55	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.01	44.50	-2.91	2.91	5.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	44.50	-2.92	2.92	5.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.03	44.50	-2.94	2.94	5.45	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	44.50	-2.95	2.95	5.41	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.06	44.50	-2.96	2.96	5.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	44.50	-2.97	2.97	5.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.08	44.50	-2.99	2.99	5.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	44.50	-3.00	3.00	5.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.10	44.50	-3.01	3.01	5.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.11	44.50	-3.02	3.02	5.20	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.13	44.50	-3.04	3.04	5.17	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.14	44.50	-3.05	3.05	5.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.15	44.50	-3.06	3.06	5.09	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	44.50	-3.07	3.07	5.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.17	44.50	-3.09	3.09	5.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	44.50	-3.10	3.10	4.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.20	44.50	-3.11	3.11	4.95	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.21	44.50	-3.12	3.12	4.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.22	44.50	-3.14	3.14	4.87	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	44.50	-3.15	3.15	4.84	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.24	44.50	-3.16	3.16	4.80	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	44.50	-3.17	3.17	4.76	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.27	44.50	-3.19	3.19	4.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.28	44.50	-3.20	3.20	4.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	44.50	-3.21	3.21	4.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.30	44.50	-3.22	3.22	4.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.32	44.50	-3.24	3.24	4.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	44.50	-3.25	3.25	4.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.34	44.50	-3.26	3.26	4.49	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.35	44.50	-3.27	3.27	4.46	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	44.50	-3.29	3.29	4.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.38	44.50	-3.30	3.30	4.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.39	44.50	-3.31	3.31	4.34	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	44.50	-3.32	3.32	4.30	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.41	44.50	-3.34	3.34	4.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.42	44.50	-3.35	3.35	4.22	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	44.50	-3.36	3.36	4.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.45	44.50	-3.37	3.37	4.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.46	44.50	-3.39	3.39	4.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	44.50	-3.40	3.40	4.06	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.48	44.50	-3.41	3.41	4.02	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.49	44.50	-3.42	3.42	3.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.51	44.50	-3.44	3.44	3.94	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.52	44.50	-3.45	3.45	3.90	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.53	44.50	-3.46	3.46	3.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	44.50	-3.47	3.47	3.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.55	44.50	-3.49	3.49	3.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.56	44.50	-3.50	3.50	3.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.58	44.50	-3.51	3.51	3.69	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.59	44.50	-3.52	3.52	3.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	44.50	-3.54	3.54	3.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.61	44.50	-3.55	3.55	3.57	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.62	44.50	-3.56	3.56	3.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	44.50	-3.57	3.57	3.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.65	44.50	-3.59	3.59	3.44	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.66	44.50	-3.60	3.60	3.40	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	44.50	-3.61	3.61	3.36	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.68	44.50	-3.62	3.62	3.31	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.69	44.50	-3.64	3.64	3.27	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	44.50	-3.65	3.65	3.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.72	44.50	-3.66	3.66	3.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.73	44.50	-3.67	3.67	3.14	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	44.50	-3.69	3.69	3.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.75	44.50	-3.70	3.70	3.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.77	44.50	-3.71	3.71	3.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	44.50	-3.72	3.72	2.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.79	44.50	-3.74	3.74	2.92	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.80	44.50	-3.75	3.75	2.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	44.50	-3.76	3.76	2.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	44.50	-3.77	3.77	2.79	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.84	44.50	-3.79	3.79	2.74	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.85	44.50	-3.80	3.80	2.70	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.86	44.50	-3.81	3.81	2.65	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.87	44.50	-3.82	3.82	2.61	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	44.50	-3.84	3.84	2.56	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	44.50	-3.85	3.85	2.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.91	44.50	-3.86	3.86	2.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.92	44.50	-3.87	3.87	2.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.93	44.50	-3.89	3.89	2.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.94	44.50	-3.90	3.90	2.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.96	44.50	-3.91	3.91	2.29	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.97	44.50	-3.92	3.92	2.24	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	44.50	-3.94	3.94	2.19	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.99	44.50	-3.95	3.95	2.15	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.00	44.50	-3.96	3.96	2.10	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.01	44.50	-3.97	3.97	2.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.03	44.50	-3.99	3.99	2.01	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.04	44.50	-4.00	4.00	1.96	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	44.50	-4.01	4.01	1.91	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.06	44.50	-4.02	4.02	1.86	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.07	44.50	-4.04	4.04	1.82	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	44.50	-4.05	4.05	1.77	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.10	44.50	-4.06	4.06	1.72	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.11	44.50	-4.07	4.07	1.67	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	44.50	-4.09	4.09	1.62	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.13	44.50	-4.10	4.10	1.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.14	44.50	-4.11	4.11	1.53	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.16	44.50	-4.12	4.12	1.48	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.17	44.50	-4.14	4.14	1.43	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.18	44.50	-4.15	4.15	1.38	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	44.50	-4.16	4.16	1.33	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.20	44.50	-4.17	4.17	1.28	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	44.50	-4.19	4.19	1.23	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.23	44.50	-4.20	4.20	1.18	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.24	44.50	-4.21	4.21	1.13	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.25	44.50	-4.22	4.22	1.08	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	44.50	-4.24	4.24	1.03	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.28	44.50	-4.25	4.25	0.98	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.29	44.50	-4.26	4.26	0.93	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.30	44.50	-4.27	4.27	0.88	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.31	44.50	-4.29	4.29	0.83	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.32	44.50	-4.30	4.30	0.78	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	44.50	-4.31	4.31	0.73	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.35	44.50	-4.32	4.32	0.68	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.36	44.50	-4.34	4.34	0.63	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.37	44.50	-4.35	4.35	0.58	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.38	44.50	-4.36	4.36	0.52	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	44.50	-4.37	4.37	0.47	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.41	44.50	-4.39	4.39	0.42	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.42	44.50	-4.40	4.40	0.37	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	44.50	-4.41	4.41	0.32	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.44	44.50	-4.42	4.42	0.26	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.45	44.50	-4.44	4.44	0.21	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	44.50	-4.45	4.45	0.16	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.48	44.50	-4.46	4.46	0.11	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.49	44.50	-4.47	4.47	0.05	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	44.50	-4.49	4.49	0.00	1.00	49.78	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.500	9.00	176.31	0.05
+1.40D+1.60H					
Span # 1	1	6.500	8.41	176.31	0.05
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	6.500	9.00	176.31	0.05
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	6.500	9.00	176.31	0.05
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	6.500	7.77	176.31	0.04
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	6.500	7.21	176.31	0.04
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	6.500	7.77	176.31	0.04
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.500	7.21	176.31	0.04
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	6.500	7.77	176.31	0.04
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	6.500	7.77	176.31	0.04
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	6.500	7.77	176.31	0.04
+0.90D+W+0.90H					
Span # 1	1	6.500	5.41	176.31	0.03
+0.90D+E+0.90H					
Span # 1	1	6.500	5.41	176.31	0.03

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0001	3.250		0.0000	0.000

Concrete Beam

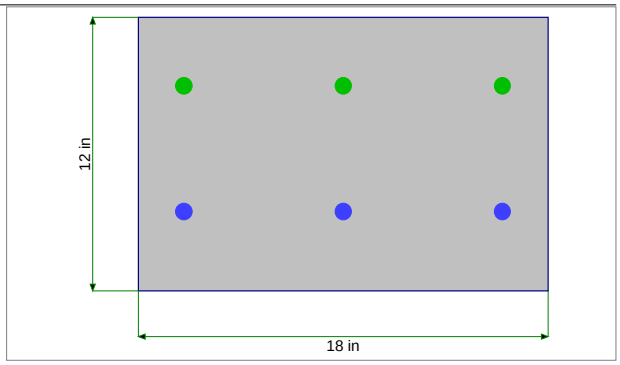
Description : GB-S (at toe of retaining wall B)

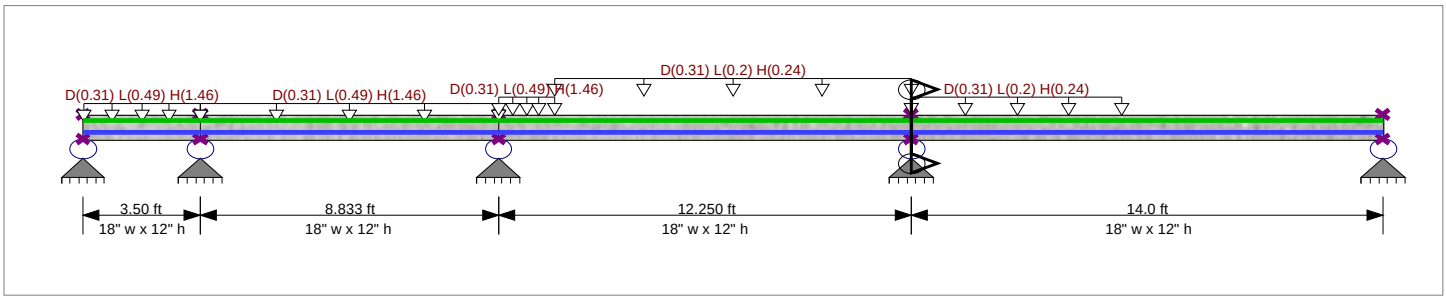
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 12.0 in

Span #1 Reinforcing....
- 2-#6 at 3.50 in from Bottom, from 0.0 to 8.833 ft in this span
- 2-#6 at 3.0 in from Top, from 0.0 to 8.833 ft in this span

Span #2 Reinforcing....
- 2-#6 at 3.50 in from Bottom, from 0.0 to 8.833 ft in this span
- 2-#6 at 3.0 in from Top, from 0.0 to 8.833 ft in this span

Span #3 Reinforcing....
- 2-#6 at 3.50 in from Bottom, from 0.0 to 12.250 ft in this span
- 2-#6 at 3.0 in from Top, from 0.0 to 12.250 ft in this span

Span #4 Reinforcing....
- 3-#6 at 3.50 in from Bottom, from 0.0 to 14.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 14.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads

Load for Span Number 1
- Uniform Load : D = 0.310, L = 0.490, H = 1.460 k/ft, Tributary Width = 1.0 ft, (toe force from wall b1)

Load for Span Number 2
- Uniform Load : D = 0.310, L = 0.490, H = 1.460 k/ft, Tributary Width = 1.0 ft, (toe force from wall b1)

Load for Span Number 3
- Uniform Load : D = 0.310, L = 0.490, H = 1.460 k/ft, Extent = 0.0 -->> 1.667 ft, Tributary Width = 1.0 ft, (toe force from wall b1)
- Uniform Load : D = 0.310, L = 0.20, H = 0.240 k/ft, Extent = 1.667 -->> 12.250 ft, Tributary Width = 1.0 ft, (toe force from wall b2)

Load for Span Number 4
- Uniform Load : D = 0.310, L = 0.20, H = 0.240 k/ft, Extent = 0.0 -->> 6.250 ft, Tributary Width = 1.0 ft, (toe force from wall b2)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.525** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	-22.384 k-ft	
Mn * Phi : Allowable	42.667 k-ft	
Location of maximum on span	0.000 ft	
Span # where maximum occurs	Span # 3	

Maximum Deflection

Max Downward Transient Deflection	0.009 in	Ratio =	12166 >=36
Max Upward Transient Deflection	-0.002 in	Ratio =	85363 >=36
Max Downward Total Deflection	0.023 in	Ratio =	7459 >=24
Max Upward Total Deflection	-0.001 in	Ratio =	35444 >=24

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	0.645	18.704	19.668	11.997	1.644
Overall MINimum	0.144	3.514	3.983	2.331	0.110
+D+H	0.501	15.045	15.684	9.667	1.533
+D+L+H	0.645	18.704	19.668	11.997	1.644
+D+Lr+H	0.501	15.045	15.684	9.667	1.533
+D+S+H	0.501	15.045	15.684	9.667	1.533
+D+0.750Lr+0.750L+H	0.609	17.789	18.672	11.415	1.616
+D+0.750L+0.750S+H	0.609	17.789	18.672	11.415	1.616
+D+0.60W+H	0.501	15.045	15.684	9.667	1.533
+D+0.70E+H	0.501	15.045	15.684	9.667	1.533
+D+0.750Lr+0.750L+0.450W+H	0.609	17.789	18.672	11.415	1.616
+D+0.750L+0.750S+0.450W+H	0.609	17.789	18.672	11.415	1.616
+D+0.750L+0.750S+0.5250E+H	0.609	17.789	18.672	11.415	1.616
+0.60D+0.60W+0.60H	0.300	9.027	9.411	5.800	0.920
+0.60D+0.70E+0.60H	0.300	9.027	9.411	5.800	0.920
D Only	0.324	3.514	5.641	7.103	1.368
Lr Only					
L Only	0.144	3.659	3.983	2.331	0.110
S Only					
W Only					
E Only					
H Only	0.177	11.531	10.043	2.564	0.166

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	8.50	0.90	0.90	0.00	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	8.50	0.76	0.76	0.03	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	8.50	0.63	0.63	0.06	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	8.50	0.49	0.49	0.08	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	8.50	0.35	0.35	0.09	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	8.50	0.21	0.21	0.10	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	8.50	0.07	0.07	0.11	0.47	14.57	Vu < PhiVc/2	Not Reqd	1 14.6	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	0.26	8.50	-0.09	0.09	0.07	0.89	15.27	Vu < PhiVc/2	Not Reqd	1 15.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	8.50	-0.20	0.20	0.10	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	8.50	-0.34	0.34	0.09	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	8.50	-0.48	0.48	0.08	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	8.50	-0.62	0.62	0.06	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	8.50	-0.76	0.76	0.03	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	8.50	-0.90	0.90	0.00	1.00	15.44	Vu < PhiVc/2	Not Reqd	1 15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	9.00	-1.03	1.03	0.03	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	9.00	-1.17	1.17	0.07	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	9.00	-1.31	1.31	0.12	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	9.00	-1.45	1.45	0.17	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	9.00	-1.59	1.59	0.23	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	9.00	-1.73	1.73	0.29	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	9.00	-1.86	1.86	0.35	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	9.00	-2.00	2.00	0.43	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	9.00	-2.14	2.14	0.50	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	9.00	-2.28	2.28	0.58	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.88	9.00	-2.42	2.42	0.67	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	9.00	-2.56	2.56	0.76	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	9.00	-2.69	2.69	0.86	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.99	9.00	-2.83	2.83	0.96	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	9.00	-2.97	2.97	1.07	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	9.00	-3.11	3.11	1.18	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	9.00	-3.25	3.25	1.30	1.00	16.25	Vu < PhiVc/2	Not Reqd	1 16.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.14	9.00	-3.38	3.38	1.42	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	9.00	-3.52	3.52	1.55	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.22	9.00	-3.66	3.66	1.68	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.25	9.00	-3.80	3.80	1.82	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.29	9.00	-3.94	3.94	1.96	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	9.00	-4.08	4.08	2.11	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.36	9.00	-4.21	4.21	2.26	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	9.00	-4.35	4.35	2.42	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	9.00	-4.49	4.49	2.58	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.47	9.00	-4.63	4.63	2.75	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	9.00	-4.77	4.77	2.92	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	9.00	-4.91	4.91	3.10	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	9.00	-5.04	5.04	3.28	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	9.00	-5.18	5.18	3.47	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.66	9.00	-5.32	5.32	3.66	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	9.00	-5.46	5.46	3.86	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	9.00	-5.60	5.60	4.07	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.77	9.00	-5.74	5.74	4.27	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.81	9.00	-5.87	5.87	4.49	0.98	16.22	Vu < PhiVc/2	Not Reqd 1	16.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	9.00	-6.01	6.01	4.71	0.96	16.18	Vu < PhiVc/2	Not Reqd 1	16.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.88	9.00	-6.15	6.15	4.93	0.94	16.14	Vu < PhiVc/2	Not Reqd 1	16.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	9.00	-6.29	6.29	5.16	0.91	16.11	Vu < PhiVc/2	Not Reqd 1	16.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	9.00	-6.43	6.43	5.39	0.89	16.07	Vu < PhiVc/2	Not Reqd 1	16.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	9.00	-6.56	6.56	5.63	0.87	16.04	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	9.00	-6.70	6.70	5.88	0.86	16.01	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	9.00	-6.84	6.84	6.13	0.84	15.98	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	9.00	-6.98	6.98	6.38	0.82	15.95	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	9.00	-7.12	7.12	6.64	0.80	15.93	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	9.00	-7.26	7.26	6.91	0.79	15.90	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	9.00	-7.39	7.39	7.18	0.77	15.88	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	9.00	-7.53	7.53	7.45	0.76	15.85	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.28	9.00	-7.67	7.67	7.73	0.74	15.83	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	9.00	-7.81	7.81	8.02	0.73	15.81	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	9.00	-7.95	7.95	8.31	0.72	15.78	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	9.00	-8.09	8.09	8.60	0.70	15.76	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	9.00	-8.22	8.22	8.90	0.69	15.74	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	9.00	-8.36	8.36	9.21	0.68	15.72	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	9.00	-8.50	8.50	9.52	0.67	15.71	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	9.00	-8.64	8.64	9.83	0.66	15.69	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	9.00	-8.78	8.78	10.16	0.65	15.67	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	9.00	-8.92	8.92	10.48	0.64	15.65	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	9.00	-9.05	9.05	10.81	0.63	15.64	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	9.00	-9.19	9.19	11.15	0.62	15.62	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	9.00	-9.33	9.33	11.49	0.61	15.61	PhiVc/2 < Vu <=	Min 11.4.6	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	9.00	-9.47	9.47	11.84	0.60	15.59	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	9.00	-9.61	9.61	12.19	0.59	15.58	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	9.00	-9.75	9.75	12.54	0.58	15.56	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	9.00	-9.88	9.88	12.91	0.57	15.55	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	9.00	-10.02	10.02	13.27	0.57	15.53	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	9.00	-10.16	10.16	13.64	0.56	15.52	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	9.00	-10.30	10.30	14.02	0.55	15.51	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	9.00	-10.44	10.44	14.40	0.54	15.50	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	9.00	-10.57	10.57	14.79	0.54	15.49	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	9.00	-10.71	10.71	15.18	0.53	15.47	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.13	9.00	-10.85	10.85	15.58	0.52	15.46	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	9.00	-10.99	10.99	15.98	0.52	15.45	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	9.00	-11.13	11.13	16.39	0.51	15.44	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	9.00	-11.27	11.27	16.80	0.50	15.43	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	9.00	-11.40	11.40	17.22	0.50	15.42	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	9.00	-11.54	11.54	17.64	0.49	15.41	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.35	9.00	-11.68	11.68	18.07	0.48	15.40	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	9.00	-11.82	11.82	18.50	0.48	15.39	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.43	9.00	-11.96	11.96	18.94	0.47	15.38	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	1	3.46	9.00	-12.10	12.10	19.38	0.47	15.37	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.50	9.00	16.29	16.29	19.83	0.62	15.62	PhiVc < Vu	0.6702	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.59	9.00	15.94	15.94	18.33	0.65	15.68	PhiVc < Vu	0.2618	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.69	9.00	15.59	15.59	16.87	0.69	15.74	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.78	9.00	15.24	15.24	15.43	0.74	15.82	PhiVc/2 < Vu <=	Min 11.4.6	30.7	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.87	9.00	14.89	14.89	14.03	0.80	15.91	PhiVc/2 < Vu <=	Min 11.4.6	30.8	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	3.96	9.00	14.54	14.54	12.67	0.86	16.02	PhiVc/2 < Vu <=	Min 11.4.6	30.9	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.06	9.00	14.19	14.19	11.33	0.94	16.15	PhiVc/2 < Vu <=	Min 11.4.6	31.0	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.15	9.00	13.84	13.84	10.03	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.24	9.00	13.50	13.50	8.76	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.34	9.00	13.15	13.15	7.52	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.43	9.00	12.80	12.80	6.31	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.52	9.00	12.45	12.45	5.14	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.62	9.00	12.10	12.10	4.00	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.71	9.00	11.75	11.75	2.89	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.80	9.00	11.40	11.40	1.81	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.89	9.00	11.05	11.05	0.77	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	4.99	8.50	10.70	10.70	0.25	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.08	8.50	10.35	10.35	1.22	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.17	8.50	10.01	10.01	2.17	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.27	8.50	9.66	9.66	3.08	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.36	8.50	9.31	9.31	3.97	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.45	8.50	8.96	8.96	4.82	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.55	8.50	8.61	8.61	5.63	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.64	8.50	8.26	8.26	6.42	0.91	15.29	PhiVc/2 < Vu <=	Min 11.4.6	29.3	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.73	8.50	7.91	7.91	7.17	0.78	15.08	PhiVc/2 < Vu <=	Min 11.4.6	29.1	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.82	8.50	7.56	7.56	7.89	0.68	14.91	PhiVc/2 < Vu <=	Min 11.4.6	28.9	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	5.92	8.50	7.21	7.21	8.57	0.60	14.77	Vu < PhiVc/2	Not Reqd 1	14.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.01	8.50	6.86	6.86	9.23	0.53	14.66	Vu < PhiVc/2	Not Reqd 1	14.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.10	8.50	6.52	6.52	9.85	0.47	14.56	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.20	8.50	6.17	6.17	10.44	0.42	14.48	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.29	8.50	5.82	5.82	11.00	0.37	14.41	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.38	8.50	5.47	5.47	11.52	0.34	14.34	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.48	8.50	5.12	5.12	12.02	0.30	14.29	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.57	8.50	4.77	4.77	12.48	0.27	14.24	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.66	8.50	4.42	4.42	12.90	0.24	14.19	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.75	8.50	4.07	4.07	13.30	0.22	14.15	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.85	8.50	3.72	3.72	13.66	0.19	14.11	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	6.94	8.50	3.38	3.38	13.99	0.17	14.07	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.03	8.50	3.03	3.03	14.29	0.15	14.04	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.13	8.50	2.68	2.68	14.55	0.13	14.00	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.22	8.50	2.33	2.33	14.79	0.11	13.97	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.31	8.50	1.98	1.98	14.99	0.09	13.94	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.41	8.50	1.63	1.63	15.15	0.08	13.91	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.50	8.50	1.28	1.28	15.29	0.06	13.89	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	2	7.59	8.50	0.93	0.93	15.39	0.04	13.86	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.68	8.50	0.58	0.58	15.46	0.03	13.83	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	2	7.78	8.50	0.25	0.25	12.38	0.01	13.81	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.87	8.50	-0.11	0.11	15.51	0.01	13.80	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	7.96	8.50	-0.46	0.46	15.48	0.02	13.82	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.06	8.50	-0.81	0.81	15.42	0.04	13.85	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.15	8.50	-1.16	1.16	15.33	0.05	13.88	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.24	8.50	-1.51	1.51	15.20	0.07	13.91	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.34	8.50	-1.86	1.86	15.05	0.09	13.93	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.43	8.50	-2.21	2.21	14.86	0.11	13.96	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.52	8.50	-2.56	2.56	14.64	0.12	13.99	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.61	8.50	-2.91	2.91	14.38	0.14	14.03	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.71	8.50	-3.26	3.26	14.10	0.16	14.06	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.80	8.50	-3.60	3.60	13.78	0.19	14.09	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.89	8.50	-3.95	3.95	13.43	0.21	14.13	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	8.99	8.50	-4.30	4.30	13.04	0.23	14.17	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.08	8.50	-4.65	4.65	12.63	0.26	14.22	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.17	8.50	-5.00	5.00	12.18	0.29	14.27	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.26	8.50	-5.35	5.35	11.70	0.32	14.32	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.36	8.50	-5.70	5.70	11.18	0.36	14.38	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.45	8.50	-6.05	6.05	10.64	0.40	14.45	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.54	8.50	-6.40	6.40	10.06	0.45	14.53	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.64	8.50	-6.74	6.74	9.45	0.51	14.62	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.73	8.50	-7.09	7.09	8.80	0.57	14.73	Vu < PhiVc/2	Not Reqd 1	14.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	9.82	8.50	-7.44	7.44	8.13	0.65	14.86	PhiVc/2 < Vu <=	Min 11.4.6	28.9	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	9.92	8.50	-7.79	7.79	7.42	0.74	15.02	PhiVc/2 < Vu <=	Min 11.4.6	29.0	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.01	8.50	-8.14	8.14	6.68	0.86	15.21	PhiVc/2 < Vu <=	Min 11.4.6	29.2	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.10	8.50	-8.49	8.49	5.91	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.19	8.50	-8.84	8.84	5.10	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.29	8.50	-9.19	9.19	4.26	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.38	8.50	-9.54	9.54	3.39	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.47	8.50	-9.89	9.89	2.49	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.57	8.50	-10.23	10.23	1.55	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.66	8.50	-10.58	10.58	0.59	1.00	15.44	PhiVc/2 < Vu <=	Min 11.4.6	29.5	4.3	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.75	9.00	-10.93	10.93	0.41	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.85	9.00	-11.28	11.28	1.45	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	10.94	9.00	-11.63	11.63	2.51	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.03	9.00	-11.98	11.98	3.61	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.12	9.00	-12.33	12.33	4.74	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.22	9.00	-12.68	12.68	5.90	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.31	9.00	-13.03	13.03	7.10	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.40	9.00	-13.37	13.37	8.33	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.50	9.00	-13.72	13.72	9.58	1.00	16.25	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.59	9.00	-14.07	14.07	10.88	0.97	16.20	PhiVc/2 < Vu <=	Min 11.4.6	31.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.68	9.00	-14.42	14.42	12.20	0.89	16.06	PhiVc/2 < Vu <=	Min 11.4.6	30.9	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.78	9.00	-14.77	14.77	13.56	0.82	15.95	PhiVc/2 < Vu <=	Min 11.4.6	30.8	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.87	9.00	-15.12	15.12	14.95	0.76	15.85	PhiVc/2 < Vu <=	Min 11.4.6	30.7	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	11.96	9.00	-15.47	15.47	16.37	0.71	15.77	PhiVc/2 < Vu <=	Min 11.4.6	30.6	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	12.05	9.00	-15.82	15.82	17.83	0.67	15.70	PhiVc < Vu	0.1194	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	12.15	9.00	-16.17	16.17	19.31	0.63	15.64	PhiVc < Vu	0.5305	30.5	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	2	12.24	9.00	-16.52	16.52	20.83	0.59	15.58	PhiVc < Vu	0.9343	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	12.33	9.00	12.35	12.35	22.38	0.41	15.28	PhiVc/2 < Vu <=	Min 11.4.6	30.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	12.46	9.00	11.86	11.86	20.82	0.43	15.31	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	12.59	9.00	11.38	11.38	19.32	0.44	15.33	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	3	12.72	9.00	10.90	10.90	17.89	0.46	15.35	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	12.85	9.00	10.41	10.41	16.51	0.47	15.38	PhiVc/2 < Vu <=	Min 11.4.6	30.2	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	12.98	9.00	9.93	9.93	15.20	0.49	15.41	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	13.11	9.00	9.44	9.44	13.95	0.51	15.44	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	13.24	9.00	8.96	8.96	12.77	0.53	15.47	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	13.36	9.00	8.48	8.48	11.64	0.55	15.50	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	13.49	9.00	7.99	7.99	10.58	0.57	15.53	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	13.62	9.00	7.51	7.51	9.58	0.59	15.57	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	13.75	9.00	7.02	7.02	8.65	0.61	15.61	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	13.88	9.00	6.54	6.54	7.77	0.63	15.64	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.01	9.00	6.08	6.08	6.96	0.66	15.68	Vu < PhiVc/2	Not Reqd 1	15.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.14	9.00	5.91	5.91	6.19	0.72	15.78	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.27	9.00	5.73	5.73	5.44	0.79	15.91	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.40	9.00	5.56	5.56	4.71	0.89	16.06	Vu < PhiVc/2	Not Reqd 1	16.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.53	9.00	5.39	5.39	4.00	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.65	9.00	5.22	5.22	3.32	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.78	9.00	5.04	5.04	2.66	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	14.91	9.00	4.87	4.87	2.02	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.04	9.00	4.70	4.70	1.40	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.17	9.00	4.53	4.53	0.81	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.30	9.00	4.35	4.35	0.23	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.43	8.50	4.18	4.18	0.32	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.56	8.50	4.01	4.01	0.85	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.69	8.50	3.84	3.84	1.35	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.81	8.50	3.66	3.66	1.83	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	15.94	8.50	3.49	3.49	2.30	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.07	8.50	3.32	3.32	2.74	0.86	15.21	Vu < PhiVc/2	Not Reqd 1	15.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.20	8.50	3.15	3.15	3.15	0.71	14.96	Vu < PhiVc/2	Not Reqd 1	15.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.33	8.50	2.97	2.97	3.55	0.59	14.77	Vu < PhiVc/2	Not Reqd 1	14.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.46	8.50	2.80	2.80	3.92	0.51	14.62	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.59	8.50	2.63	2.63	4.27	0.44	14.51	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.72	8.50	2.46	2.46	4.60	0.38	14.41	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.85	8.50	2.29	2.29	4.90	0.33	14.33	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	16.98	8.50	2.11	2.11	5.19	0.29	14.27	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.10	8.50	1.94	1.94	5.45	0.25	14.21	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.23	8.50	1.77	1.77	5.69	0.22	14.15	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.36	8.50	1.60	1.60	5.90	0.19	14.10	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.49	8.50	1.42	1.42	6.10	0.17	14.06	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.62	8.50	1.25	1.25	6.27	0.14	14.02	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.75	8.50	1.08	1.08	6.42	0.12	13.99	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	17.88	8.50	0.91	0.91	6.55	0.10	13.95	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	18.01	8.50	0.73	0.73	6.66	0.08	13.92	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	18.14	8.50	0.56	0.56	6.74	0.06	13.89	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	18.26	8.50	0.39	0.39	6.80	0.04	13.86	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	18.39	8.50	0.22	0.22	6.84	0.02	13.83	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+0.90D+E+0.90H	3	18.52	8.50	-0.06	0.06	3.51	0.01	13.81	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.40D+1.60H	3	18.65	8.50	-0.19	0.19	5.59	0.02	13.83	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.40D+1.60H	3	18.78	8.50	-0.34	0.34	5.55	0.04	13.86	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.40D+1.60H	3	18.91	8.50	-0.48	0.48	5.50	0.06	13.89	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.04	8.50	-0.65	0.65	6.70	0.07	13.90	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.17	8.50	-0.82	0.82	6.61	0.09	13.93	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.30	8.50	-0.99	0.99	6.49	0.11	13.97	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.43	8.50	-1.16	1.16	6.35	0.13	14.00	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.55	8.50	-1.34	1.34	6.19	0.15	14.04	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	3	19.68	8.50	-1.51	1.51	6.01	0.18	14.08	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.81	8.50	-1.68	1.68	5.80	0.21	14.13	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.94	8.50	-1.85	1.85	5.57	0.24	14.18	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.07	8.50	-2.02	2.02	5.32	0.27	14.23	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.20	8.50	-2.20	2.20	5.05	0.31	14.30	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.33	8.50	-2.37	2.37	4.76	0.35	14.37	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.46	8.50	-2.54	2.54	4.44	0.41	14.46	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.59	8.50	-2.71	2.71	4.10	0.47	14.56	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.71	8.50	-2.89	2.89	3.74	0.55	14.69	Vu < PhiVc/2	Not Reqd 1	14.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.84	8.50	-3.06	3.06	3.36	0.65	14.85	Vu < PhiVc/2	Not Reqd 1	14.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.97	8.50	-3.23	3.23	2.95	0.78	15.07	Vu < PhiVc/2	Not Reqd 1	15.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.10	8.50	-3.40	3.40	2.52	0.96	15.37	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.23	8.50	-3.58	3.58	2.07	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.36	8.50	-3.75	3.75	1.60	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.49	8.50	-3.92	3.92	1.11	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.62	8.50	-4.09	4.09	0.59	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.75	8.50	-4.27	4.27	0.05	1.00	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.88	9.00	-4.44	4.44	0.51	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.00	9.00	-4.61	4.61	1.09	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.13	9.00	-4.78	4.78	1.70	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.26	9.00	-4.96	4.96	2.33	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.39	9.00	-5.13	5.13	2.98	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.52	9.00	-5.30	5.30	3.65	1.00	16.25	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.65	9.00	-5.47	5.47	4.34	0.94	16.16	Vu < PhiVc/2	Not Reqd 1	16.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.78	9.00	-5.65	5.65	5.06	0.84	15.98	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.91	9.00	-5.82	5.82	5.80	0.75	15.84	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.04	9.00	-5.99	5.99	6.56	0.68	15.73	Vu < PhiVc/2	Not Reqd 1	15.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.16	9.00	-6.16	6.16	7.34	0.63	15.64	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.29	9.00	-6.33	6.33	8.15	0.58	15.56	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.42	9.00	-6.51	6.51	8.98	0.54	15.50	Vu < PhiVc/2	Not Reqd 1	15.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.55	9.00	-6.68	6.68	9.83	0.51	15.44	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.68	9.00	-6.85	6.85	10.70	0.48	15.39	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.81	9.00	-7.02	7.02	11.60	0.45	15.35	Vu < PhiVc/2	Not Reqd 1	15.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.94	9.00	-7.20	7.20	12.51	0.43	15.31	Vu < PhiVc/2	Not Reqd 1	15.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.07	9.00	-7.37	7.37	13.45	0.41	15.28	Vu < PhiVc/2	Not Reqd 1	15.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.20	9.00	-7.54	7.54	14.41	0.39	15.25	Vu < PhiVc/2	Not Reqd 1	15.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.33	9.00	-7.71	7.71	15.40	0.38	15.22	PhiVc/2 < Vu <=	Min 11.4.6	30.1	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	3	24.45	9.00	-7.89	7.89	16.40	0.36	15.20	PhiVc/2 < Vu <=	Min 11.4.6	30.0	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	4	24.58	9.00	8.30	8.30	17.43	0.36	15.48	PhiVc/2 < Vu <=	Min 11.4.6	30.3	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	4	24.73	9.00	8.10	8.10	16.22	0.37	15.53	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	4	24.88	9.00	7.90	7.90	15.04	0.39	15.58	PhiVc/2 < Vu <=	Min 11.4.6	30.4	4.5	4.0
+1.20D+1.60L+0.50S+1.60H	4	25.03	9.00	7.70	7.70	13.89	0.42	15.63	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.17	9.00	7.51	7.51	12.77	0.44	15.69	Vu < PhiVc/2	Not Reqd 1	15.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.32	9.00	7.31	7.31	11.68	0.47	15.76	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.47	9.00	7.11	7.11	10.62	0.50	15.84	Vu < PhiVc/2	Not Reqd 1	15.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.61	9.00	6.92	6.92	9.58	0.54	15.94	Vu < PhiVc/2	Not Reqd 1	15.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.76	9.00	6.72	6.72	8.58	0.59	16.05	Vu < PhiVc/2	Not Reqd 1	16.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	25.91	9.00	6.52	6.52	7.60	0.64	16.19	Vu < PhiVc/2	Not Reqd 1	16.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.06	9.00	6.33	6.33	6.66	0.71	16.36	Vu < PhiVc/2	Not Reqd 1	16.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.20	9.00	6.13	6.13	5.74	0.80	16.58	Vu < PhiVc/2	Not Reqd 1	16.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.35	9.00	5.93	5.93	4.85	0.92	16.87	Vu < PhiVc/2	Not Reqd 1	16.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.50	9.00	5.73	5.73	3.99	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.65	9.00	5.54	5.54	3.16	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	26.79	9.00	5.34	5.34	2.36	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	4	26.94	9.00	5.14	5.14	1.59	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.09	9.00	4.95	4.95	0.84	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.24	9.00	4.75	4.75	0.13	1.00	17.08	Vu < PhiVc/2	Not Reqd 1	17.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.38	8.50	4.55	4.55	0.56	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.53	8.50	4.36	4.36	1.21	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.68	8.50	4.16	4.16	1.84	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.83	8.50	3.96	3.96	2.44	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	27.97	8.50	3.76	3.76	3.01	0.89	15.98	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.12	8.50	3.57	3.57	3.55	0.71	15.55	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.27	8.50	3.37	3.37	4.06	0.59	15.24	Vu < PhiVc/2	Not Reqd 1	15.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.41	8.50	3.17	3.17	4.54	0.49	15.01	Vu < PhiVc/2	Not Reqd 1	15.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.56	8.50	2.98	2.98	5.00	0.42	14.83	Vu < PhiVc/2	Not Reqd 1	14.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.71	8.50	2.78	2.78	5.42	0.36	14.69	Vu < PhiVc/2	Not Reqd 1	14.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	28.86	8.50	2.58	2.58	5.81	0.31	14.57	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	29.00	8.50	2.38	2.38	6.18	0.27	14.47	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	29.15	8.50	2.19	2.19	6.52	0.24	14.38	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	29.30	8.50	1.99	1.99	6.82	0.21	14.30	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	29.45	8.50	1.79	1.79	7.10	0.18	14.23	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	29.59	8.50	1.60	1.60	7.35	0.15	14.17	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.40D+1.60H	4	29.74	8.50	1.41	1.41	6.88	0.14	14.15	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.40D+1.60H	4	29.89	8.50	1.24	1.24	7.08	0.12	14.10	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.40D+1.60H	4	30.04	8.50	1.08	1.08	7.25	0.11	14.05	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.40D+1.60H	4	30.18	8.50	0.91	0.91	7.40	0.09	14.00	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.40D+1.60H	4	30.33	8.50	0.74	0.74	7.52	0.07	13.96	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.40D+1.60H	4	30.48	8.50	0.58	0.58	7.61	0.05	13.92	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.40D+1.60H	4	30.63	8.50	0.41	0.41	7.69	0.04	13.88	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.40D+1.60H	4	30.77	8.50	0.25	0.25	7.74	0.02	13.85	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.40D+1.60H	4	30.92	8.50	0.15	0.15	7.76	0.01	13.82	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.07	8.50	-0.12	0.12	8.28	0.01	13.81	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.21	8.50	-0.16	0.16	8.26	0.01	13.82	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.36	8.50	-0.20	0.20	8.24	0.02	13.83	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.51	8.50	-0.24	0.24	8.21	0.02	13.84	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.66	8.50	-0.28	0.28	8.17	0.02	13.85	Vu < PhiVc/2	Not Reqd 1	13.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.80	8.50	-0.31	0.31	8.12	0.03	13.86	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.95	8.50	-0.35	0.35	8.08	0.03	13.87	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.10	8.50	-0.39	0.39	8.02	0.03	13.87	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.25	8.50	-0.43	0.43	7.96	0.04	13.88	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.39	8.50	-0.47	0.47	7.89	0.04	13.89	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.54	8.50	-0.51	0.51	7.82	0.05	13.90	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.69	8.50	-0.54	0.54	7.74	0.05	13.91	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.84	8.50	-0.58	0.58	7.66	0.05	13.92	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.98	8.50	-0.62	0.62	7.57	0.06	13.93	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.13	8.50	-0.66	0.66	7.48	0.06	13.94	Vu < PhiVc/2	Not Reqd 1	13.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.28	8.50	-0.70	0.70	7.38	0.07	13.96	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.43	8.50	-0.74	0.74	7.27	0.07	13.97	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.57	8.50	-0.78	0.78	7.16	0.08	13.98	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.72	8.50	-0.81	0.81	7.04	0.08	13.99	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.87	8.50	-0.85	0.85	6.92	0.09	14.00	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.01	8.50	-0.89	0.89	6.79	0.09	14.02	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.16	8.50	-0.93	0.93	6.66	0.10	14.03	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.31	8.50	-0.97	0.97	6.52	0.11	14.05	Vu < PhiVc/2	Not Reqd 1	14.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.46	8.50	-1.01	1.01	6.37	0.11	14.07	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.60	8.50	-1.04	1.04	6.22	0.12	14.08	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.75	8.50	-1.08	1.08	6.07	0.13	14.10	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	4	34.90	8.50	-1.12	1.12	5.90	0.13	14.12	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.05	8.50	-1.16	1.16	5.74	0.14	14.14	Vu < PhiVc/2	Not Reqd 1	14.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.19	8.50	-1.20	1.20	5.56	0.15	14.17	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.34	8.50	-1.24	1.24	5.38	0.16	14.19	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.49	8.50	-1.28	1.28	5.20	0.17	14.22	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.64	8.50	-1.31	1.31	5.01	0.19	14.25	Vu < PhiVc/2	Not Reqd 1	14.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.78	8.50	-1.35	1.35	4.81	0.20	14.28	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.93	8.50	-1.39	1.39	4.61	0.21	14.32	Vu < PhiVc/2	Not Reqd 1	14.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.08	8.50	-1.43	1.43	4.40	0.23	14.36	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.23	8.50	-1.47	1.47	4.19	0.25	14.40	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.40D+1.60H	4	36.37	8.50	-1.51	1.51	4.07	0.26	14.44	Vu < PhiVc/2	Not Reqd 1	14.4	0.0	0.0
+1.40D+1.60H	4	36.52	8.50	-1.55	1.55	3.85	0.29	14.50	Vu < PhiVc/2	Not Reqd 1	14.5	0.0	0.0
+1.40D+1.60H	4	36.67	8.50	-1.60	1.60	3.62	0.31	14.56	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.40D+1.60H	4	36.81	8.50	-1.64	1.64	3.38	0.34	14.64	Vu < PhiVc/2	Not Reqd 1	14.6	0.0	0.0
+1.40D+1.60H	4	36.96	8.50	-1.69	1.69	3.13	0.38	14.73	Vu < PhiVc/2	Not Reqd 1	14.7	0.0	0.0
+1.40D+1.60H	4	37.11	8.50	-1.73	1.73	2.88	0.43	14.84	Vu < PhiVc/2	Not Reqd 1	14.8	0.0	0.0
+1.40D+1.60H	4	37.26	8.50	-1.78	1.78	2.62	0.48	14.98	Vu < PhiVc/2	Not Reqd 1	15.0	0.0	0.0
+1.40D+1.60H	4	37.40	8.50	-1.82	1.82	2.36	0.55	15.14	Vu < PhiVc/2	Not Reqd 1	15.1	0.0	0.0
+1.40D+1.60H	4	37.55	8.50	-1.87	1.87	2.09	0.63	15.36	Vu < PhiVc/2	Not Reqd 1	15.4	0.0	0.0
+1.40D+1.60H	4	37.70	8.50	-1.91	1.91	1.81	0.75	15.64	Vu < PhiVc/2	Not Reqd 1	15.6	0.0	0.0
+1.40D+1.60H	4	37.85	8.50	-1.96	1.96	1.52	0.91	16.04	Vu < PhiVc/2	Not Reqd 1	16.0	0.0	0.0
+1.40D+1.60H	4	37.99	8.50	-2.00	2.00	1.23	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.40D+1.60H	4	38.14	8.50	-2.05	2.05	0.93	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.40D+1.60H	4	38.29	8.50	-2.09	2.09	0.63	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.40D+1.60H	4	38.44	8.50	-2.14	2.14	0.32	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0
+1.40D+1.60H	4	38.58	8.50	-2.18	2.18	0.00	1.00	16.26	Vu < PhiVc/2	Not Reqd 1	16.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	3.500	-19.38	42.67	0.45
Span # 2	2	8.833	-20.83	42.67	0.49
Span # 3	3	12.250	-22.38	42.67	0.52
Span # 4	4	14.000	-17.43	56.22	0.31
+1.40D+1.60H					
Span # 1	1	3.500	-15.89	42.67	0.37
Span # 2	2	8.833	-17.05	42.67	0.40
Span # 3	3	12.250	-18.32	42.67	0.43
Span # 4	4	14.000	-15.30	56.22	0.27
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	3.500	-19.38	42.67	0.45
Span # 2	2	8.833	-20.83	42.67	0.49
Span # 3	3	12.250	-22.38	42.67	0.52
Span # 4	4	14.000	-17.43	56.22	0.31
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	3.500	-19.38	42.67	0.45
Span # 2	2	8.833	-20.83	42.67	0.49
Span # 3	3	12.250	-22.38	42.67	0.52
Span # 4	4	14.000	-17.43	56.22	0.31
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	3.500	-16.70	42.67	0.39
Span # 2	2	8.833	-17.56	42.67	0.41
Span # 3	3	12.250	-18.89	42.67	0.44
Span # 4	4	14.000	-14.83	56.22	0.26
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	3.500	-15.48	42.67	0.36
Span # 2	2	8.833	-16.08	42.67	0.38
Span # 3	3	12.250	-17.30	42.67	0.41
Span # 4	4	14.000	-13.65	56.22	0.24
+1.20D+0.50L+1.60S+1.60H					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-S (at toe of retaining wall B)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	3.500	-16.70	42.67	0.39
Span # 2	2	8.833	-17.56	42.67	0.41
Span # 3	3	12.250	-18.89	42.67	0.44
Span # 4	4	14.000	-14.83	56.22	0.26
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	3.500	-15.48	42.67	0.36
Span # 2	2	8.833	-16.08	42.67	0.38
Span # 3	3	12.250	-17.30	42.67	0.41
Span # 4	4	14.000	-13.65	56.22	0.24
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	3.500	-16.70	42.67	0.39
Span # 2	2	8.833	-17.56	42.67	0.41
Span # 3	3	12.250	-18.89	42.67	0.44
Span # 4	4	14.000	-14.83	56.22	0.26
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	3.500	-16.70	42.67	0.39
Span # 2	2	8.833	-17.56	42.67	0.41
Span # 3	3	12.250	-18.89	42.67	0.44
Span # 4	4	14.000	-14.83	56.22	0.26
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	3.500	-16.70	42.67	0.39
Span # 2	2	8.833	-17.56	42.67	0.41
Span # 3	3	12.250	-18.89	42.67	0.44
Span # 4	4	14.000	-14.83	56.22	0.26
+0.90D+W+0.90H					
Span # 1	1	3.500	-9.17	42.67	0.21
Span # 2	2	8.833	-10.13	42.67	0.24
Span # 3	3	12.250	-10.87	42.67	0.25
Span # 4	4	14.000	-9.53	56.22	0.17
+0.90D+E+0.90H					
Span # 1	1	3.500	-9.17	42.67	0.21
Span # 2	2	8.833	-10.13	42.67	0.24
Span # 3	3	12.250	-10.87	42.67	0.25
Span # 4	4	14.000	-9.53	56.22	0.17

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0007	3.732	+D+L+H	-0.0012	2.303
+D+L+H	2	0.0125	4.417	H Only	-0.0005	9.156
+D+L+H	3	0.0082	6.125	H Only	-0.0012	0.967
+D+L+H	4	0.0225	7.737		0.0000	0.967

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and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

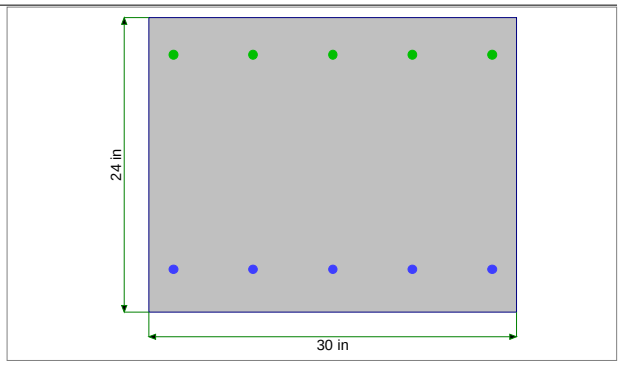
Description : GB-T (OPPOSITE)

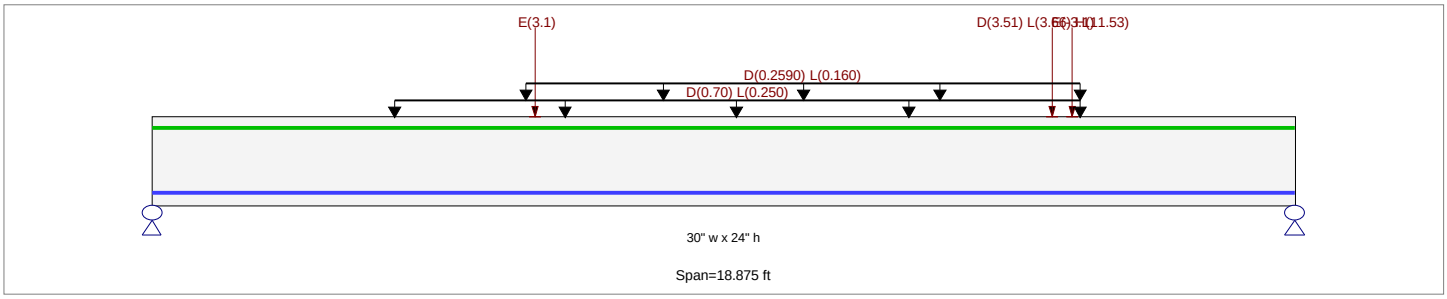
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 30.0 in, Height = 24.0 in
Span #1 Reinforcing....
5-#6 at 3.50 in from Bottom, from 0.0 to 18.875 ft in this span
5-#6 at 3.0 in from Top, from 0.0 to 18.875 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.0 -->> 15.333 ft, Tributary Width = 6.250 ft
Partial Length Uniform Load : D = 0.2590, L = 0.160 k/ft, Extent = 6.167 -->> 15.333 ft
Point Load : E = 3.10 k @ 6.333 ft, (OTM)
Point Load : E = -3.10 k @ 15.208 ft, (OTM)
Point Load : D = 3.510, L = 3.660, H = 11.530 k @ 14.875 ft, (GB-S)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.828** : 1	Maximum Deflection		
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.016 in	Ratio = 14381 >=36
Mu : Applied		168.197 k-ft	Max Upward Transient Deflection	0.000 in	Ratio = 0 <360
Mn * Phi : Allowable		203.177 k-ft	Max Downward Total Deflection	0.081 in	Ratio = 2812 >=24
Location of maximum on span		11.895 ft	Max Upward Total Deflection	0.000 in	Ratio = 999 <240
Span # where maximum occurs		Span # 1			

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	17.778	29.281
Overall MINimum	1.458	-1.458
+D+H	14.921	24.110
+D+L+H	17.710	29.281
+D+Lr+H	14.921	24.110
+D+S+H	14.921	24.110
+D+0.750Lr+0.750L+H	17.013	27.988
+D+0.750L+0.750S+H	17.013	27.988
+D+0.60W+H	14.921	24.110

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Project Descr:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-T (OPPOSITE)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.70E+H	15.941	23.090
+D+0.750Lr+0.750L+0.450W+H	17.013	27.988
+D+0.750L+0.750S+0.450W+H	17.013	27.988
+D+0.750L+0.750S+0.5250E+H	17.778	27.223
+0.60D+0.60W+0.60H	8.953	14.466
+0.60D+0.70E+0.60H	9.973	13.446
D Only	12.478	15.023
Lr Only		
L Only	2.789	5.171
S Only		
W Only		
E Only	1.458	-1.458
H Only	2.443	9.087

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.50	23.35	23.35	0.00	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	20.50	23.32	23.32	0.80	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	20.50	23.29	23.29	1.60	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.50	23.26	23.26	2.40	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	20.50	23.23	23.23	3.20	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	20.50	23.20	23.20	4.00	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	20.50	23.17	23.17	4.80	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	20.50	23.14	23.14	5.59	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	20.50	23.11	23.11	6.39	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	20.50	23.08	23.08	7.18	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	20.50	23.05	23.05	7.97	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	20.50	23.02	23.02	8.77	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	20.50	22.99	22.99	9.56	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	20.50	22.96	22.96	10.35	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.50	22.93	22.93	11.14	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	20.50	22.90	22.90	11.92	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	20.50	22.87	22.87	12.71	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	20.50	22.84	22.84	13.50	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	20.50	22.81	22.81	14.28	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	20.50	22.78	22.78	15.06	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	20.50	22.75	22.75	15.85	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	20.50	22.72	22.72	16.63	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	20.50	22.69	22.69	17.41	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	20.50	22.66	22.66	18.19	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	20.50	22.63	22.63	18.97	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	20.50	22.60	22.60	19.74	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	20.50	22.57	22.57	20.52	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	20.50	22.54	22.54	21.30	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	20.50	22.51	22.51	22.07	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	20.50	22.48	22.48	22.84	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	20.50	22.45	22.45	23.62	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	20.50	22.42	22.42	24.39	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	20.50	22.39	22.39	25.16	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	20.50	22.36	22.36	25.93	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	20.50	22.33	22.33	26.69	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	20.50	22.30	22.30	27.46	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	20.50	22.27	22.27	28.23	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	20.50	22.24	22.24	28.99	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	20.50	22.21	22.21	29.76	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.34	20.50	22.18	22.18	30.52	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	20.50	22.15	22.15	31.28	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	20.50	22.12	22.12	32.04	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	20.50	22.09	22.09	32.80	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	20.50	22.06	22.06	33.56	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	20.50	22.03	22.03	34.32	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	20.50	22.00	22.00	35.08	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	20.50	21.97	21.97	35.83	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	20.50	21.94	21.94	36.59	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	20.50	21.91	21.91	37.34	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	20.50	21.88	21.88	38.09	0.98	59.47	Vu < PhiVc/2	Not Reqd 1	59.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	20.50	21.85	21.85	38.84	0.96	59.39	Vu < PhiVc/2	Not Reqd 1	59.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	20.50	21.82	21.82	39.60	0.94	59.31	Vu < PhiVc/2	Not Reqd 1	59.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	20.50	21.79	21.79	40.34	0.92	59.23	Vu < PhiVc/2	Not Reqd 1	59.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	20.50	21.76	21.76	41.09	0.90	59.16	Vu < PhiVc/2	Not Reqd 1	59.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	20.50	21.73	21.73	41.84	0.89	59.09	Vu < PhiVc/2	Not Reqd 1	59.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	20.50	21.70	21.70	42.59	0.87	59.02	Vu < PhiVc/2	Not Reqd 1	59.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	20.50	21.67	21.67	43.33	0.85	58.95	Vu < PhiVc/2	Not Reqd 1	59.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	20.50	21.64	21.64	44.08	0.84	58.89	Vu < PhiVc/2	Not Reqd 1	58.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	20.50	21.61	21.61	44.82	0.82	58.82	Vu < PhiVc/2	Not Reqd 1	58.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	20.50	21.58	21.58	45.56	0.81	58.76	Vu < PhiVc/2	Not Reqd 1	58.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	20.50	21.55	21.55	46.30	0.80	58.71	Vu < PhiVc/2	Not Reqd 1	58.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	20.50	21.52	21.52	47.05	0.78	58.65	Vu < PhiVc/2	Not Reqd 1	58.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	20.50	21.49	21.49	47.78	0.77	58.60	Vu < PhiVc/2	Not Reqd 1	58.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	20.50	21.46	21.46	48.52	0.76	58.54	Vu < PhiVc/2	Not Reqd 1	58.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	20.50	21.43	21.43	49.26	0.74	58.49	Vu < PhiVc/2	Not Reqd 1	58.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	20.50	21.40	21.40	50.00	0.73	58.44	Vu < PhiVc/2	Not Reqd 1	58.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	20.50	21.37	21.37	50.73	0.72	58.40	Vu < PhiVc/2	Not Reqd 1	58.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	20.50	21.34	21.34	51.47	0.71	58.35	Vu < PhiVc/2	Not Reqd 1	58.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	20.50	21.31	21.31	52.20	0.70	58.30	Vu < PhiVc/2	Not Reqd 1	58.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	20.50	21.28	21.28	52.93	0.69	58.26	Vu < PhiVc/2	Not Reqd 1	58.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.50	21.25	21.25	53.66	0.68	58.22	Vu < PhiVc/2	Not Reqd 1	58.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	20.50	21.22	21.22	54.39	0.67	58.18	Vu < PhiVc/2	Not Reqd 1	58.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	20.50	21.19	21.19	55.12	0.66	58.14	Vu < PhiVc/2	Not Reqd 1	58.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.50	21.16	21.16	55.85	0.65	58.10	Vu < PhiVc/2	Not Reqd 1	58.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	20.50	21.13	21.13	56.58	0.64	58.06	Vu < PhiVc/2	Not Reqd 1	58.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	20.50	21.10	21.10	57.30	0.63	58.02	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.50	21.07	21.07	58.03	0.62	57.99	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	20.50	21.04	21.04	58.75	0.61	57.95	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	20.50	21.01	21.01	59.47	0.60	57.92	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	20.50	20.98	20.98	60.20	0.60	57.88	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	20.50	20.95	20.95	60.92	0.59	57.85	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	20.50	20.92	20.92	61.64	0.58	57.82	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	20.50	20.89	20.89	62.36	0.57	57.79	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	20.50	20.86	20.86	63.07	0.57	57.76	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.50	20.83	20.83	63.79	0.56	57.73	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	20.50	20.80	20.80	64.51	0.55	57.70	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	20.50	20.77	20.77	65.22	0.54	57.67	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.50	20.74	20.74	65.93	0.54	57.64	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	20.50	20.71	20.71	66.65	0.53	57.62	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	20.50	20.68	20.68	67.36	0.52	57.59	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	20.50	20.65	20.65	68.07	0.52	57.56	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	20.50	20.62	20.62	68.78	0.51	57.54	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	20.50	20.59	20.59	69.49	0.51	57.52	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0

Concrete Beam

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.20	20.50	20.56	20.56	70.19	0.50	57.49	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	20.50	20.53	20.53	70.90	0.49	57.47	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	20.50	20.50	20.50	71.61	0.49	57.44	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	20.50	20.47	20.47	72.31	0.48	57.42	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	20.50	20.44	20.44	73.01	0.48	57.40	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	20.50	20.41	20.41	73.72	0.47	57.38	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	20.50	20.38	20.38	74.42	0.47	57.36	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	20.50	20.35	20.35	75.12	0.46	57.34	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	20.50	20.32	20.32	75.82	0.46	57.32	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	20.50	20.29	20.29	76.52	0.45	57.30	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	20.50	20.26	20.26	77.21	0.45	57.28	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	20.50	20.23	20.23	77.91	0.44	57.26	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	20.50	20.20	20.20	78.60	0.44	57.24	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.64	20.50	20.17	20.17	79.30	0.43	57.22	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.68	20.50	20.14	20.14	79.99	0.43	57.20	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	20.50	20.11	20.11	80.68	0.43	57.18	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.75	20.50	20.08	20.08	81.37	0.42	57.17	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	20.50	20.05	20.05	82.06	0.42	57.15	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	20.50	20.02	20.02	82.75	0.41	57.13	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	20.50	20.00	20.00	83.44	0.41	57.12	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.88	20.50	19.97	19.97	84.13	0.41	57.10	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	20.50	19.94	19.94	84.81	0.40	57.08	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	20.50	19.91	19.91	85.50	0.40	57.07	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	20.50	19.88	19.88	86.18	0.39	57.05	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	20.50	19.82	19.82	86.87	0.39	57.03	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	20.50	19.75	19.75	87.55	0.39	57.02	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.09	20.50	19.67	19.67	88.22	0.38	57.00	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	20.50	19.60	19.60	88.90	0.38	56.98	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	20.50	19.53	19.53	89.57	0.37	56.96	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	20.50	19.45	19.45	90.24	0.37	56.95	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	20.50	19.38	19.38	90.91	0.36	56.93	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	20.50	19.31	19.31	91.57	0.36	56.91	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	20.50	19.24	19.24	92.24	0.36	56.90	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	20.50	19.16	19.16	92.90	0.35	56.88	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	20.50	19.09	19.09	93.55	0.35	56.86	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	20.50	19.02	19.02	94.21	0.34	56.85	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	20.50	18.95	18.95	94.86	0.34	56.83	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	20.50	18.87	18.87	95.51	0.34	56.82	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	20.50	18.80	18.80	96.16	0.33	56.80	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	20.50	18.73	18.73	96.80	0.33	56.79	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	20.50	18.66	18.66	97.45	0.33	56.78	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.61	20.50	18.58	18.58	98.09	0.32	56.76	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	20.50	18.51	18.51	98.73	0.32	56.75	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.68	20.50	18.44	18.44	99.36	0.32	56.73	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	20.50	18.37	18.37	99.99	0.31	56.72	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	20.50	18.29	18.29	100.62	0.31	56.71	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	20.50	18.22	18.22	101.25	0.31	56.70	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	20.50	18.15	18.15	101.88	0.30	56.68	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	20.50	18.08	18.08	102.50	0.30	56.67	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	20.50	18.00	18.00	103.12	0.30	56.66	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	20.50	17.93	17.93	103.74	0.30	56.64	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	20.50	17.86	17.86	104.35	0.29	56.63	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	20.50	17.79	17.79	104.96	0.29	56.62	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.50	17.71	17.71	105.57	0.29	56.61	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
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Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.05	20.50	17.64	17.64	106.18	0.28	56.60	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	20.50	17.57	17.57	106.79	0.28	56.59	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	20.50	17.50	17.50	107.39	0.28	56.57	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	20.50	17.42	17.42	107.99	0.28	56.56	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	20.50	17.35	17.35	108.59	0.27	56.55	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	20.50	17.28	17.28	109.18	0.27	56.54	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	20.50	17.21	17.21	109.78	0.27	56.53	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	20.50	17.13	17.13	110.37	0.27	56.52	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	20.50	17.06	17.06	110.95	0.26	56.51	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	20.50	16.99	16.99	111.54	0.26	56.50	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.50	16.92	16.92	112.12	0.26	56.49	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	20.50	16.84	16.84	112.70	0.26	56.48	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	20.50	16.77	16.77	113.28	0.25	56.47	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.50	16.70	16.70	113.86	0.25	56.46	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	20.50	16.63	16.63	114.43	0.25	56.45	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	20.50	16.55	16.55	115.00	0.25	56.44	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	20.50	16.48	16.48	115.57	0.24	56.43	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	20.50	16.41	16.41	116.13	0.24	56.42	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	20.50	16.34	16.34	116.70	0.24	56.41	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	20.50	16.26	16.26	117.26	0.24	56.40	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	20.50	16.19	16.19	117.81	0.23	56.40	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	20.50	16.12	16.12	118.37	0.23	56.39	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	20.50	16.05	16.05	118.92	0.23	56.38	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.84	20.50	15.97	15.97	119.47	0.23	56.37	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	20.50	15.90	15.90	120.02	0.23	56.36	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.91	20.50	15.83	15.83	120.57	0.22	56.35	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	20.50	15.76	15.76	121.11	0.22	56.34	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	20.50	15.68	15.68	121.65	0.22	56.34	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	20.50	15.61	15.61	122.19	0.22	56.33	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	20.50	15.54	15.54	122.72	0.22	56.32	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	20.50	15.47	15.47	123.26	0.21	56.31	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	20.50	15.39	15.39	123.79	0.21	56.30	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	20.50	15.32	15.32	124.31	0.21	56.30	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	20.50	15.24	15.24	124.84	0.21	56.29	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	20.50	15.14	15.14	125.36	0.21	56.28	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	20.50	15.05	15.05	125.88	0.20	56.27	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.29	20.50	14.96	14.96	126.40	0.20	56.26	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	20.50	14.87	14.87	126.91	0.20	56.25	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.36	20.50	14.78	14.78	127.42	0.20	56.24	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	20.50	14.68	14.68	127.93	0.20	56.24	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	20.50	14.59	14.59	128.43	0.19	56.23	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	20.50	14.50	14.50	128.93	0.19	56.22	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	20.50	14.41	14.41	129.43	0.19	56.21	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.53	20.50	14.32	14.32	129.92	0.19	56.20	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	20.50	14.22	14.22	130.41	0.19	56.20	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	20.50	14.13	14.13	130.90	0.18	56.19	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	20.50	14.04	14.04	131.38	0.18	56.18	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.67	20.50	13.95	13.95	131.86	0.18	56.17	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.70	20.50	13.86	13.86	132.34	0.18	56.16	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.74	20.50	13.76	13.76	132.82	0.18	56.16	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.77	20.50	13.67	13.67	133.29	0.18	56.15	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.81	20.50	13.58	13.58	133.76	0.17	56.14	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	20.50	13.49	13.49	134.22	0.17	56.13	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.88	20.50	13.39	13.39	134.68	0.17	56.13	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.91	20.50	13.30	13.30	135.14	0.17	56.12	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	20.50	13.21	13.21	135.60	0.17	56.11	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	20.50	13.12	13.12	136.05	0.16	56.11	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	20.50	13.03	13.03	136.50	0.16	56.10	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.05	20.50	12.93	12.93	136.95	0.16	56.09	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	20.50	12.84	12.84	137.39	0.16	56.09	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.12	20.50	12.75	12.75	137.83	0.16	56.08	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.15	20.50	12.66	12.66	138.27	0.16	56.07	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.19	20.50	12.57	12.57	138.70	0.15	56.07	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.22	20.50	12.47	12.47	139.13	0.15	56.06	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	20.50	12.38	12.38	139.56	0.15	56.05	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.29	20.50	12.29	12.29	139.98	0.15	56.05	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	20.50	12.20	12.20	140.40	0.15	56.04	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	20.50	12.11	12.11	140.82	0.15	56.03	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	20.50	12.01	12.01	141.23	0.15	56.03	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	20.50	11.92	11.92	141.65	0.14	56.02	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	20.50	11.83	11.83	142.05	0.14	56.01	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	20.50	11.74	11.74	142.46	0.14	56.01	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.53	20.50	11.65	11.65	142.86	0.14	56.00	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.56	20.50	11.55	11.55	143.26	0.14	56.00	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.60	20.50	11.46	11.46	143.66	0.14	55.99	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.63	20.50	11.37	11.37	144.05	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.67	20.50	11.28	11.28	144.44	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.70	20.50	11.19	11.19	144.82	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.74	20.50	11.09	11.09	145.21	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.77	20.50	11.00	11.00	145.59	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.80	20.50	10.91	10.91	145.96	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	20.50	10.82	10.82	146.34	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	20.50	10.73	10.73	146.71	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	20.50	10.63	10.63	147.07	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	20.50	10.54	10.54	147.44	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.98	20.50	10.45	10.45	147.80	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.01	20.50	10.36	10.36	119.62	0.15	56.04	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.04	20.50	10.28	10.28	119.97	0.15	56.03	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.08	20.50	10.21	10.21	120.32	0.14	56.02	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.11	20.50	10.13	10.13	120.67	0.14	56.02	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.15	20.50	10.05	10.05	121.02	0.14	56.01	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.18	20.50	9.98	9.98	121.36	0.14	56.01	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.22	20.50	9.90	9.90	121.70	0.14	56.00	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.25	20.50	9.82	9.82	122.04	0.14	55.99	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.29	20.50	9.75	9.75	122.38	0.14	55.99	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.32	20.50	9.67	9.67	122.71	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.35	20.50	9.59	9.59	123.05	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.39	20.50	9.52	9.52	123.37	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.42	20.50	9.44	9.44	123.70	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.46	20.50	9.36	9.36	124.02	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.49	20.50	9.29	9.29	124.34	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.53	20.50	9.21	9.21	124.66	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.56	20.50	9.14	9.14	124.98	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.59	20.50	9.06	9.06	125.29	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.63	20.50	8.98	8.98	125.60	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.66	20.50	8.91	8.91	125.91	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.70	20.50	8.83	8.83	126.21	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.73	20.50	8.75	8.75	126.51	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	1	8.77	20.50	8.68	8.68	126.81	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.80	20.50	8.60	8.60	127.11	0.12	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.84	20.50	8.52	8.52	127.41	0.11	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.87	20.50	8.45	8.45	127.70	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.90	20.50	8.37	8.37	127.99	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.94	20.50	8.29	8.29	128.27	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	8.97	20.50	8.22	8.22	128.56	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.01	20.50	8.14	8.14	128.84	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.04	20.50	8.06	8.06	129.12	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.08	20.50	7.99	7.99	129.39	0.11	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.11	20.50	7.91	7.91	129.67	0.10	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.15	20.50	7.83	7.83	129.94	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.18	20.50	7.76	7.76	130.20	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.21	20.50	7.68	7.68	130.47	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.25	20.50	7.60	7.60	130.73	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.28	20.50	7.53	7.53	130.99	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.32	20.50	7.45	7.45	131.25	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.35	20.50	7.38	7.38	131.50	0.10	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.39	20.50	7.30	7.30	131.76	0.09	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.42	20.50	7.22	7.22	132.01	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.45	20.50	7.15	7.15	132.25	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.49	20.50	7.07	7.07	132.50	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.52	20.50	6.99	6.99	132.74	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.56	20.50	6.92	6.92	132.98	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.59	20.50	6.84	6.84	133.22	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.63	20.50	6.76	6.76	133.45	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.66	20.50	6.69	6.69	133.68	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.70	20.50	6.61	6.61	133.91	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.73	20.50	6.53	6.53	134.13	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.76	20.50	6.46	6.46	134.36	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.80	20.50	6.38	6.38	134.58	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.83	20.50	6.30	6.30	134.80	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.87	20.50	6.23	6.23	135.01	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.90	20.50	6.15	6.15	135.23	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.94	20.50	6.07	6.07	135.44	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	9.97	20.50	6.00	6.00	135.64	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.00	20.50	5.92	5.92	135.85	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.04	20.50	5.84	5.84	136.05	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.07	20.50	5.77	5.77	136.25	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.11	20.50	5.69	5.69	136.45	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.14	20.50	5.62	5.62	136.64	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.18	20.50	5.54	5.54	136.83	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.21	20.50	5.46	5.46	137.02	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.25	20.50	5.39	5.39	137.21	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.28	20.50	5.31	5.31	137.39	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.31	20.50	5.23	5.23	137.57	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.35	20.50	5.16	5.16	137.75	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.38	20.50	5.08	5.08	137.93	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.42	20.50	5.00	5.00	138.10	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.45	20.50	4.93	4.93	138.27	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.49	20.50	4.85	4.85	138.44	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.52	20.50	4.77	4.77	138.61	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.55	20.50	4.70	4.70	138.77	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.59	20.50	4.62	4.62	138.93	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	1	10.62	20.50	4.54	4.54	139.09	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.66	20.50	4.47	4.47	139.24	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.69	20.50	4.39	4.39	139.39	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.73	20.50	4.31	4.31	139.54	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.76	20.50	4.24	4.24	139.69	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.80	20.50	4.16	4.16	139.83	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.83	20.50	4.08	4.08	139.98	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.86	20.50	4.01	4.01	140.12	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.90	20.50	3.93	3.93	140.25	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.93	20.50	3.86	3.86	140.39	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	10.97	20.50	3.78	3.78	140.52	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.00	20.50	3.70	3.70	140.65	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.04	20.50	3.63	3.63	140.77	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.07	20.50	3.55	3.55	140.89	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.10	20.50	3.47	3.47	141.02	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.14	20.50	3.40	3.40	141.13	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.17	20.50	3.32	3.32	141.25	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.21	20.50	3.24	3.24	141.36	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.24	20.50	3.17	3.17	141.47	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.28	20.50	3.09	3.09	141.58	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.31	20.50	3.01	3.01	141.68	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.35	20.50	2.94	2.94	141.79	0.04	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.38	20.50	2.86	2.86	141.89	0.03	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.41	20.50	2.78	2.78	141.98	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.45	20.50	2.71	2.71	142.08	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.48	20.50	2.63	2.63	142.17	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.52	20.50	2.55	2.55	142.26	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.55	20.50	2.48	2.48	142.35	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.59	20.50	2.40	2.40	142.43	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.62	20.50	2.32	2.32	142.51	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.65	20.50	2.25	2.25	142.59	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.69	20.50	2.17	2.17	142.66	0.03	55.53	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	11.72	20.50	2.10	2.10	142.74	0.03	55.53	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+0.90D+E+0.90H	1	11.76	20.50	-2.08	2.08	90.51	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.79	20.50	-2.13	2.13	90.44	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.83	20.50	-2.18	2.18	90.37	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.86	20.50	-2.23	2.23	90.29	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.90	20.50	-2.28	2.28	90.21	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.93	20.50	-2.34	2.34	90.13	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.96	20.50	-2.39	2.39	90.05	0.05	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.00	20.50	-2.44	2.44	89.97	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.03	20.50	-2.49	2.49	89.88	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.07	20.50	-2.55	2.55	89.80	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.10	20.50	-2.60	2.60	89.71	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.14	20.50	-2.65	2.65	89.62	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.17	20.50	-2.70	2.70	89.53	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.20	20.50	-2.75	2.75	89.43	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.24	20.50	-2.81	2.81	89.34	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	12.27	20.50	-2.86	2.86	89.24	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.31	20.50	-2.91	2.91	89.14	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.34	20.50	-2.96	2.96	89.04	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.38	20.50	-3.01	3.01	88.94	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.41	20.50	-3.07	3.07	88.83	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.45	20.50	-3.12	3.12	88.73	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0

Concrete Beam

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+0.90D+E+0.90H	1	12.48	20.50	-3.17	3.17	88.62	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.51	20.50	-3.22	3.22	88.51	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.55	20.50	-3.27	3.27	88.40	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.58	20.50	-3.33	3.33	88.28	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.62	20.50	-3.38	3.38	88.17	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.65	20.50	-3.43	3.43	88.05	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.69	20.50	-3.48	3.48	87.93	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.72	20.50	-3.54	3.54	87.81	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.75	20.50	-3.59	3.59	87.69	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.79	20.50	-3.64	3.64	87.57	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.82	20.50	-3.69	3.69	87.44	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.86	20.50	-3.74	3.74	87.31	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	12.89	20.50	-3.80	3.80	87.18	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.93	20.50	-3.87	3.87	140.45	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.96	20.50	-3.94	3.94	140.32	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.00	20.50	-4.02	4.02	140.18	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.03	20.50	-4.10	4.10	140.04	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.06	20.50	-4.17	4.17	139.90	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.10	20.50	-4.25	4.25	139.75	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.13	20.50	-4.33	4.33	139.61	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.17	20.50	-4.40	4.40	139.46	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.20	20.50	-4.48	4.48	139.30	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.24	20.50	-4.56	4.56	139.15	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.27	20.50	-4.63	4.63	138.99	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.30	20.50	-4.71	4.71	138.83	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.34	20.50	-4.79	4.79	138.67	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.37	20.50	-4.86	4.86	138.50	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.41	20.50	-4.94	4.94	138.33	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.44	20.50	-5.02	5.02	138.16	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.48	20.50	-5.09	5.09	137.99	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.51	20.50	-5.17	5.17	137.81	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.55	20.50	-5.25	5.25	137.63	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.58	20.50	-5.32	5.32	137.45	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.61	20.50	-5.40	5.40	137.27	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.65	20.50	-5.47	5.47	137.08	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.68	20.50	-5.55	5.55	136.89	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.72	20.50	-5.63	5.63	136.70	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.75	20.50	-5.70	5.70	136.50	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.79	20.50	-5.78	5.78	136.31	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.82	20.50	-5.86	5.86	136.11	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.86	20.50	-5.93	5.93	135.90	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.89	20.50	-6.01	6.01	135.70	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.92	20.50	-6.09	6.09	135.49	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.96	20.50	-6.16	6.16	135.28	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.99	20.50	-6.24	6.24	135.07	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.03	20.50	-6.32	6.32	134.85	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.06	20.50	-6.39	6.39	134.63	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.10	20.50	-6.47	6.47	134.41	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.13	20.50	-6.55	6.55	134.19	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.16	20.50	-6.62	6.62	133.96	0.08	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.20	20.50	-6.70	6.70	133.73	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.23	20.50	-6.78	6.78	133.50	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.27	20.50	-6.85	6.85	133.27	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.30	20.50	-6.93	6.93	133.03	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	14.34	20.50	-7.01	7.01	132.79	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.37	20.50	-7.08	7.08	132.55	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.41	20.50	-7.16	7.16	132.30	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.44	20.50	-7.23	7.23	132.05	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.47	20.50	-7.31	7.31	131.80	0.09	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.51	20.50	-7.39	7.39	131.55	0.10	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.54	20.50	-7.46	7.46	131.30	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.58	20.50	-7.54	7.54	131.04	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.61	20.50	-7.62	7.62	130.78	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.65	20.50	-7.69	7.69	130.52	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.68	20.50	-7.77	7.77	130.25	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.71	20.50	-7.85	7.85	129.98	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.75	20.50	-7.92	7.92	129.71	0.10	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.78	20.50	-8.00	8.00	129.44	0.11	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.82	20.50	-8.08	8.08	129.16	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.85	20.50	-8.15	8.15	128.88	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.89	20.50	-36.56	36.56	155.77	0.40	57.08	PhiVc/2 < Vu <=	Min 11.5.6	84.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.92	20.50	-36.66	36.66	154.51	0.41	57.10	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.96	20.50	-36.75	36.75	153.25	0.41	57.12	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.99	20.50	-36.84	36.84	151.99	0.41	57.13	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.02	20.50	-36.93	36.93	150.72	0.42	57.15	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.06	20.50	-37.02	37.02	149.45	0.42	57.17	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.09	20.50	-37.12	37.12	148.17	0.43	57.19	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.13	20.50	-37.21	37.21	146.90	0.43	57.21	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.16	20.50	-37.30	37.30	145.62	0.44	57.23	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.20	20.50	-37.39	37.39	144.33	0.44	57.25	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.23	20.50	-37.48	37.48	143.04	0.45	57.27	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.26	20.50	-37.58	37.58	141.75	0.45	57.29	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.30	20.50	-37.67	37.67	140.46	0.46	57.32	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.33	20.50	-37.76	37.76	139.16	0.46	57.34	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.37	20.50	-37.79	37.79	137.87	0.47	57.36	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.40	20.50	-37.82	37.82	136.57	0.47	57.38	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.44	20.50	-37.85	37.85	135.27	0.48	57.40	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.47	20.50	-37.88	37.88	133.96	0.48	57.42	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.51	20.50	-37.91	37.91	132.66	0.49	57.44	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.54	20.50	-37.94	37.94	131.36	0.49	57.46	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.57	20.50	-37.97	37.97	130.05	0.50	57.48	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.61	20.50	-38.00	38.00	128.75	0.50	57.51	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.64	20.50	-38.03	38.03	127.44	0.51	57.53	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.68	20.50	-38.06	38.06	126.13	0.52	57.55	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.71	20.50	-38.09	38.09	124.82	0.52	57.58	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.75	20.50	-38.12	38.12	123.51	0.53	57.60	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.78	20.50	-38.15	38.15	122.20	0.53	57.63	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.81	20.50	-38.18	38.18	120.89	0.54	57.65	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.85	20.50	-38.21	38.21	119.58	0.55	57.68	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.88	20.50	-38.24	38.24	118.26	0.55	57.71	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.92	20.50	-38.27	38.27	116.95	0.56	57.73	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.95	20.50	-38.30	38.30	115.63	0.57	57.76	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.99	20.50	-38.33	38.33	114.31	0.57	57.79	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.02	20.50	-38.36	38.36	113.00	0.58	57.82	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.06	20.50	-38.39	38.39	111.68	0.59	57.85	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.09	20.50	-38.42	38.42	110.36	0.59	57.88	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.12	20.50	-38.45	38.45	109.04	0.60	57.91	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.16	20.50	-38.48	38.48	107.71	0.61	57.94	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0

Concrete Beam

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	16.19	20.50	-38.51	38.51	106.39	0.62	57.98	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.23	20.50	-38.54	38.54	105.06	0.63	58.01	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.26	20.50	-38.57	38.57	103.74	0.64	58.05	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.30	20.50	-38.60	38.60	102.41	0.64	58.08	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.33	20.50	-38.63	38.63	101.09	0.65	58.12	PhiVc/2 < Vu <=	Min 11.5.6	85.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.36	20.50	-38.66	38.66	99.76	0.66	58.16	PhiVc/2 < Vu <=	Min 11.5.6	85.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.40	20.50	-38.69	38.69	98.43	0.67	58.20	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.43	20.50	-38.72	38.72	97.10	0.68	58.24	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.47	20.50	-38.75	38.75	95.77	0.69	58.28	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.50	20.50	-38.78	38.78	94.43	0.70	58.32	PhiVc/2 < Vu <=	Min 11.5.6	85.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.54	20.50	-38.81	38.81	93.10	0.71	58.36	PhiVc/2 < Vu <=	Min 11.5.6	85.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.57	20.50	-38.84	38.84	91.76	0.72	58.41	PhiVc/2 < Vu <=	Min 11.5.6	85.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.61	20.50	-38.87	38.87	90.43	0.73	58.46	PhiVc/2 < Vu <=	Min 11.5.6	85.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.64	20.50	-38.90	38.90	89.09	0.75	58.50	PhiVc/2 < Vu <=	Min 11.5.6	85.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.67	20.50	-38.93	38.93	87.75	0.76	58.55	PhiVc/2 < Vu <=	Min 11.5.6	85.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.71	20.50	-38.96	38.96	86.42	0.77	58.60	PhiVc/2 < Vu <=	Min 11.5.6	85.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.74	20.50	-38.99	38.99	85.08	0.78	58.66	PhiVc/2 < Vu <=	Min 11.5.6	85.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.78	20.50	-39.02	39.02	83.74	0.80	58.71	PhiVc/2 < Vu <=	Min 11.5.6	85.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.81	20.50	-39.05	39.05	82.39	0.81	58.77	PhiVc/2 < Vu <=	Min 11.5.6	85.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.85	20.50	-39.08	39.08	81.05	0.82	58.82	PhiVc/2 < Vu <=	Min 11.5.6	85.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.88	20.50	-39.11	39.11	79.71	0.84	58.88	PhiVc/2 < Vu <=	Min 11.5.6	85.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.91	20.50	-39.14	39.14	78.36	0.85	58.95	PhiVc/2 < Vu <=	Min 11.5.6	86.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.95	20.50	-39.17	39.17	77.02	0.87	59.01	PhiVc/2 < Vu <=	Min 11.5.6	86.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.98	20.50	-39.19	39.19	75.67	0.88	59.08	PhiVc/2 < Vu <=	Min 11.5.6	86.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.02	20.50	-39.22	39.22	74.32	0.90	59.15	PhiVc/2 < Vu <=	Min 11.5.6	86.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.05	20.50	-39.25	39.25	72.97	0.92	59.22	PhiVc/2 < Vu <=	Min 11.5.6	86.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.09	20.50	-39.28	39.28	71.62	0.94	59.29	PhiVc/2 < Vu <=	Min 11.5.6	86.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.12	20.50	-39.31	39.31	70.27	0.96	59.37	PhiVc/2 < Vu <=	Min 11.5.6	86.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.16	20.50	-39.34	39.34	68.92	0.98	59.45	PhiVc/2 < Vu <=	Min 11.5.6	86.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.19	20.50	-39.37	39.37	67.56	1.00	59.53	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.22	20.50	-39.40	39.40	66.21	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.26	20.50	-39.43	39.43	64.86	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.29	20.50	-39.46	39.46	63.50	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.33	20.50	-39.49	39.49	62.14	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.36	20.50	-39.52	39.52	60.78	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.40	20.50	-39.55	39.55	59.42	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.43	20.50	-39.58	39.58	58.06	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.46	20.50	-39.61	39.61	56.70	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.50	20.50	-39.64	39.64	55.34	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.53	20.50	-39.67	39.67	53.98	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.57	20.50	-39.70	39.70	52.61	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.60	20.50	-39.73	39.73	51.25	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.64	20.50	-39.76	39.76	49.88	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.67	20.50	-39.79	39.79	48.51	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.71	20.50	-39.82	39.82	47.14	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.74	20.50	-39.85	39.85	45.77	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.77	20.50	-39.88	39.88	44.40	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.81	20.50	-39.91	39.91	43.03	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.84	20.50	-39.94	39.94	41.66	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.88	20.50	-39.97	39.97	40.29	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.91	20.50	-40.00	40.00	38.91	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.95	20.50	-40.03	40.03	37.54	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.98	20.50	-40.06	40.06	36.16	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.02	20.50	-40.09	40.09	34.78	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0

Concrete Beam

Description : GB-T (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	18.05	20.50	-40.12	40.12	33.40	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.08	20.50	-40.15	40.15	32.02	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.12	20.50	-40.18	40.18	30.64	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.15	20.50	-40.21	40.21	29.26	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.19	20.50	-40.24	40.24	27.88	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.22	20.50	-40.27	40.27	26.49	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.26	20.50	-40.30	40.30	25.11	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.29	20.50	-40.33	40.33	23.72	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.32	20.50	-40.36	40.36	22.33	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.36	20.50	-40.39	40.39	20.95	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.39	20.50	-40.42	40.42	19.56	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.43	20.50	-40.45	40.45	18.17	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.46	20.50	-40.48	40.48	16.77	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.50	20.50	-40.51	40.51	15.38	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.53	20.50	-40.54	40.54	13.99	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.57	20.50	-40.57	40.57	12.59	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.60	20.50	-40.60	40.60	11.20	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.63	20.50	-40.63	40.63	9.80	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.67	20.50	-40.66	40.66	8.41	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.70	20.50	-40.69	40.69	7.01	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.74	20.50	-40.72	40.72	5.61	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.77	20.50	-40.75	40.75	4.21	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.81	20.50	-40.78	40.78	2.81	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.84	20.50	-40.81	40.81	1.40	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.87	20.50	-40.84	40.84	0.00	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	18.875	168.20	203.18	0.83
+1.40D+1.60H					
Span # 1	1	18.875	146.05	203.18	0.72
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	18.875	168.20	203.18	0.83
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	18.875	168.20	203.18	0.83
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	18.875	131.79	203.18	0.65
+1.20D+1.60Lr-0.50W+1.60H					
Span # 1	1	18.875	131.79	203.18	0.65
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	18.875	131.79	203.18	0.65
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	18.875	131.79	203.18	0.65
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+0.50Lr+0.50L-W+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+0.50L+0.50S-W+1.60H					
Span # 1	1	18.875	143.16	203.18	0.70
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	18.875	143.81	203.18	0.71
+1.20D+0.50L+0.70S-E+1.60H					
Span # 1	1	18.875	143.72	203.18	0.71

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-T (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+0.90D+W+0.90H					
Span # 1	1	18.875	90.25	203.18	0.44
+0.90D-W+0.90H					
Span # 1	1	18.875	90.25	203.18	0.44
+0.90D+E+0.90H					
Span # 1	1	18.875	91.94	203.18	0.45
+0.90D-E+0.90H					
Span # 1	1	18.875	90.35	203.18	0.44

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0805	10.056		0.0000	0.000

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and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

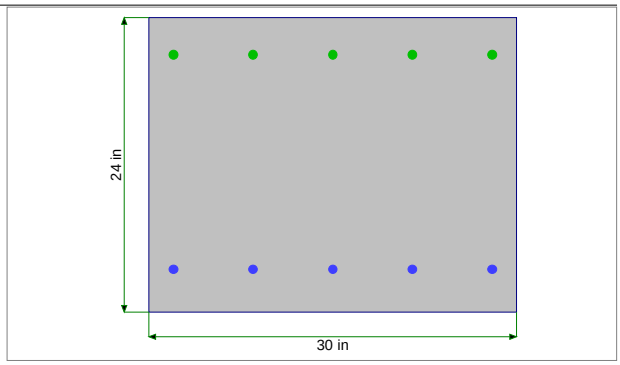
Description : GB-U (OPPOSTIE)

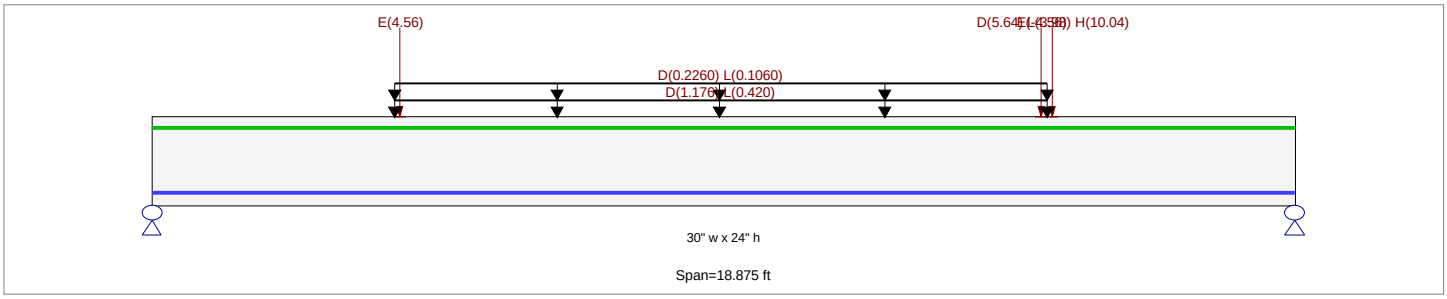
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 30.0 in, Height = 24.0 in
Span #1 Reinforcing....
5-#6 at 3.50 in from Bottom, from 0.0 to 18.875 ft in this span
5-#6 at 3.0 in from Top, from 0.0 to 18.875 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.0 -->> 14.792 ft, Tributary Width = 10.50 ft
Partial Length Uniform Load : D = 0.2260, L = 0.1060 k/ft, Extent = 4.0 -->> 14.792 ft
Point Load : E = 4.560 k @ 4.104 ft
Point Load : E = -4.560 k @ 14.688 ft, (SEISMIC OTM)
Point Load : D = 5.640, L = 3.980, H = 10.040 k @ 14.875 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.957** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.016 in	Ratio =	13884 >=36
Mu : Applied		194.490 k-ft	Max Upward Transient Deflection	-0.001 in	Ratio =	171125 >=36
Mn * Phi : Allowable		203.177 k-ft	Max Downward Total Deflection	0.140 in	Ratio =	1623 >=24
Location of maximum on span		11.242 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 1				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	21.877	32.694
Overall MINimum	2.128	-2.557
+D+H	17.764	26.731
+D+L+H	21.458	32.694
+D+Lr+H	17.764	26.731
+D+S+H	17.764	26.731
+D+0.750Lr+0.750L+H	20.534	31.203
+D+0.750L+0.750S+H	20.534	31.203
+D+0.60W+H	17.764	26.731

Title Block Line 1
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using the "Settings" menu item
and then using the "Printing &
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Title Block Line 6

Project Title:
Engineer:
Project Descr:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-U (OPPOSTIE)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.70E+H	19.553	24.941
+D+0.750Lr+0.750L+0.450W+H	20.534	31.203
+D+0.750L+0.750S+0.450W+H	20.534	31.203
+D+0.750L+0.750S+0.5250E+H	21.877	29.861
+0.60D+0.60W+0.60H	10.658	16.039
+0.60D+0.70E+0.60H	12.448	14.249
D Only	15.636	18.819
Lr Only		
L Only	3.694	5.962
S Only		
W Only		
E Only	2.557	-2.557
H Only	2.128	7.912

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.50	28.08	28.08	0.00	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	20.50	28.05	28.05	0.96	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	20.50	28.02	28.02	1.93	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.50	27.99	27.99	2.89	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	20.50	27.96	27.96	3.85	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	20.50	27.93	27.93	4.81	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.21	20.50	27.90	27.90	5.77	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.24	20.50	27.87	27.87	6.73	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.28	20.50	27.84	27.84	7.69	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	20.50	27.81	27.81	8.65	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	20.50	27.78	27.78	9.60	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	20.50	27.75	27.75	10.56	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	20.50	27.72	27.72	11.51	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	20.50	27.69	27.69	12.46	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.50	27.66	27.66	13.41	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	20.50	27.63	27.63	14.36	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	20.50	27.60	27.60	15.31	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	20.50	27.57	27.57	16.26	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.62	20.50	27.54	27.54	17.21	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.65	20.50	27.51	27.51	18.16	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	20.50	27.48	27.48	19.10	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	20.50	27.45	27.45	20.05	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	20.50	27.42	27.42	20.99	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	20.50	27.39	27.39	21.93	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	20.50	27.36	27.36	22.87	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	20.50	27.33	27.33	23.81	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	20.50	27.30	27.30	24.75	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	20.50	27.27	27.27	25.69	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	20.50	27.24	27.24	26.63	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	20.50	27.21	27.21	27.56	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.03	20.50	27.18	27.18	28.50	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	20.50	27.15	27.15	29.43	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.10	20.50	27.12	27.12	30.36	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	20.50	27.09	27.09	31.30	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	20.50	27.06	27.06	32.23	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	20.50	27.03	27.03	33.16	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	20.50	27.00	27.00	34.09	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	20.50	26.97	26.97	35.01	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.31	20.50	26.94	26.94	35.94	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.34	20.50	26.91	26.91	36.87	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	20.50	26.88	26.88	37.79	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	20.50	26.85	26.85	38.71	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.44	20.50	26.82	26.82	39.64	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	20.50	26.79	26.79	40.56	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.51	20.50	26.76	26.76	41.48	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	20.50	26.73	26.73	42.40	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	20.50	26.70	26.70	43.32	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	20.50	26.67	26.67	44.24	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	20.50	26.64	26.64	45.15	1.00	59.55	Vu < PhiVc/2	Not Reqd 1	59.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	20.50	26.61	26.61	46.07	0.99	59.50	Vu < PhiVc/2	Not Reqd 1	59.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	20.50	26.58	26.58	46.98	0.97	59.41	Vu < PhiVc/2	Not Reqd 1	59.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	20.50	26.55	26.55	47.90	0.95	59.33	Vu < PhiVc/2	Not Reqd 1	59.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	20.50	26.52	26.52	48.81	0.93	59.26	Vu < PhiVc/2	Not Reqd 1	59.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	20.50	26.49	26.49	49.72	0.91	59.18	Vu < PhiVc/2	Not Reqd 1	59.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	20.50	26.46	26.46	50.63	0.89	59.11	Vu < PhiVc/2	Not Reqd 1	59.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	20.50	26.43	26.43	51.54	0.88	59.04	Vu < PhiVc/2	Not Reqd 1	59.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	20.50	26.40	26.40	52.45	0.86	58.97	Vu < PhiVc/2	Not Reqd 1	59.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.96	20.50	26.37	26.37	53.35	0.84	58.91	Vu < PhiVc/2	Not Reqd 1	58.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	20.50	26.34	26.34	54.26	0.83	58.85	Vu < PhiVc/2	Not Reqd 1	58.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	20.50	26.31	26.31	55.17	0.81	58.79	Vu < PhiVc/2	Not Reqd 1	58.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	20.50	26.28	26.28	56.07	0.80	58.73	Vu < PhiVc/2	Not Reqd 1	58.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	20.50	26.25	26.25	56.97	0.79	58.67	Vu < PhiVc/2	Not Reqd 1	58.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	20.50	26.22	26.22	57.87	0.77	58.62	Vu < PhiVc/2	Not Reqd 1	58.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	20.50	26.19	26.19	58.78	0.76	58.57	Vu < PhiVc/2	Not Reqd 1	58.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	20.50	26.16	26.16	59.68	0.75	58.52	Vu < PhiVc/2	Not Reqd 1	58.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	20.50	26.13	26.13	60.57	0.74	58.47	Vu < PhiVc/2	Not Reqd 1	58.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	20.50	26.10	26.10	61.47	0.73	58.42	Vu < PhiVc/2	Not Reqd 1	58.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	20.50	26.07	26.07	62.37	0.71	58.37	Vu < PhiVc/2	Not Reqd 1	58.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	20.50	26.04	26.04	63.27	0.70	58.33	Vu < PhiVc/2	Not Reqd 1	58.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.37	20.50	26.01	26.01	64.16	0.69	58.28	Vu < PhiVc/2	Not Reqd 1	58.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.50	25.98	25.98	65.05	0.68	58.24	Vu < PhiVc/2	Not Reqd 1	58.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.44	20.50	25.95	25.95	65.95	0.67	58.20	Vu < PhiVc/2	Not Reqd 1	58.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	20.50	25.92	25.92	66.84	0.66	58.16	Vu < PhiVc/2	Not Reqd 1	58.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.50	25.89	25.89	67.73	0.65	58.12	Vu < PhiVc/2	Not Reqd 1	58.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	20.50	25.86	25.86	68.62	0.64	58.08	Vu < PhiVc/2	Not Reqd 1	58.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	20.50	25.83	25.83	69.51	0.63	58.05	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.50	25.80	25.80	70.40	0.63	58.01	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	20.50	25.77	25.77	71.28	0.62	57.97	Vu < PhiVc/2	Not Reqd 1	58.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	20.50	25.75	25.75	72.17	0.61	57.94	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	20.50	25.72	25.72	73.05	0.60	57.91	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	20.50	25.69	25.69	73.94	0.59	57.87	Vu < PhiVc/2	Not Reqd 1	57.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	20.50	25.66	25.66	74.82	0.59	57.84	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.82	20.50	25.63	25.63	75.70	0.58	57.81	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	20.50	25.60	25.60	76.58	0.57	57.78	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.50	25.57	25.57	77.46	0.56	57.75	Vu < PhiVc/2	Not Reqd 1	57.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	20.50	25.54	25.54	78.34	0.56	57.72	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	20.50	25.51	25.51	79.22	0.55	57.70	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.50	25.48	25.48	80.09	0.54	57.67	Vu < PhiVc/2	Not Reqd 1	57.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	20.50	25.45	25.45	80.97	0.54	57.64	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	20.50	25.42	25.42	81.84	0.53	57.62	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	20.50	25.39	25.39	82.72	0.52	57.59	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	20.50	25.36	25.36	83.59	0.52	57.56	Vu < PhiVc/2	Not Reqd 1	57.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	20.50	25.33	25.33	84.46	0.51	57.54	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.20	20.50	25.30	25.30	85.33	0.51	57.52	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.23	20.50	25.27	25.27	86.20	0.50	57.49	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	20.50	25.24	25.24	87.07	0.50	57.47	Vu < PhiVc/2	Not Reqd 1	57.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	20.50	25.21	25.21	87.93	0.49	57.45	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	20.50	25.18	25.18	88.80	0.48	57.42	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	20.50	25.15	25.15	89.67	0.48	57.40	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	20.50	25.12	25.12	90.53	0.47	57.38	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	20.50	25.09	25.09	91.39	0.47	57.36	Vu < PhiVc/2	Not Reqd 1	57.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	20.50	25.06	25.06	92.25	0.46	57.34	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	20.50	25.03	25.03	93.12	0.46	57.32	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	20.50	25.00	25.00	93.98	0.45	57.30	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.58	20.50	24.97	24.97	94.83	0.45	57.28	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	20.50	24.94	24.94	95.69	0.45	57.26	Vu < PhiVc/2	Not Reqd 1	57.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.64	20.50	24.91	24.91	96.55	0.44	57.24	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.68	20.50	24.88	24.88	97.40	0.44	57.23	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	20.50	24.85	24.85	98.26	0.43	57.21	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.75	20.50	24.82	24.82	99.11	0.43	57.19	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.78	20.50	24.79	24.79	99.97	0.42	57.17	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.82	20.50	24.76	24.76	100.82	0.42	57.16	Vu < PhiVc/2	Not Reqd 1	57.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.85	20.50	24.73	24.73	101.67	0.42	57.14	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	20.50	24.70	24.70	102.52	0.41	57.12	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.92	20.50	24.67	24.67	103.37	0.41	57.11	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.95	20.50	24.64	24.64	104.21	0.40	57.09	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.99	20.50	24.61	24.61	105.06	0.40	57.08	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	20.50	24.52	24.52	105.91	0.40	57.06	Vu < PhiVc/2	Not Reqd 1	57.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	20.50	24.40	24.40	106.75	0.39	57.04	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.09	20.50	24.29	24.29	107.58	0.39	57.02	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	20.50	24.17	24.17	108.42	0.38	57.00	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	20.50	24.05	24.05	109.25	0.38	56.98	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	20.50	23.94	23.94	110.07	0.37	56.96	Vu < PhiVc/2	Not Reqd 1	57.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	20.50	23.82	23.82	110.89	0.37	56.94	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.26	20.50	23.70	23.70	111.71	0.36	56.92	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	20.50	23.59	23.59	112.52	0.36	56.90	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	20.50	23.47	23.47	113.33	0.35	56.89	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	20.50	23.35	23.35	114.14	0.35	56.87	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	20.50	23.24	23.24	114.94	0.35	56.85	Vu < PhiVc/2	Not Reqd 1	56.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	20.50	23.12	23.12	115.73	0.34	56.83	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	20.50	23.00	23.00	116.53	0.34	56.82	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	20.50	22.89	22.89	117.32	0.33	56.80	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	20.50	22.77	22.77	118.10	0.33	56.79	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	20.50	22.65	22.65	118.88	0.33	56.77	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.61	20.50	22.54	22.54	119.66	0.32	56.75	Vu < PhiVc/2	Not Reqd 1	56.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	20.50	22.42	22.42	120.43	0.32	56.74	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.68	20.50	22.30	22.30	121.20	0.31	56.72	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	20.50	22.19	22.19	121.97	0.31	56.71	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	20.50	22.07	22.07	122.73	0.31	56.69	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	20.50	21.95	21.95	123.48	0.30	56.68	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	20.50	21.84	21.84	124.24	0.30	56.67	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	20.50	21.72	21.72	124.98	0.30	56.65	Vu < PhiVc/2	Not Reqd 1	56.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	20.50	21.60	21.60	125.73	0.29	56.64	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	20.50	21.49	21.49	126.47	0.29	56.62	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	20.50	21.37	21.37	127.21	0.29	56.61	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	20.50	21.25	21.25	127.94	0.28	56.60	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.50	21.14	21.14	128.67	0.28	56.58	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.05	20.50	21.02	21.02	129.39	0.28	56.57	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	20.50	20.90	20.90	130.11	0.27	56.56	Vu < PhiVc/2	Not Reqd 1	56.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	20.50	20.79	20.79	130.83	0.27	56.55	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	20.50	20.67	20.67	131.54	0.27	56.53	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	20.50	20.55	20.55	132.25	0.27	56.52	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	20.50	20.44	20.44	132.96	0.26	56.51	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	20.50	20.32	20.32	133.66	0.26	56.50	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	20.50	20.20	20.20	134.35	0.26	56.49	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	20.50	20.09	20.09	135.05	0.25	56.48	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	20.50	19.97	19.97	135.73	0.25	56.46	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.50	19.85	19.85	136.42	0.25	56.45	Vu < PhiVc/2	Not Reqd 1	56.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	20.50	19.74	19.74	137.10	0.25	56.44	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.47	20.50	19.62	19.62	137.78	0.24	56.43	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.50	19.50	19.50	138.45	0.24	56.42	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.54	20.50	19.39	19.39	139.12	0.24	56.41	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	20.50	19.27	19.27	139.78	0.24	56.40	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	20.50	19.15	19.15	140.44	0.23	56.39	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	20.50	19.04	19.04	141.10	0.23	56.38	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	20.50	18.92	18.92	141.75	0.23	56.37	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	20.50	18.80	18.80	142.40	0.23	56.36	Vu < PhiVc/2	Not Reqd 1	56.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.74	20.50	18.69	18.69	143.04	0.22	56.35	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	20.50	18.57	18.57	143.69	0.22	56.34	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	20.50	18.45	18.45	144.32	0.22	56.33	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.84	20.50	18.34	18.34	144.95	0.22	56.32	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	20.50	18.22	18.22	145.58	0.21	56.31	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.91	20.50	18.10	18.10	146.21	0.21	56.30	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	20.50	17.99	17.99	146.83	0.21	56.29	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	20.50	17.87	17.87	147.44	0.21	56.28	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	20.50	17.75	17.75	148.06	0.20	56.27	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	20.50	17.64	17.64	148.66	0.20	56.26	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	20.50	17.52	17.52	149.27	0.20	56.25	Vu < PhiVc/2	Not Reqd 1	56.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	20.50	17.40	17.40	149.87	0.20	56.25	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	20.50	17.29	17.29	150.47	0.20	56.24	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	20.50	17.17	17.17	151.06	0.19	56.23	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	20.50	17.05	17.05	151.65	0.19	56.22	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	20.50	16.94	16.94	152.23	0.19	56.21	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.29	20.50	16.82	16.82	152.81	0.19	56.20	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	20.50	16.70	16.70	153.39	0.19	56.19	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.36	20.50	16.59	16.59	153.96	0.18	56.19	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	20.50	16.47	16.47	154.53	0.18	56.18	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	20.50	16.35	16.35	155.09	0.18	56.17	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	20.50	16.24	16.24	155.65	0.18	56.16	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	20.50	16.12	16.12	156.21	0.18	56.15	Vu < PhiVc/2	Not Reqd 1	56.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.53	20.50	16.00	16.00	156.76	0.17	56.15	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	20.50	15.89	15.89	157.31	0.17	56.14	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	20.50	15.77	15.77	157.85	0.17	56.13	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	20.50	15.65	15.65	158.39	0.17	56.12	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.67	20.50	15.54	15.54	158.93	0.17	56.12	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.70	20.50	15.42	15.42	159.46	0.17	56.11	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.74	20.50	15.30	15.30	159.99	0.16	56.10	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.77	20.50	15.19	15.19	160.51	0.16	56.09	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.81	20.50	15.07	15.07	161.03	0.16	56.09	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	20.50	14.95	14.95	161.55	0.16	56.08	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.88	20.50	14.84	14.84	162.06	0.16	56.07	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.91	20.50	14.72	14.72	162.57	0.15	56.06	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	20.50	14.60	14.60	163.07	0.15	56.06	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	20.50	14.49	14.49	163.57	0.15	56.05	Vu < PhiVc/2	Not Reqd 1	56.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	20.50	14.37	14.37	164.07	0.15	56.04	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.05	20.50	14.25	14.25	164.56	0.15	56.04	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	20.50	14.14	14.14	165.05	0.15	56.03	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.12	20.50	14.02	14.02	165.53	0.14	56.02	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.15	20.50	13.90	13.90	166.01	0.14	56.02	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.19	20.50	13.79	13.79	166.49	0.14	56.01	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.22	20.50	13.67	13.67	166.96	0.14	56.00	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	20.50	13.55	13.55	167.43	0.14	56.00	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.29	20.50	13.44	13.44	167.89	0.14	55.99	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	20.50	13.32	13.32	168.35	0.14	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	20.50	13.20	13.20	168.81	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	20.50	13.09	13.09	169.26	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	20.50	12.97	12.97	169.71	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	20.50	12.85	12.85	170.15	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	20.50	12.74	12.74	170.59	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.53	20.50	12.62	12.62	171.03	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.56	20.50	12.50	12.50	171.46	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.60	20.50	12.39	12.39	171.89	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.63	20.50	12.27	12.27	172.31	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.67	20.50	12.15	12.15	172.73	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.70	20.50	12.04	12.04	173.15	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.74	20.50	11.92	11.92	173.56	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.77	20.50	11.80	11.80	173.97	0.12	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.80	20.50	11.69	11.69	174.37	0.11	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	20.50	11.57	11.57	174.77	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	20.50	11.45	11.45	175.17	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	20.50	11.34	11.34	175.56	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	20.50	11.22	11.22	175.95	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.98	20.50	11.10	11.10	176.33	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.01	20.50	10.99	10.99	176.71	0.11	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.05	20.50	10.87	10.87	177.09	0.10	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.08	20.50	10.75	10.75	177.46	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.11	20.50	10.64	10.64	177.83	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.15	20.50	10.52	10.52	178.19	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.18	20.50	10.40	10.40	178.55	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.22	20.50	10.29	10.29	178.90	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.25	20.50	10.17	10.17	179.26	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.29	20.50	10.05	10.05	179.60	0.10	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.32	20.50	9.94	9.94	179.95	0.09	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.35	20.50	9.82	9.82	180.29	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.39	20.50	9.70	9.70	180.62	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.42	20.50	9.59	9.59	180.95	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.46	20.50	9.47	9.47	181.28	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.49	20.50	9.35	9.35	181.61	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.53	20.50	9.24	9.24	181.92	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.56	20.50	9.12	9.12	182.24	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.60	20.50	9.00	9.00	182.55	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.63	20.50	8.89	8.89	182.86	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.66	20.50	8.77	8.77	183.16	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.70	20.50	8.65	8.65	183.46	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.73	20.50	8.54	8.54	183.76	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0

Concrete Beam

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	8.77	20.50	8.42	8.42	184.05	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.80	20.50	8.30	8.30	184.34	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.84	20.50	8.19	8.19	184.62	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.87	20.50	8.07	8.07	184.90	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.90	20.50	7.95	7.95	185.17	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.94	20.50	7.84	7.84	185.45	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.97	20.50	7.72	7.72	185.71	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.01	20.50	7.60	7.60	185.98	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.04	20.50	7.49	7.49	186.24	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.08	20.50	7.37	7.37	186.49	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.11	20.50	7.25	7.25	186.74	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.15	20.50	7.14	7.14	186.99	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.18	20.50	7.02	7.02	187.23	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.21	20.50	6.90	6.90	187.47	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.25	20.50	6.79	6.79	187.71	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.28	20.50	6.67	6.67	187.94	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.32	20.50	6.55	6.55	188.17	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.35	20.50	6.43	6.43	188.39	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.39	20.50	6.32	6.32	188.61	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.42	20.50	6.20	6.20	188.82	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.45	20.50	6.08	6.08	189.04	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.49	20.50	5.97	5.97	189.24	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.52	20.50	5.85	5.85	189.45	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.56	20.50	5.73	5.73	189.65	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.59	20.50	5.62	5.62	189.84	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.63	20.50	5.50	5.50	190.03	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.66	20.50	5.38	5.38	190.22	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.70	20.50	5.27	5.27	190.40	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.73	20.50	5.15	5.15	190.58	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.76	20.50	5.03	5.03	190.76	0.05	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.80	20.50	4.92	4.92	190.93	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.83	20.50	4.80	4.80	191.09	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.87	20.50	4.68	4.68	191.26	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.90	20.50	4.57	4.57	191.42	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.94	20.50	4.45	4.45	191.57	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.97	20.50	4.33	4.33	191.72	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.00	20.50	4.22	4.22	191.87	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.04	20.50	4.10	4.10	192.01	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.07	20.50	3.98	3.98	192.15	0.04	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.11	20.50	3.87	3.87	192.29	0.03	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.14	20.50	3.75	3.75	192.42	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.18	20.50	3.63	3.63	192.54	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.21	20.50	3.52	3.52	192.67	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.25	20.50	3.40	3.40	192.79	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.28	20.50	3.28	3.28	192.90	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.31	20.50	3.17	3.17	193.01	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.35	20.50	3.05	3.05	193.12	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.38	20.50	2.93	2.93	193.22	0.03	55.53	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.42	20.50	2.82	2.82	193.32	0.02	55.53	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.45	20.50	2.70	2.70	193.42	0.02	55.53	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.49	20.50	2.58	2.58	193.51	0.02	55.52	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.52	20.50	2.47	2.47	193.59	0.02	55.52	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.55	20.50	2.35	2.35	193.68	0.02	55.51	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.59	20.50	2.23	2.23	193.75	0.02	55.51	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	10.62	20.50	2.12	2.12	193.83	0.02	55.50	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.66	20.50	2.00	2.00	193.90	0.02	55.50	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.69	20.50	1.88	1.88	193.97	0.02	55.50	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.73	20.50	1.77	1.77	194.03	0.02	55.49	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.76	20.50	1.65	1.65	194.09	0.01	55.49	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+0.90D+E+0.90H	1	10.80	20.50	-1.63	1.63	102.52	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+0.90D+E+0.90H	1	10.83	20.50	-1.70	1.70	102.47	0.03	55.54	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+0.90D+E+0.90H	1	10.86	20.50	-1.77	1.77	102.41	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.5	0.0	0.0
+0.90D+E+0.90H	1	10.90	20.50	-1.83	1.83	102.35	0.03	55.55	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	10.93	20.50	-1.90	1.90	102.28	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	10.97	20.50	-1.96	1.96	102.21	0.03	55.56	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.00	20.50	-2.03	2.03	102.15	0.03	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.04	20.50	-2.10	2.10	102.08	0.04	55.57	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.07	20.50	-2.16	2.16	102.00	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.10	20.50	-2.23	2.23	101.93	0.04	55.58	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.14	20.50	-2.29	2.29	101.85	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.17	20.50	-2.36	2.36	101.77	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.21	20.50	-2.42	2.42	101.69	0.04	55.59	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.24	20.50	-2.49	2.49	101.60	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.28	20.50	-2.56	2.56	101.52	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.31	20.50	-2.62	2.62	101.43	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.35	20.50	-2.69	2.69	101.34	0.05	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.38	20.50	-2.75	2.75	101.24	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.41	20.50	-2.82	2.82	101.15	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.45	20.50	-2.88	2.88	101.05	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.48	20.50	-2.95	2.95	100.95	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.52	20.50	-3.02	3.02	100.85	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.55	20.50	-3.08	3.08	100.74	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.59	20.50	-3.15	3.15	100.63	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+0.90D+E+0.90H	1	11.62	20.50	-3.21	3.21	100.52	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.66	20.50	-3.28	3.28	100.41	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.69	20.50	-3.35	3.35	100.30	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.72	20.50	-3.41	3.41	100.18	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.76	20.50	-3.48	3.48	100.06	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.79	20.50	-3.54	3.54	99.94	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.83	20.50	-3.61	3.61	99.82	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.86	20.50	-3.67	3.67	99.69	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.90	20.50	-3.74	3.74	99.57	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+0.90D+E+0.90H	1	11.93	20.50	-3.81	3.81	99.44	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	11.96	20.50	-3.89	3.89	158.10	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.00	20.50	-3.99	3.99	157.96	0.04	55.60	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.03	20.50	-4.09	4.09	157.82	0.04	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.07	20.50	-4.18	4.18	157.68	0.05	55.61	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.10	20.50	-4.28	4.28	157.54	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.14	20.50	-4.38	4.38	157.39	0.05	55.62	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.17	20.50	-4.47	4.47	157.24	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.21	20.50	-4.57	4.57	157.08	0.05	55.63	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.24	20.50	-4.67	4.67	156.92	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.27	20.50	-4.76	4.76	156.76	0.05	55.64	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.31	20.50	-4.86	4.86	156.59	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.34	20.50	-4.96	4.96	156.43	0.05	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.38	20.50	-5.05	5.05	156.25	0.06	55.65	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.41	20.50	-5.15	5.15	156.08	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	12.45	20.50	-5.25	5.25	155.90	0.06	55.66	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	12.48	20.50	-5.34	5.34	155.72	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.51	20.50	-5.44	5.44	155.53	0.06	55.67	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.55	20.50	-5.54	5.54	155.34	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.58	20.50	-5.63	5.63	155.15	0.06	55.68	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.62	20.50	-5.73	5.73	154.96	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.65	20.50	-5.83	5.83	154.76	0.06	55.69	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.69	20.50	-5.92	5.92	154.56	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.72	20.50	-6.02	6.02	154.35	0.07	55.70	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.76	20.50	-6.12	6.12	154.14	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.79	20.50	-6.21	6.21	153.93	0.07	55.71	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.82	20.50	-6.31	6.31	153.71	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.86	20.50	-6.41	6.41	153.50	0.07	55.72	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.89	20.50	-6.51	6.51	153.27	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.93	20.50	-6.60	6.60	153.05	0.07	55.73	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	12.96	20.50	-6.70	6.70	152.82	0.07	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.00	20.50	-6.80	6.80	152.59	0.08	55.74	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.03	20.50	-6.89	6.89	152.35	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.06	20.50	-6.99	6.99	152.11	0.08	55.75	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.10	20.50	-7.09	7.09	151.87	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.13	20.50	-7.18	7.18	151.63	0.08	55.76	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.17	20.50	-7.28	7.28	151.38	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.20	20.50	-7.38	7.38	151.13	0.08	55.77	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.24	20.50	-7.47	7.47	150.87	0.08	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.27	20.50	-7.57	7.57	150.61	0.09	55.78	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.31	20.50	-7.67	7.67	150.35	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.34	20.50	-7.76	7.76	150.08	0.09	55.79	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.37	20.50	-7.86	7.86	149.82	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.41	20.50	-7.96	7.96	149.54	0.09	55.80	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.44	20.50	-8.05	8.05	149.27	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.48	20.50	-8.15	8.15	148.99	0.09	55.81	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.51	20.50	-8.25	8.25	148.71	0.09	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.55	20.50	-8.34	8.34	148.42	0.10	55.82	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.58	20.50	-8.44	8.44	148.13	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.61	20.50	-8.54	8.54	147.84	0.10	55.83	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.65	20.50	-8.63	8.63	147.55	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.68	20.50	-8.73	8.73	147.25	0.10	55.84	Vu < PhiVc/2	Not Reqd 1	55.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.72	20.50	-8.83	8.83	146.95	0.10	55.85	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.75	20.50	-8.93	8.93	146.64	0.10	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.79	20.50	-9.02	9.02	146.33	0.11	55.86	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.82	20.50	-9.12	9.12	146.02	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.86	20.50	-9.22	9.22	145.71	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.89	20.50	-9.31	9.31	145.39	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.92	20.50	-9.41	9.41	145.07	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.96	20.50	-9.51	9.51	144.74	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	13.99	20.50	-9.60	9.60	144.41	0.11	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.03	20.50	-9.70	9.70	144.08	0.12	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.06	20.50	-9.80	9.80	143.75	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.10	20.50	-9.89	9.89	143.41	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.13	20.50	-9.99	9.99	143.07	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.16	20.50	-10.09	10.09	142.72	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.20	20.50	-10.18	10.18	142.37	0.12	55.93	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.23	20.50	-10.28	10.28	142.02	0.12	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.27	20.50	-10.38	10.38	141.66	0.13	55.94	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.30	20.50	-10.47	10.47	141.31	0.13	55.95	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	14.34	20.50	-10.57	10.57	140.94	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.37	20.50	-10.67	10.67	140.58	0.13	55.96	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.41	20.50	-10.76	10.76	140.21	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.44	20.50	-10.86	10.86	139.84	0.13	55.97	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	14.47	20.50	-10.96	10.96	139.46	0.13	55.98	Vu < PhiVc/2	Not Reqd 1	56.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.51	20.50	-11.07	11.07	176.44	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.54	20.50	-11.18	11.18	176.06	0.11	55.87	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.58	20.50	-11.30	11.30	175.67	0.11	55.88	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.61	20.50	-11.42	11.42	175.28	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.65	20.50	-11.54	11.54	174.89	0.11	55.89	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.68	20.50	-11.65	11.65	174.49	0.11	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.71	20.50	-11.77	11.77	174.09	0.12	55.90	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.75	20.50	-11.89	11.89	173.68	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.78	20.50	-12.00	12.00	173.27	0.12	55.91	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.82	20.50	-12.05	12.05	172.86	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.85	20.50	-12.08	12.08	172.44	0.12	55.92	Vu < PhiVc/2	Not Reqd 1	55.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	14.89	20.50	-41.31	41.31	171.68	0.41	57.12	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.92	20.50	-41.34	41.34	170.26	0.41	57.14	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.96	20.50	-41.37	41.37	168.84	0.42	57.15	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	14.99	20.50	-41.40	41.40	167.41	0.42	57.17	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.02	20.50	-41.43	41.43	165.99	0.43	57.19	PhiVc/2 < Vu <=	Min 11.5.6	84.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.06	20.50	-41.46	41.46	164.56	0.43	57.20	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.09	20.50	-41.49	41.49	163.14	0.43	57.22	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.13	20.50	-41.52	41.52	161.71	0.44	57.24	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.16	20.50	-41.55	41.55	160.28	0.44	57.25	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.20	20.50	-41.58	41.58	158.85	0.45	57.27	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.23	20.50	-41.61	41.61	157.42	0.45	57.29	PhiVc/2 < Vu <=	Min 11.5.6	84.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.27	20.50	-41.64	41.64	155.99	0.46	57.31	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.30	20.50	-41.67	41.67	154.56	0.46	57.33	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.33	20.50	-41.70	41.70	153.13	0.47	57.35	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.37	20.50	-41.73	41.73	151.69	0.47	57.37	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.40	20.50	-41.76	41.76	150.26	0.47	57.39	PhiVc/2 < Vu <=	Min 11.5.6	84.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.44	20.50	-41.79	41.79	148.82	0.48	57.41	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.47	20.50	-41.82	41.82	147.39	0.48	57.43	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.51	20.50	-41.85	41.85	145.95	0.49	57.45	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.54	20.50	-41.88	41.88	144.51	0.50	57.47	PhiVc/2 < Vu <=	Min 11.5.6	84.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.57	20.50	-41.91	41.91	143.07	0.50	57.49	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.61	20.50	-41.94	41.94	141.63	0.51	57.51	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.64	20.50	-41.97	41.97	140.18	0.51	57.54	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.68	20.50	-42.00	42.00	138.74	0.52	57.56	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.71	20.50	-42.03	42.03	137.29	0.52	57.58	PhiVc/2 < Vu <=	Min 11.5.6	84.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.75	20.50	-42.06	42.06	135.85	0.53	57.61	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.78	20.50	-42.09	42.09	134.40	0.53	57.63	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.82	20.50	-42.12	42.12	132.96	0.54	57.66	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.85	20.50	-42.15	42.15	131.51	0.55	57.69	PhiVc/2 < Vu <=	Min 11.5.6	84.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.88	20.50	-42.18	42.18	130.06	0.55	57.71	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.92	20.50	-42.21	42.21	128.61	0.56	57.74	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.95	20.50	-42.24	42.24	127.15	0.57	57.77	PhiVc/2 < Vu <=	Min 11.5.6	84.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	15.99	20.50	-42.27	42.27	125.70	0.57	57.80	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.02	20.50	-42.30	42.30	124.25	0.58	57.83	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.06	20.50	-42.33	42.33	122.79	0.59	57.86	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.09	20.50	-42.36	42.36	121.34	0.60	57.89	PhiVc/2 < Vu <=	Min 11.5.6	84.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.12	20.50	-42.39	42.39	119.88	0.60	57.92	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.16	20.50	-42.42	42.42	118.42	0.61	57.95	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	16.19	20.50	-42.45	42.45	116.96	0.62	57.98	PhiVc/2 < Vu <=	Min 11.5.6	85.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.23	20.50	-42.48	42.48	115.50	0.63	58.02	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.26	20.50	-42.51	42.51	114.04	0.64	58.05	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.30	20.50	-42.54	42.54	112.58	0.65	58.09	PhiVc/2 < Vu <=	Min 11.5.6	85.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.33	20.50	-42.57	42.57	111.12	0.65	58.13	PhiVc/2 < Vu <=	Min 11.5.6	85.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.37	20.50	-42.60	42.60	109.65	0.66	58.16	PhiVc/2 < Vu <=	Min 11.5.6	85.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.40	20.50	-42.63	42.63	108.19	0.67	58.20	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.43	20.50	-42.66	42.66	106.72	0.68	58.24	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.47	20.50	-42.69	42.69	105.26	0.69	58.28	PhiVc/2 < Vu <=	Min 11.5.6	85.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.50	20.50	-42.72	42.72	103.79	0.70	58.33	PhiVc/2 < Vu <=	Min 11.5.6	85.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.54	20.50	-42.75	42.75	102.32	0.71	58.37	PhiVc/2 < Vu <=	Min 11.5.6	85.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.57	20.50	-42.78	42.78	100.85	0.72	58.42	PhiVc/2 < Vu <=	Min 11.5.6	85.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.61	20.50	-42.81	42.81	99.38	0.74	58.46	PhiVc/2 < Vu <=	Min 11.5.6	85.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.64	20.50	-42.84	42.84	97.90	0.75	58.51	PhiVc/2 < Vu <=	Min 11.5.6	85.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.67	20.50	-42.87	42.87	96.43	0.76	58.56	PhiVc/2 < Vu <=	Min 11.5.6	85.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.71	20.50	-42.90	42.90	94.96	0.77	58.61	PhiVc/2 < Vu <=	Min 11.5.6	85.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.74	20.50	-42.93	42.93	93.48	0.78	58.66	PhiVc/2 < Vu <=	Min 11.5.6	85.7	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.78	20.50	-42.96	42.96	92.00	0.80	58.72	PhiVc/2 < Vu <=	Min 11.5.6	85.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.81	20.50	-42.99	42.99	90.53	0.81	58.77	PhiVc/2 < Vu <=	Min 11.5.6	85.8	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.85	20.50	-43.02	43.02	89.05	0.83	58.83	PhiVc/2 < Vu <=	Min 11.5.6	85.9	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.88	20.50	-43.05	43.05	87.57	0.84	58.89	PhiVc/2 < Vu <=	Min 11.5.6	86.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.92	20.50	-43.08	43.08	86.09	0.85	58.95	PhiVc/2 < Vu <=	Min 11.5.6	86.0	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.95	20.50	-43.11	43.11	84.61	0.87	59.02	PhiVc/2 < Vu <=	Min 11.5.6	86.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	16.98	20.50	-43.14	43.14	83.12	0.89	59.08	PhiVc/2 < Vu <=	Min 11.5.6	86.1	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.02	20.50	-43.17	43.17	81.64	0.90	59.15	PhiVc/2 < Vu <=	Min 11.5.6	86.2	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.05	20.50	-43.20	43.20	80.16	0.92	59.22	PhiVc/2 < Vu <=	Min 11.5.6	86.3	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.09	20.50	-43.23	43.23	78.67	0.94	59.30	PhiVc/2 < Vu <=	Min 11.5.6	86.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.12	20.50	-43.26	43.26	77.18	0.96	59.38	PhiVc/2 < Vu <=	Min 11.5.6	86.4	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.16	20.50	-43.29	43.29	75.70	0.98	59.46	PhiVc/2 < Vu <=	Min 11.5.6	86.5	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.19	20.50	-43.32	43.32	74.21	1.00	59.54	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.22	20.50	-43.35	43.35	72.72	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.26	20.50	-43.38	43.38	71.23	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.29	20.50	-43.41	43.41	69.74	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.33	20.50	-43.44	43.44	68.24	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.36	20.50	-43.47	43.47	66.75	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.40	20.50	-43.50	43.50	65.25	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.43	20.50	-43.53	43.53	63.76	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.47	20.50	-43.56	43.56	62.26	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.50	20.50	-43.59	43.59	60.76	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.53	20.50	-43.62	43.62	59.26	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.57	20.50	-43.65	43.65	57.76	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.60	20.50	-43.68	43.68	56.26	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.64	20.50	-43.71	43.71	54.76	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.67	20.50	-43.74	43.74	53.26	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.71	20.50	-43.77	43.77	51.75	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.74	20.50	-43.80	43.80	50.25	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.77	20.50	-43.83	43.83	48.74	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.81	20.50	-43.85	43.85	47.23	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.84	20.50	-43.88	43.88	45.73	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.88	20.50	-43.91	43.91	44.22	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.91	20.50	-43.94	43.94	42.71	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.95	20.50	-43.97	43.97	41.20	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	17.98	20.50	-44.00	44.00	39.68	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.02	20.50	-44.03	44.03	38.17	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0

Concrete Beam

Description : GB-U (OPPOSTIE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	18.05	20.50	-44.06	44.06	36.66	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.08	20.50	-44.09	44.09	35.14	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.12	20.50	-44.12	44.12	33.62	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.15	20.50	-44.15	44.15	32.11	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.19	20.50	-44.18	44.18	30.59	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.22	20.50	-44.21	44.21	29.07	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.26	20.50	-44.24	44.24	27.55	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.29	20.50	-44.27	44.27	26.03	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.32	20.50	-44.30	44.30	24.50	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.36	20.50	-44.33	44.33	22.98	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.39	20.50	-44.36	44.36	21.45	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.43	20.50	-44.39	44.39	19.93	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.46	20.50	-44.42	44.42	18.40	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.50	20.50	-44.45	44.45	16.87	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.53	20.50	-44.48	44.48	15.34	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.57	20.50	-44.51	44.51	13.82	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.60	20.50	-44.54	44.54	12.28	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.63	20.50	-44.57	44.57	10.75	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.67	20.50	-44.60	44.60	9.22	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.70	20.50	-44.63	44.63	7.69	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.74	20.50	-44.66	44.66	6.15	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.77	20.50	-44.69	44.69	4.61	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.81	20.50	-44.72	44.72	3.08	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.84	20.50	-44.75	44.75	1.54	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0
+1.20D+1.60L+0.50S+1.60H	1	18.88	20.50	-44.78	44.78	0.00	1.00	59.55	PhiVc/2 < Vu <=	Min 11.5.6	86.6	5.9	5.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	18.875	194.49	203.18	0.96
+1.40D+1.60H					
Span # 1	1	18.875	168.77	203.18	0.83
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	18.875	194.49	203.18	0.96
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	18.875	194.49	203.18	0.96
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	18.875	163.98	203.18	0.81
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	18.875	150.12	203.18	0.74
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	18.875	163.98	203.18	0.81
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	18.875	150.12	203.18	0.74
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	18.875	163.98	203.18	0.81
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	18.875	163.98	203.18	0.81
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	18.875	160.79	203.18	0.79
+0.90D+W+0.90H					
Span # 1	1	18.875	105.47	203.18	0.52
+0.90D+E+0.90H					
Span # 1	1	18.875	103.22	203.18	0.51

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.1395	10.056		0.0000	0.000

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Title Block Line 6

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Engineer:
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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

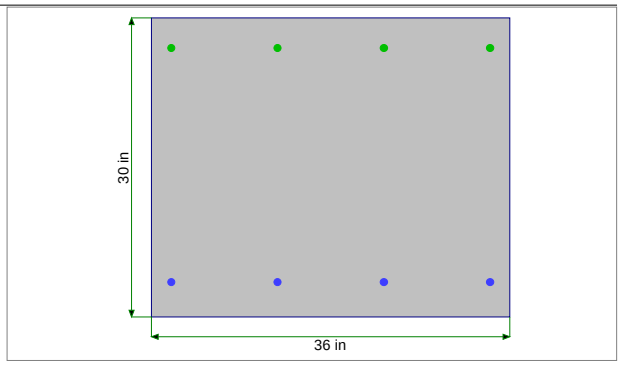
Description : GB-V (OPPOSITE)

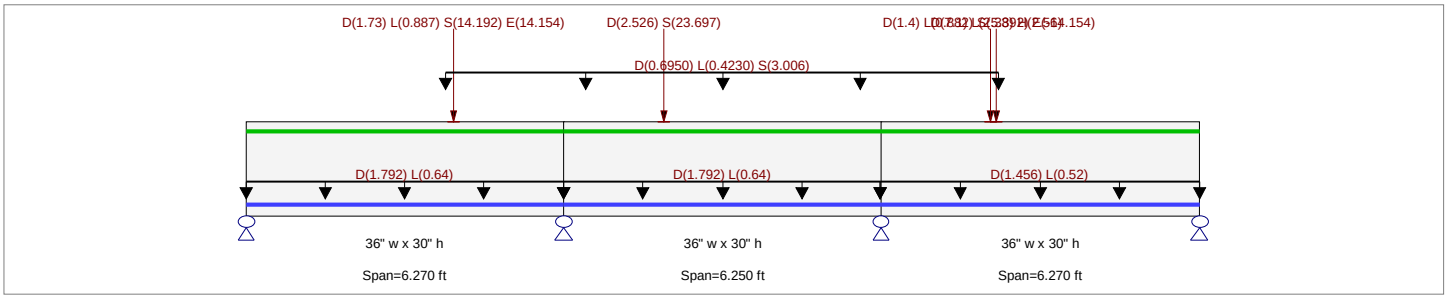
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 36.0 in, Height = 30.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.270 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 6.270 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.250 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 6.250 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.270 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 6.270 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 0.6950, L = 0.4230, S = 3.006 k/ft, Extent = 3.958 -->> 14.833 ft
- Point Load : D = 2.526, S = 23.697 k, Starting at : 8.250 ft and placed every 0.0 ft thereafter

Load for Span Number 1
- Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 16.0 ft, (slab weight)
- Point Load : D = 1.730, L = 0.8870, S = 14.192, E = 14.154 k @ 4.104 ft, (p11)

Load for Span Number 2
- Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 16.0 ft, (slab weight)

Load for Span Number 3
- Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 13.0 ft, (slab weight)
- Point Load : D = 1.40, L = 0.8820, S = 5.892, E = -14.154 k @ 2.167 ft, (P9)
- Point Load : D = 7.10, L = 2.330, H = 2.560 k @ 2.270 ft, (GB-3)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.276** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied		-62.957 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable		227.894 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Location of maximum on span		0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 2				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4

Concrete Beam

Description : GB-V (OPPOSITE)

Overall MAXimum	12.352	74.237	60.184	11.553
Overall MINimum	0.065	-0.389	-0.632	0.105
+D+H	7.700	25.648	32.431	9.094
+D+L+H, LL Comb Run (**L)	7.851	24.739	38.287	11.448
+D+L+H, LL Comb Run (*L*)	7.369	29.301	36.084	8.763
+D+L+H, LL Comb Run (*LL)	7.520	28.391	41.939	11.117
+D+L+H, LL Comb Run (L**)	9.772	29.981	31.799	9.199
+D+L+H, LL Comb Run (L*L)	9.923	29.071	37.655	11.553
+D+L+H, LL Comb Run (LL*)	9.442	33.633	35.451	8.868
+D+L+H, LL Comb Run (LLL)	9.593	32.724	41.307	11.222
+D+Lr+H, LL Comb Run (**L)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (*L*)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (*LL)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (L**)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (L*L)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (LL*)	7.700	25.648	32.431	9.094
+D+Lr+H, LL Comb Run (LLL)	7.700	25.648	32.431	9.094
+D+S+H	9.493	72.245	59.926	9.681
+D+0.750Lr+0.750L+H, LL Comb Run (	7.813	24.966	36.823	10.859
+D+0.750Lr+0.750L+H, LL Comb Run (	7.452	28.388	35.171	8.846
+D+0.750Lr+0.750L+H, LL Comb Run (	7.565	27.705	39.562	10.611
+D+0.750Lr+0.750L+H, LL Comb Run (	9.254	28.898	31.957	9.173
+D+0.750Lr+0.750L+H, LL Comb Run (	9.367	28.215	36.349	10.938
+D+0.750Lr+0.750L+H, LL Comb Run (	9.006	31.637	34.696	8.925
+D+0.750Lr+0.750L+H, LL Comb Run (	9.119	30.955	39.088	10.690
+D+0.750L+0.750S+H, LL Comb Run (*	9.158	59.913	57.444	11.299
+D+0.750L+0.750S+H, LL Comb Run (*	8.797	63.335	55.792	9.286
+D+0.750L+0.750S+H, LL Comb Run (*	8.910	62.653	60.184	11.051
+D+0.750L+0.750S+H, LL Comb Run (L	10.599	63.845	52.578	9.613
+D+0.750L+0.750S+H, LL Comb Run (L	10.712	63.163	56.970	11.378
+D+0.750L+0.750S+H, LL Comb Run (L	10.351	66.585	55.318	9.365
+D+0.750L+0.750S+H, LL Comb Run (L	10.464	65.902	59.710	11.130
+D+0.60W+H	7.700	25.648	32.431	9.094
+D+0.70E+H	9.886	35.852	22.229	6.907
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.813	24.966	36.823	10.859
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.452	28.388	35.171	8.846
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.565	27.705	39.562	10.611
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.254	28.898	31.957	9.173
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.367	28.215	36.349	10.938
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.006	31.637	34.696	8.925
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.119	30.955	39.088	10.690
+D+0.750L+0.750S+0.450W+H, LL Comb	9.158	59.913	57.444	11.299
+D+0.750L+0.750S+0.450W+H, LL Comb	8.797	63.335	55.792	9.286
+D+0.750L+0.750S+0.450W+H, LL Comb	8.910	62.653	60.184	11.051
+D+0.750L+0.750S+0.450W+H, LL Comb	10.599	63.845	52.578	9.613
+D+0.750L+0.750S+0.450W+H, LL Comb	10.712	63.163	56.970	11.378
+D+0.750L+0.750S+0.450W+H, LL Comb	10.351	66.585	55.318	9.365
+D+0.750L+0.750S+0.450W+H, LL Comb	10.464	65.902	59.710	11.130
+D+0.750L+0.750S+0.5250E+H, LL Com	10.797	67.566	49.793	9.659
+D+0.750L+0.750S+0.5250E+H, LL Com	10.436	70.988	48.140	7.645
+D+0.750L+0.750S+0.5250E+H, LL Com	10.549	70.306	52.532	9.411
+D+0.750L+0.750S+0.5250E+H, LL Com	12.238	71.498	44.927	7.972
+D+0.750L+0.750S+0.5250E+H, LL Com	12.352	70.816	49.318	9.738
+D+0.750L+0.750S+0.5250E+H, LL Com	11.990	74.237	47.666	7.724
+D+0.750L+0.750S+0.5250E+H, LL Com	12.104	73.555	52.058	9.489
+0.60D+0.60W+0.60H	4.620	15.389	19.459	5.456
+0.60D+0.70E+0.60H	6.806	25.593	9.256	3.269
D Only	7.635	26.037	30.215	8.426
Lr Only, LL Comb Run (**L)				

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Project Descr:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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Description : GB-V (OPPOSITE)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.151	-0.910	5.856	2.354
L Only, LL Comb Run (*L*)	-0.331	3.653	3.653	-0.331
L Only, LL Comb Run (*LL)	-0.180	2.743	9.508	2.023
L Only, LL Comb Run (L**)	2.073	4.332	-0.632	0.105
L Only, LL Comb Run (L*L)	2.224	3.423	5.224	2.459
L Only, LL Comb Run (LL*)	1.742	7.985	3.020	-0.226
L Only, LL Comb Run (LLL)	1.893	7.075	8.876	2.128
S Only	1.793	46.596	27.495	0.587
W Only				
E Only	3.123	14.577	-14.575	-3.125
H Only	0.065	-0.389	2.216	0.668

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	0.00	26.50	14.76	14.76	0.00	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.04	26.50	14.60	14.60	0.61	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.08	26.50	14.44	14.44	1.22	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.13	26.50	14.28	14.28	1.82	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.17	26.50	14.12	14.12	2.41	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.21	26.50	13.97	13.97	3.00	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.25	26.50	13.81	13.81	3.58	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.29	26.50	13.65	13.65	4.16	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.33	26.50	13.49	13.49	4.72	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.38	26.50	13.33	13.33	5.28	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.42	26.50	13.18	13.18	5.84	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.46	26.50	13.02	13.02	6.39	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.50	26.50	12.86	12.86	6.93	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.54	26.50	12.70	12.70	7.46	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.59	26.50	12.55	12.55	7.99	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.63	26.50	12.39	12.39	8.51	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.67	26.50	12.23	12.23	9.02	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.71	26.50	12.07	12.07	9.53	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.75	26.50	11.91	11.91	10.03	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.79	26.50	11.76	11.76	10.53	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.84	26.50	11.60	11.60	11.02	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.88	26.50	11.44	11.44	11.50	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.92	26.50	11.28	11.28	11.97	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	0.96	26.50	11.13	11.13	12.44	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.00	26.50	10.97	10.97	12.90	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.05	26.50	10.81	10.81	13.36	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.09	26.50	10.65	10.65	13.81	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.13	26.50	10.49	10.49	14.25	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.17	26.50	10.34	10.34	14.68	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.21	26.50	10.18	10.18	15.11	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.25	26.50	10.02	10.02	15.53	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.30	26.50	9.86	9.86	15.95	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.34	26.50	9.71	9.71	16.36	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.38	26.50	9.55	9.55	16.76	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.42	26.50	9.39	9.39	17.16	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.46	26.50	9.23	9.23	17.55	1.00	89.28	Vu < PhiVc/2	Not Reqd	1 89.3	0.0	0.0

Concrete Beam

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	1	1.50	26.50	9.07	9.07	17.93	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.55	26.50	8.92	8.92	18.30	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.59	26.50	8.76	8.76	18.67	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.63	26.50	8.60	8.60	19.04	1.00	89.27	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.67	26.50	8.44	8.44	19.39	0.96	89.15	Vu < PhiVc/2	Not Reqd 1	89.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.71	26.50	8.28	8.28	19.74	0.93	89.04	Vu < PhiVc/2	Not Reqd 1	89.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.76	26.50	8.13	8.13	20.09	0.89	88.93	Vu < PhiVc/2	Not Reqd 1	88.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.80	26.50	7.97	7.97	20.42	0.86	88.82	Vu < PhiVc/2	Not Reqd 1	88.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.84	26.50	7.81	7.81	20.75	0.83	88.72	Vu < PhiVc/2	Not Reqd 1	88.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.88	26.50	7.65	7.65	21.08	0.80	88.63	Vu < PhiVc/2	Not Reqd 1	88.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.92	26.50	7.50	7.50	21.39	0.77	88.53	Vu < PhiVc/2	Not Reqd 1	88.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	1.96	26.50	7.34	7.34	21.70	0.75	88.44	Vu < PhiVc/2	Not Reqd 1	88.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.01	26.50	7.18	7.18	22.01	0.72	88.36	Vu < PhiVc/2	Not Reqd 1	88.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.05	26.50	7.02	7.02	22.30	0.70	88.27	Vu < PhiVc/2	Not Reqd 1	88.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.09	26.50	6.86	6.86	22.59	0.67	88.19	Vu < PhiVc/2	Not Reqd 1	88.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.13	26.50	6.71	6.71	22.88	0.65	88.12	Vu < PhiVc/2	Not Reqd 1	88.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.17	26.50	6.55	6.55	23.15	0.62	88.04	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.22	26.50	6.39	6.39	23.42	0.60	87.97	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.26	26.50	6.23	6.23	23.69	0.58	87.90	Vu < PhiVc/2	Not Reqd 1	87.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.30	26.50	6.08	6.08	23.94	0.56	87.83	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.34	26.50	5.92	5.92	24.20	0.54	87.76	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.38	26.50	5.76	5.76	24.44	0.52	87.70	Vu < PhiVc/2	Not Reqd 1	87.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.42	26.50	5.60	5.60	24.68	0.50	87.63	Vu < PhiVc/2	Not Reqd 1	87.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.47	26.50	5.44	5.44	24.91	0.48	87.57	Vu < PhiVc/2	Not Reqd 1	87.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.51	26.50	5.29	5.29	25.13	0.46	87.51	Vu < PhiVc/2	Not Reqd 1	87.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.55	26.50	5.13	5.13	25.35	0.45	87.45	Vu < PhiVc/2	Not Reqd 1	87.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.59	26.50	4.97	4.97	25.56	0.43	87.40	Vu < PhiVc/2	Not Reqd 1	87.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.63	26.50	4.81	4.81	25.77	0.41	87.34	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.68	26.50	4.66	4.66	25.96	0.40	87.29	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.72	26.50	4.50	4.50	26.15	0.38	87.23	Vu < PhiVc/2	Not Reqd 1	87.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.76	26.50	4.34	4.34	26.34	0.36	87.18	Vu < PhiVc/2	Not Reqd 1	87.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.80	26.50	4.18	4.18	26.52	0.35	87.13	Vu < PhiVc/2	Not Reqd 1	87.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.84	26.50	4.02	4.02	26.69	0.33	87.08	Vu < PhiVc/2	Not Reqd 1	87.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	1	2.88	26.50	3.87	3.87	26.85	0.32	87.03	Vu < PhiVc/2	Not Reqd 1	87.0	0.0	0.0
+0.90D-E+0.90H	1	2.93	26.50	-3.78	3.78	0.05	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D-E+0.90H	1	2.97	27.00	-3.88	3.88	0.11	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.01	27.00	-3.99	3.99	0.28	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.05	27.00	-4.10	4.10	0.45	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.09	27.00	-4.21	4.21	0.62	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.14	27.00	-4.32	4.32	0.80	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.18	27.00	-4.43	4.43	0.98	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.22	27.00	-4.53	4.53	1.17	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.26	27.00	-4.64	4.64	1.36	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.30	27.00	-4.75	4.75	1.56	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.34	27.00	-4.86	4.86	1.76	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.39	27.00	-4.97	4.97	1.96	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.43	27.00	-5.08	5.08	2.17	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.47	27.00	-5.18	5.18	2.39	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.51	27.00	-5.29	5.29	2.61	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.55	27.00	-5.40	5.40	2.83	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.59	27.00	-5.51	5.51	3.06	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.64	27.00	-5.62	5.62	3.29	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.68	27.00	-5.73	5.73	3.53	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D-E+0.90H	1	3.72	27.00	-5.83	5.83	3.77	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0

Concrete Beam

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+0.90D-E+0.90H	1	3.76	27.00	-5.94	5.94	4.02	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.80	26.50	-6.09	6.09	4.14	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.85	26.50	-6.25	6.25	3.88	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.89	26.50	-6.41	6.41	3.62	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.93	26.50	-6.57	6.57	3.35	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	3.97	26.50	-6.76	6.76	3.07	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.01	26.50	-7.05	7.05	2.78	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.05	26.50	-7.34	7.34	2.48	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	4.10	26.50	-7.63	7.63	2.17	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.14	26.50	-28.90	28.90	20.53	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.18	26.50	-29.30	29.30	19.32	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.22	26.50	-29.70	29.70	18.08	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.26	26.50	-30.11	30.11	16.83	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.31	26.50	-30.51	30.51	15.57	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.35	26.50	-30.91	30.91	14.28	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.39	26.50	-31.32	31.32	12.98	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	26.50	-31.72	31.72	11.67	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.47	26.50	-32.12	32.12	10.33	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.51	26.50	-32.52	32.52	8.98	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.56	26.50	-32.93	32.93	7.61	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.60	26.50	-33.33	33.33	6.23	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.64	26.50	-33.73	33.73	4.83	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.68	26.50	-34.13	34.13	3.41	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.72	26.50	-34.54	34.54	1.97	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	26.50	-34.94	34.94	0.52	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.81	27.00	-35.34	35.34	0.95	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.85	27.00	-35.74	35.74	2.43	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	27.00	-36.15	36.15	3.94	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.93	27.00	-36.55	36.55	5.45	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.97	27.00	-36.95	36.95	6.99	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.02	27.00	-37.35	37.35	8.54	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.06	27.00	-37.76	37.76	10.11	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.10	27.00	-38.16	38.16	11.70	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.14	27.00	-38.56	38.56	13.30	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.18	27.00	-38.96	38.96	14.92	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.23	27.00	-39.37	39.37	16.56	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.27	27.00	-39.77	39.77	18.22	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.31	27.00	-40.17	40.17	19.89	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.35	27.00	-40.57	40.57	21.57	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.39	27.00	-40.98	40.98	23.28	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.43	27.00	-41.38	41.38	25.00	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.48	27.00	-41.78	41.78	26.74	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.52	27.00	-42.18	42.18	28.49	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.56	27.00	-42.59	42.59	30.26	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.60	27.00	-42.99	42.99	32.05	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.64	27.00	-43.39	43.39	33.86	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.68	27.00	-43.79	43.79	35.68	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.73	27.00	-44.20	44.20	37.52	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.77	27.00	-44.60	44.60	39.37	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.81	27.00	-45.00	45.00	41.25	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.85	27.00	-45.40	45.40	43.14	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.89	27.00	-45.81	45.81	45.04	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	5.94	27.00	-46.21	46.21	46.97	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	5.98	27.00	-46.61	46.61	48.91	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	6.02	27.00	-47.01	47.01	50.86	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	6.06	27.00	-47.42	47.42	52.84	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	6.10	27.00	-47.82	47.82	54.83	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	6.14	27.00	-48.22	48.22	56.83	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	6.19	27.00	-48.63	48.63	58.86	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	1	6.23	27.00	-49.03	49.03	60.90	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.27	27.00	59.74	59.74	62.96	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.31	27.00	59.34	59.34	60.48	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.35	27.00	58.94	58.94	58.01	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.40	27.00	58.54	58.54	55.57	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.44	27.00	58.13	58.13	53.13	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	27.00	57.73	57.73	50.72	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.52	27.00	57.33	57.33	48.32	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.56	27.00	56.93	56.93	45.94	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.60	27.00	56.53	56.53	43.58	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.65	27.00	56.13	56.13	41.23	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.69	27.00	55.73	55.73	38.90	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.73	27.00	55.33	55.33	36.59	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.77	27.00	54.92	54.92	34.29	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.81	27.00	54.52	54.52	32.01	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.85	27.00	54.12	54.12	29.75	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.90	27.00	53.72	53.72	27.50	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.94	27.00	53.32	53.32	25.27	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	6.98	27.00	52.92	52.92	23.06	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.02	27.00	52.52	52.52	20.86	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.06	27.00	52.12	52.12	18.68	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.10	27.00	51.71	51.71	16.52	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.15	27.00	51.31	51.31	14.37	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.19	27.00	50.91	50.91	12.24	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.23	27.00	50.51	50.51	10.13	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	27.00	50.11	50.11	8.03	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.31	27.00	49.71	49.71	5.95	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.35	27.00	49.31	49.31	3.89	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.40	27.00	48.90	48.90	1.84	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.44	26.50	48.50	48.50	0.18	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.48	26.50	48.10	48.10	2.20	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.52	26.50	47.70	47.70	4.19	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.56	26.50	47.30	47.30	6.17	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.60	26.50	46.90	46.90	8.13	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.65	26.50	46.50	46.50	10.08	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.69	26.50	46.10	46.10	12.01	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.73	26.50	45.69	45.69	13.92	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.77	26.50	45.29	45.29	15.82	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.81	26.50	44.89	44.89	17.70	1.00	89.28	PhiVc/2 < Vu <=	Min 11.5.6	133.0	4.9	4.0
+1.20D+0.50L+1.60S+1.60H,	2	7.85	26.50	44.49	44.49	19.56	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.90	26.50	44.09	44.09	21.40	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.94	26.50	43.69	43.69	23.23	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.98	26.50	43.29	43.29	25.04	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.02	26.50	42.89	42.89	26.84	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.06	26.50	42.48	42.48	28.62	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.10	26.50	42.08	42.08	30.38	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.15	26.50	41.68	41.68	32.13	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.19	26.50	41.28	41.28	33.85	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.23	26.50	40.88	40.88	35.57	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+0.90D+E+0.90H	2	8.27	27.00	5.60	5.60	1.48	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.31	27.00	5.47	5.47	1.25	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.35	27.00	5.33	5.33	1.03	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.40	27.00	5.20	5.20	0.81	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.44	27.00	5.06	5.06	0.59	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.48	27.00	4.93	4.93	0.38	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+0.90D+E+0.90H	2	8.52	27.00	4.79	4.79	0.18	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	8.56	26.50	-4.90	4.90	20.13	0.54	87.75	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	8.60	26.50	-5.17	5.17	19.92	0.57	87.87	Vu < PhiVc/2	Not Reqd 1	87.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	8.65	26.50	-5.44	5.44	19.69	0.61	87.99	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	8.69	26.50	-5.70	5.70	19.46	0.65	88.11	Vu < PhiVc/2	Not Reqd 1	88.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	8.73	26.50	-5.97	5.97	19.22	0.69	88.24	Vu < PhiVc/2	Not Reqd 1	88.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.77	26.50	-6.26	6.26	33.73	0.41	87.33	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.81	26.50	-6.64	6.64	33.46	0.44	87.42	Vu < PhiVc/2	Not Reqd 1	87.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.85	26.50	-7.02	7.02	33.18	0.47	87.52	Vu < PhiVc/2	Not Reqd 1	87.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.90	26.50	-7.40	7.40	32.88	0.50	87.62	Vu < PhiVc/2	Not Reqd 1	87.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.94	26.50	-7.78	7.78	32.56	0.53	87.72	Vu < PhiVc/2	Not Reqd 1	87.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	26.50	-8.15	8.15	32.23	0.56	87.82	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.02	26.50	-8.53	8.53	31.88	0.59	87.93	Vu < PhiVc/2	Not Reqd 1	87.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.06	26.50	-8.91	8.91	31.52	0.62	88.04	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.10	26.50	-9.29	9.29	31.14	0.66	88.15	Vu < PhiVc/2	Not Reqd 1	88.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.15	26.50	-9.67	9.67	30.75	0.69	88.27	Vu < PhiVc/2	Not Reqd 1	88.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	26.50	-10.05	10.05	30.34	0.73	88.39	Vu < PhiVc/2	Not Reqd 1	88.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.23	26.50	-10.43	10.43	29.91	0.77	88.52	Vu < PhiVc/2	Not Reqd 1	88.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.27	26.50	-10.81	10.81	29.47	0.81	88.65	Vu < PhiVc/2	Not Reqd 1	88.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.31	26.50	-11.19	11.19	29.01	0.85	88.79	Vu < PhiVc/2	Not Reqd 1	88.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.35	26.50	-11.57	11.57	28.53	0.90	88.93	Vu < PhiVc/2	Not Reqd 1	88.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.40	26.50	-11.95	11.95	28.04	0.94	89.08	Vu < PhiVc/2	Not Reqd 1	89.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.44	26.50	-12.35	12.35	29.10	0.94	89.07	Vu < PhiVc/2	Not Reqd 1	89.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.48	26.50	-12.75	12.75	28.57	0.99	89.23	Vu < PhiVc/2	Not Reqd 1	89.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.52	26.50	-13.15	13.15	28.03	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.56	26.50	-13.55	13.55	27.48	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.60	26.50	-13.95	13.95	26.91	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.65	26.50	-14.35	14.35	26.32	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.69	26.50	-14.75	14.75	25.71	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.73	26.50	-15.16	15.16	25.09	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	26.50	-15.56	15.56	24.45	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.81	26.50	-15.96	15.96	23.79	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.85	26.50	-16.36	16.36	23.12	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.90	26.50	-16.76	16.76	22.43	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.94	26.50	-17.16	17.16	21.72	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.98	26.50	-17.56	17.56	21.00	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.02	26.50	-17.96	17.96	20.26	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.06	26.50	-18.37	18.37	19.50	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.10	26.50	-18.77	18.77	18.73	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.15	26.50	-19.17	19.17	17.94	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.19	26.50	-19.57	19.57	17.13	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.23	26.50	-19.97	19.97	16.30	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.27	26.50	-20.37	20.37	15.46	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.31	26.50	-20.77	20.77	14.61	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.35	26.50	-21.17	21.17	13.73	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.40	26.50	-21.58	21.58	12.84	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.44	26.50	-21.98	21.98	11.94	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.48	26.50	-22.38	22.38	11.01	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	10.52	26.50	-22.78	22.78	10.07	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.56	26.50	-23.18	23.18	9.11	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.60	26.50	-23.58	23.58	8.14	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.65	26.50	-23.98	23.98	7.15	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.69	26.50	-24.38	24.38	6.14	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.73	26.50	-24.79	24.79	5.12	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.77	26.50	-25.19	25.19	4.07	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.81	26.50	-25.59	25.59	3.02	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.85	26.50	-25.99	25.99	1.94	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.90	26.50	-26.39	26.39	0.85	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.94	27.00	-26.79	26.79	0.26	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.98	27.00	-27.19	27.19	1.38	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.02	27.00	-27.59	27.59	2.52	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.06	27.00	-28.00	28.00	3.68	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.10	27.00	-28.40	28.40	4.86	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.15	27.00	-28.80	28.80	6.05	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.19	27.00	-29.20	29.20	7.26	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.23	27.00	-29.60	29.60	8.48	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.27	27.00	-30.00	30.00	9.72	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.31	27.00	-30.40	30.40	10.98	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.35	27.00	-30.81	30.81	12.26	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.40	27.00	-31.21	31.21	13.55	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.44	27.00	-31.61	31.61	14.86	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.48	27.00	-32.01	32.01	16.18	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.52	27.00	-32.41	32.41	17.52	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.56	27.00	-32.81	32.81	18.88	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.60	27.00	-33.21	33.21	20.26	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.65	27.00	-33.61	33.61	21.65	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.69	27.00	-34.02	34.02	23.06	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.73	27.00	-34.42	34.42	24.49	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.77	27.00	-34.82	34.82	25.93	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.81	27.00	-35.22	35.22	27.39	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.85	27.00	-35.62	35.62	28.86	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.90	27.00	-36.02	36.02	30.36	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.94	27.00	-36.42	36.42	31.86	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.98	27.00	-36.82	36.82	33.39	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.02	27.00	-37.23	37.23	34.93	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.06	27.00	-37.63	37.63	36.49	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.10	27.00	-38.03	38.03	38.07	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.15	27.00	-38.43	38.43	39.66	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.19	27.00	-38.83	38.83	41.27	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.23	27.00	-39.23	39.23	42.90	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.27	27.00	-39.63	39.63	44.54	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.31	27.00	-40.03	40.03	46.20	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.35	27.00	-40.44	40.44	47.88	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.40	27.00	-40.84	40.84	49.57	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.44	27.00	-41.24	41.24	51.28	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.48	27.00	-41.64	41.64	53.01	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.52	27.00	46.51	46.51	54.75	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.56	27.00	46.24	46.24	48.47	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.60	27.00	45.97	45.97	46.55	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.65	27.00	45.70	45.70	44.63	1.00	90.90	PhiVc/2 < Vu <=	Min 11.5.6	135.5	4.9	4.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.69	27.00	45.43	45.43	42.73	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.73	27.00	45.16	45.16	40.83	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S-E+1.60H	3	12.77	27.00	44.89	44.89	38.95	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.81	27.00	44.62	44.62	37.08	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.85	27.00	44.35	44.35	35.22	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.90	27.00	44.08	44.08	33.37	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.94	27.00	43.81	43.81	31.54	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	12.98	27.00	43.54	43.54	29.71	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.02	27.00	43.26	43.26	27.90	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.06	27.00	42.99	42.99	26.09	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.11	27.00	42.72	42.72	24.30	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.15	27.00	42.45	42.45	22.52	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.19	27.00	42.18	42.18	20.75	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.23	27.00	41.91	41.91	19.00	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.27	27.00	41.64	41.64	17.25	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.31	27.00	41.37	41.37	15.52	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.36	27.00	41.10	41.10	13.79	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.40	27.00	40.83	40.83	12.08	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.44	27.00	40.56	40.56	10.38	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.48	27.00	40.29	40.29	8.69	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.52	27.00	40.02	40.02	7.01	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.57	27.00	39.75	39.75	5.34	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.61	27.00	39.48	39.48	3.69	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.65	27.00	39.21	39.21	2.04	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.69	27.00	38.94	38.94	0.41	1.00	90.90	Vu < PhiVc/2	Not Reqd 1	90.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.73	26.50	38.67	38.67	1.21	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.77	26.50	38.40	38.40	2.83	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.82	26.50	38.13	38.13	4.43	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.86	26.50	37.86	37.86	6.01	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.90	26.50	37.59	37.59	7.59	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.94	26.50	37.32	37.32	9.16	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.98	26.50	37.05	37.05	10.71	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.02	26.50	36.78	36.78	12.25	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.07	26.50	36.51	36.51	13.79	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.11	26.50	36.24	36.24	15.31	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.15	26.50	35.97	35.97	16.82	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.19	26.50	35.70	35.70	18.31	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.23	26.50	35.43	35.43	19.80	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.28	26.50	35.16	35.16	21.28	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.32	26.50	34.89	34.89	22.74	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.36	26.50	34.62	34.62	24.19	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.40	26.50	34.35	34.35	25.63	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.44	26.50	34.08	34.08	27.06	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.48	26.50	33.81	33.81	28.48	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.53	26.50	33.54	33.54	29.89	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.57	26.50	33.27	33.27	31.29	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.61	26.50	33.00	33.00	32.67	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	14.65	26.50	32.73	32.73	34.05	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	14.69	26.50	18.31	18.31	9.67	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	14.74	26.50	18.04	18.04	10.43	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	14.78	26.50	17.77	17.77	11.18	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D+E+0.90H	3	14.82	26.50	4.04	4.04	2.04	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D+E+0.90H	3	14.86	26.50	3.93	3.93	2.21	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D+E+0.90H	3	14.90	26.50	3.84	3.84	2.37	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D+E+0.90H	3	14.94	26.50	3.74	3.74	2.53	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+0.90D+E+0.90H	3	14.99	26.50	3.65	3.65	2.69	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+0.90D+E+0.90H	3	15.03	26.50	3.55	3.55	2.84	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.07	26.50	-3.62	3.62	36.40	0.22	86.70	Vu < PhiVc/2	Not Reqd 1	86.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.11	26.50	-3.76	3.76	36.24	0.23	86.74	Vu < PhiVc/2	Not Reqd 1	86.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.15	26.50	-3.90	3.90	36.08	0.24	86.77	Vu < PhiVc/2	Not Reqd 1	86.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.20	26.50	-4.04	4.04	35.92	0.25	86.80	Vu < PhiVc/2	Not Reqd 1	86.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.24	26.50	-4.18	4.18	35.75	0.26	86.83	Vu < PhiVc/2	Not Reqd 1	86.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.28	26.50	-4.31	4.31	35.57	0.27	86.86	Vu < PhiVc/2	Not Reqd 1	86.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.32	26.50	-4.45	4.45	35.38	0.28	86.90	Vu < PhiVc/2	Not Reqd 1	86.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.36	26.50	-4.59	4.59	35.20	0.29	86.93	Vu < PhiVc/2	Not Reqd 1	86.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.40	26.50	-4.73	4.73	35.00	0.30	86.96	Vu < PhiVc/2	Not Reqd 1	87.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.45	26.50	-4.87	4.87	34.80	0.31	87.00	Vu < PhiVc/2	Not Reqd 1	87.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.49	26.50	-5.01	5.01	34.59	0.32	87.03	Vu < PhiVc/2	Not Reqd 1	87.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.53	26.50	-5.15	5.15	34.38	0.33	87.07	Vu < PhiVc/2	Not Reqd 1	87.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.57	26.50	-5.28	5.28	34.16	0.34	87.11	Vu < PhiVc/2	Not Reqd 1	87.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.61	26.50	-5.42	5.42	33.94	0.35	87.14	Vu < PhiVc/2	Not Reqd 1	87.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.66	26.50	-5.56	5.56	33.71	0.36	87.18	Vu < PhiVc/2	Not Reqd 1	87.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.70	26.50	-5.70	5.70	33.47	0.38	87.22	Vu < PhiVc/2	Not Reqd 1	87.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.74	26.50	-5.84	5.84	33.23	0.39	87.26	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.78	26.50	-5.98	5.98	32.99	0.40	87.30	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.82	26.50	-6.11	6.11	32.73	0.41	87.34	Vu < PhiVc/2	Not Reqd 1	87.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.86	26.50	-6.25	6.25	32.48	0.43	87.38	Vu < PhiVc/2	Not Reqd 1	87.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.91	26.50	-6.39	6.39	32.21	0.44	87.43	Vu < PhiVc/2	Not Reqd 1	87.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.95	26.50	-6.53	6.53	31.94	0.45	87.47	Vu < PhiVc/2	Not Reqd 1	87.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.99	26.50	-6.67	6.67	31.67	0.47	87.51	Vu < PhiVc/2	Not Reqd 1	87.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.03	26.50	-6.81	6.81	31.38	0.48	87.56	Vu < PhiVc/2	Not Reqd 1	87.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.07	26.50	-6.95	6.95	31.10	0.49	87.61	Vu < PhiVc/2	Not Reqd 1	87.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.11	26.50	-7.08	7.08	30.80	0.51	87.66	Vu < PhiVc/2	Not Reqd 1	87.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.16	26.50	-7.22	7.22	30.50	0.52	87.70	Vu < PhiVc/2	Not Reqd 1	87.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.20	26.50	-7.36	7.36	30.20	0.54	87.76	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.24	26.50	-7.50	7.50	29.89	0.55	87.81	Vu < PhiVc/2	Not Reqd 1	87.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.28	26.50	-7.64	7.64	29.57	0.57	87.86	Vu < PhiVc/2	Not Reqd 1	87.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.32	26.50	-7.78	7.78	29.25	0.59	87.92	Vu < PhiVc/2	Not Reqd 1	87.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.37	26.50	-7.91	7.91	28.92	0.60	87.97	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.41	26.50	-8.05	8.05	28.59	0.62	88.03	Vu < PhiVc/2	Not Reqd 1	88.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.45	26.50	-8.19	8.19	28.25	0.64	88.09	Vu < PhiVc/2	Not Reqd 1	88.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.49	26.50	-8.33	8.33	27.90	0.66	88.15	Vu < PhiVc/2	Not Reqd 1	88.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.53	26.50	-8.47	8.47	27.55	0.68	88.22	Vu < PhiVc/2	Not Reqd 1	88.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.57	26.50	-8.61	8.61	27.20	0.70	88.29	Vu < PhiVc/2	Not Reqd 1	88.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.62	26.50	-8.75	8.75	26.83	0.72	88.35	Vu < PhiVc/2	Not Reqd 1	88.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.66	26.50	-8.88	8.88	26.46	0.74	88.43	Vu < PhiVc/2	Not Reqd 1	88.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.70	26.50	-9.02	9.02	26.09	0.76	88.50	Vu < PhiVc/2	Not Reqd 1	88.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.74	26.50	-9.16	9.16	25.71	0.79	88.58	Vu < PhiVc/2	Not Reqd 1	88.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.78	26.50	-9.30	9.30	25.32	0.81	88.66	Vu < PhiVc/2	Not Reqd 1	88.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.83	26.50	-9.44	9.44	24.93	0.84	88.74	Vu < PhiVc/2	Not Reqd 1	88.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.87	26.50	-9.58	9.58	24.54	0.86	88.82	Vu < PhiVc/2	Not Reqd 1	88.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.91	26.50	-9.71	9.71	24.13	0.89	88.91	Vu < PhiVc/2	Not Reqd 1	88.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.95	26.50	-9.85	9.85	23.72	0.92	89.01	Vu < PhiVc/2	Not Reqd 1	89.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.99	26.50	-9.99	9.99	23.31	0.95	89.10	Vu < PhiVc/2	Not Reqd 1	89.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.03	26.50	-10.13	10.13	22.89	0.98	89.20	Vu < PhiVc/2	Not Reqd 1	89.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.08	26.50	-10.27	10.27	22.46	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.12	26.50	-10.41	10.41	22.03	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.16	26.50	-10.55	10.55	21.59	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.20	26.50	-10.68	10.68	21.15	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.24	26.50	-10.82	10.82	20.70	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0

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Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-V (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S-E+1.60H	3	17.29	26.50	-10.96	10.96	20.24	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.33	26.50	-11.10	11.10	19.78	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.37	26.50	-11.24	11.24	19.32	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.41	26.50	-11.38	11.38	18.84	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.45	26.50	-11.51	11.51	18.36	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.49	26.50	-11.65	11.65	17.88	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.54	26.50	-11.79	11.79	17.39	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.58	26.50	-11.93	11.93	16.89	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.62	26.50	-12.07	12.07	16.39	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.66	26.50	-12.21	12.21	15.89	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.70	26.50	-12.35	12.35	15.37	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.75	26.50	-12.48	12.48	14.85	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.79	26.50	-12.62	12.62	14.33	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.83	26.50	-12.76	12.76	13.80	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.87	26.50	-12.90	12.90	13.26	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.91	26.50	-13.04	13.04	12.72	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.95	26.50	-13.18	13.18	12.17	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.00	26.50	-13.31	13.31	11.62	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.04	26.50	-13.45	13.45	11.06	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.08	26.50	-13.59	13.59	10.49	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.12	26.50	-13.73	13.73	9.92	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.16	26.50	-13.87	13.87	9.35	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.20	26.50	-14.01	14.01	8.76	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.25	26.50	-14.14	14.14	8.18	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.29	26.50	-14.28	14.28	7.58	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.33	26.50	-14.42	14.42	6.98	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.37	26.50	-14.56	14.56	6.38	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.41	26.50	-14.70	14.70	5.76	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.46	26.50	-14.84	14.84	5.15	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.50	26.50	-14.98	14.98	4.52	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.54	26.50	-15.11	15.11	3.89	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.58	26.50	-15.25	15.25	3.26	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.62	26.50	-15.39	15.39	2.62	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.66	26.50	-15.53	15.53	1.97	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.71	26.50	-15.67	15.67	1.32	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.75	26.50	-15.81	15.81	0.66	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.79	26.50	-15.94	15.94	0.00	1.00	89.28	Vu < PhiVc/2	Not Reqd 1	89.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.270	-60.90	227.89	0.27
Span # 2	2	6.250	-62.96	227.89	0.28
Span # 3	3	6.270	-54.75	227.89	0.24
+1.40D+1.60H					
Span # 1	1	6.270	-18.62	227.89	0.08
Span # 2	2	6.250	-27.29	227.89	0.12
Span # 3	3	6.270	-28.04	227.89	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-14.36	227.89	0.06
Span # 2	2	6.250	-29.78	227.89	0.13
Span # 3	3	6.270	-30.48	227.89	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-19.17	227.89	0.08
Span # 2	2	6.250	-26.86	227.89	0.12
Span # 3	3	6.270	-27.72	227.89	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					

Concrete Beam

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.270	-17.66	227.89	0.08
Span # 2	2	6.250	-32.88	227.89	0.14
Span # 3	3	6.270	-33.80	227.89	0.15
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-19.84	227.89	0.09
Span # 2	2	6.250	-22.74	227.89	0.10
Span # 3	3	6.270	-23.35	227.89	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	18.35	218.47	0.08
Span # 2	2	6.250	-28.76	227.89	0.13
Span # 3	3	6.270	29.41	218.47	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-23.13	227.89	0.10
Span # 2	2	6.250	-25.84	227.89	0.11
Span # 3	3	6.270	-26.67	227.89	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-21.63	227.89	0.09
Span # 2	2	6.250	-31.86	227.89	0.14
Span # 3	3	6.270	-32.74	227.89	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-27.73	227.89	0.12
Span # 2	2	6.250	-38.03	227.89	0.17
Span # 3	3	6.270	-39.04	227.89	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-32.53	227.89	0.14
Span # 2	2	6.250	-35.11	227.89	0.15
Span # 3	3	6.270	-36.29	227.89	0.16
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-31.02	227.89	0.14
Span # 2	2	6.250	-41.13	227.89	0.18
Span # 3	3	6.270	-42.36	227.89	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-33.20	227.89	0.15
Span # 2	2	6.250	-34.54	227.89	0.15
Span # 3	3	6.270	-31.92	227.89	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-31.69	227.89	0.14
Span # 2	2	6.250	-37.01	227.89	0.16
Span # 3	3	6.270	-37.99	227.89	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-36.49	227.89	0.16
Span # 2	2	6.250	-37.85	227.89	0.17
Span # 3	3	6.270	-35.24	227.89	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-34.99	227.89	0.15
Span # 2	2	6.250	-40.11	227.89	0.18
Span # 3	3	6.270	-41.31	227.89	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.40	227.89	0.07
Span # 2	2	6.250	-25.64	227.89	0.11
Span # 3	3	6.270	-26.30	227.89	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-16.90	227.89	0.07
Span # 2	2	6.250	-24.73	227.89	0.11
Span # 3	3	6.270	-25.44	227.89	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-16.43	227.89	0.07
Span # 2	2	6.250	-26.61	227.89	0.12
Span # 3	3	6.270	-27.34	227.89	0.12
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-17.11	227.89	0.08
Span # 2	2	6.250	-23.44	227.89	0.10
Span # 3	3	6.270	-24.08	227.89	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-16.64	227.89	0.07
Span # 2	2	6.250	-25.32	227.89	0.11
Span # 3	3	6.270	-25.97	227.89	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-18.14	227.89	0.08

Concrete Beam

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.250	-24.41	227.89	0.11
Span # 3	3	6.270	-25.11	227.89	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-17.67	227.89	0.08
Span # 2	2	6.250	-26.29	227.89	0.12
Span # 3	3	6.270	-27.01	227.89	0.12
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-15.87	227.89	0.07
Span # 2	2	6.250	-23.76	227.89	0.10
Span # 3	3	6.270	-24.41	227.89	0.11
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-58.16	227.89	0.26
Span # 2	2	6.250	-60.13	227.89	0.26
Span # 3	3	6.270	-53.71	227.89	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-59.66	227.89	0.26
Span # 2	2	6.250	-61.64	227.89	0.27

Concrete Beam

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.270	-52.85	227.89	0.23
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-59.19	227.89	0.26
Span # 2	2	6.250	-61.17	227.89	0.27
Span # 3	3	6.270	-54.75	227.89	0.24
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-59.87	227.89	0.26
Span # 2	2	6.250	-61.92	227.89	0.27
Span # 3	3	6.270	-51.49	227.89	0.23
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-59.40	227.89	0.26
Span # 2	2	6.250	-61.45	227.89	0.27
Span # 3	3	6.270	-53.38	227.89	0.23
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-60.90	227.89	0.27
Span # 2	2	6.250	-62.96	227.89	0.28
Span # 3	3	6.270	-52.52	227.89	0.23
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-60.43	227.89	0.27
Span # 2	2	6.250	-62.48	227.89	0.27
Span # 3	3	6.270	-54.42	227.89	0.24
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.270	-58.63	227.89	0.26
Span # 2	2	6.250	-60.60	227.89	0.27
Span # 3	3	6.270	-51.82	227.89	0.23
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	6.270	-58.63	227.89	0.26
Span # 2	2	6.250	-60.60	227.89	0.27
Span # 3	3	6.270	-51.82	227.89	0.23
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.270	-15.40	227.89	0.07
Span # 2	2	6.250	-25.64	227.89	0.11
Span # 3	3	6.270	-26.30	227.89	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.270	-16.90	227.89	0.07
Span # 2	2	6.250	-24.73	227.89	0.11
Span # 3	3	6.270	-25.44	227.89	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.270	-16.43	227.89	0.07
Span # 2	2	6.250	-26.61	227.89	0.12
Span # 3	3	6.270	-27.34	227.89	0.12
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.270	-17.11	227.89	0.08
Span # 2	2	6.250	-23.44	227.89	0.10
Span # 3	3	6.270	-24.08	227.89	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.270	-16.64	227.89	0.07
Span # 2	2	6.250	-25.32	227.89	0.11
Span # 3	3	6.270	-25.97	227.89	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.270	-18.14	227.89	0.08
Span # 2	2	6.250	-24.41	227.89	0.11
Span # 3	3	6.270	-25.11	227.89	0.11
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.270	-17.67	227.89	0.08
Span # 2	2	6.250	-26.29	227.89	0.12
Span # 3	3	6.270	-27.01	227.89	0.12
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	6.270	-15.40	227.89	0.07
Span # 2	2	6.250	-25.64	227.89	0.11
Span # 3	3	6.270	-26.30	227.89	0.12
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.270	-16.90	227.89	0.07
Span # 2	2	6.250	-24.73	227.89	0.11
Span # 3	3	6.270	-25.44	227.89	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.270	-16.43	227.89	0.07
Span # 2	2	6.250	-26.61	227.89	0.12
Span # 3	3	6.270	-27.34	227.89	0.12

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	6.270	-17.11	227.89	0.08
Span # 2	2	6.250	-23.44	227.89	0.10
Span # 3	3	6.270	-24.08	227.89	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.270	-16.64	227.89	0.07
Span # 2	2	6.250	-25.32	227.89	0.11
Span # 3	3	6.270	-25.97	227.89	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.270	-18.14	227.89	0.08
Span # 2	2	6.250	-24.41	227.89	0.11
Span # 3	3	6.270	-25.11	227.89	0.11
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.270	-17.67	227.89	0.08
Span # 2	2	6.250	-26.29	227.89	0.12
Span # 3	3	6.270	-27.01	227.89	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-28.76	227.89	0.13
Span # 2	2	6.250	-33.89	227.89	0.15
Span # 3	3	6.270	-34.87	227.89	0.15
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-30.26	227.89	0.13
Span # 2	2	6.250	-32.98	227.89	0.14
Span # 3	3	6.270	-34.01	227.89	0.15
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-29.79	227.89	0.13
Span # 2	2	6.250	-34.86	227.89	0.15
Span # 3	3	6.270	-35.91	227.89	0.16
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-30.47	227.89	0.13
Span # 2	2	6.250	-31.69	227.89	0.14
Span # 3	3	6.270	-32.64	227.89	0.14
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-30.00	227.89	0.13
Span # 2	2	6.250	-33.57	227.89	0.15
Span # 3	3	6.270	-34.54	227.89	0.15
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-31.50	227.89	0.14
Span # 2	2	6.250	-32.67	227.89	0.14
Span # 3	3	6.270	-33.68	227.89	0.15
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-31.03	227.89	0.14
Span # 2	2	6.250	-34.54	227.89	0.15
Span # 3	3	6.270	-35.58	227.89	0.16
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-28.76	227.89	0.13
Span # 2	2	6.250	-33.89	227.89	0.15
Span # 3	3	6.270	-34.87	227.89	0.15
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-30.26	227.89	0.13
Span # 2	2	6.250	-32.98	227.89	0.14
Span # 3	3	6.270	-34.01	227.89	0.15
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-29.79	227.89	0.13
Span # 2	2	6.250	-34.86	227.89	0.15
Span # 3	3	6.270	-35.91	227.89	0.16
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-30.47	227.89	0.13
Span # 2	2	6.250	-31.69	227.89	0.14
Span # 3	3	6.270	-32.64	227.89	0.14
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-30.00	227.89	0.13
Span # 2	2	6.250	-33.57	227.89	0.15
Span # 3	3	6.270	-34.54	227.89	0.15
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-31.50	227.89	0.14
Span # 2	2	6.250	-32.67	227.89	0.14
Span # 3	3	6.270	-33.68	227.89	0.15
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLL)					

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.270	-31.03	227.89	0.14
Span # 2	2	6.250	-34.54	227.89	0.15
Span # 3	3	6.270	-35.58	227.89	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-44.73	227.89	0.20
Span # 2	2	6.250	-46.43	227.89	0.20
Span # 3	3	6.270	-27.22	227.89	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-46.23	227.89	0.20
Span # 2	2	6.250	-47.94	227.89	0.21
Span # 3	3	6.270	-26.35	227.89	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-45.76	227.89	0.20
Span # 2	2	6.250	-47.47	227.89	0.21
Span # 3	3	6.270	-28.25	227.89	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-46.44	227.89	0.20
Span # 2	2	6.250	-48.22	227.89	0.21
Span # 3	3	6.270	-24.99	227.89	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-45.96	227.89	0.20
Span # 2	2	6.250	-47.75	227.89	0.21
Span # 3	3	6.270	-26.89	227.89	0.12
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-47.46	227.89	0.21
Span # 2	2	6.250	-49.26	227.89	0.22
Span # 3	3	6.270	-26.03	227.89	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-46.99	227.89	0.21
Span # 2	2	6.250	-48.78	227.89	0.21
Span # 3	3	6.270	-27.92	227.89	0.12
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.270	-23.49	227.89	0.10
Span # 2	2	6.250	-48.12	227.89	0.21
Span # 3	3	6.270	-49.38	227.89	0.22
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.270	-24.99	227.89	0.11
Span # 2	2	6.250	-47.21	227.89	0.21
Span # 3	3	6.270	-48.51	227.89	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.270	-24.52	227.89	0.11
Span # 2	2	6.250	-49.09	227.89	0.22
Span # 3	3	6.270	-50.41	227.89	0.22
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.270	-25.20	227.89	0.11
Span # 2	2	6.250	-45.92	227.89	0.20
Span # 3	3	6.270	-47.15	227.89	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.270	-24.73	227.89	0.11
Span # 2	2	6.250	-47.80	227.89	0.21
Span # 3	3	6.270	-49.05	227.89	0.22
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.270	-26.23	227.89	0.12
Span # 2	2	6.250	-46.89	227.89	0.21
Span # 3	3	6.270	-48.19	227.89	0.21
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.270	-25.76	227.89	0.11
Span # 2	2	6.250	-48.77	227.89	0.21
Span # 3	3	6.270	-50.08	227.89	0.22
+0.90D+W+0.90H					
Span # 1	1	6.270	-12.02	227.89	0.05
Span # 2	2	6.250	-17.34	227.89	0.08
Span # 3	3	6.270	-17.82	227.89	0.08
+0.90D-W+0.90H					
Span # 1	1	6.270	-12.02	227.89	0.05
Span # 2	2	6.250	-17.34	227.89	0.08
Span # 3	3	6.270	-17.82	227.89	0.08
+0.90D+E+0.90H					
Span # 1	1	6.270	-22.64	227.89	0.10

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-V (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.250	-23.61	227.89	0.10
Span # 3	3	6.270	-6.74	227.89	0.03
+0.90D-E+0.90H					
Span # 1	1	6.270	-6.15	227.89	0.03
Span # 2	2	6.250	-28.27	227.89	0.12
Span # 3	3	6.270	-28.90	227.89	0.13

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0005	2.884		0.0000	0.000
S Only	2	0.0003	2.875	+D+L+H, LL Comb Run (L*L)	-0.0001	5.625
+D+L+H, LL Comb Run (L*L)	3	0.0005	3.135		0.0000	5.625

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 12:34PM

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

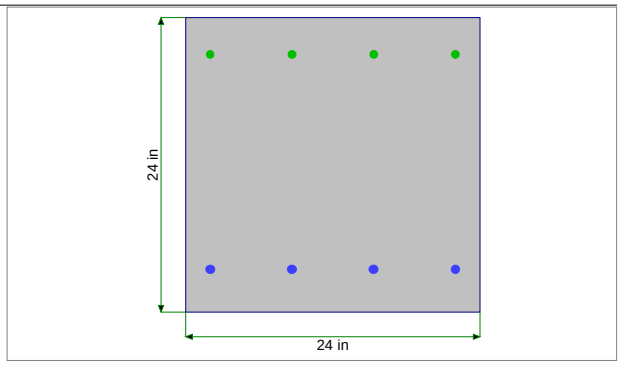
Description : GB-W (OPPOSITE)

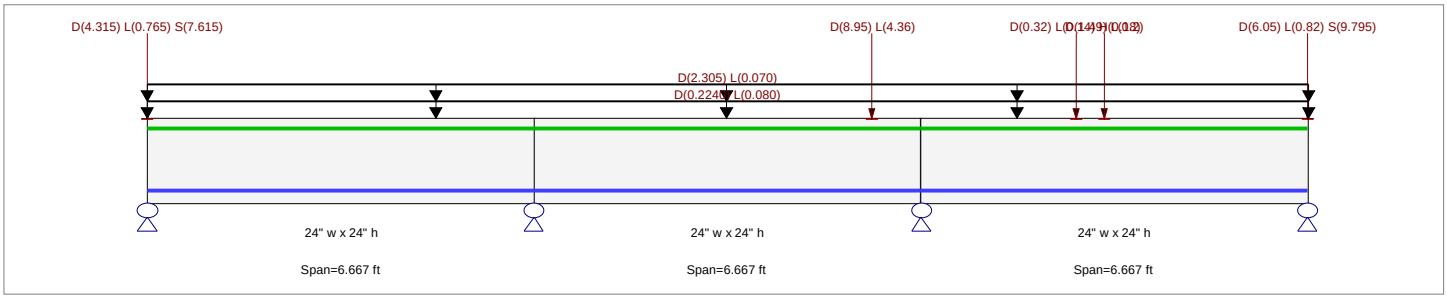
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #2 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #3 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 0.1120, L = 0.040
Uniform Load on ALL spans : D = 0.1120, L = 0.040 ksf, Tributary Width = 2.0 ft
Partial Length Uniform Load : D = 2.305, L = 0.070 k/ft, Extent = 0.0 -->> 20.0 ft
Load for Span Number 1
Point Load : D = 4.315, L = 0.7650, S = 7.615 k @ 0.0 ft, (GB-H)
Load for Span Number 2
Point Load : D = 8.950, L = 4.360 k @ 5.833 ft
Load for Span Number 3
Point Load : D = 6.050, L = 0.820, S = 9.795 k @ 6.667 ft, (GB-G)
Point Load : D = 1.490, L = 0.20 k @ 3.167 ft
Point Load : D = 0.320, L = 0.140, H = 0.180 k @ 2.667 ft, (GB-S)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.199** : 1		Maximum Deflection			
Section used for this span	**Typical Section**		Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied	-25.361 k-ft		Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	127.584 k-ft		Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Location of maximum on span	0.000 ft		Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 3					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Overall MAXimum	20.098	25.254	38.434	24.421
Overall MINimum	0.005	0.001	0.002	0.017
+D+H	12.485	23.544	32.830	14.627
+D+L+H, LL Comb Run (**L)	12.510	23.392	33.747	15.997
+D+L+H, LL Comb Run (*L*)	12.351	24.603	37.517	14.374
+D+L+H, LL Comb Run (*LL)	12.376	24.452	38.434	15.744
+D+L+H, LL Comb Run (L**)	13.683	24.194	32.730	14.644
+D+L+H, LL Comb Run (L*L)	13.708	24.042	33.647	16.013
+D+L+H, LL Comb Run (LL*)	13.549	25.254	37.417	14.391
+D+L+H, LL Comb Run (LLL)	13.575	25.102	38.334	15.761
+D+Lr+H, LL Comb Run (**L)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (*L*)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (*LL)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (L**)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (L*L)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (LL*)	12.485	23.544	32.830	14.627
+D+Lr+H, LL Comb Run (LLL)	12.485	23.544	32.830	14.627
+D+S+H	20.098	23.545	32.832	24.421
+D+0.750Lr+0.750L+H, LL Comb Run (	12.504	23.430	33.518	15.654
+D+0.750Lr+0.750L+H, LL Comb Run (	12.384	24.339	36.345	14.437
+D+0.750Lr+0.750L+H, LL Comb Run (	12.403	24.225	37.033	15.465
+D+0.750Lr+0.750L+H, LL Comb Run (	13.383	24.031	32.755	14.640
+D+0.750Lr+0.750L+H, LL Comb Run (	13.402	23.917	33.443	15.667
+D+0.750Lr+0.750L+H, LL Comb Run (	13.283	24.826	36.270	14.450
+D+0.750Lr+0.750L+H, LL Comb Run (	13.302	24.712	36.958	15.477
+D+0.750L+0.750S+H, LL Comb Run (*	18.214	23.431	33.519	22.999
+D+0.750L+0.750S+H, LL Comb Run (*	18.095	24.339	36.347	21.783
+D+0.750L+0.750S+H, LL Comb Run (*	18.114	24.225	37.034	22.810
+D+0.750L+0.750S+H, LL Comb Run (L	19.094	24.032	32.757	21.985
+D+0.750L+0.750S+H, LL Comb Run (L	19.113	23.918	33.444	23.012
+D+0.750L+0.750S+H, LL Comb Run (L	18.994	24.827	36.272	21.795
+D+0.750L+0.750S+H, LL Comb Run (L	19.013	24.713	36.959	22.822
+D+0.60W+H	12.485	23.544	32.830	14.627
+D+0.70E+H	12.485	23.544	32.830	14.627
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.504	23.430	33.518	15.654
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.384	24.339	36.345	14.437
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.403	24.225	37.033	15.465
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.383	24.031	32.755	14.640
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.402	23.917	33.443	15.667
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.283	24.826	36.270	14.450
+D+0.750Lr+0.750L+0.450W+H, LL Com	13.302	24.712	36.958	15.477
+D+0.750L+0.750S+0.450W+H, LL Comb	18.214	23.431	33.519	22.999
+D+0.750L+0.750S+0.450W+H, LL Comb	18.095	24.339	36.347	21.783
+D+0.750L+0.750S+0.450W+H, LL Comb	18.114	24.225	37.034	22.810
+D+0.750L+0.750S+0.450W+H, LL Comb	19.094	24.032	32.757	21.985
+D+0.750L+0.750S+0.450W+H, LL Comb	19.113	23.918	33.444	23.012
+D+0.750L+0.750S+0.450W+H, LL Comb	18.994	24.827	36.272	21.795
+D+0.750L+0.750S+0.450W+H, LL Comb	19.013	24.713	36.959	22.822
+D+0.750L+0.750S+0.5250E+H, LL Com	18.214	23.431	33.519	22.999
+D+0.750L+0.750S+0.5250E+H, LL Com	18.095	24.339	36.347	21.783
+D+0.750L+0.750S+0.5250E+H, LL Com	18.114	24.225	37.034	22.810
+D+0.750L+0.750S+0.5250E+H, LL Com	19.094	24.032	32.757	21.985
+D+0.750L+0.750S+0.5250E+H, LL Com	19.113	23.918	33.444	23.012
+D+0.750L+0.750S+0.5250E+H, LL Com	18.994	24.827	36.272	21.795
+D+0.750L+0.750S+0.5250E+H, LL Com	19.013	24.713	36.959	22.822
+0.60D+0.60W+0.60H	7.491	14.126	19.698	8.776
+0.60D+0.70E+0.60H	7.491	14.126	19.698	8.776
D Only	12.480	23.571	32.681	14.574
Lr Only, LL Comb Run (**L)				

Title Block Line 1
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Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 12:34PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Lr Only, LL Comb Run (*L*)				
Lr Only, LL Comb Run (*LL)				
Lr Only, LL Comb Run (L**)				
Lr Only, LL Comb Run (L*L)				
Lr Only, LL Comb Run (LL*)				
Lr Only, LL Comb Run (LLL)				
L Only, LL Comb Run (**L)	0.025	-0.152	0.917	1.370
L Only, LL Comb Run (*L*)	-0.134	1.060	4.687	-0.253
L Only, LL Comb Run (*LL)	-0.108	0.908	5.604	1.117
L Only, LL Comb Run (L**)	1.198	0.650	-0.100	0.017
L Only, LL Comb Run (L*L)	1.224	0.498	0.817	1.386
L Only, LL Comb Run (LL*)	1.065	1.710	4.587	-0.236
L Only, LL Comb Run (LLL)	1.090	1.558	5.504	1.133
S Only	7.614	0.001	0.002	9.794
W Only				
E Only				
H Only	0.005	-0.028	0.149	0.054

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	27.78	27.78	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.40D+1.60H	1	0.04	20.50	11.24	11.24	0.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.09	20.50	11.05	11.05	1.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.13	20.50	10.86	10.86	1.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.18	20.50	10.66	10.66	1.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.22	20.50	10.47	10.47	2.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.27	20.50	10.28	10.28	2.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.31	20.50	10.08	10.08	3.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.36	20.50	9.89	9.89	3.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.40	20.50	9.70	9.70	4.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.44	20.50	9.50	9.50	4.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.49	20.50	9.31	9.31	5.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.53	20.50	9.12	9.12	5.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.58	20.50	8.92	8.92	5.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.62	20.50	8.73	8.73	6.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.67	20.50	8.54	8.54	6.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.71	20.50	8.34	8.34	7.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.76	20.50	8.15	8.15	7.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.80	20.50	7.96	7.96	7.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.84	20.50	7.76	7.76	8.11	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.89	20.50	7.57	7.57	8.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.93	20.50	7.38	7.38	8.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	0.98	20.50	7.18	7.18	9.11	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.02	20.50	6.99	6.99	9.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.07	20.50	6.80	6.80	9.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.11	20.50	6.60	6.60	10.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.16	20.50	6.41	6.41	10.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.20	20.50	6.21	6.21	10.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	1.24	20.50	6.02	6.02	10.87	0.95	47.46	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.40D+1.60H	1	1.29	20.50	5.83	5.83	11.13	0.89	47.29	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	1	1.33	20.50	5.63	5.63	11.39	0.85	47.13	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	1	1.38	20.50	5.44	5.44	11.63	0.80	46.98	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	1	1.42	20.50	5.25	5.25	11.87	0.76	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	1.47	20.50	5.05	5.05	12.10	0.71	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	1	1.51	20.50	4.86	4.86	12.32	0.67	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	1	1.56	20.50	4.67	4.67	12.53	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.60	20.50	4.47	4.47	12.74	0.60	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.40D+1.60H	1	1.64	20.50	4.28	4.28	12.93	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	1	1.69	20.50	4.09	4.09	13.12	0.53	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	1	1.73	20.50	3.89	3.89	13.29	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	1	1.78	20.50	3.70	3.70	13.46	0.47	45.89	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	1	1.82	20.50	3.51	3.51	13.62	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	1	1.87	20.50	3.31	3.31	13.77	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	1	1.91	20.50	3.12	3.12	13.92	0.38	45.61	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	1	1.96	20.50	2.93	2.93	14.05	0.36	45.52	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	1	2.00	20.50	2.73	2.73	14.18	0.33	45.43	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	1	2.04	20.50	2.54	2.54	14.29	0.30	45.34	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	2.09	20.50	2.35	2.35	14.40	0.28	45.26	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	2.13	20.50	2.15	2.15	14.50	0.25	45.18	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	2.18	20.50	1.96	1.96	14.59	0.23	45.10	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	1	2.22	20.50	1.77	1.77	14.68	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.40D+1.60H	1	2.27	20.50	1.57	1.57	14.75	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.40D+1.60H	1	2.31	20.50	1.38	1.38	14.82	0.16	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.36	20.50	1.19	1.19	13.81	0.15	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.40	20.50	1.01	1.01	13.86	0.12	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.44	20.50	0.83	0.83	13.90	0.10	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.49	20.50	0.66	0.66	13.94	0.08	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.53	20.50	0.48	0.48	13.96	0.06	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.58	20.50	0.30	0.30	13.98	0.04	44.46	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.62	20.50	-0.19	0.19	12.33	0.03	44.43	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.67	20.50	-0.36	0.36	12.32	0.05	44.51	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.71	20.50	-0.52	0.52	12.30	0.07	44.58	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.76	20.50	-0.69	0.69	12.27	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.80	20.50	-0.86	0.86	12.24	0.12	44.74	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.84	20.50	-1.02	1.02	12.20	0.14	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.89	20.50	-1.19	1.19	13.15	0.15	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.93	20.50	-1.36	1.36	13.09	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.98	20.50	-1.54	1.54	13.03	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.02	20.50	-1.72	1.72	12.96	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	1	3.07	20.50	-1.91	1.91	14.62	0.22	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	1	3.11	20.50	-2.10	2.10	14.53	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	3.16	20.50	-2.30	2.30	14.43	0.27	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	3.20	20.50	-2.49	2.49	14.32	0.30	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	1	3.24	20.50	-2.68	2.68	14.21	0.32	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	1	3.29	20.50	-2.88	2.88	14.08	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	1	3.33	20.50	-3.07	3.07	13.95	0.38	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	1	3.38	20.50	-3.26	3.26	13.81	0.40	45.67	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	1	3.42	20.50	-3.46	3.46	13.66	0.43	45.77	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	1	3.47	20.50	-3.65	3.65	13.50	0.46	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	1	3.51	20.50	-3.84	3.84	13.34	0.49	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	1	3.56	20.50	-4.04	4.04	13.16	0.52	46.07	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	1	3.60	20.50	-4.23	4.23	12.98	0.56	46.18	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	1	3.64	20.50	-4.43	4.43	12.79	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.40D+1.60H	1	3.69	20.50	-4.62	4.62	12.58	0.63	46.41	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	1	3.73	20.50	-4.81	4.81	12.37	0.66	46.53	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	1	3.78	20.50	-5.01	5.01	12.16	0.70	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	1	3.82	20.50	-5.20	5.20	11.93	0.74	46.80	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	3.87	20.50	-5.39	5.39	11.69	0.79	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	1	3.91	20.50	-5.59	5.59	11.45	0.83	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	1	3.96	20.50	-5.78	5.78	11.20	0.88	47.25	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0

Concrete Beam

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	4.00	20.50	-5.97	5.97	10.94	0.93	47.42	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	1	4.04	20.50	-6.17	6.17	10.67	0.99	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.09	20.50	-6.36	6.36	10.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.13	20.50	-6.55	6.55	10.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.18	20.50	-6.75	6.75	9.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.22	20.50	-6.94	6.94	9.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.27	20.50	-7.13	7.13	9.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.31	20.50	-7.33	7.33	8.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.36	20.50	-7.52	7.52	8.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.40	20.50	-7.71	7.71	8.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.44	20.50	-7.91	7.91	7.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.49	20.50	-8.10	8.10	7.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.53	20.50	-8.29	8.29	7.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.58	20.50	-8.49	8.49	6.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.62	20.50	-8.68	8.68	6.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.67	20.50	-8.87	8.87	5.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.71	20.50	-9.07	9.07	5.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.76	20.50	-9.26	9.26	5.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.80	20.50	-9.46	9.46	4.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.84	20.50	-9.65	9.65	4.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.89	20.50	-9.84	9.84	3.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.93	20.50	-10.04	10.04	3.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	4.98	20.50	-10.23	10.23	3.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.02	20.50	-10.42	10.42	2.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.07	20.50	-10.62	10.62	2.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.11	20.50	-10.81	10.81	1.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.16	20.50	-11.00	11.00	1.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.20	20.50	-11.20	11.20	0.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.24	20.50	-11.39	11.39	0.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	1	5.29	21.00	-11.58	11.58	0.38	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.33	21.00	-11.78	11.78	0.90	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.38	21.00	-11.97	11.97	1.43	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.42	21.00	-12.16	12.16	1.96	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.47	21.00	-12.36	12.36	2.51	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.51	21.00	-12.55	12.55	3.06	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.56	21.00	-12.74	12.74	3.62	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.60	21.00	-12.94	12.94	4.19	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.64	21.00	-13.13	13.13	4.77	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.69	21.00	-13.32	13.32	5.36	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.73	21.00	-13.52	13.52	5.96	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.78	21.00	-13.71	13.71	6.56	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.82	21.00	-13.90	13.90	7.18	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.87	21.00	-14.10	14.10	7.80	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.91	21.00	-14.29	14.29	8.43	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	5.96	21.00	-14.49	14.49	9.07	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.00	21.00	-14.68	14.68	9.72	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.04	21.00	-14.87	14.87	10.37	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.09	21.00	-15.07	15.07	11.04	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.13	21.00	-15.26	15.26	11.71	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.18	21.00	-15.45	15.45	12.39	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.22	21.00	-15.65	15.65	13.09	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.27	21.00	-15.84	15.84	13.79	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.31	21.00	-16.03	16.03	14.49	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.36	21.00	-16.23	16.23	15.21	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0

Concrete Beam

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	6.40	21.00	-16.42	16.42	15.94	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.44	21.00	-16.61	16.61	16.67	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.49	21.00	-16.81	16.81	17.41	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.53	21.00	-17.00	17.00	18.16	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.58	21.00	-17.19	17.19	18.92	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	1	6.62	21.00	-17.39	17.39	19.69	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.67	21.00	15.38	15.38	20.47	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.71	21.00	15.18	15.18	19.79	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.76	21.00	14.99	14.99	19.12	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.80	21.00	14.79	14.79	18.46	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.84	21.00	14.60	14.60	17.81	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.89	21.00	14.41	14.41	17.16	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.93	21.00	14.21	14.21	16.52	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	6.98	21.00	14.02	14.02	15.90	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.02	21.00	13.83	13.83	15.28	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.07	21.00	13.63	13.63	14.67	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.11	21.00	13.44	13.44	14.07	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.16	21.00	13.25	13.25	13.47	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.20	21.00	13.05	13.05	12.89	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.24	21.00	12.86	12.86	12.31	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.29	21.00	12.67	12.67	11.75	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.33	21.00	12.47	12.47	11.19	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.38	21.00	12.28	12.28	10.64	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.42	21.00	12.09	12.09	10.09	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.47	21.00	11.89	11.89	9.56	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.51	21.00	11.70	11.70	9.04	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.56	21.00	11.51	11.51	8.52	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.60	21.00	11.31	11.31	8.01	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.64	21.00	11.12	11.12	7.52	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.69	21.00	10.93	10.93	7.03	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.73	21.00	10.73	10.73	6.54	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.78	21.00	10.54	10.54	6.07	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.82	21.00	10.35	10.35	5.61	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.87	21.00	10.15	10.15	5.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.91	21.00	9.96	9.96	4.71	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	7.96	21.00	9.77	9.77	4.27	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.00	21.00	9.57	9.57	3.84	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.04	21.00	9.38	9.38	3.42	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.09	21.00	9.18	9.18	3.00	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.13	21.00	8.99	8.99	2.60	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	8.18	21.00	8.80	8.80	2.20	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.22	21.00	8.61	8.61	1.47	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.27	21.00	8.44	8.44	1.09	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.31	21.00	8.26	8.26	0.72	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.36	21.00	8.08	8.08	0.36	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.40	21.00	7.91	7.91	0.00	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.44	20.50	7.73	7.73	0.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.49	20.50	7.55	7.55	0.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.53	20.50	7.38	7.38	1.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.58	20.50	7.20	7.20	1.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.62	20.50	7.02	7.02	1.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.67	20.50	6.85	6.85	1.96	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.71	20.50	6.67	6.67	2.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.76	20.50	6.49	6.49	2.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	8.80	20.50	6.32	6.32	2.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.84	20.50	6.14	6.14	3.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.89	20.50	5.96	5.96	3.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.93	20.50	5.79	5.79	3.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.98	20.50	5.61	5.61	3.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.02	20.50	5.43	5.43	4.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.07	20.50	5.26	5.26	4.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.11	20.50	5.08	5.08	4.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.16	20.50	4.91	4.91	4.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.20	20.50	4.73	4.73	5.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.24	20.50	4.55	4.55	5.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.29	20.50	4.38	4.38	5.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.33	20.50	4.20	4.20	5.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.38	20.50	4.02	4.02	5.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.42	20.50	3.85	3.85	6.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.47	20.50	3.67	3.67	6.17	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.51	20.50	3.49	3.49	6.33	0.94	47.45	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.56	20.50	3.32	3.32	6.48	0.87	47.23	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.60	20.50	3.14	3.14	6.62	0.81	47.01	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.64	20.50	2.96	2.96	6.76	0.75	46.81	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.69	20.50	2.79	2.79	6.89	0.69	46.62	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.73	20.50	2.61	2.61	7.01	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.78	20.50	2.43	2.43	7.12	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.82	20.50	2.26	2.26	7.22	0.53	46.10	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.87	20.50	2.08	2.08	7.32	0.49	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.91	20.50	1.91	1.91	7.41	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.96	20.50	1.73	1.73	7.49	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.00	20.50	1.55	1.55	7.56	0.35	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.04	20.50	1.38	1.38	7.63	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.09	20.50	1.20	1.20	7.68	0.27	45.22	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.13	20.50	1.02	1.02	7.73	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.18	20.50	0.85	0.85	7.78	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.22	20.50	0.67	0.67	7.81	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.27	20.50	0.49	0.49	7.83	0.11	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.31	20.50	-0.63	0.63	5.23	0.20	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.36	20.50	-0.79	0.79	5.20	0.26	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.40	20.50	-0.96	0.96	5.16	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.44	20.50	-1.12	1.12	5.11	0.38	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.49	20.50	-1.29	1.29	5.06	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.53	20.50	-1.46	1.46	5.00	0.50	45.98	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	2	10.58	20.50	-1.65	1.65	6.37	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	2	10.62	20.50	-1.84	1.84	6.30	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	2	10.67	20.50	-2.04	2.04	6.21	0.56	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	2	10.71	20.50	-2.23	2.23	6.12	0.62	46.40	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	2	10.76	20.50	-2.42	2.42	6.01	0.69	46.61	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	2	10.80	20.50	-2.62	2.62	5.90	0.76	46.84	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	2	10.84	20.50	-2.81	2.81	5.78	0.83	47.08	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	2	10.89	20.50	-3.00	3.00	5.65	0.91	47.34	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	2	10.93	20.50	-3.20	3.20	5.51	0.99	47.61	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	10.98	20.50	-3.39	3.39	5.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.02	20.50	-3.58	3.58	5.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.07	20.50	-3.78	3.78	5.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.11	20.50	-3.97	3.97	4.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.16	20.50	-4.16	4.16	4.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	2	11.20	20.50	-4.36	4.36	4.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.25	20.50	-4.55	4.55	4.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.29	20.50	-4.74	4.74	4.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.33	20.50	-4.94	4.94	3.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.38	20.50	-5.13	5.13	3.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.42	20.50	-5.32	5.32	3.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.47	20.50	-5.52	5.52	3.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.51	20.50	-5.71	5.71	2.94	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.56	20.50	-5.91	5.91	2.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.60	20.50	-6.10	6.10	2.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.65	20.50	-6.29	6.29	2.14	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.69	20.50	-6.49	6.49	1.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.73	20.50	-6.68	6.68	1.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.78	20.50	-6.87	6.87	1.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.82	20.50	-7.07	7.07	0.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.87	20.50	-7.26	7.26	0.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.91	20.50	-7.45	7.45	0.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	2	11.96	21.00	-7.65	7.65	0.03	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.00	21.00	-7.84	7.84	0.37	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.05	21.00	-8.03	8.03	0.73	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.09	21.00	-8.23	8.23	1.09	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.13	21.00	-8.42	8.42	1.46	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.18	21.00	-8.61	8.61	1.84	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.22	21.00	-8.81	8.81	2.22	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.27	21.00	-9.00	9.00	2.62	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.31	21.00	-9.19	9.19	3.02	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.36	21.00	-9.39	9.39	3.44	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.40	21.00	-9.58	9.58	3.86	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.45	21.00	-9.77	9.77	4.29	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	2	12.49	21.00	-9.97	9.97	4.73	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.53	21.00	-26.56	26.56	2.84	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.58	21.00	-26.74	26.74	4.03	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.62	21.00	-26.91	26.91	5.22	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.67	21.00	-27.09	27.09	6.42	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.71	21.00	-27.27	27.27	7.63	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.76	21.00	-27.44	27.44	8.84	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.80	21.00	-27.62	27.62	10.07	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.85	21.00	-27.80	27.80	11.30	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.89	21.00	-27.97	27.97	12.54	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.93	21.00	-28.15	28.15	13.78	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.98	21.00	-28.32	28.32	15.04	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.02	21.00	-28.50	28.50	16.30	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.07	21.00	-28.68	28.68	17.57	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.11	21.00	-28.85	28.85	18.85	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.16	21.00	-29.03	29.03	20.14	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.20	21.00	-29.21	29.21	21.43	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.25	21.00	-29.38	29.38	22.73	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H, I	2	13.29	21.00	-29.56	29.56	24.04	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.40D+1.60H	3	13.33	21.00	19.82	19.82	25.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.38	21.00	19.63	19.63	24.27	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.42	21.00	19.43	19.43	23.40	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.47	21.00	19.24	19.24	22.54	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.51	21.00	19.05	19.05	21.69	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.56	21.00	18.85	18.85	20.85	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0

Concrete Beam

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	3	13.60	21.00	18.66	18.66	20.02	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.65	21.00	18.46	18.46	19.19	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.69	21.00	18.27	18.27	18.37	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.73	21.00	18.08	18.08	17.57	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.78	21.00	17.88	17.88	16.77	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.82	21.00	17.69	17.69	15.98	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.87	21.00	17.50	17.50	15.20	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.91	21.00	17.30	17.30	14.42	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	13.96	21.00	17.11	17.11	13.66	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.00	21.00	16.92	16.92	12.90	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.05	21.00	16.72	16.72	12.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.09	21.00	16.53	16.53	11.41	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.13	21.00	16.34	16.34	10.68	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.18	21.00	16.14	16.14	9.96	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.22	21.00	15.95	15.95	9.25	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.27	21.00	15.76	15.76	8.54	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.31	21.00	15.56	15.56	7.85	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.36	21.00	15.37	15.37	7.16	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.40	21.00	15.18	15.18	6.48	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.45	21.00	14.98	14.98	5.81	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.49	21.00	14.79	14.79	5.15	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.53	21.00	14.60	14.60	4.50	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.58	21.00	14.40	14.40	3.85	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.62	21.00	14.21	14.21	3.22	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.67	21.00	14.02	14.02	2.59	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.71	21.00	13.82	13.82	1.97	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.76	21.00	13.63	13.63	1.36	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.80	21.00	13.43	13.43	0.76	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.85	21.00	13.24	13.24	0.17	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	3	14.89	20.50	13.05	13.05	0.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.93	20.50	12.85	12.85	0.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.98	20.50	12.66	12.66	1.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.02	20.50	12.47	12.47	2.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.07	20.50	12.27	12.27	2.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.11	20.50	12.08	12.08	3.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.16	20.50	11.89	11.89	3.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.20	20.50	11.69	11.69	4.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.25	20.50	11.50	11.50	4.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.29	20.50	11.31	11.31	5.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.33	20.50	11.11	11.11	5.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.38	20.50	10.92	10.92	6.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.42	20.50	10.73	10.73	6.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.47	20.50	10.53	10.53	7.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.51	20.50	10.34	10.34	7.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.56	20.50	10.15	10.15	8.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.60	20.50	9.95	9.95	8.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.65	20.50	9.76	9.76	9.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.69	20.50	9.57	9.57	9.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.73	20.50	9.37	9.37	9.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.78	20.50	9.18	9.18	10.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.82	20.50	8.99	8.99	10.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.87	20.50	8.79	8.79	11.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.91	20.50	8.60	8.60	11.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.96	20.50	8.40	8.40	11.86	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	3	16.00	20.50	8.21	8.21	12.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.05	20.50	7.28	7.28	12.56	0.99	47.61	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.09	20.50	7.09	7.09	12.88	0.94	47.44	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	3	16.13	20.50	6.90	6.90	13.19	0.89	47.29	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	3	16.18	20.50	6.70	6.70	13.49	0.85	47.14	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	3	16.22	20.50	6.51	6.51	13.78	0.81	47.00	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	3	16.27	20.50	6.31	6.31	14.07	0.77	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	3	16.31	20.50	6.12	6.12	14.34	0.73	46.75	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	3	16.36	20.50	5.93	5.93	14.61	0.69	46.63	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	3	16.40	20.50	5.73	5.73	14.87	0.66	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	3	16.45	20.50	5.54	5.54	15.12	0.63	46.41	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	3	16.49	20.50	5.35	5.35	15.36	0.59	46.30	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.40D+1.60H	3	16.53	20.50	3.07	3.07	15.53	0.34	45.46	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	3	16.58	20.50	2.87	2.87	15.66	0.31	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.62	20.50	2.69	2.69	12.21	0.38	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.67	20.50	2.53	2.53	12.32	0.35	45.50	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.71	20.50	2.36	2.36	12.43	0.32	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.76	20.50	2.19	2.19	12.53	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.80	20.50	2.03	2.03	12.62	0.27	45.25	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.85	20.50	1.86	1.86	12.71	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.89	20.50	1.70	1.70	12.79	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.93	20.50	1.53	1.53	12.86	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	16.98	20.50	1.36	1.36	12.93	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.02	20.50	1.20	1.20	12.98	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.07	20.50	1.03	1.03	13.03	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.11	20.50	0.87	0.87	13.08	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.16	20.50	0.70	0.70	13.11	0.09	44.64	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.20	20.50	0.54	0.54	13.14	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	17.25	20.50	0.37	0.37	13.16	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.29	20.50	-0.46	0.46	15.84	0.05	44.50	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.33	20.50	-0.63	0.63	15.82	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.38	20.50	-0.81	0.81	15.78	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.42	20.50	-0.99	0.99	15.74	0.11	44.69	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.47	20.50	-1.16	1.16	15.70	0.13	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.51	20.50	-1.34	1.34	15.64	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.56	20.50	-1.52	1.52	15.58	0.17	44.89	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.60	20.50	-1.69	1.69	15.51	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.65	20.50	-1.87	1.87	15.43	0.21	45.02	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.69	20.50	-2.05	2.05	15.34	0.23	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.73	20.50	-2.22	2.22	15.25	0.25	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.78	20.50	-2.40	2.40	15.14	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.82	20.50	-2.57	2.57	15.03	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	17.87	20.50	-2.75	2.75	14.91	0.32	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	3	17.91	20.50	-2.93	2.93	15.62	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	3	17.96	20.50	-3.12	3.12	15.49	0.34	45.48	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	3	18.00	20.50	-3.32	3.32	15.35	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	3	18.05	20.50	-3.51	3.51	15.19	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.40D+1.60H	3	18.09	20.50	-3.70	3.70	15.03	0.42	45.73	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	3	18.13	20.50	-3.90	3.90	14.87	0.45	45.82	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	3	18.18	20.50	-4.09	4.09	14.69	0.48	45.91	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.40D+1.60H	3	18.22	20.50	-4.28	4.28	14.50	0.50	46.01	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	3	18.27	20.50	-4.48	4.48	14.31	0.53	46.11	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	3	18.31	20.50	-4.67	4.67	14.10	0.57	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.40D+1.60H	3	18.36	20.50	-4.86	4.86	13.89	0.60	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-W (OPPOSITE)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	3	18.40	20.50	-5.06	5.06	13.67	0.63	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.40D+1.60H	3	18.45	20.50	-5.25	5.25	13.44	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	3	18.49	20.50	-5.44	5.44	13.20	0.70	46.67	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	3	18.53	20.50	-5.64	5.64	12.96	0.74	46.79	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	3	18.58	20.50	-5.83	5.83	12.70	0.78	46.93	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	3	18.62	20.50	-6.02	6.02	12.44	0.83	47.07	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	3	18.67	20.50	-6.22	6.22	12.17	0.87	47.22	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.40D+1.60H	3	18.71	20.50	-6.41	6.41	11.89	0.92	47.38	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	3	18.76	20.50	-6.61	6.61	11.60	0.97	47.55	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.80	20.50	-6.80	6.80	11.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.85	20.50	-6.99	6.99	10.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.89	20.50	-7.19	7.19	10.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.93	20.50	-7.38	7.38	10.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	18.98	20.50	-7.57	7.57	10.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.02	20.50	-7.77	7.77	9.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.07	20.50	-7.96	7.96	9.33	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.11	20.50	-8.15	8.15	8.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.16	20.50	-8.35	8.35	8.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.20	20.50	-8.54	8.54	8.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.25	20.50	-8.73	8.73	7.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.29	20.50	-8.93	8.93	7.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.33	20.50	-9.12	9.12	7.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.38	20.50	-9.31	9.31	6.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.42	20.50	-9.51	9.51	6.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.47	20.50	-9.70	9.70	5.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.51	20.50	-9.89	9.89	5.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.56	20.50	-10.09	10.09	4.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.60	20.50	-10.28	10.28	4.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.65	20.50	-10.47	10.47	4.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.69	20.50	-10.67	10.67	3.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.73	20.50	-10.86	10.86	3.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.78	20.50	-11.05	11.05	2.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.82	20.50	-11.25	11.25	2.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.87	20.50	-11.44	11.44	1.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.91	20.50	-11.63	11.63	1.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.96	20.50	-11.83	11.83	0.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	20.00	20.50	-33.94	33.94	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.667	-19.69	127.58	0.15
Span # 2	2	6.667	-24.04	127.58	0.19
Span # 3	3	6.667	-25.36	127.58	0.20
+1.40D+1.60H					
Span # 1	1	6.667	-19.69	127.58	0.15
Span # 2	2	6.667	-23.99	127.58	0.19
Span # 3	3	6.667	-25.15	127.58	0.20
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.60	127.58	0.13
Span # 2	2	6.667	-21.66	127.58	0.17
Span # 3	3	6.667	-22.66	127.58	0.18
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-18.29	127.58	0.14
Span # 2	2	6.667	-22.97	127.58	0.18
Span # 3	3	6.667	-24.28	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL)					

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-18.02	127.58	0.14
Span # 2	2	6.667	-24.04	127.58	0.19
Span # 3	3	6.667	-25.36	127.58	0.20
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.54	127.58	0.14
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.40	127.58	0.17
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.28	127.58	0.14
Span # 2	2	6.667	-21.49	127.58	0.17
Span # 3	3	6.667	-22.49	127.58	0.18
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-18.96	127.58	0.15
Span # 2	2	6.667	-22.80	127.58	0.18
Span # 3	3	6.667	-24.10	127.58	0.19
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-18.69	127.58	0.15
Span # 2	2	6.667	-23.87	127.58	0.19
Span # 3	3	6.667	-25.18	127.58	0.20
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.60	127.58	0.13
Span # 2	2	6.667	-21.66	127.58	0.17
Span # 3	3	6.667	-22.66	127.58	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-18.29	127.58	0.14
Span # 2	2	6.667	-22.97	127.58	0.18
Span # 3	3	6.667	-24.28	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-18.02	127.58	0.14
Span # 2	2	6.667	-24.04	127.58	0.19
Span # 3	3	6.667	-25.36	127.58	0.20
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.54	127.58	0.14
Span # 2	2	6.667	-20.42	127.58	0.16
Span # 3	3	6.667	-21.41	127.58	0.17
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.28	127.58	0.14
Span # 2	2	6.667	-21.49	127.58	0.17
Span # 3	3	6.667	-22.49	127.58	0.18
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-18.96	127.58	0.15
Span # 2	2	6.667	-22.80	127.58	0.18
Span # 3	3	6.667	-24.10	127.58	0.19
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-18.69	127.58	0.15
Span # 2	2	6.667	-23.87	127.58	0.19
Span # 3	3	6.667	-25.18	127.58	0.20
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.31	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.42	127.58	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.53	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.86	127.58	0.17
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.52	127.58	0.14

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.61	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+1.60Lr-0.50W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.58	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.93	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.32	127.58	0.14
Span # 2	2	6.667	-21.34	127.58	0.17

Concrete Beam

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.667	-22.43	127.58	0.18
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.77	127.58	0.18
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.54	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.53	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.62	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.59	127.58	0.17
+1.20D+1.60S-0.50W+1.60H					
Span # 1	1	6.667	-16.87	127.58	0.13
Span # 2	2	6.667	-20.59	127.58	0.16
Span # 3	3	6.667	-21.59	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-17.31	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.42	127.58	0.18
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.53	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.86	127.58	0.17
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-17.52	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.61	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-17.31	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.42	127.58	0.18
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.53	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.86	127.58	0.17
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-17.52	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50Lr+0.50L-W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.61	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.32	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.43	127.58	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.54	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.52	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.61	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.32	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.43	127.58	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.54	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.52	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50L+0.50S-W+1.60H, LL Comb Run (LLL)					

Concrete Beam

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.61	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.32	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.43	127.58	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.54	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.53	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.62	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L)					
Span # 1	1	6.667	-16.79	127.58	0.13
Span # 2	2	6.667	-20.92	127.58	0.16
Span # 3	3	6.667	-21.92	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*)					
Span # 1	1	6.667	-17.32	127.58	0.14
Span # 2	2	6.667	-21.33	127.58	0.17
Span # 3	3	6.667	-22.43	127.58	0.18
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL)					
Span # 1	1	6.667	-17.23	127.58	0.14
Span # 2	2	6.667	-21.67	127.58	0.17
Span # 3	3	6.667	-22.76	127.58	0.18
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**)					
Span # 1	1	6.667	-17.08	127.58	0.13
Span # 2	2	6.667	-20.54	127.58	0.16
Span # 3	3	6.667	-21.53	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L)					
Span # 1	1	6.667	-17.00	127.58	0.13
Span # 2	2	6.667	-20.87	127.58	0.16
Span # 3	3	6.667	-21.87	127.58	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*)					
Span # 1	1	6.667	-17.53	127.58	0.14
Span # 2	2	6.667	-21.28	127.58	0.17
Span # 3	3	6.667	-22.37	127.58	0.18
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL)					
Span # 1	1	6.667	-17.44	127.58	0.14
Span # 2	2	6.667	-21.62	127.58	0.17
Span # 3	3	6.667	-22.71	127.58	0.18
+0.90D+W+0.90H					
Span # 1	1	6.667	-12.66	127.58	0.10
Span # 2	2	6.667	-15.40	127.58	0.12
Span # 3	3	6.667	-16.15	127.58	0.13
+0.90D-W+0.90H					
Span # 1	1	6.667	-12.66	127.58	0.10
Span # 2	2	6.667	-15.40	127.58	0.12
Span # 3	3	6.667	-16.15	127.58	0.13
+0.90D+E+0.90H					
Span # 1	1	6.667	-12.66	127.58	0.10

Concrete Beam

Description : GB-W (OPPOSITE)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-15.40	127.58	0.12
Span # 3	3	6.667	-16.15	127.58	0.13
+0.90D-E+0.90H					
Span # 1	1	6.667	-12.66	127.58	0.10
Span # 2	2	6.667	-15.40	127.58	0.12
Span # 3	3	6.667	-16.15	127.58	0.13

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*L)	1	0.0009	3.067	+D+L+H, LL Comb Run (L*L)	-0.0000	6.800
+D+L+H, LL Comb Run (*L*)	2	0.0003	3.600	+D+L+H, LL Comb Run (L*L)	-0.0000	0.667
+D+L+H, LL Comb Run (L*L)	3	0.0009	3.600		0.0000	0.667

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 12:28PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

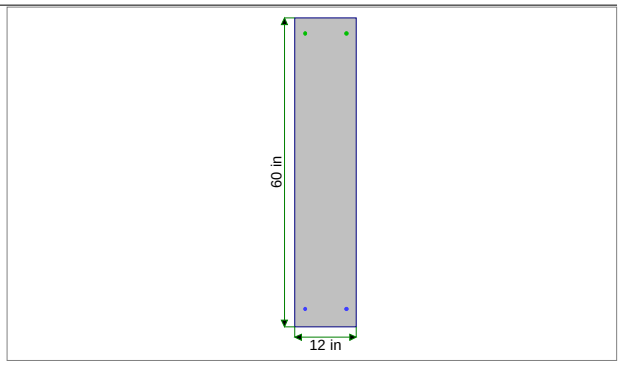
Description : GB-X

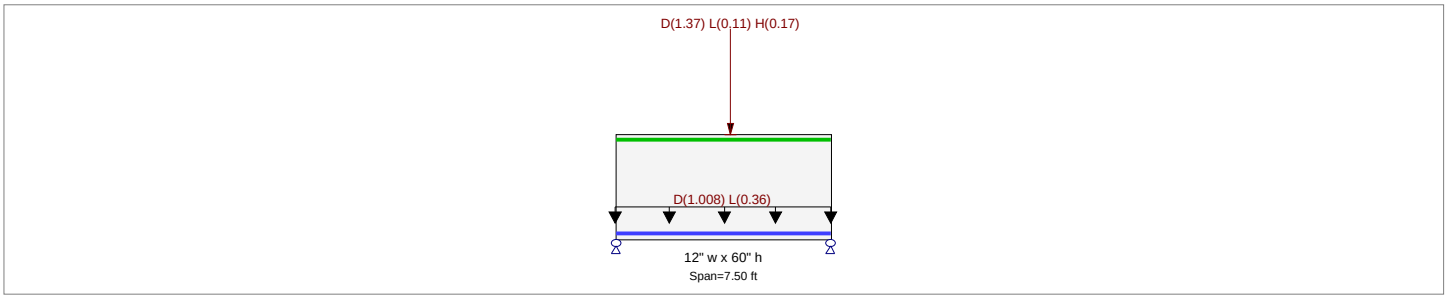
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 60.0 in
Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 7.50 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 7.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 9.0 ft, (slab weight)
Point Load : D = 1.370, L = 0.110, H = 0.170 k @ 4.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.140** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied		22.491 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable		160.215 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Location of maximum on span		3.989 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 1				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	8.619	8.729
Overall MINimum	0.079	0.091
+D+H	7.217	7.320
+D+L+H	8.619	8.729
+D+Lr+H	7.217	7.320
+D+S+H	7.217	7.320
+D+0.750Lr+0.750L+H	8.268	8.377
+D+0.750L+0.750S+H	8.268	8.377
+D+0.60W+H	7.217	7.320
+D+0.70E+H	7.217	7.320
+D+0.750Lr+0.750L+0.450W+H	8.268	8.377
+D+0.750L+0.750S+0.450W+H	8.268	8.377

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 22 JUL 2017, 12:28PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-X

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.750L+0.750S+0.5250E+H	8.268	8.377
+0.60D+0.60W+0.60H	4.330	4.392
+0.60D+0.70E+0.60H	4.330	4.392
D Only	7.138	7.229
Lr Only		
L Only	1.401	1.409
S Only		
W Only		
E Only		
H Only	0.079	0.091

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	56.50	10.93	10.93	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.01	56.50	10.90	10.90	0.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.03	56.50	10.86	10.86	0.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.04	56.50	10.83	10.83	0.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	56.50	10.79	10.79	0.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	56.50	10.75	10.75	0.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.08	56.50	10.72	10.72	0.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	56.50	10.68	10.68	1.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.11	56.50	10.64	10.64	1.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	56.50	10.61	10.61	1.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.14	56.50	10.57	10.57	1.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	56.50	10.54	10.54	1.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.16	56.50	10.50	10.50	1.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.18	56.50	10.46	10.46	1.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	56.50	10.43	10.43	2.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	56.50	10.39	10.39	2.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	56.50	10.35	10.35	2.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.23	56.50	10.32	10.32	2.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.25	56.50	10.28	10.28	2.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.26	56.50	10.25	10.25	2.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	56.50	10.21	10.21	2.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	56.50	10.17	10.17	3.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	56.50	10.14	10.14	3.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.31	56.50	10.10	10.10	3.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.33	56.50	10.06	10.06	3.44	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	56.50	10.03	10.03	3.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.36	56.50	9.99	9.99	3.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	56.50	9.96	9.96	3.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.38	56.50	9.92	9.92	3.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.40	56.50	9.88	9.88	4.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.41	56.50	9.85	9.85	4.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.42	56.50	9.81	9.81	4.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	56.50	9.77	9.77	4.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.45	56.50	9.74	9.74	4.66	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.46	56.50	9.70	9.70	4.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	56.50	9.67	9.67	4.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	56.50	9.63	9.63	5.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.51	56.50	9.59	9.59	5.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	56.50	9.56	9.56	5.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.53	56.50	9.52	9.52	5.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.55	56.50	9.48	9.48	5.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.56	56.50	9.45	9.45	5.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.57	56.50	9.41	9.41	5.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	56.50	9.37	9.37	5.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.60	56.50	9.34	9.34	6.09	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	56.50	9.30	9.30	6.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.63	56.50	9.27	9.27	6.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	56.50	9.23	9.23	6.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	56.50	9.19	9.19	6.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.67	56.50	9.16	9.16	6.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.68	56.50	9.12	9.12	6.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.70	56.50	9.08	9.08	6.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	56.50	9.05	9.05	7.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.72	56.50	9.01	9.01	7.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	56.50	8.98	8.98	7.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.75	56.50	8.94	8.94	7.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	56.50	8.90	8.90	7.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.78	56.50	8.87	8.87	7.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	56.50	8.83	8.83	7.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	56.50	8.79	8.79	7.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.82	56.50	8.76	8.76	8.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.83	56.50	8.72	8.72	8.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.85	56.50	8.69	8.69	8.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	56.50	8.65	8.65	8.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.87	56.50	8.61	8.61	8.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	56.50	8.58	8.58	8.66	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.90	56.50	8.54	8.54	8.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.92	56.50	8.50	8.50	8.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	56.50	8.47	8.47	9.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.94	56.50	8.43	8.43	9.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	56.50	8.40	8.40	9.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.97	56.50	8.36	8.36	9.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	56.50	8.32	8.32	9.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.00	56.50	8.29	8.29	9.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	56.50	8.25	8.25	9.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.02	56.50	8.21	8.21	9.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.04	56.50	8.18	8.18	9.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.05	56.50	8.14	8.14	10.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.07	56.50	8.11	8.11	10.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	56.50	8.07	8.07	10.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.09	56.50	8.03	8.03	10.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	56.50	8.00	8.00	10.47	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.12	56.50	7.96	7.96	10.58	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	56.50	7.92	7.92	10.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.15	56.50	7.89	7.89	10.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	56.50	7.85	7.85	10.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.17	56.50	7.81	7.81	11.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.19	56.50	7.78	7.78	11.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	56.50	7.74	7.74	11.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.22	56.50	7.71	7.71	11.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	56.50	7.67	7.67	11.44	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.24	56.50	7.63	7.63	11.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.26	56.50	7.60	7.60	11.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.27	56.50	7.56	7.56	11.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	56.50	7.52	7.52	11.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	56.50	7.49	7.49	11.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.31	56.50	7.45	7.45	12.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	56.50	7.42	7.42	12.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.34	56.50	7.38	7.38	12.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	56.50	7.34	7.34	12.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.37	56.50	7.31	7.31	12.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	56.50	7.27	7.27	12.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.39	56.50	7.23	7.23	12.66	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.41	56.50	7.20	7.20	12.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.42	56.50	7.16	7.16	12.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	56.50	7.13	7.13	12.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	56.50	7.09	7.09	13.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.46	56.50	7.05	7.05	13.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	56.50	7.02	7.02	13.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.49	56.50	6.98	6.98	13.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	56.50	6.94	6.94	13.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	56.50	6.91	6.91	13.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.53	56.50	6.87	6.87	13.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	56.50	6.84	6.84	13.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.56	56.50	6.80	6.80	13.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	56.50	6.76	6.76	13.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.58	56.50	6.73	6.73	13.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	56.50	6.69	6.69	14.09	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.61	56.50	6.65	6.65	14.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.63	56.50	6.62	6.62	14.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.64	56.50	6.58	6.58	14.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	56.50	6.55	6.55	14.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.67	56.50	6.51	6.51	14.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.68	56.50	6.47	6.47	14.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.69	56.50	6.44	6.44	14.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.71	56.50	6.40	6.40	14.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	56.50	6.36	6.36	14.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.73	56.50	6.33	6.33	14.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	56.50	6.29	6.29	15.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.76	56.50	6.25	6.25	15.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.78	56.50	6.22	6.22	15.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.79	56.50	6.18	6.18	15.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	56.50	6.15	6.15	15.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	56.50	6.11	6.11	15.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.83	56.50	6.07	6.07	15.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	56.50	6.04	6.04	15.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.86	56.50	6.00	6.00	15.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	56.50	5.96	5.96	15.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	56.50	5.93	5.93	15.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.90	56.50	5.89	5.89	15.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.91	56.50	5.86	5.86	16.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	56.50	5.82	5.82	16.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	56.50	5.78	5.78	16.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.95	56.50	5.75	5.75	16.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	56.50	5.71	5.71	16.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.98	56.50	5.67	5.67	16.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	56.50	5.64	5.64	16.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.01	56.50	5.60	5.60	16.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	56.50	5.57	5.57	16.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	56.50	5.53	5.53	16.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.05	56.50	5.49	5.49	16.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.06	56.50	5.46	5.46	16.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.08	56.50	5.42	5.42	16.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.09	56.50	5.38	5.38	17.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.10	56.50	5.35	5.35	17.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.12	56.50	5.31	5.31	17.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.13	56.50	5.28	5.28	17.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	56.50	5.24	5.24	17.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.16	56.50	5.20	5.20	17.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.17	56.50	5.17	5.17	17.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.19	56.50	5.13	5.13	17.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.20	56.50	5.09	5.09	17.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	56.50	5.06	5.06	17.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.23	56.50	5.02	5.02	17.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	56.50	4.99	4.99	17.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.25	56.50	4.95	4.95	17.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.27	56.50	4.91	4.91	17.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.28	56.50	4.88	4.88	18.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.30	56.50	4.84	4.84	18.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	56.50	4.80	4.80	18.17	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	56.50	4.77	4.77	18.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	56.50	4.73	4.73	18.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.35	56.50	4.69	4.69	18.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.36	56.50	4.66	4.66	18.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.38	56.50	4.62	4.62	18.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	56.50	4.59	4.59	18.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.40	56.50	4.55	4.55	18.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.42	56.50	4.51	4.51	18.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	56.50	4.48	4.48	18.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.45	56.50	4.44	4.44	18.80	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	56.50	4.40	4.40	18.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.47	56.50	4.37	4.37	18.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.49	56.50	4.33	4.33	18.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.50	56.50	4.30	4.30	19.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	56.50	4.26	4.26	19.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	56.50	4.22	4.22	19.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.54	56.50	4.19	4.19	19.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.55	56.50	4.15	4.15	19.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.57	56.50	4.11	4.11	19.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	56.50	4.08	4.08	19.38	0.99	62.26	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.60	56.50	4.04	4.04	19.44	0.98	62.24	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	56.50	4.01	4.01	19.49	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.62	56.50	3.97	3.97	19.55	0.96	62.22	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.64	56.50	3.93	3.93	19.60	0.94	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.65	56.50	3.90	3.90	19.65	0.93	62.19	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	56.50	3.86	3.86	19.71	0.92	62.18	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	56.50	3.82	3.82	19.76	0.91	62.16	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.69	56.50	3.79	3.79	19.81	0.90	62.15	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	56.50	3.75	3.75	19.86	0.89	62.14	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.72	56.50	3.72	3.72	19.91	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	56.50	3.68	3.68	19.96	0.87	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	56.50	3.64	3.64	20.01	0.86	62.10	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.76	56.50	3.61	3.61	20.06	0.85	62.09	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.77	56.50	3.57	3.57	20.11	0.84	62.08	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.79	56.50	3.53	3.53	20.16	0.83	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	56.50	3.50	3.50	20.21	0.81	62.05	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.81	56.50	3.46	3.46	20.26	0.80	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.83	56.50	3.43	3.43	20.30	0.79	62.03	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.84	56.50	3.39	3.39	20.35	0.78	62.02	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.86	56.50	3.35	3.35	20.40	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.87	56.50	3.32	3.32	20.44	0.76	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	56.50	3.28	3.28	20.49	0.75	61.98	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	56.50	3.24	3.24	20.53	0.74	61.97	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.91	56.50	3.21	3.21	20.58	0.73	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.92	56.50	3.17	3.17	20.62	0.72	61.95	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.94	56.50	3.13	3.13	20.66	0.71	61.94	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	56.50	3.10	3.10	20.70	0.70	61.92	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.96	56.50	3.06	3.06	20.75	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	56.50	3.03	3.03	20.79	0.69	61.90	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.99	56.50	2.99	2.99	20.83	0.68	61.89	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.01	56.50	2.95	2.95	20.87	0.67	61.88	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	56.50	2.92	2.92	20.91	0.66	61.87	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.03	56.50	2.88	2.88	20.95	0.65	61.86	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	56.50	2.84	2.84	20.99	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.06	56.50	2.81	2.81	21.03	0.63	61.84	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	56.50	2.77	2.77	21.07	0.62	61.82	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	56.50	2.74	2.74	21.10	0.61	61.81	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	56.50	2.70	2.70	21.14	0.60	61.80	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.11	56.50	2.66	2.66	21.18	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.13	56.50	2.63	2.63	21.21	0.58	61.78	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.14	56.50	2.59	2.59	21.25	0.57	61.77	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.16	56.50	2.55	2.55	21.28	0.57	61.76	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	56.50	2.52	2.52	21.32	0.56	61.75	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	56.50	2.48	2.48	21.35	0.55	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	56.50	2.45	2.45	21.39	0.54	61.73	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.21	56.50	2.41	2.41	21.42	0.53	61.72	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	56.50	2.37	2.37	21.45	0.52	61.71	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.24	56.50	2.34	2.34	21.48	0.51	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	56.50	2.30	2.30	21.52	0.50	61.69	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	56.50	2.26	2.26	21.55	0.49	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	56.50	2.23	2.23	21.58	0.49	61.67	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.29	56.50	2.19	2.19	21.61	0.48	61.66	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.31	56.50	2.16	2.16	21.64	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	56.50	2.12	2.12	21.67	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.33	56.50	2.08	2.08	21.70	0.45	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.35	56.50	2.05	2.05	21.72	0.44	61.62	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.36	56.50	2.01	2.01	21.75	0.44	61.61	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	56.50	1.97	1.97	21.78	0.43	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	56.50	1.94	1.94	21.81	0.42	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.40	56.50	1.90	1.90	21.83	0.41	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.42	56.50	1.87	1.87	21.86	0.40	61.57	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.43	56.50	1.83	1.83	21.88	0.39	61.56	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	56.50	1.79	1.79	21.91	0.39	61.55	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.46	56.50	1.76	1.76	21.93	0.38	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	56.50	1.72	1.72	21.96	0.37	61.53	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.48	56.50	1.68	1.68	21.98	0.36	61.52	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.50	56.50	1.65	1.65	22.00	0.35	61.51	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.51	56.50	1.61	1.61	22.02	0.34	61.51	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.52	56.50	1.57	1.57	22.05	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	56.50	1.54	1.54	22.07	0.33	61.49	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.55	56.50	1.50	1.50	20.64	0.34	61.50	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.57	56.50	1.47	1.47	20.66	0.33	61.49	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.58	56.50	1.44	1.44	20.68	0.33	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.59	56.50	1.40	1.40	20.70	0.32	61.48	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.61	56.50	1.37	1.37	20.72	0.31	61.47	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.62	56.50	1.34	1.34	20.74	0.30	61.46	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.40D+1.60H	1	3.63	56.50	1.30	1.30	20.76	0.30	61.45	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.65	56.50	1.27	1.27	20.77	0.29	61.44	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.66	56.50	1.24	1.24	20.79	0.28	61.43	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.67	56.50	1.20	1.20	20.81	0.27	61.42	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.69	56.50	1.17	1.17	20.82	0.26	61.41	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.70	56.50	1.14	1.14	20.84	0.26	61.40	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.72	56.50	1.10	1.10	20.86	0.25	61.39	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.73	56.50	1.07	1.07	20.87	0.24	61.39	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.74	56.50	1.04	1.04	20.88	0.23	61.38	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.76	56.50	1.01	1.01	20.90	0.23	61.37	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.77	56.50	0.97	0.97	20.91	0.22	61.36	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.78	56.50	0.94	0.94	20.93	0.21	61.35	Vu < PhiVc/2	Not Reqd 1	61.4	0.0	0.0
+1.40D+1.60H	1	3.80	56.50	0.91	0.91	20.94	0.20	61.34	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.81	56.50	0.87	0.87	20.95	0.20	61.33	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.83	56.50	0.84	0.84	20.96	0.19	61.32	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.84	56.50	0.81	0.81	20.97	0.18	61.32	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.85	56.50	0.77	0.77	20.98	0.17	61.31	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.87	56.50	0.74	0.74	20.99	0.17	61.30	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.88	56.50	0.71	0.71	21.00	0.16	61.29	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.89	56.50	0.67	0.67	21.01	0.15	61.28	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.91	56.50	0.64	0.64	21.02	0.14	61.27	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.92	56.50	0.61	0.61	21.03	0.14	61.26	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.93	56.50	0.57	0.57	21.04	0.13	61.25	Vu < PhiVc/2	Not Reqd 1	61.3	0.0	0.0
+1.40D+1.60H	1	3.95	56.50	0.54	0.54	21.05	0.12	61.25	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.40D+1.60H	1	3.96	56.50	0.51	0.51	21.05	0.11	61.24	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.40D+1.60H	1	3.98	56.50	0.48	0.48	21.06	0.11	61.23	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.40D+1.60H	1	3.99	56.50	0.44	0.44	21.07	0.10	61.22	Vu < PhiVc/2	Not Reqd 1	61.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.00	56.50	-1.79	1.79	22.49	0.37	61.54	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.02	56.50	-1.82	1.82	22.46	0.38	61.55	Vu < PhiVc/2	Not Reqd 1	61.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.03	56.50	-1.86	1.86	22.44	0.39	61.56	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.04	56.50	-1.90	1.90	22.41	0.40	61.57	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	56.50	-1.93	1.93	22.39	0.41	61.58	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.07	56.50	-1.97	1.97	22.36	0.41	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	56.50	-2.00	2.00	22.33	0.42	61.60	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.10	56.50	-2.04	2.04	22.31	0.43	61.61	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.11	56.50	-2.08	2.08	22.28	0.44	61.62	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	56.50	-2.11	2.11	22.25	0.45	61.62	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.14	56.50	-2.15	2.15	22.22	0.46	61.63	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.15	56.50	-2.19	2.19	22.19	0.46	61.64	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.17	56.50	-2.22	2.22	22.16	0.47	61.65	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.18	56.50	-2.26	2.26	22.13	0.48	61.66	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.19	56.50	-2.29	2.29	22.10	0.49	61.67	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.21	56.50	-2.33	2.33	22.07	0.50	61.68	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.22	56.50	-2.37	2.37	22.04	0.51	61.69	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	56.50	-2.40	2.40	22.00	0.51	61.70	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.25	56.50	-2.44	2.44	21.97	0.52	61.71	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	4.26	56.50	-2.48	2.48	21.94	0.53	61.72	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.28	56.50	-2.51	2.51	21.90	0.54	61.73	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.29	56.50	-2.55	2.55	21.87	0.55	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	56.50	-2.59	2.59	21.83	0.56	61.75	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.32	56.50	-2.62	2.62	21.80	0.57	61.76	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	56.50	-2.66	2.66	21.76	0.58	61.77	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.34	56.50	-2.69	2.69	21.72	0.58	61.78	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.36	56.50	-2.73	2.73	21.69	0.59	61.79	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.37	56.50	-2.77	2.77	21.65	0.60	61.80	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.39	56.50	-2.80	2.80	21.61	0.61	61.81	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	56.50	-2.84	2.84	21.57	0.62	61.82	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.41	56.50	-2.88	2.88	21.53	0.63	61.84	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	56.50	-2.91	2.91	21.49	0.64	61.85	Vu < PhiVc/2	Not Reqd 1	61.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	56.50	-2.95	2.95	21.45	0.65	61.86	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.45	56.50	-2.98	2.98	21.41	0.66	61.87	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.47	56.50	-3.02	3.02	21.37	0.67	61.88	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.48	56.50	-3.06	3.06	21.33	0.67	61.89	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.49	56.50	-3.09	3.09	21.29	0.68	61.90	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.51	56.50	-3.13	3.13	21.25	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.52	56.50	-3.17	3.17	21.20	0.70	61.92	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	56.50	-3.20	3.20	21.16	0.71	61.93	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.55	56.50	-3.24	3.24	21.12	0.72	61.94	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.56	56.50	-3.27	3.27	21.07	0.73	61.96	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.58	56.50	-3.31	3.31	21.03	0.74	61.97	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.59	56.50	-3.35	3.35	20.98	0.75	61.98	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.60	56.50	-3.38	3.38	20.94	0.76	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	56.50	-3.42	3.42	20.89	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.63	56.50	-3.46	3.46	20.84	0.78	62.01	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.64	56.50	-3.49	3.49	20.79	0.79	62.02	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.66	56.50	-3.53	3.53	20.75	0.80	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.67	56.50	-3.56	3.56	20.70	0.81	62.05	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.69	56.50	-3.60	3.60	20.65	0.82	62.06	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.70	56.50	-3.64	3.64	20.60	0.83	62.07	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.71	56.50	-3.67	3.67	20.55	0.84	62.08	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.73	56.50	-3.71	3.71	20.50	0.85	62.10	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.74	56.50	-3.75	3.75	20.45	0.86	62.11	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.75	56.50	-3.78	3.78	20.40	0.87	62.12	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.77	56.50	-3.82	3.82	20.35	0.88	62.13	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.78	56.50	-3.85	3.85	20.29	0.89	62.14	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.80	56.50	-3.89	3.89	20.24	0.91	62.16	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.81	56.50	-3.93	3.93	20.19	0.92	62.17	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.82	56.50	-3.96	3.96	20.13	0.93	62.18	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.84	56.50	-4.00	4.00	20.08	0.94	62.20	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.85	56.50	-4.04	4.04	20.02	0.95	62.21	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.86	56.50	-4.07	4.07	19.97	0.96	62.22	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.88	56.50	-4.11	4.11	19.91	0.97	62.23	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.89	56.50	-4.15	4.15	19.86	0.98	62.25	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.90	56.50	-4.18	4.18	19.80	0.99	62.26	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	56.50	-4.22	4.22	19.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.93	56.50	-4.25	4.25	19.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.95	56.50	-4.29	4.29	19.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.96	56.50	-4.33	4.33	19.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.97	56.50	-4.36	4.36	19.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	56.50	-4.40	4.40	19.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.00	56.50	-4.44	4.44	19.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.01	56.50	-4.47	4.47	19.33	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.03	56.50	-4.51	4.51	19.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	56.50	-4.54	4.54	19.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.05	56.50	-4.58	4.58	19.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	56.50	-4.62	4.62	19.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.08	56.50	-4.65	4.65	19.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.10	56.50	-4.69	4.69	18.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.11	56.50	-4.73	4.73	18.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.12	56.50	-4.76	4.76	18.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.14	56.50	-4.80	4.80	18.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.15	56.50	-4.83	4.83	18.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	56.50	-4.87	4.87	18.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.18	56.50	-4.91	4.91	18.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	56.50	-4.94	4.94	18.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.20	56.50	-4.98	4.98	18.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.22	56.50	-5.02	5.02	18.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.23	56.50	-5.05	5.05	18.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.25	56.50	-5.09	5.09	18.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	56.50	-5.12	5.12	18.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.27	56.50	-5.16	5.16	18.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	56.50	-5.20	5.20	18.01	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.30	56.50	-5.23	5.23	17.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.31	56.50	-5.27	5.27	17.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.33	56.50	-5.31	5.31	17.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.34	56.50	-5.34	5.34	17.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	56.50	-5.38	5.38	17.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.37	56.50	-5.41	5.41	17.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.38	56.50	-5.45	5.45	17.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	56.50	-5.49	5.49	17.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.41	56.50	-5.52	5.52	17.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.42	56.50	-5.56	5.56	17.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.44	56.50	-5.60	5.60	17.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.45	56.50	-5.63	5.63	17.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.46	56.50	-5.67	5.67	17.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.48	56.50	-5.70	5.70	16.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.49	56.50	-5.74	5.74	16.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.51	56.50	-5.78	5.78	16.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.52	56.50	-5.81	5.81	16.73	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.53	56.50	-5.85	5.85	16.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.55	56.50	-5.89	5.89	16.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.56	56.50	-5.92	5.92	16.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.57	56.50	-5.96	5.96	16.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.59	56.50	-6.00	6.00	16.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	56.50	-6.03	6.03	16.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.61	56.50	-6.07	6.07	16.16	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.63	56.50	-6.10	6.10	16.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.64	56.50	-6.14	6.14	15.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.66	56.50	-6.18	6.18	15.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.67	56.50	-6.21	6.21	15.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.68	56.50	-6.25	6.25	15.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.70	56.50	-6.29	6.29	15.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.71	56.50	-6.32	6.32	15.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.72	56.50	-6.36	6.36	15.48	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.74	56.50	-6.39	6.39	15.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.75	56.50	-6.43	6.43	15.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.77	56.50	-6.47	6.47	15.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	56.50	-6.50	6.50	15.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.79	56.50	-6.54	6.54	15.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.81	56.50	-6.58	6.58	14.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.82	56.50	-6.61	6.61	14.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	56.50	-6.65	6.65	14.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.85	56.50	-6.68	6.68	14.68	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.86	56.50	-6.72	6.72	14.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.87	56.50	-6.76	6.76	14.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.89	56.50	-6.79	6.79	14.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	56.50	-6.83	6.83	14.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.92	56.50	-6.87	6.87	14.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.93	56.50	-6.90	6.90	14.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.94	56.50	-6.94	6.94	14.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.96	56.50	-6.97	6.97	13.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.97	56.50	-7.01	7.01	13.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	56.50	-7.05	7.05	13.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.00	56.50	-7.08	7.08	13.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.01	56.50	-7.12	7.12	13.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.02	56.50	-7.16	7.16	13.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.04	56.50	-7.19	7.19	13.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.05	56.50	-7.23	7.23	13.25	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.07	56.50	-7.26	7.26	13.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.08	56.50	-7.30	7.30	13.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.09	56.50	-7.34	7.34	12.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.11	56.50	-7.37	7.37	12.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.12	56.50	-7.41	7.41	12.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.13	56.50	-7.45	7.45	12.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.15	56.50	-7.48	7.48	12.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.16	56.50	-7.52	7.52	12.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.17	56.50	-7.56	7.56	12.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.19	56.50	-7.59	7.59	12.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.20	56.50	-7.63	7.63	12.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.22	56.50	-7.66	7.66	12.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.23	56.50	-7.70	7.70	11.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.24	56.50	-7.74	7.74	11.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.26	56.50	-7.77	7.77	11.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.27	56.50	-7.81	7.81	11.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.28	56.50	-7.85	7.85	11.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.30	56.50	-7.88	7.88	11.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.31	56.50	-7.92	7.92	11.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.33	56.50	-7.95	7.95	11.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.34	56.50	-7.99	7.99	11.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.35	56.50	-8.03	8.03	10.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.37	56.50	-8.06	8.06	10.85	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.38	56.50	-8.10	8.10	10.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.39	56.50	-8.14	8.14	10.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.41	56.50	-8.17	8.17	10.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.42	56.50	-8.21	8.21	10.41	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.43	56.50	-8.24	8.24	10.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.45	56.50	-8.28	8.28	10.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.46	56.50	-8.32	8.32	10.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	6.48	56.50	-8.35	8.35	9.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.49	56.50	-8.39	8.39	9.84	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.50	56.50	-8.43	8.43	9.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.52	56.50	-8.46	8.46	9.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.53	56.50	-8.50	8.50	9.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.54	56.50	-8.53	8.53	9.38	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.56	56.50	-8.57	8.57	9.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	56.50	-8.61	8.61	9.14	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.58	56.50	-8.64	8.64	9.02	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.60	56.50	-8.68	8.68	8.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.61	56.50	-8.72	8.72	8.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.63	56.50	-8.75	8.75	8.67	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	56.50	-8.79	8.79	8.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.65	56.50	-8.82	8.82	8.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.67	56.50	-8.86	8.86	8.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.68	56.50	-8.90	8.90	8.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.69	56.50	-8.93	8.93	8.06	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.71	56.50	-8.97	8.97	7.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.72	56.50	-9.01	9.01	7.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.73	56.50	-9.04	9.04	7.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.75	56.50	-9.08	9.08	7.57	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.76	56.50	-9.12	9.12	7.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.78	56.50	-9.15	9.15	7.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.79	56.50	-9.19	9.19	7.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.80	56.50	-9.22	9.22	7.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.82	56.50	-9.26	9.26	6.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.83	56.50	-9.30	9.30	6.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	56.50	-9.33	9.33	6.69	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.86	56.50	-9.37	9.37	6.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.87	56.50	-9.41	9.41	6.43	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.89	56.50	-9.44	9.44	6.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.90	56.50	-9.48	9.48	6.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.91	56.50	-9.51	9.51	6.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.93	56.50	-9.55	9.55	5.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.94	56.50	-9.59	9.59	5.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.95	56.50	-9.62	9.62	5.66	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.97	56.50	-9.66	9.66	5.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	56.50	-9.70	9.70	5.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.99	56.50	-9.73	9.73	5.26	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	56.50	-9.77	9.77	5.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.02	56.50	-9.80	9.80	4.99	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.04	56.50	-9.84	9.84	4.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.05	56.50	-9.88	9.88	4.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.06	56.50	-9.91	9.91	4.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	56.50	-9.95	9.95	4.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.09	56.50	-9.99	9.99	4.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.10	56.50	-10.02	10.02	4.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.12	56.50	-10.06	10.06	4.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.13	56.50	-10.09	10.09	3.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.14	56.50	-10.13	10.13	3.77	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.16	56.50	-10.17	10.17	3.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.17	56.50	-10.20	10.20	3.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.19	56.50	-10.24	10.24	3.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.20	56.50	-10.28	10.28	3.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-X

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	7.21	56.50	-10.31	10.31	3.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.23	56.50	-10.35	10.35	2.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.24	56.50	-10.38	10.38	2.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	56.50	-10.42	10.42	2.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.27	56.50	-10.46	10.46	2.50	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.28	56.50	-10.49	10.49	2.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.30	56.50	-10.53	10.53	2.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.31	56.50	-10.57	10.57	2.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.32	56.50	-10.60	10.60	1.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.34	56.50	-10.64	10.64	1.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.35	56.50	-10.68	10.68	1.63	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.36	56.50	-10.71	10.71	1.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.38	56.50	-10.75	10.75	1.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.39	56.50	-10.78	10.78	1.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.40	56.50	-10.82	10.82	1.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.42	56.50	-10.86	10.86	0.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	56.50	-10.89	10.89	0.75	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.45	56.50	-10.93	10.93	0.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.46	56.50	-10.97	10.97	0.45	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.47	56.50	-11.00	11.00	0.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.49	56.50	-11.04	11.04	0.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.50	56.50	-11.07	11.07	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.500	22.49	160.21	0.14
+1.40D+1.60H					
Span # 1	1	7.500	21.07	160.21	0.13
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	7.500	22.49	160.21	0.14
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	7.500	22.49	160.21	0.14
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	7.500	19.49	160.21	0.12
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	7.500	18.13	160.21	0.11
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	7.500	19.49	160.21	0.12
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.500	18.13	160.21	0.11
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	7.500	19.49	160.21	0.12
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	7.500	19.49	160.21	0.12
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	7.500	19.49	160.21	0.12
+0.90D+W+0.90H					
Span # 1	1	7.500	13.50	160.21	0.08
+0.90D+E+0.90H					
Span # 1	1	7.500	13.50	160.21	0.08

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0003	3.750		0.0000	0.000

Title Block Line 1
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Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

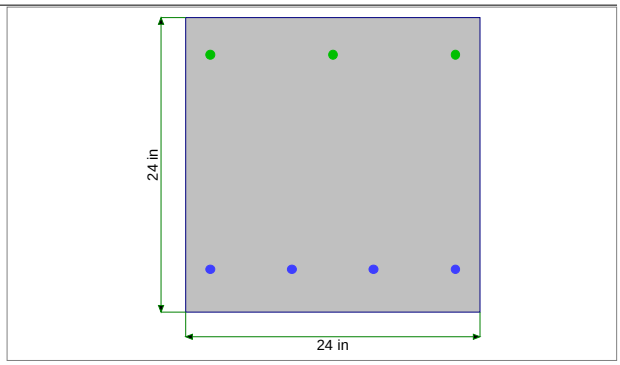
Description : GB-Y (2 units)

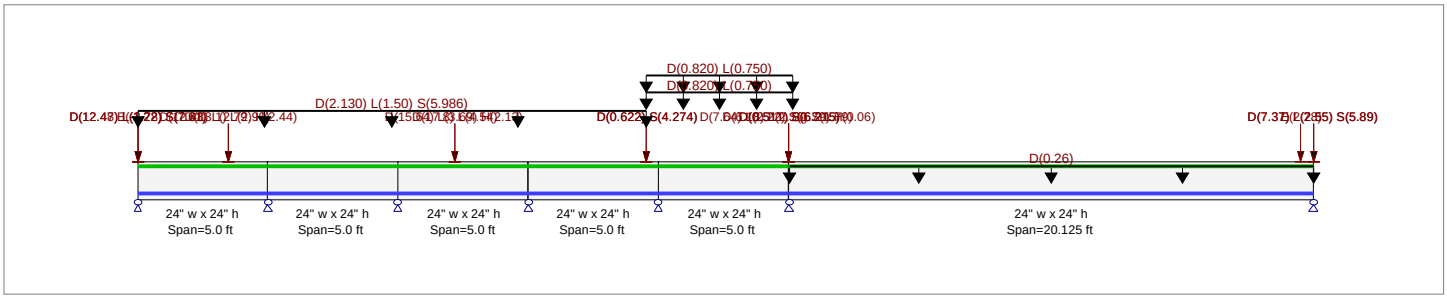
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #5 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #6 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 20.125 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 20.125 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 1.065, L = 0.750, S = 2.993 ksf, Extent = 0.0 -->> 19.50 ft, Tributary Width = 2.0 ft
- Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.167 ft
- Partial Length Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 19.50 -->> 25.167 ft

Load for Span Number 1
- Point Load : D = 12.470, L = 1.220, S = 7.610 k @ 0.0 ft, (GB-K)
- Point Load : D = 13.10, L = 2.990 k @ 3.50 ft, (GB-D)
- Point Load : D = 12.480, L = 1.220, S = 7.610 k @ 0.0 ft, (GB-W)
- Point Load : D = 12.480, L = 2.790, H = 2.440 k @ 3.50 ft, (GB-T)
- Point Load : E = -2.780 k @ 0.0 ft, (MOT)

Load for Span Number 3
- Point Load : D = 17.80, L = 4.540 k @ 2.167 ft, (GB-E)
- Point Load : D = 15.640, L = 3.690, H = 2.130 k @ 2.167 ft, (GB-U)

Load for Span Number 4
- Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P13)
- Point Load : D = 0.6220, S = 4.274 k @ 4.50 ft, (P13)

Load for Span Number 6

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 24 JUL 2017, 2:38PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Point Load : D = 7.370, L = 2.550, S = 5.890 k @ 20.125 ft, (GB-C)
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 6.180, L = 2.160, S = 1.790 k @ 0.0 ft, (GB-F)
Point Load : D = 7.370, L = 2.550, S = 5.890 k @ 20.125 ft, (GB-C)
Point Load : D = 0.5110, S = 6.215 k @ 0.0 ft, (P15)
Point Load : D = 7.640, L = 2.220, S = 1.790, H = 0.060 k @ 0.0 ft, (GB-V)
Uniform Load : D = 0.260 k/ft, Tributary Width = 1.0 ft, (WALL L3)
Point Load : E = 2.780 k @ 19.625 ft, (MOT)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.405** : 1
Section used for this span **Typical Section**
Mu : Applied -54.362 k-ft
Mn * Phi : Allowable 134.110 k-ft
Location of maximum on span 0.000 ft
Span # where maximum occurs Span # 4

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.018 in	Ratio =	13247 >=24
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Overall MAXimum	63.711	73.232	64.099	70.676	20.594	28.632	35.500
Overall MINimum	-0.000	0.000	-0.000	0.002	-0.006	-0.009	0.000
+D+H	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+L+H, LL Comb Run (*****L)	36.723	36.810	32.244	36.006	-1.037	24.865	26.498
+D+L+H, LL Comb Run (****L*)	36.731	36.760	32.444	35.257	3.633	28.070	21.363
+D+L+H, LL Comb Run (****LL)	36.731	36.760	32.443	35.259	3.627	28.326	26.463
+D+L+H, LL Comb Run (***L**)	36.696	36.970	31.603	40.285	3.111	24.185	21.408
+D+L+H, LL Comb Run (***L*L)	36.696	36.970	31.602	40.287	3.105	24.441	26.507
+D+L+H, LL Comb Run (***LL*)	36.704	36.920	31.802	39.538	7.775	27.646	21.373
+D+L+H, LL Comb Run (***LLL)	36.704	36.920	31.802	39.540	7.769	27.901	26.473
+D+L+H, LL Comb Run (**L***)	36.993	35.187	42.105	44.464	-2.548	24.894	21.392
+D+L+H, LL Comb Run (**L**L)	36.993	35.187	42.104	44.465	-2.554	25.149	26.492
+D+L+H, LL Comb Run (**L*L*)	37.002	35.138	42.304	43.717	2.116	28.355	21.357
+D+L+H, LL Comb Run (**L*LL)	37.002	35.138	42.304	43.718	2.110	28.610	26.457
+D+L+H, LL Comb Run (**LL**)	36.967	35.348	41.463	48.745	1.595	24.469	21.401
+D+L+H, LL Comb Run (**LL*L)	36.967	35.348	41.463	48.746	1.589	24.725	26.501
+D+L+H, LL Comb Run (**LLL*)	36.975	35.298	41.663	47.998	6.259	27.930	21.366
+D+L+H, LL Comb Run (**LLLL)	36.975	35.298	41.662	47.999	6.253	28.185	26.466
+D+L+H, LL Comb Run (*L****)	36.355	40.891	36.542	35.357	-0.865	24.579	21.399
+D+L+H, LL Comb Run (*L***L)	36.355	40.891	36.542	35.358	-0.871	24.834	26.499
+D+L+H, LL Comb Run (*L**L*)	36.363	40.842	36.741	34.610	3.799	28.039	21.364
+D+L+H, LL Comb Run (*L**LL)	36.363	40.842	36.741	34.611	3.793	28.295	26.464
+D+L+H, LL Comb Run (*L*L**)	36.328	41.052	35.900	39.638	3.277	24.154	21.408
+D+L+H, LL Comb Run (*L*L*L)	36.328	41.052	35.900	39.640	3.271	24.409	26.508
+D+L+H, LL Comb Run (*L*LL*)	36.337	41.002	36.100	38.891	7.941	27.614	21.373
+D+L+H, LL Comb Run (*L*LLL)	36.337	41.002	36.099	38.893	7.935	27.870	26.473
+D+L+H, LL Comb Run (*LL***)	36.625	39.269	46.402	43.817	-2.382	24.863	21.393
+D+L+H, LL Comb Run (*LL**L)	36.625	39.269	46.402	43.818	-2.388	25.118	26.492
+D+L+H, LL Comb Run (*LL*L*)	36.634	39.219	46.602	43.070	2.282	28.323	21.358
+D+L+H, LL Comb Run (*LL*LL)	36.634	39.220	46.601	43.071	2.276	28.579	26.458
+D+L+H, LL Comb Run (*LLL**)	36.599	39.430	45.761	48.098	1.761	24.438	21.402
+D+L+H, LL Comb Run (*LLL*L)	36.599	39.430	45.760	48.099	1.755	24.694	26.502
+D+L+H, LL Comb Run (*LLLL*)	36.607	39.380	45.960	47.351	6.425	27.899	21.367
+D+L+H, LL Comb Run (*LLLLL)	36.607	39.380	45.960	47.352	6.419	28.154	26.467
+D+L+H, LL Comb Run (L*****)	43.591	46.999	30.548	36.457	-1.147	24.632	21.398
+D+L+H, LL Comb Run (L****L)	43.591	47.000	30.548	36.459	-1.153	24.887	26.498
+D+L+H, LL Comb Run (L***L*)	43.599	46.950	30.747	35.710	3.517	28.092	21.363
+D+L+H, LL Comb Run (L***LL)	43.599	46.950	30.747	35.712	3.510	28.348	26.463
+D+L+H, LL Comb Run (L**L**)	43.564	47.160	29.906	40.738	2.995	24.207	21.407
+D+L+H, LL Comb Run (L**L*L)	43.564	47.160	29.906	40.740	2.989	24.462	26.507
+D+L+H, LL Comb Run (L**LL*)	43.573	47.110	30.106	39.991	7.659	27.667	21.372

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+L+H, LL Comb Run (L**LLL)	43.573	47.110	30.105	39.993	7.653	27.923	26.472
+D+L+H, LL Comb Run (L*L***)	43.861	45.377	40.409	44.917	-2.664	24.916	21.391
+D+L+H, LL Comb Run (L*L**L)	43.861	45.377	40.408	44.919	-2.670	25.171	26.491
+D+L+H, LL Comb Run (L*L*L*)	43.870	45.328	40.608	44.170	2.000	28.376	21.357
+D+L+H, LL Comb Run (L*L*LL)	43.870	45.328	40.607	44.172	1.994	28.632	26.456
+D+L+H, LL Comb Run (L*LL**)	43.835	45.538	39.767	49.198	1.479	24.491	21.401
+D+L+H, LL Comb Run (L*LL*L)	43.835	45.538	39.766	49.200	1.473	24.746	26.501
+D+L+H, LL Comb Run (L*LLL*)	43.843	45.488	39.966	48.451	6.142	27.951	21.366
+D+L+H, LL Comb Run (L*LLLL)	43.843	45.488	39.966	48.453	6.136	28.207	26.466
+D+L+H, LL Comb Run (LL****)	43.223	51.081	34.846	35.810	-0.981	24.601	21.398
+D+L+H, LL Comb Run (LL***L)	43.223	51.081	34.845	35.812	-0.987	24.856	26.498
+D+L+H, LL Comb Run (LL**L*)	43.232	51.031	35.045	35.063	3.682	28.061	21.364
+D+L+H, LL Comb Run (LL**LL)	43.232	51.032	35.044	35.065	3.676	28.316	26.463
+D+L+H, LL Comb Run (LL*L**)	43.197	51.242	34.204	40.091	3.161	24.176	21.408
+D+L+H, LL Comb Run (LL*L*L)	43.197	51.242	34.204	40.093	3.155	24.431	26.508
+D+L+H, LL Comb Run (LL*LL*)	43.205	51.192	34.403	39.344	7.825	27.636	21.373
+D+L+H, LL Comb Run (LL*LLL)	43.205	51.192	34.403	39.346	7.819	27.892	26.473
+D+L+H, LL Comb Run (LLL***)	43.494	49.459	44.706	44.270	-2.498	24.885	21.392
+D+L+H, LL Comb Run (LLL**L)	43.494	49.459	44.706	44.271	-2.504	25.140	26.492
+D+L+H, LL Comb Run (LLL*L*)	43.502	49.409	44.905	43.523	2.166	28.345	21.357
+D+L+H, LL Comb Run (LLL*LL)	43.502	49.409	44.905	43.524	2.160	28.601	26.457
+D+L+H, LL Comb Run (LLLL**)	43.467	49.620	44.064	48.551	1.645	24.460	21.401
+D+L+H, LL Comb Run (LLLL*L)	43.467	49.620	44.064	48.553	1.639	24.715	26.501
+D+L+H, LL Comb Run (LLLLL*)	43.475	49.570	44.264	47.804	6.308	27.920	21.367
+D+L+H, LL Comb Run (LLLLLL)	43.475	49.570	44.263	47.806	6.302	28.176	26.466
+D+Lr+H, LL Comb Run (*****L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (****L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (****LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (***L**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (***L*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (***LL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (***LLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**L***)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**L**L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**L*L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**L*LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**LL**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**LL*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**LLL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (**LLLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L****)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L***L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L**L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L**LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L*L**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L*L*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L*LL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*L*LLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LL***)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LL**L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LL*L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LL*LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LLL**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LLL*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LLLL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (*LLLLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*****)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L****L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L***L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+Lr+H, LL Comb Run (L***LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L**L**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L**L*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L**LL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L**LLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*L***)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*L**L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*L*L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*L*LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*LL**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*LL*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*LLL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (L*LLLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL****)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL***L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL**L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL**LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL*L**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL*L*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL*LL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LL*LLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLL***)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLL**L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLL*L*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLL*LL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLLL**)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLLL*L)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLLLL*)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+Lr+H, LL Comb Run (LLLLLL)	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+S+H	63.711	70.938	60.360	69.003	18.830	22.978	33.213
+D+0.750Lr+0.750L+H, LL Comb Run (	36.723	36.810	32.244	36.005	-1.036	24.802	25.223
+D+0.750Lr+0.750L+H, LL Comb Run (	36.729	36.772	32.394	35.444	2.467	27.205	21.372
+D+0.750Lr+0.750L+H, LL Comb Run (	36.729	36.772	32.394	35.445	2.462	27.397	25.197
+D+0.750Lr+0.750L+H, LL Comb Run (	36.703	36.930	31.763	39.215	2.076	24.291	21.405
+D+0.750Lr+0.750L+H, LL Comb Run (	36.703	36.930	31.763	39.216	2.071	24.483	25.230
+D+0.750Lr+0.750L+H, LL Comb Run (	36.709	36.892	31.913	38.655	5.574	26.887	21.379
+D+0.750Lr+0.750L+H, LL Comb Run (	36.709	36.893	31.912	38.656	5.569	27.078	25.204
+D+0.750Lr+0.750L+H, LL Comb Run (	36.926	35.593	39.640	42.349	-2.168	24.823	21.393
+D+0.750Lr+0.750L+H, LL Comb Run (	36.926	35.593	39.639	42.350	-2.173	25.015	25.218
+D+0.750Lr+0.750L+H, LL Comb Run (	36.932	35.556	39.789	41.789	1.329	27.418	21.367
+D+0.750Lr+0.750L+H, LL Comb Run (	36.932	35.556	39.789	41.790	1.325	27.610	25.192
+D+0.750Lr+0.750L+H, LL Comb Run (	36.906	35.713	39.159	45.560	0.938	24.504	21.400
+D+0.750Lr+0.750L+H, LL Comb Run (	36.906	35.713	39.158	45.561	0.934	24.696	25.225
+D+0.750Lr+0.750L+H, LL Comb Run (	36.912	35.676	39.308	44.999	4.436	27.100	21.374
+D+0.750Lr+0.750L+H, LL Comb Run (	36.912	35.676	39.308	45.001	4.432	27.291	25.199
+D+0.750Lr+0.750L+H, LL Comb Run (	36.447	39.871	35.468	35.519	-0.907	24.587	21.399
+D+0.750Lr+0.750L+H, LL Comb Run (	36.447	39.871	35.467	35.520	-0.911	24.778	25.224
+D+0.750Lr+0.750L+H, LL Comb Run (	36.453	39.834	35.617	34.958	2.591	27.182	21.373
+D+0.750Lr+0.750L+H, LL Comb Run (	36.453	39.834	35.617	34.960	2.587	27.373	25.197
+D+0.750Lr+0.750L+H, LL Comb Run (	36.427	39.991	34.986	38.729	2.200	24.268	21.406
+D+0.750Lr+0.750L+H, LL Comb Run (	36.427	39.991	34.986	38.731	2.196	24.460	25.231
+D+0.750Lr+0.750L+H, LL Comb Run (	36.433	39.954	35.136	38.169	5.698	26.863	21.380
+D+0.750Lr+0.750L+H, LL Comb Run (	36.433	39.954	35.135	38.170	5.693	27.055	25.204
+D+0.750Lr+0.750L+H, LL Comb Run (	36.650	38.654	42.863	41.864	-2.044	24.800	21.394
+D+0.750Lr+0.750L+H, LL Comb Run (	36.650	38.654	42.863	41.865	-2.049	24.991	25.219
+D+0.750Lr+0.750L+H, LL Comb Run (	36.656	38.617	43.012	41.303	1.454	27.395	21.368
+D+0.750Lr+0.750L+H, LL Comb Run (	36.656	38.617	43.012	41.304	1.449	27.587	25.193
+D+0.750Lr+0.750L+H, LL Comb Run (	36.630	38.775	42.382	45.074	1.063	24.481	21.401
+D+0.750Lr+0.750L+H, LL Comb Run (	36.630	38.775	42.381	45.076	1.058	24.673	25.226

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+H, LL Comb Run (	36.636	38.737	42.531	44.514	4.561	27.076	21.375
+D+0.750Lr+0.750L+H, LL Comb Run (	36.636	38.737	42.531	44.515	4.556	27.268	25.200
+D+0.750Lr+0.750L+H, LL Comb Run (	41.874	44.452	30.972	36.344	-1.118	24.626	21.398
+D+0.750Lr+0.750L+H, LL Comb Run (	41.874	44.452	30.972	36.345	-1.123	24.818	25.223
+D+0.750Lr+0.750L+H, LL Comb Run (	41.880	44.415	31.122	35.784	2.380	27.222	21.372
+D+0.750Lr+0.750L+H, LL Comb Run (	41.880	44.415	31.121	35.785	2.375	27.413	25.197
+D+0.750Lr+0.750L+H, LL Comb Run (	41.854	44.572	30.491	39.555	1.989	24.308	21.405
+D+0.750Lr+0.750L+H, LL Comb Run (	41.854	44.572	30.491	39.556	1.984	24.499	25.230
+D+0.750Lr+0.750L+H, LL Comb Run (	41.860	44.535	30.640	38.994	5.486	26.903	21.379
+D+0.750Lr+0.750L+H, LL Comb Run (	41.860	44.535	30.640	38.996	5.482	27.095	25.204
+D+0.750Lr+0.750L+H, LL Comb Run (	42.077	43.235	38.368	42.689	-2.256	24.839	21.393
+D+0.750Lr+0.750L+H, LL Comb Run (	42.077	43.235	38.367	42.690	-2.260	25.031	25.218
+D+0.750Lr+0.750L+H, LL Comb Run (	42.083	43.198	38.517	42.128	1.242	27.435	21.367
+D+0.750Lr+0.750L+H, LL Comb Run (	42.083	43.198	38.517	42.130	1.238	27.626	25.192
+D+0.750Lr+0.750L+H, LL Comb Run (	42.057	43.356	37.886	45.899	0.851	24.521	21.400
+D+0.750Lr+0.750L+H, LL Comb Run (	42.057	43.356	37.886	45.901	0.847	24.712	25.225
+D+0.750Lr+0.750L+H, LL Comb Run (	42.063	43.318	38.036	45.339	4.349	27.116	21.374
+D+0.750Lr+0.750L+H, LL Comb Run (	42.063	43.318	38.035	45.340	4.345	27.308	25.199
+D+0.750Lr+0.750L+H, LL Comb Run (	41.598	47.513	34.195	35.858	-0.994	24.603	21.398
+D+0.750Lr+0.750L+H, LL Comb Run (	41.598	47.513	34.195	35.860	-0.998	24.795	25.223
+D+0.750Lr+0.750L+H, LL Comb Run (	41.604	47.476	34.345	35.298	2.504	27.198	21.372
+D+0.750Lr+0.750L+H, LL Comb Run (	41.604	47.476	34.344	35.299	2.500	27.390	25.197
+D+0.750Lr+0.750L+H, LL Comb Run (	41.578	47.634	33.714	39.069	2.113	24.284	21.405
+D+0.750Lr+0.750L+H, LL Comb Run (	41.578	47.634	33.714	39.071	2.108	24.476	25.230
+D+0.750Lr+0.750L+H, LL Comb Run (	41.584	47.596	33.864	38.509	5.611	26.880	21.379
+D+0.750Lr+0.750L+H, LL Comb Run (	41.584	47.596	33.863	38.510	5.606	27.071	25.204
+D+0.750Lr+0.750L+H, LL Comb Run (	41.801	46.297	41.591	42.203	-2.131	24.816	21.394
+D+0.750Lr+0.750L+H, LL Comb Run (	41.801	46.297	41.590	42.205	-2.136	25.008	25.219
+D+0.750Lr+0.750L+H, LL Comb Run (	41.807	46.259	41.740	41.643	1.367	27.411	21.367
+D+0.750Lr+0.750L+H, LL Comb Run (	41.807	46.259	41.740	41.644	1.362	27.603	25.192
+D+0.750Lr+0.750L+H, LL Comb Run (	41.781	46.417	41.109	45.414	0.976	24.497	21.401
+D+0.750Lr+0.750L+H, LL Comb Run (	41.781	46.417	41.109	45.415	0.971	24.689	25.226
+D+0.750Lr+0.750L+H, LL Comb Run (	41.787	46.380	41.259	44.854	4.474	27.093	21.374
+D+0.750Lr+0.750L+H, LL Comb Run (	41.787	46.380	41.259	44.855	4.469	27.284	25.199
+D+0.750L+0.750S+H, LL Comb Run (*	56.964	62.406	53.330	60.754	13.860	23.577	34.085
+D+0.750L+0.750S+H, LL Comb Run (*	56.971	62.369	53.480	60.193	17.363	25.981	30.233
+D+0.750L+0.750S+H, LL Comb Run (*	56.970	62.369	53.480	60.194	17.358	26.172	34.058
+D+0.750L+0.750S+H, LL Comb Run (*	56.944	62.526	52.850	63.964	16.972	23.067	30.267
+D+0.750L+0.750S+H, LL Comb Run (*	56.944	62.526	52.849	63.965	16.967	23.259	34.092
+D+0.750L+0.750S+H, LL Comb Run (*	56.950	62.489	52.999	63.404	20.469	25.662	30.240
+D+0.750L+0.750S+H, LL Comb Run (*	56.950	62.489	52.999	63.405	20.465	25.854	34.065
+D+0.750L+0.750S+H, LL Comb Run (*	57.167	61.189	60.726	67.098	12.727	23.599	30.255
+D+0.750L+0.750S+H, LL Comb Run (*	57.167	61.190	60.726	67.099	12.723	23.790	34.080
+D+0.750L+0.750S+H, LL Comb Run (*	57.173	61.152	60.876	66.538	16.225	26.194	30.229
+D+0.750L+0.750S+H, LL Comb Run (*	57.173	61.152	60.875	66.539	16.221	26.386	34.054
+D+0.750L+0.750S+H, LL Comb Run (*	57.147	61.310	60.245	70.309	15.834	23.280	30.262
+D+0.750L+0.750S+H, LL Comb Run (*	57.147	61.310	60.245	70.310	15.830	23.472	34.087
+D+0.750L+0.750S+H, LL Comb Run (*	57.153	61.272	60.394	69.748	19.332	25.875	30.236
+D+0.750L+0.750S+H, LL Comb Run (*	57.153	61.273	60.394	69.750	19.328	26.067	34.061
+D+0.750L+0.750S+H, LL Comb Run (*	56.688	65.467	56.554	60.268	13.989	23.362	30.260
+D+0.750L+0.750S+H, LL Comb Run (*	56.688	65.468	56.554	60.269	13.985	23.554	34.085
+D+0.750L+0.750S+H, LL Comb Run (*	56.695	65.430	56.703	59.707	17.487	25.958	30.234
+D+0.750L+0.750S+H, LL Comb Run (*	56.695	65.430	56.703	59.709	17.483	26.149	34.059
+D+0.750L+0.750S+H, LL Comb Run (*	56.668	65.588	56.073	63.478	17.096	23.044	30.267
+D+0.750L+0.750S+H, LL Comb Run (*	56.668	65.588	56.072	63.480	17.091	23.235	34.092
+D+0.750L+0.750S+H, LL Comb Run (*	56.675	65.550	56.222	62.918	20.594	25.639	30.241
+D+0.750L+0.750S+H, LL Comb Run (*	56.675	65.550	56.222	62.919	20.589	25.831	34.066
+D+0.750L+0.750S+H, LL Comb Run (*	56.891	64.251	63.949	66.613	12.852	23.575	30.255
+D+0.750L+0.750S+H, LL Comb Run (*	56.891	64.251	63.949	66.614	12.847	23.767	34.080

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+H, LL Comb Run (*	56.897	64.214	64.099	66.052	16.350	26.171	30.229
+D+0.750L+0.750S+H, LL Comb Run (*	56.897	64.214	64.098	66.054	16.345	26.362	34.054
+D+0.750L+0.750S+H, LL Comb Run (*	56.871	64.371	63.468	69.823	15.959	23.257	30.262
+D+0.750L+0.750S+H, LL Comb Run (*	56.871	64.371	63.468	69.825	15.954	23.448	34.087
+D+0.750L+0.750S+H, LL Comb Run (*	56.877	64.334	63.617	69.263	19.457	25.852	30.236
+D+0.750L+0.750S+H, LL Comb Run (*	56.877	64.334	63.617	69.264	19.452	26.044	34.061
+D+0.750L+0.750S+H, LL Comb Run (L	62.115	70.049	52.058	61.093	13.778	23.402	30.259
+D+0.750L+0.750S+H, LL Comb Run (L	62.115	70.049	52.058	61.094	13.773	23.593	34.084
+D+0.750L+0.750S+H, LL Comb Run (L	62.122	70.011	52.208	60.533	17.275	25.997	30.233
+D+0.750L+0.750S+H, LL Comb Run (L	62.122	70.011	52.208	60.534	17.271	26.189	34.058
+D+0.750L+0.750S+H, LL Comb Run (L	62.095	70.169	51.577	64.304	16.884	23.083	30.266
+D+0.750L+0.750S+H, LL Comb Run (L	62.095	70.169	51.577	64.305	16.880	23.275	34.091
+D+0.750L+0.750S+H, LL Comb Run (L	62.102	70.131	51.727	63.743	20.382	25.679	30.240
+D+0.750L+0.750S+H, LL Comb Run (L	62.102	70.132	51.726	63.745	20.378	25.870	34.065
+D+0.750L+0.750S+H, LL Comb Run (L	62.318	68.832	59.454	67.438	12.640	23.615	30.255
+D+0.750L+0.750S+H, LL Comb Run (L	62.318	68.832	59.453	67.439	12.636	23.807	34.079
+D+0.750L+0.750S+H, LL Comb Run (L	62.324	68.795	59.603	66.877	16.138	26.210	30.228
+D+0.750L+0.750S+H, LL Comb Run (L	62.324	68.795	59.603	66.879	16.134	26.402	34.053
+D+0.750L+0.750S+H, LL Comb Run (L	62.298	68.952	58.973	70.649	15.747	23.296	30.262
+D+0.750L+0.750S+H, LL Comb Run (L	62.298	68.952	58.972	70.650	15.743	23.488	34.086
+D+0.750L+0.750S+H, LL Comb Run (L	62.304	68.915	59.122	70.088	19.245	25.892	30.235
+D+0.750L+0.750S+H, LL Comb Run (L	62.304	68.915	59.122	70.089	19.240	26.083	34.060
+D+0.750L+0.750S+H, LL Comb Run (L	61.840	73.110	55.282	60.608	13.902	23.379	30.260
+D+0.750L+0.750S+H, LL Comb Run (L	61.840	73.110	55.281	60.609	13.898	23.570	34.085
+D+0.750L+0.750S+H, LL Comb Run (L	61.846	73.073	55.431	60.047	17.400	25.974	30.234
+D+0.750L+0.750S+H, LL Comb Run (L	61.846	73.073	55.431	60.048	17.395	26.165	34.059
+D+0.750L+0.750S+H, LL Comb Run (L	61.820	73.230	54.800	63.818	17.009	23.060	30.267
+D+0.750L+0.750S+H, LL Comb Run (L	61.820	73.230	54.800	63.820	17.004	23.252	34.092
+D+0.750L+0.750S+H, LL Comb Run (L	61.826	73.193	54.950	63.258	20.507	25.655	30.241
+D+0.750L+0.750S+H, LL Comb Run (L	61.826	73.193	54.949	63.259	20.502	25.847	34.066
+D+0.750L+0.750S+H, LL Comb Run (L	62.042	71.893	62.677	66.952	12.765	23.592	30.255
+D+0.750L+0.750S+H, LL Comb Run (L	62.042	71.893	62.677	66.954	12.760	23.783	34.080
+D+0.750L+0.750S+H, LL Comb Run (L	62.049	71.856	62.826	66.392	16.263	26.187	30.229
+D+0.750L+0.750S+H, LL Comb Run (L	62.049	71.856	62.826	66.393	16.258	26.379	34.054
+D+0.750L+0.750S+H, LL Comb Run (L	62.022	72.014	62.196	70.163	15.872	23.273	30.262
+D+0.750L+0.750S+H, LL Comb Run (L	62.022	72.014	62.195	70.164	15.867	23.465	34.087
+D+0.750L+0.750S+H, LL Comb Run (L	62.029	71.976	62.345	69.603	19.369	25.868	30.236
+D+0.750L+0.750S+H, LL Comb Run (L	62.028	71.976	62.345	69.604	19.365	26.060	34.061
+D+0.60W+H	36.723	36.809	32.244	36.004	-1.031	24.610	21.398
+D+0.70E+H	34.777	36.811	32.235	36.038	-1.160	24.780	23.276
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.723	36.810	32.244	36.005	-1.036	24.802	25.223
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.729	36.772	32.394	35.444	2.467	27.205	21.372
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.729	36.772	32.394	35.445	2.462	27.397	25.197
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.703	36.930	31.763	39.215	2.076	24.291	21.405
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.703	36.930	31.763	39.216	2.071	24.483	25.230
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.709	36.892	31.913	38.655	5.574	26.887	21.379
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.709	36.893	31.912	38.656	5.569	27.078	25.204
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.926	35.593	39.640	42.349	-2.168	24.823	21.393
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.926	35.593	39.639	42.350	-2.173	25.015	25.218
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.932	35.556	39.789	41.789	1.329	27.418	21.367
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.932	35.556	39.789	41.790	1.325	27.610	25.192
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.906	35.713	39.159	45.560	0.938	24.504	21.400
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.906	35.713	39.158	45.561	0.934	24.696	25.225
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.912	35.676	39.308	44.999	4.436	27.100	21.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.912	35.676	39.308	45.001	4.432	27.291	25.199
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.447	39.871	35.468	35.519	-0.907	24.587	21.399
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.447	39.871	35.467	35.520	-0.911	24.778	25.224
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.453	39.834	35.617	34.958	2.591	27.182	21.373
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.453	39.834	35.617	34.960	2.587	27.373	25.197

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.427	39.991	34.986	38.729	2.200	24.268	21.406
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.427	39.991	34.986	38.731	2.196	24.460	25.231
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.433	39.954	35.136	38.169	5.698	26.863	21.380
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.433	39.954	35.135	38.170	5.693	27.055	25.204
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.650	38.654	42.863	41.864	-2.044	24.800	21.394
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.650	38.654	42.863	41.865	-2.049	24.991	25.219
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.656	38.617	43.012	41.303	1.454	27.395	21.368
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.656	38.617	43.012	41.304	1.449	27.587	25.193
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.630	38.775	42.382	45.074	1.063	24.481	21.401
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.630	38.775	42.381	45.076	1.058	24.673	25.226
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.636	38.737	42.531	44.514	4.561	27.076	21.375
+D+0.750Lr+0.750L+0.450W+H, LL Com	36.636	38.737	42.531	44.515	4.556	27.268	25.200
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.874	44.452	30.972	36.344	-1.118	24.626	21.398
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.874	44.452	30.972	36.345	-1.123	24.818	25.223
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.880	44.415	31.122	35.784	2.380	27.222	21.372
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.880	44.415	31.121	35.785	2.375	27.413	25.197
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.854	44.572	30.491	39.555	1.989	24.308	21.405
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.854	44.572	30.491	39.556	1.984	24.499	25.230
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.860	44.535	30.640	38.994	5.486	26.903	21.379
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.860	44.535	30.640	38.996	5.482	27.095	25.204
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.077	43.235	38.368	42.689	-2.256	24.839	21.393
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.077	43.235	38.367	42.690	-2.260	25.031	25.218
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.083	43.198	38.517	42.128	1.242	27.435	21.367
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.083	43.198	38.517	42.130	1.238	27.626	25.192
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.057	43.356	37.886	45.899	0.851	24.521	21.400
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.057	43.356	37.886	45.901	0.847	24.712	25.225
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.063	43.318	38.036	45.339	4.349	27.116	21.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	42.063	43.318	38.035	45.340	4.345	27.308	25.199
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.598	47.513	34.195	35.858	-0.994	24.603	21.398
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.598	47.513	34.195	35.860	-0.998	24.795	25.223
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.604	47.476	34.345	35.298	2.504	27.198	21.372
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.604	47.476	34.344	35.299	2.500	27.390	25.197
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.578	47.634	33.714	39.069	2.113	24.284	21.405
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.578	47.634	33.714	39.071	2.108	24.476	25.230
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.584	47.596	33.864	38.509	5.611	26.880	21.379
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.584	47.596	33.863	38.510	5.606	27.071	25.204
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.801	46.297	41.591	42.203	-2.131	24.816	21.394
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.801	46.297	41.590	42.205	-2.136	25.008	25.219
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.807	46.259	41.740	41.643	1.367	27.411	21.367
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.807	46.259	41.740	41.644	1.362	27.603	25.192
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.781	46.417	41.109	45.414	0.976	24.497	21.401
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.781	46.417	41.109	45.415	0.971	24.689	25.226
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.787	46.380	41.259	44.854	4.474	27.093	21.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	41.787	46.380	41.259	44.855	4.469	27.284	25.199
+D+0.750L+0.750S+0.450W+H, LL Comb	56.964	62.406	53.330	60.754	13.860	23.577	34.085
+D+0.750L+0.750S+0.450W+H, LL Comb	56.971	62.369	53.480	60.193	17.363	25.981	30.233
+D+0.750L+0.750S+0.450W+H, LL Comb	56.970	62.369	53.480	60.194	17.358	26.172	34.058
+D+0.750L+0.750S+0.450W+H, LL Comb	56.944	62.526	52.850	63.964	16.972	23.067	30.267
+D+0.750L+0.750S+0.450W+H, LL Comb	56.944	62.526	52.849	63.965	16.967	23.259	34.092
+D+0.750L+0.750S+0.450W+H, LL Comb	56.950	62.489	52.999	63.404	20.469	25.662	30.240
+D+0.750L+0.750S+0.450W+H, LL Comb	56.950	62.489	52.999	63.405	20.465	25.854	34.065
+D+0.750L+0.750S+0.450W+H, LL Comb	57.167	61.189	60.726	67.098	12.727	23.599	30.255
+D+0.750L+0.750S+0.450W+H, LL Comb	57.167	61.190	60.726	67.099	12.723	23.790	34.080
+D+0.750L+0.750S+0.450W+H, LL Comb	57.173	61.152	60.876	66.538	16.225	26.194	30.229
+D+0.750L+0.750S+0.450W+H, LL Comb	57.173	61.152	60.875	66.539	16.221	26.386	34.054
+D+0.750L+0.750S+0.450W+H, LL Comb	57.147	61.310	60.245	70.309	15.834	23.280	30.262
+D+0.750L+0.750S+0.450W+H, LL Comb	57.147	61.310	60.245	70.310	15.830	23.472	34.087
+D+0.750L+0.750S+0.450W+H, LL Comb	57.153	61.272	60.394	69.748	19.332	25.875	30.236
+D+0.750L+0.750S+0.450W+H, LL Comb	57.153	61.273	60.394	69.750	19.328	26.067	34.061

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.450W+H, LL Comb	56.688	65.467	56.554	60.268	13.989	23.362	30.260
+D+0.750L+0.750S+0.450W+H, LL Comb	56.688	65.468	56.554	60.269	13.985	23.554	34.085
+D+0.750L+0.750S+0.450W+H, LL Comb	56.695	65.430	56.703	59.707	17.487	25.958	30.234
+D+0.750L+0.750S+0.450W+H, LL Comb	56.695	65.430	56.703	59.709	17.483	26.149	34.059
+D+0.750L+0.750S+0.450W+H, LL Comb	56.668	65.588	56.073	63.478	17.096	23.044	30.267
+D+0.750L+0.750S+0.450W+H, LL Comb	56.668	65.588	56.072	63.480	17.091	23.235	34.092
+D+0.750L+0.750S+0.450W+H, LL Comb	56.675	65.550	56.222	62.918	20.594	25.639	30.241
+D+0.750L+0.750S+0.450W+H, LL Comb	56.675	65.550	56.222	62.919	20.589	25.831	34.066
+D+0.750L+0.750S+0.450W+H, LL Comb	56.891	64.251	63.949	66.613	12.852	23.575	30.255
+D+0.750L+0.750S+0.450W+H, LL Comb	56.891	64.251	63.949	66.614	12.847	23.767	34.080
+D+0.750L+0.750S+0.450W+H, LL Comb	56.897	64.214	64.099	66.052	16.350	26.171	30.229
+D+0.750L+0.750S+0.450W+H, LL Comb	56.897	64.214	64.098	66.054	16.345	26.362	34.054
+D+0.750L+0.750S+0.450W+H, LL Comb	56.871	64.371	63.468	69.823	15.959	23.257	30.262
+D+0.750L+0.750S+0.450W+H, LL Comb	56.871	64.371	63.468	69.825	15.954	23.448	34.087
+D+0.750L+0.750S+0.450W+H, LL Comb	56.877	64.334	63.617	69.263	19.457	25.852	30.236
+D+0.750L+0.750S+0.450W+H, LL Comb	56.877	64.334	63.617	69.264	19.452	26.044	34.061
+D+0.750L+0.750S+0.450W+H, LL Comb	62.115	70.049	52.058	61.093	13.778	23.402	30.259
+D+0.750L+0.750S+0.450W+H, LL Comb	62.115	70.049	52.058	61.094	13.773	23.593	34.084
+D+0.750L+0.750S+0.450W+H, LL Comb	62.122	70.011	52.208	60.533	17.275	25.997	30.233
+D+0.750L+0.750S+0.450W+H, LL Comb	62.122	70.011	52.208	60.534	17.271	26.189	34.058
+D+0.750L+0.750S+0.450W+H, LL Comb	62.095	70.169	51.577	64.304	16.884	23.083	30.266
+D+0.750L+0.750S+0.450W+H, LL Comb	62.095	70.169	51.577	64.305	16.880	23.275	34.091
+D+0.750L+0.750S+0.450W+H, LL Comb	62.102	70.131	51.727	63.743	20.382	25.679	30.240
+D+0.750L+0.750S+0.450W+H, LL Comb	62.102	70.132	51.726	63.745	20.378	25.870	34.065
+D+0.750L+0.750S+0.450W+H, LL Comb	62.318	68.832	59.454	67.438	12.640	23.615	30.255
+D+0.750L+0.750S+0.450W+H, LL Comb	62.318	68.832	59.453	67.439	12.636	23.807	34.079
+D+0.750L+0.750S+0.450W+H, LL Comb	62.324	68.795	59.603	66.877	16.138	26.210	30.228
+D+0.750L+0.750S+0.450W+H, LL Comb	62.324	68.795	59.603	66.879	16.134	26.402	34.053
+D+0.750L+0.750S+0.450W+H, LL Comb	62.298	68.952	58.973	70.649	15.747	23.296	30.262
+D+0.750L+0.750S+0.450W+H, LL Comb	62.298	68.952	58.972	70.650	15.743	23.488	34.086
+D+0.750L+0.750S+0.450W+H, LL Comb	62.304	68.915	59.122	70.088	19.245	25.892	30.235
+D+0.750L+0.750S+0.450W+H, LL Comb	62.304	68.915	59.122	70.089	19.240	26.083	34.060
+D+0.750L+0.750S+0.450W+H, LL Comb	61.840	73.110	55.282	60.608	13.902	23.379	30.260
+D+0.750L+0.750S+0.450W+H, LL Comb	61.840	73.110	55.281	60.609	13.898	23.570	34.085
+D+0.750L+0.750S+0.450W+H, LL Comb	61.846	73.073	55.431	60.047	17.400	25.974	30.234
+D+0.750L+0.750S+0.450W+H, LL Comb	61.846	73.073	55.431	60.048	17.395	26.165	34.059
+D+0.750L+0.750S+0.450W+H, LL Comb	61.820	73.230	54.800	63.818	17.009	23.060	30.267
+D+0.750L+0.750S+0.450W+H, LL Comb	61.820	73.230	54.800	63.820	17.004	23.252	34.092
+D+0.750L+0.750S+0.450W+H, LL Comb	61.826	73.193	54.950	63.258	20.507	25.655	30.241
+D+0.750L+0.750S+0.450W+H, LL Comb	61.826	73.193	54.949	63.259	20.502	25.847	34.066
+D+0.750L+0.750S+0.450W+H, LL Comb	62.042	71.893	62.677	66.952	12.765	23.592	30.255
+D+0.750L+0.750S+0.450W+H, LL Comb	62.042	71.893	62.677	66.954	12.760	23.783	34.080
+D+0.750L+0.750S+0.450W+H, LL Comb	62.049	71.856	62.826	66.392	16.263	26.187	30.229
+D+0.750L+0.750S+0.450W+H, LL Comb	62.049	71.856	62.826	66.393	16.258	26.379	34.054
+D+0.750L+0.750S+0.450W+H, LL Comb	62.022	72.014	62.196	70.163	15.872	23.273	30.262
+D+0.750L+0.750S+0.450W+H, LL Comb	62.022	72.014	62.195	70.164	15.867	23.465	34.087
+D+0.750L+0.750S+0.450W+H, LL Comb	62.029	71.976	62.345	69.603	19.369	25.868	30.236
+D+0.750L+0.750S+0.450W+H, LL Comb	62.028	71.976	62.345	69.604	19.365	26.060	34.061
+D+0.750L+0.750S+0.5250E+H, LL Com	55.505	62.407	53.324	60.780	13.764	23.704	35.493
+D+0.750L+0.750S+0.5250E+H, LL Com	55.511	62.370	53.473	60.219	17.266	26.108	31.642
+D+0.750L+0.750S+0.5250E+H, LL Com	55.511	62.370	53.473	60.220	17.262	26.300	35.467
+D+0.750L+0.750S+0.5250E+H, LL Com	55.485	62.528	52.843	63.990	16.875	23.194	31.675
+D+0.750L+0.750S+0.5250E+H, LL Com	55.485	62.528	52.842	63.991	16.871	23.386	35.500
+D+0.750L+0.750S+0.5250E+H, LL Com	55.491	62.490	52.992	63.429	20.373	25.790	31.649
+D+0.750L+0.750S+0.5250E+H, LL Com	55.491	62.490	52.992	63.431	20.368	25.981	35.474
+D+0.750L+0.750S+0.5250E+H, LL Com	55.708	61.191	60.719	67.124	12.631	23.726	31.663
+D+0.750L+0.750S+0.5250E+H, LL Com	55.708	61.191	60.719	67.125	12.626	23.918	35.488
+D+0.750L+0.750S+0.5250E+H, LL Com	55.714	61.153	60.869	66.563	16.129	26.321	31.637
+D+0.750L+0.750S+0.5250E+H, LL Com	55.714	61.154	60.868	66.565	16.124	26.513	35.462

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.5250E+H, LL Com	55.688	61.311	60.238	70.334	15.738	23.407	31.670
+D+0.750L+0.750S+0.5250E+H, LL Com	55.688	61.311	60.238	70.336	15.733	23.599	35.495
+D+0.750L+0.750S+0.5250E+H, LL Com	55.694	61.274	60.388	69.774	19.236	26.003	31.644
+D+0.750L+0.750S+0.5250E+H, LL Com	55.694	61.274	60.387	69.775	19.231	26.194	35.469
+D+0.750L+0.750S+0.5250E+H, LL Com	55.229	65.469	56.547	60.293	13.893	23.490	31.668
+D+0.750L+0.750S+0.5250E+H, LL Com	55.229	65.469	56.547	60.295	13.888	23.681	35.493
+D+0.750L+0.750S+0.5250E+H, LL Com	55.235	65.431	56.697	59.733	17.391	26.085	31.642
+D+0.750L+0.750S+0.5250E+H, LL Com	55.235	65.432	56.696	59.734	17.386	26.276	35.467
+D+0.750L+0.750S+0.5250E+H, LL Com	55.209	65.589	56.066	63.504	17.000	23.171	31.675
+D+0.750L+0.750S+0.5250E+H, LL Com	55.209	65.589	56.066	63.505	16.995	23.362	35.500
+D+0.750L+0.750S+0.5250E+H, LL Com	55.215	65.552	56.215	62.944	20.497	25.766	31.649
+D+0.750L+0.750S+0.5250E+H, LL Com	55.215	65.552	56.215	62.945	20.493	25.958	35.474
+D+0.750L+0.750S+0.5250E+H, LL Com	55.432	64.252	63.942	66.638	12.755	23.703	31.664
+D+0.750L+0.750S+0.5250E+H, LL Com	55.432	64.252	63.942	66.640	12.751	23.894	35.489
+D+0.750L+0.750S+0.5250E+H, LL Com	55.438	64.215	64.092	66.078	16.253	26.298	31.638
+D+0.750L+0.750S+0.5250E+H, LL Com	55.438	64.215	64.092	66.079	16.249	26.490	35.463
+D+0.750L+0.750S+0.5250E+H, LL Com	55.412	64.373	63.461	69.849	15.862	23.384	31.671
+D+0.750L+0.750S+0.5250E+H, LL Com	55.412	64.373	63.461	69.850	15.858	23.576	35.496
+D+0.750L+0.750S+0.5250E+H, LL Com	55.418	64.335	63.611	69.289	19.360	25.979	31.645
+D+0.750L+0.750S+0.5250E+H, LL Com	55.418	64.335	63.610	69.290	19.356	26.171	35.470
+D+0.750L+0.750S+0.5250E+H, LL Com	60.656	70.050	52.052	61.119	13.681	23.529	31.668
+D+0.750L+0.750S+0.5250E+H, LL Com	60.656	70.050	52.051	61.120	13.677	23.721	35.492
+D+0.750L+0.750S+0.5250E+H, LL Com	60.662	70.013	52.201	60.558	17.179	26.125	31.641
+D+0.750L+0.750S+0.5250E+H, LL Com	60.662	70.013	52.201	60.560	17.174	26.316	35.466
+D+0.750L+0.750S+0.5250E+H, LL Com	60.636	70.170	51.570	64.329	16.788	23.211	31.675
+D+0.750L+0.750S+0.5250E+H, LL Com	60.636	70.170	51.570	64.331	16.783	23.402	35.499
+D+0.750L+0.750S+0.5250E+H, LL Com	60.642	70.133	51.720	63.769	20.286	25.806	31.648
+D+0.750L+0.750S+0.5250E+H, LL Com	60.642	70.133	51.720	63.770	20.281	25.997	35.473
+D+0.750L+0.750S+0.5250E+H, LL Com	60.859	68.833	59.447	67.464	12.544	23.742	31.663
+D+0.750L+0.750S+0.5250E+H, LL Com	60.859	68.833	59.447	67.465	12.539	23.934	35.488
+D+0.750L+0.750S+0.5250E+H, LL Com	60.865	68.796	59.596	66.903	16.042	26.338	31.637
+D+0.750L+0.750S+0.5250E+H, LL Com	60.865	68.796	59.596	66.905	16.037	26.529	35.462
+D+0.750L+0.750S+0.5250E+H, LL Com	60.839	68.954	58.966	70.674	15.651	23.424	31.670
+D+0.750L+0.750S+0.5250E+H, LL Com	60.839	68.954	58.966	70.676	15.646	23.615	35.495
+D+0.750L+0.750S+0.5250E+H, LL Com	60.845	68.916	59.115	70.114	19.148	26.019	31.644
+D+0.750L+0.750S+0.5250E+H, LL Com	60.845	68.916	59.115	70.115	19.144	26.211	35.469
+D+0.750L+0.750S+0.5250E+H, LL Com	60.380	73.111	55.275	60.633	13.806	23.506	31.668
+D+0.750L+0.750S+0.5250E+H, LL Com	60.380	73.111	55.275	60.635	13.801	23.697	35.493
+D+0.750L+0.750S+0.5250E+H, LL Com	60.386	73.074	55.424	60.073	17.303	26.101	31.642
+D+0.750L+0.750S+0.5250E+H, LL Com	60.386	73.074	55.424	60.074	17.299	26.293	35.467
+D+0.750L+0.750S+0.5250E+H, LL Com	60.360	73.232	54.794	63.844	16.912	23.187	31.675
+D+0.750L+0.750S+0.5250E+H, LL Com	60.360	73.232	54.793	63.845	16.908	23.379	35.500
+D+0.750L+0.750S+0.5250E+H, LL Com	60.366	73.194	54.943	63.284	20.410	25.783	31.649
+D+0.750L+0.750S+0.5250E+H, LL Com	60.366	73.194	54.943	63.285	20.406	25.974	35.474
+D+0.750L+0.750S+0.5250E+H, LL Com	60.583	71.895	62.670	66.978	12.668	23.719	31.663
+D+0.750L+0.750S+0.5250E+H, LL Com	60.583	71.895	62.670	66.979	12.664	23.911	35.488
+D+0.750L+0.750S+0.5250E+H, LL Com	60.589	71.857	62.820	66.418	16.166	26.314	31.637
+D+0.750L+0.750S+0.5250E+H, LL Com	60.589	71.857	62.819	66.419	16.162	26.506	35.462
+D+0.750L+0.750S+0.5250E+H, LL Com	60.563	72.015	62.189	70.189	15.775	23.400	31.670
+D+0.750L+0.750S+0.5250E+H, LL Com	60.563	72.015	62.189	70.190	15.771	23.592	35.495
+D+0.750L+0.750S+0.5250E+H, LL Com	60.569	71.978	62.338	69.629	19.273	25.996	31.644
+D+0.750L+0.750S+0.5250E+H, LL Com	60.569	71.978	62.338	69.630	19.268	26.187	35.469
+0.60D+0.60W+0.60H	22.034	22.086	19.347	21.602	-0.619	14.766	12.839
+0.60D+0.70E+0.60H	20.088	22.087	19.338	21.637	-0.747	14.936	14.717
D Only	36.180	34.839	31.166	34.814	-0.770	24.561	21.399
Lr Only, LL Comb Run (*****L)							
Lr Only, LL Comb Run (****L*)							
Lr Only, LL Comb Run (****LL)							
Lr Only, LL Comb Run (***L**)							

Concrete Beam

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Lr Only, LL Comb Run (***L*L)							
Lr Only, LL Comb Run (***LL*)							
Lr Only, LL Comb Run (***LLL)							
Lr Only, LL Comb Run (**L***)							
Lr Only, LL Comb Run (**L**L)							
Lr Only, LL Comb Run (**L*L*)							
Lr Only, LL Comb Run (**L*LL)							
Lr Only, LL Comb Run (**LL**)							
Lr Only, LL Comb Run (**LL*L)							
Lr Only, LL Comb Run (**LLL*)							
Lr Only, LL Comb Run (**LLLL)							
Lr Only, LL Comb Run (*L****)							
Lr Only, LL Comb Run (*L***L)							
Lr Only, LL Comb Run (*L**L*)							
Lr Only, LL Comb Run (*L**LL)							
Lr Only, LL Comb Run (*L*L**)							
Lr Only, LL Comb Run (*L*L*L)							
Lr Only, LL Comb Run (*L*LL*)							
Lr Only, LL Comb Run (*L*LLL)							
Lr Only, LL Comb Run (*LL***)							
Lr Only, LL Comb Run (*LL**L)							
Lr Only, LL Comb Run (*LL*L*)							
Lr Only, LL Comb Run (*LL*LL)							
Lr Only, LL Comb Run (*LLL**)							
Lr Only, LL Comb Run (*LLL*L)							
Lr Only, LL Comb Run (*LLLL*)							
Lr Only, LL Comb Run (*LLLLL)							
Lr Only, LL Comb Run (L*****)							
Lr Only, LL Comb Run (L****L)							
Lr Only, LL Comb Run (L***L*)							
Lr Only, LL Comb Run (L***LL)							
Lr Only, LL Comb Run (L**L**)							
Lr Only, LL Comb Run (L**L*L)							
Lr Only, LL Comb Run (L**LL*)							
Lr Only, LL Comb Run (L**LLL)							
Lr Only, LL Comb Run (L*L***)							
Lr Only, LL Comb Run (L*L**L)							
Lr Only, LL Comb Run (L*L*L*)							
Lr Only, LL Comb Run (L*L*LL)							
Lr Only, LL Comb Run (L*LL**)							
Lr Only, LL Comb Run (L*LL*L)							
Lr Only, LL Comb Run (L*LLL*)							
Lr Only, LL Comb Run (L*LLLL)							
Lr Only, LL Comb Run (LL****)							
Lr Only, LL Comb Run (LL***L)							
Lr Only, LL Comb Run (LL**L*)							
Lr Only, LL Comb Run (LL**LL)							
Lr Only, LL Comb Run (LL*L**)							
Lr Only, LL Comb Run (LL*L*L)							
Lr Only, LL Comb Run (LL*LL*)							
Lr Only, LL Comb Run (LL*LLL)							
Lr Only, LL Comb Run (LLL***)							
Lr Only, LL Comb Run (LLL**L)							
Lr Only, LL Comb Run (LLL*L*)							
Lr Only, LL Comb Run (LLL*LL)							
Lr Only, LL Comb Run (LLLL**)							
Lr Only, LL Comb Run (LLLL*L)							
Lr Only, LL Comb Run (LLLLL*)							
Lr Only, LL Comb Run (LLLLLL)							

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (*****L)	-0.000	0.000	-0.000	0.002	-0.006	0.255	5.100
L Only, LL Comb Run (****L*)	0.008	-0.050	0.199	-0.747	4.664	3.460	-0.035
L Only, LL Comb Run (****LL)	0.008	-0.050	0.199	-0.745	4.658	3.716	5.065
L Only, LL Comb Run (***L**)	-0.027	0.160	-0.642	4.281	4.142	-0.425	0.009
L Only, LL Comb Run (***L*L)	-0.027	0.161	-0.642	4.283	4.136	-0.169	5.109
L Only, LL Comb Run (***LL*)	-0.018	0.111	-0.442	3.534	8.806	3.036	-0.026
L Only, LL Comb Run (***LLL)	-0.018	0.111	-0.443	3.536	8.800	3.291	5.074
L Only, LL Comb Run (**L***)	0.270	-1.622	9.860	8.460	-1.516	0.284	-0.006
L Only, LL Comb Run (**L**L)	0.270	-1.622	9.860	8.461	-1.522	0.540	5.094
L Only, LL Comb Run (**L*L*)	0.279	-1.672	10.060	7.713	3.147	3.745	-0.041
L Only, LL Comb Run (**L*LL)	0.279	-1.672	10.059	7.714	3.141	4.000	5.059
L Only, LL Comb Run (**LL**)	0.244	-1.462	9.219	12.741	2.626	-0.141	0.003
L Only, LL Comb Run (**LL*L)	0.244	-1.462	9.218	12.743	2.620	0.115	5.103
L Only, LL Comb Run (**LLL*)	0.252	-1.512	9.418	11.994	7.290	3.320	-0.032
L Only, LL Comb Run (**LLLL)	0.252	-1.511	9.418	11.996	7.284	3.575	5.068
L Only, LL Comb Run (*L****)	-0.368	4.082	4.298	-0.647	0.166	-0.031	0.001
L Only, LL Comb Run (*L***L)	-0.368	4.082	4.297	-0.645	0.160	0.224	5.101
L Only, LL Comb Run (*L**L*)	-0.360	4.032	4.497	-1.394	4.830	3.429	-0.034
L Only, LL Comb Run (*L**LL)	-0.360	4.032	4.496	-1.392	4.824	3.685	5.066
L Only, LL Comb Run (*L*L**)	-0.395	4.242	3.656	3.634	4.308	-0.456	0.010
L Only, LL Comb Run (*L*L*L)	-0.395	4.242	3.656	3.636	4.302	-0.201	5.110
L Only, LL Comb Run (*L*LL*)	-0.386	4.192	3.855	2.887	8.972	3.004	-0.025
L Only, LL Comb Run (*L*LLL)	-0.386	4.193	3.855	2.889	8.966	3.260	5.075
L Only, LL Comb Run (*LL***)	-0.097	2.460	14.158	7.813	-1.351	0.253	-0.006
L Only, LL Comb Run (*LL**L)	-0.097	2.460	14.158	7.814	-1.357	0.508	5.094
L Only, LL Comb Run (*LL*L*)	-0.089	2.410	14.357	7.066	3.313	3.713	-0.040
L Only, LL Comb Run (*LL*LL)	-0.089	2.410	14.357	7.067	3.307	3.969	5.059
L Only, LL Comb Run (*LLL**)	-0.124	2.620	13.516	12.094	2.792	-0.172	0.004
L Only, LL Comb Run (*LLL*L)	-0.124	2.620	13.516	12.095	2.786	0.084	5.104
L Only, LL Comb Run (*LLLL*)	-0.116	2.570	13.716	11.347	7.456	3.289	-0.031
L Only, LL Comb Run (*LLLLL)	-0.116	2.570	13.715	11.348	7.450	3.544	5.069
L Only, LL Comb Run (L*****)	6.868	10.190	-1.696	0.453	-0.116	0.022	-0.000
L Only, LL Comb Run (L****L)	6.868	10.190	-1.697	0.455	-0.122	0.277	5.099
L Only, LL Comb Run (L***L*)	6.876	10.140	-1.497	-0.294	4.548	3.482	-0.035
L Only, LL Comb Run (L***LL)	6.876	10.140	-1.498	-0.292	4.542	3.738	5.065
L Only, LL Comb Run (L**L**)	6.841	10.350	-2.338	4.734	4.026	-0.403	0.009
L Only, LL Comb Run (L**L*L)	6.841	10.350	-2.338	4.736	4.020	-0.148	5.109
L Only, LL Comb Run (L**LL*)	6.850	10.301	-2.139	3.987	8.690	3.057	-0.026
L Only, LL Comb Run (L**LLL)	6.850	10.301	-2.139	3.989	8.684	3.313	5.074
L Only, LL Comb Run (L*L***)	7.139	8.568	8.164	8.913	-1.633	0.306	-0.007
L Only, LL Comb Run (L*L**L)	7.139	8.568	8.164	8.915	-1.639	0.561	5.093
L Only, LL Comb Run (L*L*L*)	7.147	8.518	8.363	8.166	3.031	3.766	-0.042
L Only, LL Comb Run (L*L*LL)	7.147	8.518	8.363	8.168	3.025	4.022	5.058
L Only, LL Comb Run (L*LL**)	7.112	8.728	7.522	13.194	2.510	-0.119	0.003
L Only, LL Comb Run (L*LL*L)	7.112	8.728	7.522	13.196	2.504	0.136	5.103
L Only, LL Comb Run (L*LLL*)	7.120	8.678	7.722	12.447	7.174	3.341	-0.032
L Only, LL Comb Run (L*LLLL)	7.120	8.679	7.721	12.449	7.168	3.597	5.068
L Only, LL Comb Run (LL****)	6.500	14.272	2.601	-0.194	0.050	-0.009	0.000
L Only, LL Comb Run (LL***L)	6.500	14.272	2.601	-0.192	0.044	0.246	5.100
L Only, LL Comb Run (LL**L*)	6.509	14.222	2.800	-0.941	4.714	3.451	-0.035
L Only, LL Comb Run (LL**LL)	6.509	14.222	2.800	-0.939	4.707	3.706	5.065
L Only, LL Comb Run (LL*L**)	6.474	14.432	1.960	4.087	4.192	-0.434	0.010
L Only, LL Comb Run (LL*L*L)	6.474	14.432	1.959	4.089	4.186	-0.179	5.109
L Only, LL Comb Run (LL*LL*)	6.482	14.382	2.159	3.340	8.856	3.026	-0.025
L Only, LL Comb Run (LL*LLL)	6.482	14.383	2.158	3.342	8.850	3.282	5.075
L Only, LL Comb Run (LLL***)	6.771	12.650	12.462	8.266	-1.467	0.275	-0.006
L Only, LL Comb Run (LLL**L)	6.771	12.650	12.461	8.267	-1.473	0.530	5.094
L Only, LL Comb Run (LLL*L*)	6.779	12.600	12.661	7.519	3.197	3.735	-0.041
L Only, LL Comb Run (LLL*LL)	6.779	12.600	12.660	7.520	3.191	3.991	5.059

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-Y (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (LLLL**)	6.744	12.810	11.820	12.547	2.676	-0.150	0.003
L Only, LL Comb Run (LLLL*L)	6.744	12.810	11.820	12.549	2.670	0.105	5.103
L Only, LL Comb Run (LLLLL*)	6.752	12.760	12.019	11.800	7.339	3.310	-0.032
L Only, LL Comb Run (LLLLLL)	6.752	12.760	12.019	11.802	7.333	3.566	5.068
S Only	26.988	34.129	28.115	32.999	19.861	-1.632	11.815
W Only							
E Only	-2.780	0.003	-0.013	0.049	-0.184	0.242	2.683
H Only	0.543	1.971	1.079	1.190	-0.261	0.049	-0.001

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	91.04	91.04	0.00	1.00	47.64	PhiVc < Vu	43.398	92.7	3.1	3.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	20.50	33.98	33.98	4.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	20.50	32.44	32.44	7.77	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	20.50	30.90	30.90	11.37	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	20.50	29.36	29.36	14.79	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	20.50	27.81	27.81	18.04	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	20.50	26.27	26.27	21.11	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	20.50	24.73	24.73	24.01	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	20.50	23.18	23.18	26.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	20.50	21.64	21.64	29.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	20.50	20.10	20.10	31.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	20.50	18.55	18.55	33.85	0.94	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	20.50	17.01	17.01	35.87	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	20.50	15.47	15.47	37.71	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.59	20.50	14.01	14.01	33.26	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.70	20.50	13.02	13.02	34.79	0.64	46.45	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	20.50	12.04	12.04	36.22	0.57	46.22	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.93	20.50	11.06	11.06	37.53	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	20.50	10.31	10.31	32.95	0.53	46.11	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	20.50	9.67	9.67	34.09	0.48	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	20.50	9.03	9.03	35.15	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	20.50	8.39	8.39	36.14	0.40	45.65	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.50	20.50	7.75	7.75	37.05	0.36	45.52	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.61	20.50	7.10	7.10	37.90	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.73	20.50	6.46	6.46	38.67	0.29	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.84	20.50	5.82	5.82	39.37	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	1	2.95	20.50	5.38	5.38	32.49	0.28	45.28	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	20.50	-6.47	6.47	44.10	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	20.50	-8.02	8.02	43.28	0.32	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	20.50	-9.56	9.56	42.28	0.39	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	20.50	-11.10	11.10	41.11	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	20.50	-50.14	50.14	38.90	1.00	47.64	PhiVc < Vu	2.495	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	20.50	-51.68	51.68	33.12	1.00	47.64	PhiVc < Vu	4.038	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	20.50	-53.22	53.22	27.16	1.00	47.64	PhiVc < Vu	5.581	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	20.50	-54.77	54.77	21.02	1.00	47.64	PhiVc < Vu	7.124	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	20.50	-56.31	56.31	14.71	1.00	47.64	PhiVc < Vu	8.667	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	20.50	-57.85	57.85	8.23	1.00	47.64	PhiVc < Vu	10.210	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	20.50	-59.39	59.39	1.56	1.00	47.64	PhiVc < Vu	11.753	70.2	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	21.00	-60.94	60.94	5.27	1.00	47.90	PhiVc < Vu	13.040	71.0	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	21.00	-62.48	62.48	12.29	1.00	47.90	PhiVc < Vu	14.583	71.0	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	21.00	-64.02	64.02	19.47	1.00	47.90	PhiVc < Vu	16.126	71.0	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	21.00	-65.57	65.57	26.84	1.00	47.90	PhiVc < Vu	17.670	71.0	7.7	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	21.00	-67.11	67.11	34.38	1.00	47.90	PhiVc < Vu	19.213	71.0	7.2	6.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	21.00	-68.65	68.65	42.09	1.00	47.90	PhiVc < Vu	20.756	71.0	6.7	6.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-Y (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	5.00	21.00	36.58	36.58	49.98	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	21.00	35.04	35.04	45.91	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	21.00	33.50	33.50	42.01	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	21.00	31.96	31.96	38.30	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	21.00	30.41	30.41	34.75	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	21.00	28.87	28.87	31.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	21.00	27.33	27.33	28.19	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	21.00	25.78	25.78	25.17	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	21.00	24.24	24.24	22.33	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	21.00	22.70	22.70	19.66	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.14	21.00	21.15	21.15	17.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	21.00	19.61	19.61	14.86	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	21.00	18.07	18.07	12.72	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	21.00	16.52	16.52	10.75	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	21.00	14.98	14.98	8.96	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	21.00	13.44	13.44	7.34	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	21.00	11.89	11.89	5.91	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	21.00	10.35	10.35	4.64	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	21.00	8.81	8.81	3.55	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	21.00	7.27	7.27	2.64	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	21.00	5.72	5.72	1.90	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.39	21.00	4.18	4.18	1.34	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.50	21.00	3.17	3.17	10.00	0.55	46.80	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.61	21.00	-2.61	2.61	9.04	0.51	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.73	21.00	-3.44	3.44	6.72	0.89	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.84	21.00	-4.42	4.42	7.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.95	21.00	-5.40	5.40	7.72	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	21.00	-6.51	6.51	2.64	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	21.00	-8.06	8.06	3.47	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.30	21.00	-9.60	9.60	4.47	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	21.00	-11.14	11.14	5.65	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	21.00	-12.68	12.68	7.00	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	21.00	-14.23	14.23	8.53	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	21.00	-15.77	15.77	10.24	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	21.00	-17.31	17.31	12.12	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	21.00	-18.86	18.86	14.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	21.00	-20.40	20.40	16.40	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	21.00	-21.94	21.94	18.81	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	21.00	-23.49	23.49	21.39	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	21.00	-25.03	25.03	24.15	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	21.00	-26.57	26.57	27.08	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	21.00	-28.12	28.12	30.18	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	21.00	-29.66	29.66	33.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	21.00	-31.20	31.20	36.93	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	21.00	58.54	58.54	40.56	1.00	47.90	PhiVc < Vu	10.644	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	21.00	57.00	57.00	33.99	1.00	47.90	PhiVc < Vu	9.101	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	21.00	55.46	55.46	27.60	1.00	47.90	PhiVc < Vu	7.558	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	21.00	53.91	53.91	21.39	1.00	47.90	PhiVc < Vu	6.015	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	21.00	52.37	52.37	15.35	1.00	47.90	PhiVc < Vu	4.472	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	21.00	50.83	50.83	9.49	1.00	47.90	PhiVc < Vu	2.928	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	21.00	49.28	49.28	3.80	1.00	47.90	PhiVc < Vu	1.385	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	20.50	47.74	47.74	1.71	1.00	47.64	PhiVc < Vu	0.09862	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.91	20.50	46.20	46.20	7.05	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	20.50	44.65	44.65	12.21	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	3	11.14	20.50	43.25	43.25	17.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.25	20.50	42.26	42.26	22.73	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.36	20.50	41.28	41.28	27.47	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.48	20.50	40.30	40.30	32.11	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.59	20.50	39.32	39.32	36.63	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.70	20.50	38.33	38.33	41.05	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	20.50	37.35	37.35	45.35	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	20.50	36.37	36.37	49.53	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	20.50	35.39	35.39	53.61	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	20.50	34.40	34.40	57.58	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.27	20.50	-26.01	26.01	53.59	0.83	47.08	PhiVc/2 < Vu <=	Min 11.5.6	66.4	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.39	20.50	-26.72	26.72	53.48	0.85	47.16	PhiVc/2 < Vu <=	Min 11.5.6	66.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.50	20.50	-27.70	27.70	50.39	0.94	47.44	PhiVc/2 < Vu <=	Min 11.5.6	66.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	20.50	-28.69	28.69	47.19	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	20.50	-29.67	29.67	43.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	20.50	-30.65	30.65	40.45	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	20.50	-31.63	31.63	36.91	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	20.50	-32.62	32.62	33.26	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	13.18	20.50	-33.60	33.60	29.49	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.30	20.50	-34.63	34.63	24.39	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.41	20.50	-36.17	36.17	20.37	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	20.50	-37.71	37.71	16.17	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	20.50	-39.26	39.26	11.80	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	20.50	-40.80	40.80	7.25	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	20.50	-42.34	42.34	2.52	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	21.00	-43.89	43.89	2.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	21.00	-45.43	45.43	7.45	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	21.00	-46.97	46.97	12.70	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	21.00	-48.52	48.52	18.13	1.00	47.90	PhiVc < Vu	0.6181	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.43	21.00	-50.06	50.06	23.73	1.00	47.90	PhiVc < Vu	2.161	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	21.00	-51.60	51.60	29.50	1.00	47.90	PhiVc < Vu	3.704	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	21.00	-53.15	53.15	35.46	1.00	47.90	PhiVc < Vu	5.248	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	21.00	-54.69	54.69	41.58	1.00	47.90	PhiVc < Vu	6.791	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	21.00	-56.23	56.23	47.88	1.00	47.90	PhiVc < Vu	8.334	67.7	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	21.00	45.30	45.30	54.36	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	21.00	43.76	43.76	49.30	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	21.00	42.22	42.22	44.42	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	21.00	40.67	40.67	39.71	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	21.00	39.13	39.13	35.17	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	21.00	37.59	37.59	30.81	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	21.00	36.04	36.04	26.63	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	21.00	34.50	34.50	22.62	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	21.00	32.96	32.96	18.79	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	21.00	31.41	31.41	15.13	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	21.00	29.87	29.87	11.65	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	21.00	28.33	28.33	8.34	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	21.00	26.78	26.78	5.21	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	21.00	25.24	25.24	2.26	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	20.50	23.70	23.70	0.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	20.50	22.15	22.15	3.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	20.50	20.61	20.61	5.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	20.50	19.07	19.07	7.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.05	20.50	17.53	17.53	9.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	20.50	15.98	15.98	11.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	4	17.27	20.50	14.44	14.44	13.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.39	20.50	12.90	12.90	15.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.50	20.50	11.35	11.35	16.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.61	20.50	9.88	9.88	16.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.73	20.50	8.91	8.91	4.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.84	20.50	8.20	8.20	5.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	20.50	7.72	7.72	1.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	20.50	7.35	7.35	2.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.18	20.50	6.98	6.98	3.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.30	20.50	6.61	6.61	4.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.41	20.50	6.24	6.24	5.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.52	20.50	5.87	5.87	5.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.64	20.50	5.50	5.50	6.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	20.50	-6.65	6.65	19.41	0.59	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	20.50	-8.19	8.19	18.57	0.75	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	20.50	-9.74	9.74	17.55	0.95	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	20.50	-11.28	11.28	16.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	20.50	-12.82	12.82	14.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	20.50	-14.37	14.37	13.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	20.50	-15.91	15.91	11.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	20.50	-32.16	32.16	9.14	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	20.50	-32.55	32.55	5.47	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	20.50	-32.94	32.94	1.75	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	21.00	-33.32	33.32	2.02	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	5	20.00	21.00	4.42	4.42	2.62	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	20.11	20.50	-4.55	4.55	8.75	0.89	47.27	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	5	20.23	20.50	-4.90	4.90	8.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.34	20.50	-5.25	5.25	7.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.45	20.50	-5.61	5.61	7.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.57	20.50	-5.96	5.96	6.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.68	20.50	-6.31	6.31	5.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.80	20.50	-6.67	6.67	4.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	20.91	20.50	-7.02	7.02	4.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	21.02	20.50	-7.37	7.37	3.33	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	21.14	20.50	-7.73	7.73	2.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	21.25	20.50	-8.08	8.08	1.58	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	21.36	20.50	-8.43	8.43	0.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	5	21.48	21.00	-8.79	8.79	0.34	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	21.59	21.00	-9.14	9.14	1.36	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	21.70	21.00	-9.49	9.49	2.42	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	21.82	21.00	-9.85	9.85	3.52	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	21.93	21.00	-10.20	10.20	4.65	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.05	21.00	-10.55	10.55	5.83	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.16	21.00	-10.90	10.90	7.05	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.27	21.00	-11.26	11.26	8.31	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.39	21.00	-11.61	11.61	9.61	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.50	21.00	-11.96	11.96	10.95	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.61	21.00	-12.32	12.32	12.33	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.73	21.00	-12.67	12.67	13.75	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.84	21.00	-13.02	13.02	15.21	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	22.95	21.00	-13.38	13.38	16.71	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	23.07	21.00	-13.73	13.73	18.25	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	23.18	21.00	-14.08	14.08	19.83	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	5	23.30	21.00	-14.44	14.44	21.45	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-Y (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	5	23.41	21.00	-14.84	14.84	14.71	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.52	21.00	-15.41	15.41	16.43	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.64	21.00	-15.99	15.99	18.21	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.75	21.00	-16.56	16.56	20.06	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.86	21.00	-17.14	17.14	21.98	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.98	21.00	-17.71	17.71	23.96	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.09	21.00	-18.29	18.29	26.00	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.20	21.00	-18.87	18.87	28.12	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.32	21.00	-19.44	19.44	30.29	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.43	21.00	-20.02	20.02	32.53	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.55	21.00	-20.59	20.59	34.84	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.66	21.00	-21.17	21.17	37.21	1.00	47.89	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.77	21.00	-21.74	21.74	39.65	0.96	47.80	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.89	21.00	-22.32	22.32	42.15	0.93	47.72	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.40D+1.60H	6	25.00	21.00	14.73	14.73	50.57	0.51	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.40D+1.60H	6	25.46	21.00	13.81	13.81	44.10	0.55	46.78	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	6	25.91	21.00	13.27	13.27	37.91	0.61	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.40D+1.60H	6	26.37	21.00	12.73	12.73	31.96	0.70	47.15	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.40D+1.60H	6	26.83	21.00	12.19	12.19	26.26	0.81	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.40D+1.60H	6	27.29	21.00	11.66	11.66	20.81	0.98	47.85	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.40D+1.60H	6	27.74	21.00	11.12	11.12	15.60	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	6	28.20	21.00	10.58	10.58	10.64	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	6	28.66	21.00	10.04	10.04	5.92	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	6	29.12	21.00	9.50	9.50	1.45	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.40D+1.60H	6	29.57	20.50	8.97	8.97	2.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	6	30.03	20.50	8.43	8.43	6.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	6	30.49	20.50	7.89	7.89	10.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	6	30.95	20.50	7.35	7.35	13.97	0.90	47.31	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.40D+1.60H	6	31.40	20.50	6.82	6.82	17.21	0.68	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.40D+1.60H	6	31.86	20.50	6.28	6.28	20.20	0.53	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	6	32.32	20.50	5.74	5.74	22.95	0.43	45.75	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	6	32.78	20.50	5.20	5.20	25.45	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.40D+1.60H	6	33.23	20.50	4.66	4.66	27.71	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.40D+1.60H	6	33.69	20.50	4.13	4.13	29.72	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	6	34.15	20.50	3.59	3.59	31.48	0.19	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.40D+1.60H	6	34.61	20.50	3.05	3.05	33.00	0.16	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.40D+1.60H	6	35.06	20.50	2.51	2.51	34.27	0.13	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.40D+1.60H	6	35.52	20.50	1.97	1.97	35.30	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.40D+1.60H	6	35.98	20.50	1.44	1.44	36.08	0.07	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.40D+1.60H	6	36.43	20.50	0.90	0.90	36.61	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	6	36.89	20.50	0.40	0.40	32.26	0.02	44.41	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60	6	37.35	20.50	-0.28	0.28	31.27	0.02	44.39	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60	6	37.81	20.50	-0.74	0.74	31.04	0.04	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.40D+1.60H	6	38.26	20.50	-1.25	1.25	36.29	0.06	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.40D+1.60H	6	38.72	20.50	-1.79	1.79	35.59	0.09	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.40D+1.60H	6	39.18	20.50	-2.33	2.33	34.65	0.11	44.72	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.40D+1.60H	6	39.64	20.50	-2.87	2.87	33.46	0.15	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.40D+1.60H	6	40.09	20.50	-3.40	3.40	32.03	0.18	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.40D+1.60H	6	40.55	20.50	-3.94	3.94	30.35	0.22	45.07	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.40D+1.60H	6	41.01	20.50	-4.48	4.48	28.42	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.40D+1.60H	6	41.47	20.50	-5.02	5.02	26.25	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.40D+1.60H	6	41.92	20.50	-5.56	5.56	23.83	0.40	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.40D+1.60H	6	42.38	20.50	-6.09	6.09	21.17	0.49	45.96	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.40D+1.60H	6	42.84	20.50	-6.63	6.63	18.26	0.62	46.39	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0

Concrete Beam

Description : GB-Y (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	6	43.30	20.50	-7.17	7.17	15.10	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.40D+1.60H	6	43.75	20.50	-7.71	7.71	11.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	6	44.21	20.50	-8.25	8.25	8.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	6	44.67	20.50	-10.24	10.24	4.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	45.13	20.50	-47.14	47.14	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.000	-42.09	134.11	0.31
Span # 2	2	5.000	-49.98	134.11	0.37
Span # 3	3	5.000	60.06	162.01	0.37
Span # 4	4	5.000	-54.36	134.11	0.41
Span # 5	5	5.000	-48.35	134.11	0.36
Span # 6	6	20.125	-50.57	134.11	0.38
+1.40D+1.60H					
Span # 1	1	5.000	34.54	162.01	0.21
Span # 2	2	5.000	-24.02	134.11	0.18
Span # 3	3	5.000	47.08	162.01	0.29
Span # 4	4	5.000	-30.89	134.11	0.23
Span # 5	5	5.000	-48.35	134.11	0.36
Span # 6	6	20.125	-50.57	134.11	0.38
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.48	134.11	0.31
Span # 6	6	20.125	-43.38	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.08	162.01	0.19
Span # 2	2	5.000	-20.74	134.11	0.15
Span # 3	3	5.000	41.07	162.01	0.25
Span # 4	4	5.000	-25.68	134.11	0.19
Span # 5	5	5.000	-41.96	134.11	0.31
Span # 6	6	20.125	-44.48	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.08	162.01	0.19
Span # 2	2	5.000	-20.74	134.11	0.15
Span # 3	3	5.000	41.07	162.01	0.25
Span # 4	4	5.000	-25.68	134.11	0.19
Span # 5	5	5.000	-41.99	134.11	0.31
Span # 6	6	20.125	-44.51	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	29.88	162.01	0.18
Span # 2	2	5.000	-21.02	134.11	0.16
Span # 3	3	5.000	39.89	162.01	0.25
Span # 4	4	5.000	-29.88	134.11	0.22
Span # 5	5	5.000	-41.22	134.11	0.31
Span # 6	6	20.125	-43.05	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	29.88	162.01	0.18
Span # 2	2	5.000	-21.02	134.11	0.16
Span # 3	3	5.000	39.89	162.01	0.25
Span # 4	4	5.000	-29.88	134.11	0.22
Span # 5	5	5.000	-41.25	134.11	0.31
Span # 6	6	20.125	-43.08	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	29.93	162.01	0.18
Span # 2	2	5.000	-20.95	134.11	0.16
Span # 3	3	5.000	40.17	162.01	0.25
Span # 4	4	5.000	-28.88	134.11	0.22
Span # 5	5	5.000	-41.74	134.11	0.31
Span # 6	6	20.125	-44.18	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	29.93	162.01	0.18
Span # 2	2	5.000	-20.95	134.11	0.16
Span # 3	3	5.000	40.17	162.01	0.25
Span # 4	4	5.000	-28.89	134.11	0.22
Span # 5	5	5.000	-41.77	134.11	0.31
Span # 6	6	20.125	-44.21	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	31.50	162.01	0.19
Span # 2	2	5.000	-26.77	134.11	0.20
Span # 3	3	5.000	55.94	162.01	0.35
Span # 4	4	5.000	-34.56	134.11	0.26
Span # 5	5	5.000	-41.60	134.11	0.31
Span # 6	6	20.125	-43.56	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	31.50	162.01	0.19
Span # 2	2	5.000	-26.77	134.11	0.20
Span # 3	3	5.000	55.94	162.01	0.35
Span # 4	4	5.000	-34.56	134.11	0.26
Span # 5	5	5.000	-41.63	134.11	0.31
Span # 6	6	20.125	-43.59	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	31.55	162.01	0.19
Span # 2	2	5.000	-27.03	134.11	0.20
Span # 3	3	5.000	56.22	162.01	0.35
Span # 4	4	5.000	-33.56	134.11	0.25
Span # 5	5	5.000	-42.11	134.11	0.31
Span # 6	6	20.125	-44.68	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	31.55	162.01	0.19
Span # 2	2	5.000	-27.03	134.11	0.20
Span # 3	3	5.000	56.22	162.01	0.35
Span # 4	4	5.000	-33.56	134.11	0.25
Span # 5	5	5.000	-42.14	134.11	0.31
Span # 6	6	20.125	-44.71	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	31.36	162.01	0.19
Span # 2	2	5.000	-25.94	134.11	0.19
Span # 3	3	5.000	55.04	162.01	0.34
Span # 4	4	5.000	-37.77	134.11	0.28
Span # 5	5	5.000	-41.37	134.11	0.31
Span # 6	6	20.125	-43.25	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	31.36	162.01	0.19
Span # 2	2	5.000	-25.94	134.11	0.19
Span # 3	3	5.000	55.04	162.01	0.34
Span # 4	4	5.000	-37.77	134.11	0.28
Span # 5	5	5.000	-41.40	134.11	0.31
Span # 6	6	20.125	-43.28	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	31.40	162.01	0.19
Span # 2	2	5.000	-26.20	134.11	0.20
Span # 3	3	5.000	55.32	162.01	0.34
Span # 4	4	5.000	-36.77	134.11	0.27
Span # 5	5	5.000	-41.89	134.11	0.31
Span # 6	6	20.125	-44.38	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	31.40	162.01	0.19
Span # 2	2	5.000	-26.19	134.11	0.20
Span # 3	3	5.000	55.32	162.01	0.34
Span # 4	4	5.000	-36.77	134.11	0.27
Span # 5	5	5.000	-41.92	134.11	0.31
Span # 6	6	20.125	-44.41	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.02	162.01	0.17
Span # 2	2	5.000	-23.74	134.11	0.18
Span # 3	3	5.000	39.33	162.01	0.24
Span # 4	4	5.000	-25.81	134.11	0.19
Span # 5	5	5.000	-41.43	134.11	0.31
Span # 6	6	20.125	-43.33	134.11	0.32

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	28.02	162.01	0.17
Span # 2	2	5.000	-23.74	134.11	0.18
Span # 3	3	5.000	39.33	162.01	0.24
Span # 4	4	5.000	-25.81	134.11	0.19
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.36	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.07	162.01	0.17
Span # 2	2	5.000	-23.68	134.11	0.18
Span # 3	3	5.000	39.61	162.01	0.24
Span # 4	4	5.000	-24.81	134.11	0.19
Span # 5	5	5.000	-41.95	134.11	0.31
Span # 6	6	20.125	-44.46	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	28.07	162.01	0.17
Span # 2	2	5.000	-23.68	134.11	0.18
Span # 3	3	5.000	39.61	162.01	0.24
Span # 4	4	5.000	-24.81	134.11	0.19
Span # 5	5	5.000	-41.98	134.11	0.31
Span # 6	6	20.125	-44.49	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	27.88	162.01	0.17
Span # 2	2	5.000	-23.96	134.11	0.18
Span # 3	3	5.000	38.43	162.01	0.24
Span # 4	4	5.000	-29.02	134.11	0.22
Span # 5	5	5.000	-41.21	134.11	0.31
Span # 6	6	20.125	-43.03	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	27.88	162.01	0.17
Span # 2	2	5.000	-23.96	134.11	0.18
Span # 3	3	5.000	38.43	162.01	0.24
Span # 4	4	5.000	-29.02	134.11	0.22
Span # 5	5	5.000	-41.24	134.11	0.31
Span # 6	6	20.125	-43.06	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	27.92	162.01	0.17
Span # 2	2	5.000	-23.89	134.11	0.18
Span # 3	3	5.000	38.71	162.01	0.24
Span # 4	4	5.000	-28.02	134.11	0.21
Span # 5	5	5.000	-41.72	134.11	0.31
Span # 6	6	20.125	-44.15	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	27.92	162.01	0.17
Span # 2	2	5.000	-23.89	134.11	0.18
Span # 3	3	5.000	38.71	162.01	0.24
Span # 4	4	5.000	-28.02	134.11	0.21
Span # 5	5	5.000	-41.75	134.11	0.31
Span # 6	6	20.125	-44.18	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.50	162.01	0.18
Span # 2	2	5.000	-29.33	134.11	0.22
Span # 3	3	5.000	54.48	162.01	0.34
Span # 4	4	5.000	-33.69	134.11	0.25
Span # 5	5	5.000	-41.58	134.11	0.31
Span # 6	6	20.125	-43.53	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.50	162.01	0.18
Span # 2	2	5.000	-29.32	134.11	0.22
Span # 3	3	5.000	54.48	162.01	0.34
Span # 4	4	5.000	-33.70	134.11	0.25
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.56	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.54	162.01	0.18
Span # 2	2	5.000	-29.58	134.11	0.22
Span # 3	3	5.000	54.75	162.01	0.34
Span # 4	4	5.000	-32.70	134.11	0.24
Span # 5	5	5.000	-42.10	134.11	0.31

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	20.125	-44.66	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.54	162.01	0.18
Span # 2	2	5.000	-29.58	134.11	0.22
Span # 3	3	5.000	54.75	162.01	0.34
Span # 4	4	5.000	-32.70	134.11	0.24
Span # 5	5	5.000	-42.13	134.11	0.31
Span # 6	6	20.125	-44.69	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.35	162.01	0.18
Span # 2	2	5.000	-28.49	134.11	0.21
Span # 3	3	5.000	53.58	162.01	0.33
Span # 4	4	5.000	-36.90	134.11	0.28
Span # 5	5	5.000	-41.36	134.11	0.31
Span # 6	6	20.125	-43.23	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.35	162.01	0.18
Span # 2	2	5.000	-28.49	134.11	0.21
Span # 3	3	5.000	53.58	162.01	0.33
Span # 4	4	5.000	-36.90	134.11	0.28
Span # 5	5	5.000	-41.39	134.11	0.31
Span # 6	6	20.125	-43.26	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.40	162.01	0.18
Span # 2	2	5.000	-28.75	134.11	0.21
Span # 3	3	5.000	53.86	162.01	0.33
Span # 4	4	5.000	-35.91	134.11	0.27
Span # 5	5	5.000	-41.87	134.11	0.31
Span # 6	6	20.125	-44.36	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.40	162.01	0.18
Span # 2	2	5.000	-28.75	134.11	0.21
Span # 3	3	5.000	53.85	162.01	0.33
Span # 4	4	5.000	-35.91	134.11	0.27
Span # 5	5	5.000	-41.90	134.11	0.31
Span # 6	6	20.125	-44.39	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	40.24	162.01	0.25
Span # 2	2	5.000	-29.24	134.11	0.22
Span # 3	3	5.000	41.81	162.01	0.26
Span # 4	4	5.000	-27.28	134.11	0.20
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.37	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	40.24	162.01	0.25
Span # 2	2	5.000	-29.24	134.11	0.22
Span # 3	3	5.000	41.81	162.01	0.26
Span # 4	4	5.000	-27.28	134.11	0.20
Span # 5	5	5.000	-41.49	134.11	0.31
Span # 6	6	20.125	-43.40	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	40.29	162.01	0.25
Span # 2	2	5.000	-29.18	134.11	0.22
Span # 3	3	5.000	42.09	162.01	0.26
Span # 4	4	5.000	-26.28	134.11	0.20
Span # 5	5	5.000	-41.98	134.11	0.31
Span # 6	6	20.125	-44.49	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	40.29	162.01	0.25
Span # 2	2	5.000	-29.18	134.11	0.22
Span # 3	3	5.000	42.09	162.01	0.26
Span # 4	4	5.000	-26.28	134.11	0.20
Span # 5	5	5.000	-42.00	134.11	0.31
Span # 6	6	20.125	-44.52	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	40.10	162.01	0.25
Span # 2	2	5.000	-29.46	134.11	0.22
Span # 3	3	5.000	40.91	162.01	0.25
Span # 4	4	5.000	-30.48	134.11	0.23

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-41.23	134.11	0.31
Span # 6	6	20.125	-43.07	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	40.09	162.01	0.25
Span # 2	2	5.000	-29.46	134.11	0.22
Span # 3	3	5.000	40.91	162.01	0.25
Span # 4	4	5.000	-30.49	134.11	0.23
Span # 5	5	5.000	-41.26	134.11	0.31
Span # 6	6	20.125	-43.10	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	40.14	162.01	0.25
Span # 2	2	5.000	-29.39	134.11	0.22
Span # 3	3	5.000	41.19	162.01	0.25
Span # 4	4	5.000	-29.49	134.11	0.22
Span # 5	5	5.000	-41.75	134.11	0.31
Span # 6	6	20.125	-44.19	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	40.14	162.01	0.25
Span # 2	2	5.000	-29.39	134.11	0.22
Span # 3	3	5.000	41.19	162.01	0.25
Span # 4	4	5.000	-29.49	134.11	0.22
Span # 5	5	5.000	-41.78	134.11	0.31
Span # 6	6	20.125	-44.22	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.72	162.01	0.26
Span # 2	2	5.000	-27.08	134.11	0.20
Span # 3	3	5.000	56.96	162.01	0.35
Span # 4	4	5.000	-35.16	134.11	0.26
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.57	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	41.72	162.01	0.26
Span # 2	2	5.000	-27.08	134.11	0.20
Span # 3	3	5.000	56.96	162.01	0.35
Span # 4	4	5.000	-35.16	134.11	0.26
Span # 5	5	5.000	-41.64	134.11	0.31
Span # 6	6	20.125	-43.60	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.76	162.01	0.26
Span # 2	2	5.000	-27.02	134.11	0.20
Span # 3	3	5.000	57.24	162.01	0.35
Span # 4	4	5.000	-34.17	134.11	0.25
Span # 5	5	5.000	-42.13	134.11	0.31
Span # 6	6	20.125	-44.69	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	41.76	162.01	0.26
Span # 2	2	5.000	-27.02	134.11	0.20
Span # 3	3	5.000	57.24	162.01	0.35
Span # 4	4	5.000	-34.17	134.11	0.25
Span # 5	5	5.000	-42.15	134.11	0.31
Span # 6	6	20.125	-44.72	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.57	162.01	0.26
Span # 2	2	5.000	-27.30	134.11	0.20
Span # 3	3	5.000	56.06	162.01	0.35
Span # 4	4	5.000	-38.37	134.11	0.29
Span # 5	5	5.000	-41.39	134.11	0.31
Span # 6	6	20.125	-43.27	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	41.57	162.01	0.26
Span # 2	2	5.000	-27.30	134.11	0.20
Span # 3	3	5.000	56.06	162.01	0.35
Span # 4	4	5.000	-38.37	134.11	0.29
Span # 5	5	5.000	-41.41	134.11	0.31
Span # 6	6	20.125	-43.30	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.61	162.01	0.26
Span # 2	2	5.000	-27.23	134.11	0.20
Span # 3	3	5.000	56.34	162.01	0.35

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-37.37	134.11	0.28
Span # 5	5	5.000	-41.90	134.11	0.31
Span # 6	6	20.125	-44.39	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	41.61	162.01	0.26
Span # 2	2	5.000	-27.23	134.11	0.20
Span # 3	3	5.000	56.34	162.01	0.35
Span # 4	4	5.000	-37.38	134.11	0.28
Span # 5	5	5.000	-41.93	134.11	0.31
Span # 6	6	20.125	-44.42	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	38.23	162.01	0.24
Span # 2	2	5.000	-32.19	134.11	0.24
Span # 3	3	5.000	40.35	162.01	0.25
Span # 4	4	5.000	-26.41	134.11	0.20
Span # 5	5	5.000	-41.44	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	38.23	162.01	0.24
Span # 2	2	5.000	-32.19	134.11	0.24
Span # 3	3	5.000	40.35	162.01	0.25
Span # 4	4	5.000	-26.41	134.11	0.20
Span # 5	5	5.000	-41.47	134.11	0.31
Span # 6	6	20.125	-43.38	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	38.28	162.01	0.24
Span # 2	2	5.000	-32.12	134.11	0.24
Span # 3	3	5.000	40.63	162.01	0.25
Span # 4	4	5.000	-25.42	134.11	0.19
Span # 5	5	5.000	-41.96	134.11	0.31
Span # 6	6	20.125	-44.47	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	38.28	162.01	0.24
Span # 2	2	5.000	-32.12	134.11	0.24
Span # 3	3	5.000	40.63	162.01	0.25
Span # 4	4	5.000	-25.42	134.11	0.19
Span # 5	5	5.000	-41.99	134.11	0.31
Span # 6	6	20.125	-44.50	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	38.09	162.01	0.24
Span # 2	2	5.000	-32.40	134.11	0.24
Span # 3	3	5.000	39.45	162.01	0.24
Span # 4	4	5.000	-29.62	134.11	0.22
Span # 5	5	5.000	-41.22	134.11	0.31
Span # 6	6	20.125	-43.05	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	38.09	162.01	0.24
Span # 2	2	5.000	-32.40	134.11	0.24
Span # 3	3	5.000	39.45	162.01	0.24
Span # 4	4	5.000	-29.62	134.11	0.22
Span # 5	5	5.000	-41.25	134.11	0.31
Span # 6	6	20.125	-43.08	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	38.13	162.01	0.24
Span # 2	2	5.000	-32.33	134.11	0.24
Span # 3	3	5.000	39.73	162.01	0.25
Span # 4	4	5.000	-28.62	134.11	0.21
Span # 5	5	5.000	-41.73	134.11	0.31
Span # 6	6	20.125	-44.17	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	38.13	162.01	0.24
Span # 2	2	5.000	-32.33	134.11	0.24
Span # 3	3	5.000	39.73	162.01	0.25
Span # 4	4	5.000	-28.63	134.11	0.21
Span # 5	5	5.000	-41.76	134.11	0.31
Span # 6	6	20.125	-44.20	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	39.71	162.01	0.25
Span # 2	2	5.000	-30.02	134.11	0.22

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	55.50	162.01	0.34
Span # 4	4	5.000	-34.30	134.11	0.26
Span # 5	5	5.000	-41.59	134.11	0.31
Span # 6	6	20.125	-43.55	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	39.71	162.01	0.25
Span # 2	2	5.000	-30.02	134.11	0.22
Span # 3	3	5.000	55.50	162.01	0.34
Span # 4	4	5.000	-34.30	134.11	0.26
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-43.58	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	39.75	162.01	0.25
Span # 2	2	5.000	-29.96	134.11	0.22
Span # 3	3	5.000	55.78	162.01	0.34
Span # 4	4	5.000	-33.30	134.11	0.25
Span # 5	5	5.000	-42.11	134.11	0.31
Span # 6	6	20.125	-44.67	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	39.75	162.01	0.25
Span # 2	2	5.000	-29.96	134.11	0.22
Span # 3	3	5.000	55.78	162.01	0.34
Span # 4	4	5.000	-33.31	134.11	0.25
Span # 5	5	5.000	-42.14	134.11	0.31
Span # 6	6	20.125	-44.70	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	39.56	162.01	0.24
Span # 2	2	5.000	-30.24	134.11	0.23
Span # 3	3	5.000	54.60	162.01	0.34
Span # 4	4	5.000	-37.51	134.11	0.28
Span # 5	5	5.000	-41.37	134.11	0.31
Span # 6	6	20.125	-43.25	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	39.56	162.01	0.24
Span # 2	2	5.000	-30.24	134.11	0.23
Span # 3	3	5.000	54.60	162.01	0.34
Span # 4	4	5.000	-37.51	134.11	0.28
Span # 5	5	5.000	-41.40	134.11	0.31
Span # 6	6	20.125	-43.28	134.11	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	39.61	162.01	0.24
Span # 2	2	5.000	-30.17	134.11	0.22
Span # 3	3	5.000	54.88	162.01	0.34
Span # 4	4	5.000	-36.51	134.11	0.27
Span # 5	5	5.000	-41.88	134.11	0.31
Span # 6	6	20.125	-44.37	134.11	0.33
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	39.61	162.01	0.24
Span # 2	2	5.000	-30.17	134.11	0.22
Span # 3	3	5.000	54.88	162.01	0.34
Span # 4	4	5.000	-36.51	134.11	0.27
Span # 5	5	5.000	-41.91	134.11	0.31
Span # 6	6	20.125	-44.40	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.000	32.78	162.01	0.20
Span # 2	2	5.000	-28.79	134.11	0.21
Span # 3	3	5.000	43.61	162.01	0.27
Span # 4	4	5.000	-34.18	134.11	0.25
Span # 5	5	5.000	-41.21	134.11	0.31
Span # 6	6	20.125	-43.03	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.000	32.83	162.01	0.20
Span # 2	2	5.000	-28.72	134.11	0.21
Span # 3	3	5.000	43.89	162.01	0.27
Span # 4	4	5.000	-33.19	134.11	0.25
Span # 5	5	5.000	-41.69	134.11	0.31
Span # 6	6	20.125	-44.12	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	5.000	32.83	162.01	0.20

Concrete Beam

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Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-28.72	134.11	0.21
Span # 3	3	5.000	43.89	162.01	0.27
Span # 4	4	5.000	-33.19	134.11	0.25
Span # 5	5	5.000	-41.72	134.11	0.31
Span # 6	6	20.125	-44.15	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.000	32.65	162.01	0.20
Span # 2	2	5.000	-29.00	134.11	0.22
Span # 3	3	5.000	42.71	162.01	0.26
Span # 4	4	5.000	-37.39	134.11	0.28
Span # 5	5	5.000	-40.95	134.11	0.31
Span # 6	6	20.125	-42.69	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.000	32.65	162.01	0.20
Span # 2	2	5.000	-29.00	134.11	0.22
Span # 3	3	5.000	42.71	162.01	0.26
Span # 4	4	5.000	-37.39	134.11	0.28
Span # 5	5	5.000	-40.98	134.11	0.31
Span # 6	6	20.125	-42.72	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.000	32.69	162.01	0.20
Span # 2	2	5.000	-28.93	134.11	0.22
Span # 3	3	5.000	42.99	162.01	0.27
Span # 4	4	5.000	-36.39	134.11	0.27
Span # 5	5	5.000	-41.47	134.11	0.31
Span # 6	6	20.125	-43.82	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	5.000	32.69	162.01	0.20
Span # 2	2	5.000	-28.93	134.11	0.22
Span # 3	3	5.000	42.99	162.01	0.27
Span # 4	4	5.000	-36.40	134.11	0.27
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.85	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L***					
Span # 1	1	5.000	34.21	162.01	0.21
Span # 2	2	5.000	-31.47	134.11	0.23
Span # 3	3	5.000	58.76	162.01	0.36
Span # 4	4	5.000	-42.07	134.11	0.31
Span # 5	5	5.000	-41.33	134.11	0.31
Span # 6	6	20.125	-43.20	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L**L					
Span # 1	1	5.000	34.21	162.01	0.21
Span # 2	2	5.000	-31.47	134.11	0.23
Span # 3	3	5.000	58.76	162.01	0.36
Span # 4	4	5.000	-42.07	134.11	0.31
Span # 5	5	5.000	-41.36	134.11	0.31
Span # 6	6	20.125	-43.23	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*L*					
Span # 1	1	5.000	34.25	162.01	0.21
Span # 2	2	5.000	-31.73	134.11	0.24
Span # 3	3	5.000	59.04	162.01	0.36
Span # 4	4	5.000	-41.07	134.11	0.31
Span # 5	5	5.000	-41.85	134.11	0.31
Span # 6	6	20.125	-44.32	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*LL					
Span # 1	1	5.000	34.25	162.01	0.21
Span # 2	2	5.000	-31.73	134.11	0.24
Span # 3	3	5.000	59.04	162.01	0.36
Span # 4	4	5.000	-41.07	134.11	0.31
Span # 5	5	5.000	-41.87	134.11	0.31
Span # 6	6	20.125	-44.35	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL**					
Span # 1	1	5.000	34.07	162.01	0.21
Span # 2	2	5.000	-30.64	134.11	0.23
Span # 3	3	5.000	57.86	162.01	0.36
Span # 4	4	5.000	-45.28	134.11	0.34
Span # 5	5	5.000	-41.10	134.11	0.31
Span # 6	6	20.125	-42.90	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL*L					

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	34.07	162.01	0.21
Span # 2	2	5.000	-30.64	134.11	0.23
Span # 3	3	5.000	57.86	162.01	0.36
Span # 4	4	5.000	-45.28	134.11	0.34
Span # 5	5	5.000	-41.13	134.11	0.31
Span # 6	6	20.125	-42.93	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLL*					
Span # 1	1	5.000	34.11	162.01	0.21
Span # 2	2	5.000	-30.90	134.11	0.23
Span # 3	3	5.000	58.14	162.01	0.36
Span # 4	4	5.000	-44.28	134.11	0.33
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-44.02	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLLL					
Span # 1	1	5.000	34.11	162.01	0.21
Span # 2	2	5.000	-30.90	134.11	0.23
Span # 3	3	5.000	58.14	162.01	0.36
Span # 4	4	5.000	-44.28	134.11	0.33
Span # 5	5	5.000	-41.65	134.11	0.31
Span # 6	6	20.125	-44.05	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L****					
Span # 1	1	5.000	-26.52	134.11	0.20
Span # 2	2	5.000	-31.73	134.11	0.24
Span # 3	3	5.000	42.15	162.01	0.26
Span # 4	4	5.000	-33.32	134.11	0.25
Span # 5	5	5.000	-41.16	134.11	0.31
Span # 6	6	20.125	-42.97	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L***L					
Span # 1	1	5.000	-26.52	134.11	0.20
Span # 2	2	5.000	-31.73	134.11	0.24
Span # 3	3	5.000	42.15	162.01	0.26
Span # 4	4	5.000	-33.32	134.11	0.25
Span # 5	5	5.000	-41.19	134.11	0.31
Span # 6	6	20.125	-43.00	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**L*					
Span # 1	1	5.000	-26.46	134.11	0.20
Span # 2	2	5.000	-31.66	134.11	0.24
Span # 3	3	5.000	42.43	162.01	0.26
Span # 4	4	5.000	-32.32	134.11	0.24
Span # 5	5	5.000	-41.68	134.11	0.31
Span # 6	6	20.125	-44.10	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**LL					
Span # 1	1	5.000	-26.46	134.11	0.20
Span # 2	2	5.000	-31.66	134.11	0.24
Span # 3	3	5.000	42.43	162.01	0.26
Span # 4	4	5.000	-32.33	134.11	0.24
Span # 5	5	5.000	-41.71	134.11	0.31
Span # 6	6	20.125	-44.13	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L**					
Span # 1	1	5.000	-26.73	134.11	0.20
Span # 2	2	5.000	-31.94	134.11	0.24
Span # 3	3	5.000	41.25	162.01	0.25
Span # 4	4	5.000	-36.53	134.11	0.27
Span # 5	5	5.000	-40.94	134.11	0.31
Span # 6	6	20.125	-42.67	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L*L					
Span # 1	1	5.000	-26.73	134.11	0.20
Span # 2	2	5.000	-31.94	134.11	0.24
Span # 3	3	5.000	41.25	162.01	0.25
Span # 4	4	5.000	-36.53	134.11	0.27
Span # 5	5	5.000	-40.97	134.11	0.31
Span # 6	6	20.125	-42.70	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LL*					
Span # 1	1	5.000	-26.67	134.11	0.20
Span # 2	2	5.000	-31.88	134.11	0.24
Span # 3	3	5.000	41.53	162.01	0.26
Span # 4	4	5.000	-35.53	134.11	0.26
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.79	134.11	0.33

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LLL					
Span # 1	1	5.000	-26.67	134.11	0.20
Span # 2	2	5.000	-31.88	134.11	0.24
Span # 3	3	5.000	41.53	162.01	0.26
Span # 4	4	5.000	-35.53	134.11	0.26
Span # 5	5	5.000	-41.48	134.11	0.31
Span # 6	6	20.125	-43.82	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL***					
Span # 1	1	5.000	32.29	162.01	0.20
Span # 2	2	5.000	-34.03	134.11	0.25
Span # 3	3	5.000	57.30	162.01	0.35
Span # 4	4	5.000	-41.21	134.11	0.31
Span # 5	5	5.000	-41.31	134.11	0.31
Span # 6	6	20.125	-43.17	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL**L					
Span # 1	1	5.000	32.29	162.01	0.20
Span # 2	2	5.000	-34.03	134.11	0.25
Span # 3	3	5.000	57.30	162.01	0.35
Span # 4	4	5.000	-41.21	134.11	0.31
Span # 5	5	5.000	-41.34	134.11	0.31
Span # 6	6	20.125	-43.20	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*L*					
Span # 1	1	5.000	32.33	162.01	0.20
Span # 2	2	5.000	-34.29	134.11	0.26
Span # 3	3	5.000	57.58	162.01	0.36
Span # 4	4	5.000	-40.21	134.11	0.30
Span # 5	5	5.000	-41.83	134.11	0.31
Span # 6	6	20.125	-44.30	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*LL					
Span # 1	1	5.000	32.33	162.01	0.20
Span # 2	2	5.000	-34.29	134.11	0.26
Span # 3	3	5.000	57.58	162.01	0.36
Span # 4	4	5.000	-40.21	134.11	0.30
Span # 5	5	5.000	-41.86	134.11	0.31
Span # 6	6	20.125	-44.33	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL**					
Span # 1	1	5.000	32.15	162.01	0.20
Span # 2	2	5.000	-33.20	134.11	0.25
Span # 3	3	5.000	56.40	162.01	0.35
Span # 4	4	5.000	-44.41	134.11	0.33
Span # 5	5	5.000	-41.09	134.11	0.31
Span # 6	6	20.125	-42.87	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL*L					
Span # 1	1	5.000	32.15	162.01	0.20
Span # 2	2	5.000	-33.20	134.11	0.25
Span # 3	3	5.000	56.40	162.01	0.35
Span # 4	4	5.000	-44.42	134.11	0.33
Span # 5	5	5.000	-41.12	134.11	0.31
Span # 6	6	20.125	-42.90	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLL*					
Span # 1	1	5.000	32.19	162.01	0.20
Span # 2	2	5.000	-33.46	134.11	0.25
Span # 3	3	5.000	56.68	162.01	0.35
Span # 4	4	5.000	-43.42	134.11	0.32
Span # 5	5	5.000	-41.60	134.11	0.31
Span # 6	6	20.125	-44.00	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLLL					
Span # 1	1	5.000	32.19	162.01	0.20
Span # 2	2	5.000	-33.46	134.11	0.25
Span # 3	3	5.000	56.68	162.01	0.35
Span # 4	4	5.000	-43.42	134.11	0.32
Span # 5	5	5.000	-41.63	134.11	0.31
Span # 6	6	20.125	-44.03	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*****					
Span # 1	1	5.000	43.18	162.01	0.27
Span # 2	2	5.000	-37.23	134.11	0.28
Span # 3	3	5.000	44.64	162.01	0.28
Span # 4	4	5.000	-34.79	134.11	0.26
Span # 5	5	5.000	-41.19	134.11	0.31

Concrete Beam

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	20.125	-43.01	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L****L					
Span # 1	1	5.000	43.18	162.01	0.27
Span # 2	2	5.000	-37.23	134.11	0.28
Span # 3	3	5.000	44.64	162.01	0.28
Span # 4	4	5.000	-34.79	134.11	0.26
Span # 5	5	5.000	-41.22	134.11	0.31
Span # 6	6	20.125	-43.04	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***L*					
Span # 1	1	5.000	43.22	162.01	0.27
Span # 2	2	5.000	-37.16	134.11	0.28
Span # 3	3	5.000	44.92	162.01	0.28
Span # 4	4	5.000	-33.79	134.11	0.25
Span # 5	5	5.000	-41.71	134.11	0.31
Span # 6	6	20.125	-44.13	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***LL					
Span # 1	1	5.000	43.22	162.01	0.27
Span # 2	2	5.000	-37.16	134.11	0.28
Span # 3	3	5.000	44.92	162.01	0.28
Span # 4	4	5.000	-33.79	134.11	0.25
Span # 5	5	5.000	-41.74	134.11	0.31
Span # 6	6	20.125	-44.16	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L**					
Span # 1	1	5.000	43.05	162.01	0.27
Span # 2	2	5.000	-37.44	134.11	0.28
Span # 3	3	5.000	43.74	162.01	0.27
Span # 4	4	5.000	-37.99	134.11	0.28
Span # 5	5	5.000	-40.97	134.11	0.31
Span # 6	6	20.125	-42.71	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L*L					
Span # 1	1	5.000	43.05	162.01	0.27
Span # 2	2	5.000	-37.44	134.11	0.28
Span # 3	3	5.000	43.74	162.01	0.27
Span # 4	4	5.000	-38.00	134.11	0.28
Span # 5	5	5.000	-40.99	134.11	0.31
Span # 6	6	20.125	-42.74	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LL*					
Span # 1	1	5.000	43.09	162.01	0.27
Span # 2	2	5.000	-37.38	134.11	0.28
Span # 3	3	5.000	44.02	162.01	0.27
Span # 4	4	5.000	-37.00	134.11	0.28
Span # 5	5	5.000	-41.48	134.11	0.31
Span # 6	6	20.125	-43.83	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LLL					
Span # 1	1	5.000	43.09	162.01	0.27
Span # 2	2	5.000	-37.38	134.11	0.28
Span # 3	3	5.000	44.02	162.01	0.27
Span # 4	4	5.000	-37.00	134.11	0.28
Span # 5	5	5.000	-41.51	134.11	0.31
Span # 6	6	20.125	-43.86	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L***					
Span # 1	1	5.000	44.56	162.01	0.28
Span # 2	2	5.000	-35.07	134.11	0.26
Span # 3	3	5.000	59.79	162.01	0.37
Span # 4	4	5.000	-42.67	134.11	0.32
Span # 5	5	5.000	-41.34	134.11	0.31
Span # 6	6	20.125	-43.21	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L**L					
Span # 1	1	5.000	44.56	162.01	0.28
Span # 2	2	5.000	-35.07	134.11	0.26
Span # 3	3	5.000	59.78	162.01	0.37
Span # 4	4	5.000	-42.67	134.11	0.32
Span # 5	5	5.000	-41.37	134.11	0.31
Span # 6	6	20.125	-43.24	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*L*					
Span # 1	1	5.000	44.60	162.01	0.28
Span # 2	2	5.000	-35.00	134.11	0.26
Span # 3	3	5.000	60.06	162.01	0.37
Span # 4	4	5.000	-41.68	134.11	0.31

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-41.86	134.11	0.31
Span # 6	6	20.125	-44.33	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*LL					
Span # 1	1	5.000	44.60	162.01	0.28
Span # 2	2	5.000	-35.00	134.11	0.26
Span # 3	3	5.000	60.06	162.01	0.37
Span # 4	4	5.000	-41.68	134.11	0.31
Span # 5	5	5.000	-41.89	134.11	0.31
Span # 6	6	20.125	-44.36	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL**					
Span # 1	1	5.000	44.42	162.01	0.27
Span # 2	2	5.000	-35.28	134.11	0.26
Span # 3	3	5.000	58.89	162.01	0.36
Span # 4	4	5.000	-45.88	134.11	0.34
Span # 5	5	5.000	-41.12	134.11	0.31
Span # 6	6	20.125	-42.91	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL*L					
Span # 1	1	5.000	44.42	162.01	0.27
Span # 2	2	5.000	-35.28	134.11	0.26
Span # 3	3	5.000	58.89	162.01	0.36
Span # 4	4	5.000	-45.88	134.11	0.34
Span # 5	5	5.000	-41.15	134.11	0.31
Span # 6	6	20.125	-42.94	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLL*					
Span # 1	1	5.000	44.46	162.01	0.27
Span # 2	2	5.000	-35.21	134.11	0.26
Span # 3	3	5.000	59.17	162.01	0.37
Span # 4	4	5.000	-44.88	134.11	0.33
Span # 5	5	5.000	-41.63	134.11	0.31
Span # 6	6	20.125	-44.03	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLLL					
Span # 1	1	5.000	44.46	162.01	0.27
Span # 2	2	5.000	-35.21	134.11	0.26
Span # 3	3	5.000	59.16	162.01	0.37
Span # 4	4	5.000	-44.89	134.11	0.33
Span # 5	5	5.000	-41.66	134.11	0.31
Span # 6	6	20.125	-44.06	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL****					
Span # 1	1	5.000	41.34	162.01	0.26
Span # 2	2	5.000	-40.17	134.11	0.30
Span # 3	3	5.000	43.17	162.01	0.27
Span # 4	4	5.000	-33.92	134.11	0.25
Span # 5	5	5.000	-41.17	134.11	0.31
Span # 6	6	20.125	-42.99	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL***L					
Span # 1	1	5.000	41.34	162.01	0.26
Span # 2	2	5.000	-40.17	134.11	0.30
Span # 3	3	5.000	43.17	162.01	0.27
Span # 4	4	5.000	-33.93	134.11	0.25
Span # 5	5	5.000	-41.20	134.11	0.31
Span # 6	6	20.125	-43.02	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**L*					
Span # 1	1	5.000	41.38	162.01	0.26
Span # 2	2	5.000	-40.11	134.11	0.30
Span # 3	3	5.000	43.45	162.01	0.27
Span # 4	4	5.000	-32.93	134.11	0.25
Span # 5	5	5.000	-41.69	134.11	0.31
Span # 6	6	20.125	-44.11	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**LL					
Span # 1	1	5.000	41.38	162.01	0.26
Span # 2	2	5.000	-40.11	134.11	0.30
Span # 3	3	5.000	43.45	162.01	0.27
Span # 4	4	5.000	-32.93	134.11	0.25
Span # 5	5	5.000	-41.72	134.11	0.31
Span # 6	6	20.125	-44.14	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L**					
Span # 1	1	5.000	41.21	162.01	0.25
Span # 2	2	5.000	-40.39	134.11	0.30
Span # 3	3	5.000	42.27	162.01	0.26

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-37.13	134.11	0.28
Span # 5	5	5.000	-40.95	134.11	0.31
Span # 6	6	20.125	-42.69	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L*L					
Span # 1	1	5.000	41.21	162.01	0.25
Span # 2	2	5.000	-40.39	134.11	0.30
Span # 3	3	5.000	42.27	162.01	0.26
Span # 4	4	5.000	-37.13	134.11	0.28
Span # 5	5	5.000	-40.98	134.11	0.31
Span # 6	6	20.125	-42.72	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LL*					
Span # 1	1	5.000	41.25	162.01	0.25
Span # 2	2	5.000	-40.32	134.11	0.30
Span # 3	3	5.000	42.55	162.01	0.26
Span # 4	4	5.000	-36.14	134.11	0.27
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.81	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LLL					
Span # 1	1	5.000	41.25	162.01	0.25
Span # 2	2	5.000	-40.32	134.11	0.30
Span # 3	3	5.000	42.55	162.01	0.26
Span # 4	4	5.000	-36.14	134.11	0.27
Span # 5	5	5.000	-41.49	134.11	0.31
Span # 6	6	20.125	-43.84	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL***					
Span # 1	1	5.000	42.69	162.01	0.26
Span # 2	2	5.000	-38.01	134.11	0.28
Span # 3	3	5.000	58.32	162.01	0.36
Span # 4	4	5.000	-41.81	134.11	0.31
Span # 5	5	5.000	-41.33	134.11	0.31
Span # 6	6	20.125	-43.19	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL**L					
Span # 1	1	5.000	42.69	162.01	0.26
Span # 2	2	5.000	-38.01	134.11	0.28
Span # 3	3	5.000	58.32	162.01	0.36
Span # 4	4	5.000	-41.81	134.11	0.31
Span # 5	5	5.000	-41.35	134.11	0.31
Span # 6	6	20.125	-43.22	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*L*					
Span # 1	1	5.000	42.73	162.01	0.26
Span # 2	2	5.000	-37.94	134.11	0.28
Span # 3	3	5.000	58.60	162.01	0.36
Span # 4	4	5.000	-40.81	134.11	0.30
Span # 5	5	5.000	-41.84	134.11	0.31
Span # 6	6	20.125	-44.31	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*LL					
Span # 1	1	5.000	42.73	162.01	0.26
Span # 2	2	5.000	-37.94	134.11	0.28
Span # 3	3	5.000	58.60	162.01	0.36
Span # 4	4	5.000	-40.82	134.11	0.30
Span # 5	5	5.000	-41.87	134.11	0.31
Span # 6	6	20.125	-44.34	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL**					
Span # 1	1	5.000	42.55	162.01	0.26
Span # 2	2	5.000	-38.22	134.11	0.29
Span # 3	3	5.000	57.42	162.01	0.35
Span # 4	4	5.000	-45.02	134.11	0.34
Span # 5	5	5.000	-41.10	134.11	0.31
Span # 6	6	20.125	-42.89	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL*L					
Span # 1	1	5.000	42.55	162.01	0.26
Span # 2	2	5.000	-38.22	134.11	0.29
Span # 3	3	5.000	57.42	162.01	0.35
Span # 4	4	5.000	-45.02	134.11	0.34
Span # 5	5	5.000	-41.13	134.11	0.31
Span # 6	6	20.125	-42.92	134.11	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLL*					
Span # 1	1	5.000	42.59	162.01	0.26
Span # 2	2	5.000	-38.16	134.11	0.28

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	57.70	162.01	0.36
Span # 4	4	5.000	-44.02	134.11	0.33
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-44.01	134.11	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLLL					
Span # 1	1	5.000	42.59	162.01	0.26
Span # 2	2	5.000	-38.16	134.11	0.28
Span # 3	3	5.000	57.70	162.01	0.36
Span # 4	4	5.000	-44.02	134.11	0.33
Span # 5	5	5.000	-41.64	134.11	0.31
Span # 6	6	20.125	-44.04	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.36	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.04	162.01	0.19
Span # 2	2	5.000	-20.78	134.11	0.15
Span # 3	3	5.000	40.88	162.01	0.25
Span # 4	4	5.000	-26.36	134.11	0.20
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.71	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.04	162.01	0.19
Span # 2	2	5.000	-20.78	134.11	0.15
Span # 3	3	5.000	40.88	162.01	0.25
Span # 4	4	5.000	-26.36	134.11	0.20
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-43.71	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	29.98	162.01	0.19
Span # 2	2	5.000	-20.87	134.11	0.16
Span # 3	3	5.000	40.51	162.01	0.25
Span # 4	4	5.000	-27.67	134.11	0.21
Span # 5	5	5.000	-41.38	134.11	0.31
Span # 6	6	20.125	-43.26	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	29.98	162.01	0.19
Span # 2	2	5.000	-20.87	134.11	0.16
Span # 3	3	5.000	40.51	162.01	0.25
Span # 4	4	5.000	-27.67	134.11	0.21
Span # 5	5	5.000	-41.39	134.11	0.31
Span # 6	6	20.125	-43.27	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	30.00	162.01	0.19
Span # 2	2	5.000	-20.85	134.11	0.16
Span # 3	3	5.000	40.60	162.01	0.25
Span # 4	4	5.000	-27.36	134.11	0.20
Span # 5	5	5.000	-41.54	134.11	0.31
Span # 6	6	20.125	-43.61	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	30.00	162.01	0.19
Span # 2	2	5.000	-20.85	134.11	0.16
Span # 3	3	5.000	40.60	162.01	0.25
Span # 4	4	5.000	-27.36	134.11	0.20
Span # 5	5	5.000	-41.55	134.11	0.31
Span # 6	6	20.125	-43.62	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.49	162.01	0.19
Span # 2	2	5.000	-20.99	134.11	0.16
Span # 3	3	5.000	45.52	162.01	0.28
Span # 4	4	5.000	-29.14	134.11	0.22
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.42	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.49	162.01	0.19

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-20.99	134.11	0.16
Span # 3	3	5.000	45.52	162.01	0.28
Span # 4	4	5.000	-29.14	134.11	0.22
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.43	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.51	162.01	0.19
Span # 2	2	5.000	-21.07	134.11	0.16
Span # 3	3	5.000	45.61	162.01	0.28
Span # 4	4	5.000	-28.82	134.11	0.21
Span # 5	5	5.000	-41.66	134.11	0.31
Span # 6	6	20.125	-43.77	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.51	162.01	0.19
Span # 2	2	5.000	-21.07	134.11	0.16
Span # 3	3	5.000	45.61	162.01	0.28
Span # 4	4	5.000	-28.83	134.11	0.21
Span # 5	5	5.000	-41.67	134.11	0.31
Span # 6	6	20.125	-43.78	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.45	162.01	0.19
Span # 2	2	5.000	-20.73	134.11	0.15
Span # 3	3	5.000	45.24	162.01	0.28
Span # 4	4	5.000	-30.14	134.11	0.22
Span # 5	5	5.000	-41.42	134.11	0.31
Span # 6	6	20.125	-43.32	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.45	162.01	0.19
Span # 2	2	5.000	-20.73	134.11	0.15
Span # 3	3	5.000	45.24	162.01	0.28
Span # 4	4	5.000	-30.14	134.11	0.22
Span # 5	5	5.000	-41.43	134.11	0.31
Span # 6	6	20.125	-43.33	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.46	162.01	0.19
Span # 2	2	5.000	-20.81	134.11	0.16
Span # 3	3	5.000	45.33	162.01	0.28
Span # 4	4	5.000	-29.83	134.11	0.22
Span # 5	5	5.000	-41.59	134.11	0.31
Span # 6	6	20.125	-43.67	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.46	162.01	0.19
Span # 2	2	5.000	-20.81	134.11	0.16
Span # 3	3	5.000	45.33	162.01	0.28
Span # 4	4	5.000	-29.83	134.11	0.22
Span # 5	5	5.000	-41.60	134.11	0.31
Span # 6	6	20.125	-43.68	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	29.40	162.01	0.18
Span # 2	2	5.000	-21.72	134.11	0.16
Span # 3	3	5.000	40.33	162.01	0.25
Span # 4	4	5.000	-26.40	134.11	0.20
Span # 5	5	5.000	-41.44	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	29.40	162.01	0.18
Span # 2	2	5.000	-21.72	134.11	0.16
Span # 3	3	5.000	40.33	162.01	0.25
Span # 4	4	5.000	-26.40	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.36	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	29.42	162.01	0.18
Span # 2	2	5.000	-21.70	134.11	0.16
Span # 3	3	5.000	40.42	162.01	0.25
Span # 4	4	5.000	-26.09	134.11	0.19
Span # 5	5	5.000	-41.60	134.11	0.31
Span # 6	6	20.125	-43.70	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	29.42	162.01	0.18
Span # 2	2	5.000	-21.70	134.11	0.16
Span # 3	3	5.000	40.42	162.01	0.25
Span # 4	4	5.000	-26.09	134.11	0.19
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.71	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	29.36	162.01	0.18
Span # 2	2	5.000	-21.79	134.11	0.16
Span # 3	3	5.000	40.05	162.01	0.25
Span # 4	4	5.000	-27.40	134.11	0.20
Span # 5	5	5.000	-41.37	134.11	0.31
Span # 6	6	20.125	-43.25	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	29.36	162.01	0.18
Span # 2	2	5.000	-21.79	134.11	0.16
Span # 3	3	5.000	40.05	162.01	0.25
Span # 4	4	5.000	-27.40	134.11	0.20
Span # 5	5	5.000	-41.38	134.11	0.31
Span # 6	6	20.125	-43.26	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	29.37	162.01	0.18
Span # 2	2	5.000	-21.77	134.11	0.16
Span # 3	3	5.000	40.14	162.01	0.25
Span # 4	4	5.000	-27.09	134.11	0.20
Span # 5	5	5.000	-41.53	134.11	0.31
Span # 6	6	20.125	-43.60	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	29.37	162.01	0.18
Span # 2	2	5.000	-21.77	134.11	0.16
Span # 3	3	5.000	40.14	162.01	0.25
Span # 4	4	5.000	-27.09	134.11	0.20
Span # 5	5	5.000	-41.54	134.11	0.31
Span # 6	6	20.125	-43.61	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.86	162.01	0.18
Span # 2	2	5.000	-21.79	134.11	0.16
Span # 3	3	5.000	45.07	162.01	0.28
Span # 4	4	5.000	-28.87	134.11	0.22
Span # 5	5	5.000	-41.49	134.11	0.31
Span # 6	6	20.125	-43.41	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	29.86	162.01	0.18
Span # 2	2	5.000	-21.79	134.11	0.16
Span # 3	3	5.000	45.07	162.01	0.28
Span # 4	4	5.000	-28.87	134.11	0.22
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.42	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.88	162.01	0.18
Span # 2	2	5.000	-21.87	134.11	0.16
Span # 3	3	5.000	45.15	162.01	0.28
Span # 4	4	5.000	-28.55	134.11	0.21
Span # 5	5	5.000	-41.65	134.11	0.31
Span # 6	6	20.125	-43.76	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	29.88	162.01	0.18
Span # 2	2	5.000	-21.87	134.11	0.16
Span # 3	3	5.000	45.15	162.01	0.28
Span # 4	4	5.000	-28.56	134.11	0.21
Span # 5	5	5.000	-41.66	134.11	0.31
Span # 6	6	20.125	-43.77	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.82	162.01	0.18
Span # 2	2	5.000	-21.53	134.11	0.16
Span # 3	3	5.000	44.79	162.01	0.28
Span # 4	4	5.000	-29.87	134.11	0.22
Span # 5	5	5.000	-41.42	134.11	0.31
Span # 6	6	20.125	-43.32	134.11	0.32

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	29.82	162.01	0.18
Span # 2	2	5.000	-21.53	134.11	0.16
Span # 3	3	5.000	44.79	162.01	0.28
Span # 4	4	5.000	-29.87	134.11	0.22
Span # 5	5	5.000	-41.43	134.11	0.31
Span # 6	6	20.125	-43.33	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.83	162.01	0.18
Span # 2	2	5.000	-21.61	134.11	0.16
Span # 3	3	5.000	44.87	162.01	0.28
Span # 4	4	5.000	-29.56	134.11	0.22
Span # 5	5	5.000	-41.58	134.11	0.31
Span # 6	6	20.125	-43.67	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	29.83	162.01	0.18
Span # 2	2	5.000	-21.61	134.11	0.16
Span # 3	3	5.000	44.87	162.01	0.28
Span # 4	4	5.000	-29.56	134.11	0.22
Span # 5	5	5.000	-41.59	134.11	0.31
Span # 6	6	20.125	-43.68	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	33.22	162.01	0.21
Span # 2	2	5.000	-23.44	134.11	0.17
Span # 3	3	5.000	41.11	162.01	0.25
Span # 4	4	5.000	-26.86	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.36	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	33.22	162.01	0.21
Span # 2	2	5.000	-23.44	134.11	0.17
Span # 3	3	5.000	41.11	162.01	0.25
Span # 4	4	5.000	-26.86	134.11	0.20
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.37	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	33.24	162.01	0.21
Span # 2	2	5.000	-23.42	134.11	0.17
Span # 3	3	5.000	41.20	162.01	0.25
Span # 4	4	5.000	-26.55	134.11	0.20
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.71	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	33.24	162.01	0.21
Span # 2	2	5.000	-23.42	134.11	0.17
Span # 3	3	5.000	41.20	162.01	0.25
Span # 4	4	5.000	-26.55	134.11	0.20
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-43.72	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	33.18	162.01	0.20
Span # 2	2	5.000	-23.51	134.11	0.18
Span # 3	3	5.000	40.83	162.01	0.25
Span # 4	4	5.000	-27.86	134.11	0.21
Span # 5	5	5.000	-41.38	134.11	0.31
Span # 6	6	20.125	-43.27	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	33.18	162.01	0.20
Span # 2	2	5.000	-23.51	134.11	0.18
Span # 3	3	5.000	40.83	162.01	0.25
Span # 4	4	5.000	-27.86	134.11	0.21
Span # 5	5	5.000	-41.39	134.11	0.31
Span # 6	6	20.125	-43.27	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	33.19	162.01	0.20
Span # 2	2	5.000	-23.49	134.11	0.18
Span # 3	3	5.000	40.92	162.01	0.25
Span # 4	4	5.000	-27.55	134.11	0.21
Span # 5	5	5.000	-41.54	134.11	0.31

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	20.125	-43.62	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	33.19	162.01	0.20
Span # 2	2	5.000	-23.49	134.11	0.18
Span # 3	3	5.000	40.92	162.01	0.25
Span # 4	4	5.000	-27.55	134.11	0.21
Span # 5	5	5.000	-41.55	134.11	0.31
Span # 6	6	20.125	-43.63	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	33.68	162.01	0.21
Span # 2	2	5.000	-22.76	134.11	0.17
Span # 3	3	5.000	45.84	162.01	0.28
Span # 4	4	5.000	-29.32	134.11	0.22
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.42	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	33.68	162.01	0.21
Span # 2	2	5.000	-22.76	134.11	0.17
Span # 3	3	5.000	45.84	162.01	0.28
Span # 4	4	5.000	-29.33	134.11	0.22
Span # 5	5	5.000	-41.51	134.11	0.31
Span # 6	6	20.125	-43.43	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	33.70	162.01	0.21
Span # 2	2	5.000	-22.74	134.11	0.17
Span # 3	3	5.000	45.93	162.01	0.28
Span # 4	4	5.000	-29.01	134.11	0.22
Span # 5	5	5.000	-41.66	134.11	0.31
Span # 6	6	20.125	-43.77	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	33.70	162.01	0.21
Span # 2	2	5.000	-22.74	134.11	0.17
Span # 3	3	5.000	45.93	162.01	0.28
Span # 4	4	5.000	-29.01	134.11	0.22
Span # 5	5	5.000	-41.67	134.11	0.31
Span # 6	6	20.125	-43.78	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	33.64	162.01	0.21
Span # 2	2	5.000	-22.83	134.11	0.17
Span # 3	3	5.000	45.56	162.01	0.28
Span # 4	4	5.000	-30.33	134.11	0.23
Span # 5	5	5.000	-41.43	134.11	0.31
Span # 6	6	20.125	-43.33	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	33.64	162.01	0.21
Span # 2	2	5.000	-22.83	134.11	0.17
Span # 3	3	5.000	45.56	162.01	0.28
Span # 4	4	5.000	-30.33	134.11	0.23
Span # 5	5	5.000	-41.44	134.11	0.31
Span # 6	6	20.125	-43.34	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	33.65	162.01	0.21
Span # 2	2	5.000	-22.81	134.11	0.17
Span # 3	3	5.000	45.65	162.01	0.28
Span # 4	4	5.000	-30.02	134.11	0.22
Span # 5	5	5.000	-41.59	134.11	0.31
Span # 6	6	20.125	-43.68	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	33.65	162.01	0.21
Span # 2	2	5.000	-22.81	134.11	0.17
Span # 3	3	5.000	45.65	162.01	0.28
Span # 4	4	5.000	-30.02	134.11	0.22
Span # 5	5	5.000	-41.60	134.11	0.31
Span # 6	6	20.125	-43.69	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	32.59	162.01	0.20
Span # 2	2	5.000	-24.36	134.11	0.18
Span # 3	3	5.000	40.65	162.01	0.25
Span # 4	4	5.000	-26.59	134.11	0.20

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	32.59	162.01	0.20
Span # 2	2	5.000	-24.36	134.11	0.18
Span # 3	3	5.000	40.65	162.01	0.25
Span # 4	4	5.000	-26.59	134.11	0.20
Span # 5	5	5.000	-41.46	134.11	0.31
Span # 6	6	20.125	-43.36	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	32.61	162.01	0.20
Span # 2	2	5.000	-24.34	134.11	0.18
Span # 3	3	5.000	40.74	162.01	0.25
Span # 4	4	5.000	-26.28	134.11	0.20
Span # 5	5	5.000	-41.61	134.11	0.31
Span # 6	6	20.125	-43.70	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	32.61	162.01	0.20
Span # 2	2	5.000	-24.34	134.11	0.18
Span # 3	3	5.000	40.74	162.01	0.25
Span # 4	4	5.000	-26.28	134.11	0.20
Span # 5	5	5.000	-41.62	134.11	0.31
Span # 6	6	20.125	-43.71	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	32.55	162.01	0.20
Span # 2	2	5.000	-24.43	134.11	0.18
Span # 3	3	5.000	40.37	162.01	0.25
Span # 4	4	5.000	-27.59	134.11	0.21
Span # 5	5	5.000	-41.38	134.11	0.31
Span # 6	6	20.125	-43.26	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	32.55	162.01	0.20
Span # 2	2	5.000	-24.43	134.11	0.18
Span # 3	3	5.000	40.37	162.01	0.25
Span # 4	4	5.000	-27.59	134.11	0.21
Span # 5	5	5.000	-41.39	134.11	0.31
Span # 6	6	20.125	-43.27	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	32.56	162.01	0.20
Span # 2	2	5.000	-24.41	134.11	0.18
Span # 3	3	5.000	40.46	162.01	0.25
Span # 4	4	5.000	-27.28	134.11	0.20
Span # 5	5	5.000	-41.54	134.11	0.31
Span # 6	6	20.125	-43.61	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	32.56	162.01	0.20
Span # 2	2	5.000	-24.41	134.11	0.18
Span # 3	3	5.000	40.46	162.01	0.25
Span # 4	4	5.000	-27.28	134.11	0.20
Span # 5	5	5.000	-41.55	134.11	0.31
Span # 6	6	20.125	-43.62	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	33.05	162.01	0.20
Span # 2	2	5.000	-23.68	134.11	0.18
Span # 3	3	5.000	45.39	162.01	0.28
Span # 4	4	5.000	-29.05	134.11	0.22
Span # 5	5	5.000	-41.49	134.11	0.31
Span # 6	6	20.125	-43.42	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	33.05	162.01	0.20
Span # 2	2	5.000	-23.68	134.11	0.18
Span # 3	3	5.000	45.39	162.01	0.28
Span # 4	4	5.000	-29.06	134.11	0.22
Span # 5	5	5.000	-41.50	134.11	0.31
Span # 6	6	20.125	-43.42	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	33.07	162.01	0.20
Span # 2	2	5.000	-23.66	134.11	0.18
Span # 3	3	5.000	45.47	162.01	0.28

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-28.74	134.11	0.21
Span # 5	5	5.000	-41.65	134.11	0.31
Span # 6	6	20.125	-43.77	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	33.07	162.01	0.20
Span # 2	2	5.000	-23.66	134.11	0.18
Span # 3	3	5.000	45.47	162.01	0.28
Span # 4	4	5.000	-28.74	134.11	0.21
Span # 5	5	5.000	-41.66	134.11	0.31
Span # 6	6	20.125	-43.78	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	33.01	162.01	0.20
Span # 2	2	5.000	-23.75	134.11	0.18
Span # 3	3	5.000	45.11	162.01	0.28
Span # 4	4	5.000	-30.06	134.11	0.22
Span # 5	5	5.000	-41.42	134.11	0.31
Span # 6	6	20.125	-43.32	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	33.01	162.01	0.20
Span # 2	2	5.000	-23.75	134.11	0.18
Span # 3	3	5.000	45.11	162.01	0.28
Span # 4	4	5.000	-30.06	134.11	0.22
Span # 5	5	5.000	-41.43	134.11	0.31
Span # 6	6	20.125	-43.33	134.11	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	33.02	162.01	0.20
Span # 2	2	5.000	-23.73	134.11	0.18
Span # 3	3	5.000	45.19	162.01	0.28
Span # 4	4	5.000	-29.75	134.11	0.22
Span # 5	5	5.000	-41.58	134.11	0.31
Span # 6	6	20.125	-43.67	134.11	0.33
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	33.02	162.01	0.20
Span # 2	2	5.000	-23.73	134.11	0.18
Span # 3	3	5.000	45.19	162.01	0.28
Span # 4	4	5.000	-29.75	134.11	0.22
Span # 5	5	5.000	-41.59	134.11	0.31
Span # 6	6	20.125	-43.68	134.11	0.33
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	30.03	162.01	0.19

Concrete Beam

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-Y (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	30.03	162.01	0.19
Span # 2	2	5.000	-20.80	134.11	0.16
Span # 3	3	5.000	40.79	162.01	0.25
Span # 4	4	5.000	-26.67	134.11	0.20
Span # 5	5	5.000	-41.45	134.11	0.31
Span # 6	6	20.125	-43.35	134.11	0.32

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

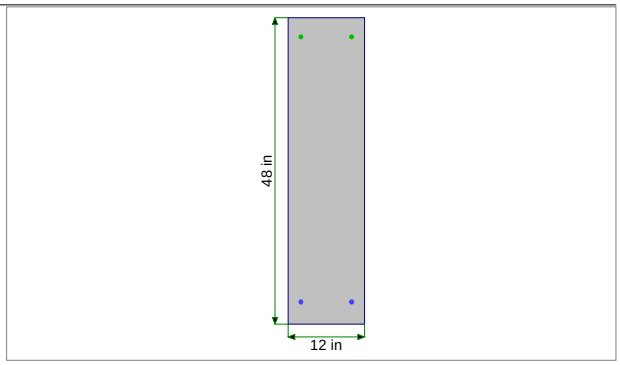
Description : GB-A-62R

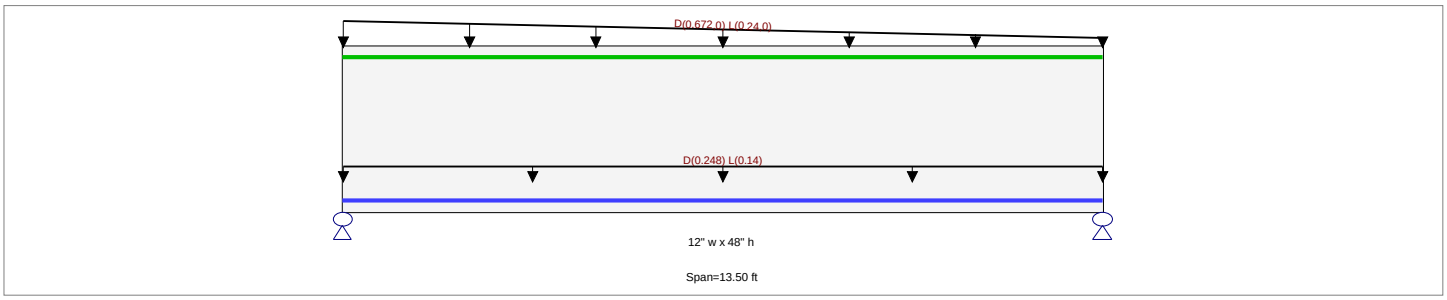
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in
Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 13.50 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 13.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Varying Uniform Load : D(S,E) = 0.1120->0.0, L(S,E) = 0.040->0.0 ksf, Extent = 0.0 -->> 13.50 ft, Trib Width = 6.0 ft, (slab weight)
Uniform Load : D = 0.2480, L = 0.140 k/ft, Tributary Width = 1.0 ft, (WALL D)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.327** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in Ratio = 0 <360
Mu : Applied	41.421 k-ft	Max Upward Transient Deflection	0.000 in Ratio = 0 <360
Mn * Phi : Allowable	126.735 k-ft	Max Downward Total Deflection	0.003 in Ratio = 52575 >=24
Location of maximum on span	6.393 ft	Max Upward Total Deflection	0.000 in Ratio = 999 <240
Span # where maximum occurs	Span # 1		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	10.638	8.586
Overall MINimum	2.025	1.485
+D+H	8.613	7.101
+D+L+H	10.638	8.586
+D+Lr+H	8.613	7.101
+D+S+H	8.613	7.101
+D+0.750Lr+0.750L+H	10.132	8.215
+D+0.750L+0.750S+H	10.132	8.215
+D+0.60W+H	8.613	7.101
+D+0.70E+H	8.613	7.101
+D+0.750Lr+0.750L+0.450W+H	10.132	8.215
+D+0.750L+0.750S+0.450W+H	10.132	8.215

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+D+0.750L+0.750S+0.5250E+H	10.132	8.215
+0.60D+0.60W+0.60H	5.168	4.261
+0.60D+0.70E+0.60H	5.168	4.261
D Only	8.613	7.101
Lr Only		
L Only	2.025	1.485
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	44.50	13.58	13.58	0.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.02	44.50	13.52	13.52	0.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.05	44.50	13.46	13.46	0.66	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.07	44.50	13.40	13.40	0.99	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	44.50	13.34	13.34	1.32	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.12	44.50	13.28	13.28	1.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.15	44.50	13.22	13.22	1.98	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.17	44.50	13.16	13.16	2.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.20	44.50	13.10	13.10	2.62	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.22	44.50	13.04	13.04	2.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.25	44.50	12.99	12.99	3.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.27	44.50	12.93	12.93	3.58	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.30	44.50	12.87	12.87	3.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.32	44.50	12.81	12.81	4.22	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.34	44.50	12.75	12.75	4.53	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.37	44.50	12.69	12.69	4.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.39	44.50	12.64	12.64	5.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.42	44.50	12.58	12.58	5.47	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.44	44.50	12.52	12.52	5.77	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.47	44.50	12.46	12.46	6.08	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.49	44.50	12.40	12.40	6.39	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.52	44.50	12.34	12.34	6.69	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.54	44.50	12.29	12.29	6.99	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.57	44.50	12.23	12.23	7.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.59	44.50	12.17	12.17	7.60	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.61	44.50	12.11	12.11	7.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.64	44.50	12.05	12.05	8.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.66	44.50	12.00	12.00	8.49	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.69	44.50	11.94	11.94	8.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.71	44.50	11.88	11.88	9.07	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.74	44.50	11.82	11.82	9.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.76	44.50	11.77	11.77	9.66	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.79	44.50	11.71	11.71	9.94	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.81	44.50	11.65	11.65	10.23	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.84	44.50	11.59	11.59	10.52	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.86	44.50	11.54	11.54	10.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.89	44.50	11.48	11.48	11.08	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.91	44.50	11.42	11.42	11.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.93	44.50	11.36	11.36	11.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	44.50	11.31	11.31	11.92	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	0.98	44.50	11.25	11.25	12.20	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.01	44.50	11.19	11.19	12.48	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	1.03	44.50	11.14	11.14	12.75	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.06	44.50	11.08	11.08	13.03	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.08	44.50	11.02	11.02	13.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.11	44.50	10.96	10.96	13.57	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.13	44.50	10.91	10.91	13.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	44.50	10.85	10.85	14.10	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.18	44.50	10.79	10.79	14.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.20	44.50	10.74	10.74	14.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.23	44.50	10.68	10.68	14.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.25	44.50	10.63	10.63	15.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.28	44.50	10.57	10.57	15.42	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.30	44.50	10.51	10.51	15.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.33	44.50	10.46	10.46	15.94	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	44.50	10.40	10.40	16.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.38	44.50	10.34	10.34	16.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.40	44.50	10.29	10.29	16.70	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.43	44.50	10.23	10.23	16.96	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	44.50	10.17	10.17	17.21	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.48	44.50	10.12	10.12	17.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.50	44.50	10.06	10.06	17.70	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.52	44.50	10.01	10.01	17.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.55	44.50	9.95	9.95	18.20	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.57	44.50	9.90	9.90	18.44	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.60	44.50	9.84	9.84	18.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.62	44.50	9.78	9.78	18.92	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.65	44.50	9.73	9.73	19.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.67	44.50	9.67	9.67	19.40	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.70	44.50	9.62	9.62	19.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.72	44.50	9.56	9.56	19.88	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.75	44.50	9.51	9.51	20.11	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.77	44.50	9.45	9.45	20.34	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.80	44.50	9.40	9.40	20.57	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.82	44.50	9.34	9.34	20.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.84	44.50	9.28	9.28	21.03	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.87	44.50	9.23	9.23	21.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.89	44.50	9.17	9.17	21.49	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.92	44.50	9.12	9.12	21.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.94	44.50	9.06	9.06	21.94	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.97	44.50	9.01	9.01	22.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.99	44.50	8.95	8.95	22.38	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.02	44.50	8.90	8.90	22.60	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.04	44.50	8.84	8.84	22.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.07	44.50	8.79	8.79	23.03	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.09	44.50	8.74	8.74	23.25	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.11	44.50	8.68	8.68	23.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.14	44.50	8.63	8.63	23.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.16	44.50	8.57	8.57	23.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.19	44.50	8.52	8.52	24.10	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.21	44.50	8.46	8.46	24.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.24	44.50	8.41	8.41	24.51	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.26	44.50	8.35	8.35	24.72	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.29	44.50	8.30	8.30	24.92	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.31	44.50	8.25	8.25	25.13	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.34	44.50	8.19	8.19	25.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.36	44.50	8.14	8.14	25.53	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.39	44.50	8.08	8.08	25.73	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	44.50	8.03	8.03	25.93	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.43	44.50	7.97	7.97	26.13	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.46	44.50	7.92	7.92	26.32	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.48	44.50	7.87	7.87	26.51	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	44.50	7.81	7.81	26.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.53	44.50	7.76	7.76	26.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.56	44.50	7.71	7.71	27.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.58	44.50	7.65	7.65	27.28	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	44.50	7.60	7.60	27.47	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.63	44.50	7.55	7.55	27.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.66	44.50	7.49	7.49	27.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.68	44.50	7.44	7.44	28.02	0.98	49.27	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	44.50	7.38	7.38	28.20	0.97	49.26	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.73	44.50	7.33	7.33	28.38	0.96	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.75	44.50	7.28	7.28	28.56	0.94	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.78	44.50	7.22	7.22	28.74	0.93	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	44.50	7.17	7.17	28.92	0.92	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.83	44.50	7.12	7.12	29.09	0.91	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.85	44.50	7.07	7.07	29.27	0.90	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.88	44.50	7.01	7.01	29.44	0.88	49.15	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.90	44.50	6.96	6.96	29.61	0.87	49.14	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.93	44.50	6.91	6.91	29.78	0.86	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.95	44.50	6.85	6.85	29.95	0.85	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.98	44.50	6.80	6.80	30.12	0.84	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.00	44.50	6.75	6.75	30.29	0.83	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.02	44.50	6.70	6.70	30.45	0.82	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.05	44.50	6.64	6.64	30.62	0.80	49.06	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.07	44.50	6.59	6.59	30.78	0.79	49.05	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.10	44.50	6.54	6.54	30.94	0.78	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.12	44.50	6.49	6.49	31.10	0.77	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.15	44.50	6.43	6.43	31.26	0.76	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.17	44.50	6.38	6.38	31.42	0.75	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.20	44.50	6.33	6.33	31.57	0.74	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.22	44.50	6.28	6.28	31.73	0.73	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.25	44.50	6.22	6.22	31.88	0.72	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.27	44.50	6.17	6.17	32.03	0.71	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.30	44.50	6.12	6.12	32.19	0.71	48.95	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.32	44.50	6.07	6.07	32.34	0.70	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.34	44.50	6.02	6.02	32.48	0.69	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.37	44.50	5.96	5.96	32.63	0.68	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.39	44.50	5.91	5.91	32.78	0.67	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.42	44.50	5.86	5.86	32.92	0.66	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.44	44.50	5.81	5.81	33.07	0.65	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	44.50	5.76	5.76	33.21	0.64	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.49	44.50	5.70	5.70	33.35	0.63	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.52	44.50	5.65	5.65	33.49	0.63	48.85	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.54	44.50	5.60	5.60	33.63	0.62	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.57	44.50	5.55	5.55	33.76	0.61	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.59	44.50	5.50	5.50	33.90	0.60	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.61	44.50	5.45	5.45	34.03	0.59	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.64	44.50	5.40	5.40	34.17	0.59	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.66	44.50	5.34	5.34	34.30	0.58	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	3.69	44.50	5.29	5.29	34.43	0.57	48.79	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.71	44.50	5.24	5.24	34.56	0.56	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.74	44.50	5.19	5.19	34.69	0.55	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.76	44.50	5.14	5.14	34.82	0.55	48.76	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.79	44.50	5.09	5.09	34.94	0.54	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.81	44.50	5.04	5.04	35.07	0.53	48.75	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.84	44.50	4.99	4.99	35.19	0.53	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.86	44.50	4.94	4.94	35.31	0.52	48.73	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.89	44.50	4.89	4.89	35.43	0.51	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.91	44.50	4.83	4.83	35.55	0.50	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.93	44.50	4.78	4.78	35.67	0.50	48.70	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.96	44.50	4.73	4.73	35.79	0.49	48.70	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.98	44.50	4.68	4.68	35.90	0.48	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.01	44.50	4.63	4.63	36.02	0.48	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.03	44.50	4.58	4.58	36.13	0.47	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.06	44.50	4.53	4.53	36.24	0.46	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.08	44.50	4.48	4.48	36.35	0.46	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.11	44.50	4.43	4.43	36.46	0.45	48.65	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.13	44.50	4.38	4.38	36.57	0.44	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.16	44.50	4.33	4.33	36.68	0.44	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.18	44.50	4.28	4.28	36.78	0.43	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.20	44.50	4.23	4.23	36.89	0.43	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.23	44.50	4.18	4.18	36.99	0.42	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.25	44.50	4.13	4.13	37.09	0.41	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.28	44.50	4.08	4.08	37.20	0.41	48.60	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.30	44.50	4.03	4.03	37.29	0.40	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.33	44.50	3.98	3.98	37.39	0.39	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.35	44.50	3.93	3.93	37.49	0.39	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.38	44.50	3.88	3.88	37.59	0.38	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.40	44.50	3.83	3.83	37.68	0.38	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.43	44.50	3.78	3.78	37.77	0.37	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.45	44.50	3.73	3.73	37.87	0.37	48.55	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.48	44.50	3.68	3.68	37.96	0.36	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.50	44.50	3.63	3.63	38.05	0.35	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.52	44.50	3.58	3.58	38.14	0.35	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.55	44.50	3.53	3.53	38.22	0.34	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.57	44.50	3.48	3.48	38.31	0.34	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.60	44.50	3.44	3.44	38.40	0.33	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.62	44.50	3.39	3.39	38.48	0.33	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.65	44.50	3.34	3.34	38.56	0.32	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.67	44.50	3.29	3.29	38.64	0.32	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.70	44.50	3.24	3.24	38.72	0.31	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.72	44.50	3.19	3.19	38.80	0.30	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.75	44.50	3.14	3.14	38.88	0.30	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.77	44.50	3.09	3.09	38.96	0.29	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.80	44.50	3.04	3.04	39.03	0.29	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.82	44.50	2.99	2.99	39.11	0.28	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.84	44.50	2.95	2.95	39.18	0.28	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.87	44.50	2.90	2.90	39.25	0.27	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.89	44.50	2.85	2.85	39.32	0.27	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	44.50	2.80	2.80	39.39	0.26	48.43	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.94	44.50	2.75	2.75	39.46	0.26	48.43	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.97	44.50	2.70	2.70	39.53	0.25	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.99	44.50	2.65	2.65	39.59	0.25	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	5.02	44.50	2.61	2.61	39.66	0.24	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.04	44.50	2.56	2.56	39.72	0.24	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.07	44.50	2.51	2.51	39.78	0.23	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.09	44.50	2.46	2.46	39.84	0.23	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.11	44.50	2.41	2.41	39.90	0.22	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.14	44.50	2.36	2.36	39.96	0.22	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.16	44.50	2.32	2.32	40.02	0.21	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.19	44.50	2.27	2.27	40.08	0.21	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.21	44.50	2.22	2.22	40.13	0.21	48.37	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.24	44.50	2.17	2.17	40.19	0.20	48.36	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.26	44.50	2.12	2.12	40.24	0.20	48.35	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.29	44.50	2.08	2.08	40.29	0.19	48.35	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.31	44.50	2.03	2.03	40.34	0.19	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.34	44.50	1.98	1.98	40.39	0.18	48.34	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.36	44.50	1.93	1.93	40.44	0.18	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.39	44.50	1.89	1.89	40.49	0.17	48.33	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.41	44.50	1.84	1.84	40.53	0.17	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.43	44.50	1.79	1.79	40.58	0.16	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.46	44.50	1.74	1.74	40.62	0.16	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.48	44.50	1.70	1.70	40.66	0.15	48.31	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.51	44.50	1.65	1.65	40.70	0.15	48.30	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.53	44.50	1.60	1.60	40.74	0.15	48.30	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.56	44.50	1.56	1.56	40.78	0.14	48.29	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.58	44.50	1.51	1.51	40.82	0.14	48.29	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.61	44.50	1.46	1.46	40.86	0.13	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.63	44.50	1.41	1.41	40.89	0.13	48.28	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.66	44.50	1.37	1.37	40.93	0.12	48.27	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.68	44.50	1.32	1.32	40.96	0.12	48.27	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.70	44.50	1.27	1.27	40.99	0.12	48.26	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.73	44.50	1.23	1.23	41.02	0.11	48.26	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.75	44.50	1.18	1.18	41.05	0.11	48.25	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.78	44.50	1.13	1.13	41.08	0.10	48.25	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.80	44.50	1.09	1.09	41.11	0.10	48.24	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.83	44.50	1.04	1.04	41.13	0.09	48.24	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.85	44.50	0.99	0.99	41.16	0.09	48.23	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.88	44.50	0.95	0.95	41.18	0.09	48.23	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.90	44.50	0.90	0.90	41.20	0.08	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.93	44.50	0.85	0.85	41.23	0.08	48.22	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.95	44.50	0.81	0.81	41.25	0.07	48.21	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	44.50	0.76	0.76	41.27	0.07	48.21	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.00	44.50	0.71	0.71	41.28	0.06	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.02	44.50	0.67	0.67	37.08	0.07	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.05	44.50	0.63	0.63	37.09	0.06	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.07	44.50	0.59	0.59	37.11	0.06	48.20	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.10	44.50	0.55	0.55	37.12	0.05	48.19	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.12	44.50	0.51	0.51	37.13	0.05	48.19	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.15	44.50	0.47	0.47	37.14	0.05	48.18	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.17	44.50	0.42	0.42	37.16	0.04	48.18	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.20	44.50	0.38	0.38	37.17	0.04	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.22	44.50	0.34	0.34	37.17	0.03	48.17	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.25	44.50	0.30	0.30	37.18	0.03	48.16	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.27	44.50	0.26	0.26	37.19	0.03	48.16	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.30	44.50	0.22	0.22	37.20	0.02	48.15	Vu < PhiVc/2	Not Reqd 1	48.2	0.0	0.0
+1.40D+1.60H	1	6.32	44.50	0.18	0.18	37.20	0.02	48.15	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	6.34	44.50	0.14	0.14	37.20	0.01	48.14	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.40D+1.60H	1	6.37	44.50	0.10	0.10	37.21	0.01	48.14	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.40D+1.60H	1	6.39	44.50	0.06	0.06	37.21	0.01	48.13	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.42	44.50	-0.06	0.06	41.42	0.01	48.13	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.44	44.50	-0.11	0.11	41.42	0.01	48.14	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.47	44.50	-0.15	0.15	41.41	0.01	48.14	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.49	44.50	-0.20	0.20	41.41	0.02	48.15	Vu < PhiVc/2	Not Reqd	1 48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.52	44.50	-0.24	0.24	41.40	0.02	48.15	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.54	44.50	-0.29	0.29	41.40	0.03	48.16	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.57	44.50	-0.33	0.33	41.39	0.03	48.16	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.59	44.50	-0.38	0.38	41.38	0.03	48.17	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.61	44.50	-0.42	0.42	41.37	0.04	48.17	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.64	44.50	-0.47	0.47	41.36	0.04	48.18	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.66	44.50	-0.51	0.51	41.35	0.05	48.18	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.69	44.50	-0.56	0.56	41.34	0.05	48.18	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.71	44.50	-0.60	0.60	41.32	0.05	48.19	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.74	44.50	-0.65	0.65	41.31	0.06	48.19	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.76	44.50	-0.69	0.69	41.29	0.06	48.20	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.79	44.50	-0.74	0.74	41.27	0.07	48.20	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.81	44.50	-0.78	0.78	41.25	0.07	48.21	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.84	44.50	-0.83	0.83	41.23	0.07	48.21	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.86	44.50	-0.87	0.87	41.21	0.08	48.22	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.89	44.50	-0.91	0.91	41.19	0.08	48.22	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.91	44.50	-0.96	0.96	41.17	0.09	48.23	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.93	44.50	-1.00	1.00	41.14	0.09	48.23	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.96	44.50	-1.05	1.05	41.12	0.09	48.24	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.98	44.50	-1.09	1.09	41.09	0.10	48.24	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.01	44.50	-1.13	1.13	41.06	0.10	48.25	Vu < PhiVc/2	Not Reqd	1 48.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.03	44.50	-1.18	1.18	41.04	0.11	48.25	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.06	44.50	-1.22	1.22	41.01	0.11	48.26	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.08	44.50	-1.27	1.27	40.98	0.11	48.26	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.11	44.50	-1.31	1.31	40.94	0.12	48.26	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.13	44.50	-1.35	1.35	40.91	0.12	48.27	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.16	44.50	-1.40	1.40	40.88	0.13	48.27	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.18	44.50	-1.44	1.44	40.84	0.13	48.28	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.20	44.50	-1.49	1.49	40.81	0.13	48.28	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.23	44.50	-1.53	1.53	40.77	0.14	48.29	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.25	44.50	-1.57	1.57	40.73	0.14	48.29	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.28	44.50	-1.62	1.62	40.69	0.15	48.30	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.30	44.50	-1.66	1.66	40.65	0.15	48.30	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.33	44.50	-1.70	1.70	40.61	0.16	48.31	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.35	44.50	-1.75	1.75	40.57	0.16	48.31	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.38	44.50	-1.79	1.79	40.53	0.16	48.32	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.40	44.50	-1.83	1.83	40.48	0.17	48.32	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	44.50	-1.88	1.88	40.44	0.17	48.33	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.45	44.50	-1.92	1.92	40.39	0.18	48.33	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.48	44.50	-1.96	1.96	40.34	0.18	48.34	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.50	44.50	-2.00	2.00	40.29	0.18	48.34	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.52	44.50	-2.05	2.05	40.24	0.19	48.35	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.55	44.50	-2.09	2.09	40.19	0.19	48.35	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.57	44.50	-2.13	2.13	40.14	0.20	48.36	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.60	44.50	-2.18	2.18	40.09	0.20	48.36	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.62	44.50	-2.22	2.22	40.03	0.21	48.37	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.65	44.50	-2.26	2.26	39.98	0.21	48.37	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	7.67	44.50	-2.30	2.30	39.92	0.21	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.70	44.50	-2.35	2.35	39.86	0.22	48.38	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.72	44.50	-2.39	2.39	39.81	0.22	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.75	44.50	-2.43	2.43	39.75	0.23	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.77	44.50	-2.47	2.47	39.69	0.23	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.80	44.50	-2.52	2.52	39.62	0.24	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.82	44.50	-2.56	2.56	39.56	0.24	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.84	44.50	-2.60	2.60	39.50	0.24	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.87	44.50	-2.64	2.64	39.43	0.25	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.89	44.50	-2.68	2.68	39.37	0.25	48.42	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.92	44.50	-2.73	2.73	39.30	0.26	48.43	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.94	44.50	-2.77	2.77	39.23	0.26	48.43	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.97	44.50	-2.81	2.81	39.17	0.27	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	7.99	44.50	-2.85	2.85	39.10	0.27	48.44	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.02	44.50	-2.89	2.89	39.03	0.28	48.45	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.04	44.50	-2.94	2.94	38.95	0.28	48.45	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.07	44.50	-2.98	2.98	38.88	0.28	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.09	44.50	-3.02	3.02	38.81	0.29	48.46	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.11	44.50	-3.06	3.06	38.73	0.29	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.14	44.50	-3.10	3.10	38.66	0.30	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.16	44.50	-3.14	3.14	38.58	0.30	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.19	44.50	-3.19	3.19	38.50	0.31	48.48	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.21	44.50	-3.23	3.23	38.42	0.31	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.24	44.50	-3.27	3.27	38.34	0.32	48.49	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.26	44.50	-3.31	3.31	38.26	0.32	48.50	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.29	44.50	-3.35	3.35	38.18	0.33	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.31	44.50	-3.39	3.39	38.10	0.33	48.51	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.34	44.50	-3.43	3.43	38.01	0.33	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.36	44.50	-3.48	3.48	37.93	0.34	48.52	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.39	44.50	-3.52	3.52	37.84	0.34	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.41	44.50	-3.56	3.56	37.76	0.35	48.53	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.43	44.50	-3.60	3.60	37.67	0.35	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.46	44.50	-3.64	3.64	37.58	0.36	48.54	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.48	44.50	-3.68	3.68	37.49	0.36	48.55	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.51	44.50	-3.72	3.72	37.40	0.37	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.53	44.50	-3.76	3.76	37.31	0.37	48.56	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.56	44.50	-3.80	3.80	37.21	0.38	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.58	44.50	-3.84	3.84	37.12	0.38	48.57	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.61	44.50	-3.88	3.88	37.02	0.39	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.63	44.50	-3.92	3.92	36.93	0.39	48.58	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.66	44.50	-3.96	3.96	36.83	0.40	48.59	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.68	44.50	-4.00	4.00	36.73	0.40	48.60	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.70	44.50	-4.04	4.04	36.63	0.41	48.60	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.73	44.50	-4.09	4.09	36.53	0.41	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.75	44.50	-4.13	4.13	36.43	0.42	48.61	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.78	44.50	-4.17	4.17	36.33	0.43	48.62	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.80	44.50	-4.21	4.21	36.23	0.43	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.83	44.50	-4.25	4.25	36.12	0.44	48.63	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.85	44.50	-4.29	4.29	36.02	0.44	48.64	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.88	44.50	-4.33	4.33	35.91	0.45	48.65	Vu < PhiVc/2	Not Reqd 1	48.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.90	44.50	-4.37	4.37	35.81	0.45	48.65	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.93	44.50	-4.41	4.41	35.70	0.46	48.66	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.95	44.50	-4.45	4.45	35.59	0.46	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	8.98	44.50	-4.49	4.49	35.48	0.47	48.67	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	9.00	44.50	-4.53	4.53	35.37	0.47	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.02	44.50	-4.56	4.56	35.26	0.48	48.68	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.05	44.50	-4.60	4.60	35.15	0.49	48.69	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.07	44.50	-4.64	4.64	35.03	0.49	48.70	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.10	44.50	-4.68	4.68	34.92	0.50	48.70	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.12	44.50	-4.72	4.72	34.80	0.50	48.71	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.15	44.50	-4.76	4.76	34.68	0.51	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.17	44.50	-4.80	4.80	34.57	0.52	48.73	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.20	44.50	-4.84	4.84	34.45	0.52	48.73	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.22	44.50	-4.88	4.88	34.33	0.53	48.74	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.25	44.50	-4.92	4.92	34.21	0.53	48.75	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.27	44.50	-4.96	4.96	34.09	0.54	48.75	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.30	44.50	-5.00	5.00	33.96	0.55	48.76	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.32	44.50	-5.04	5.04	33.84	0.55	48.77	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.34	44.50	-5.08	5.08	33.72	0.56	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.37	44.50	-5.11	5.11	33.59	0.56	48.78	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.39	44.50	-5.15	5.15	33.47	0.57	48.79	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.42	44.50	-5.19	5.19	33.34	0.58	48.80	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.44	44.50	-5.23	5.23	33.21	0.58	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.47	44.50	-5.27	5.27	33.08	0.59	48.81	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.49	44.50	-5.31	5.31	32.95	0.60	48.82	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.52	44.50	-5.35	5.35	32.82	0.60	48.83	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.54	44.50	-5.39	5.39	32.69	0.61	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.57	44.50	-5.42	5.42	32.56	0.62	48.84	Vu < PhiVc/2	Not Reqd 1	48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.59	44.50	-5.46	5.46	32.42	0.62	48.85	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.61	44.50	-5.50	5.50	32.29	0.63	48.86	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.64	44.50	-5.54	5.54	32.15	0.64	48.87	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.66	44.50	-5.58	5.58	32.01	0.65	48.88	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.69	44.50	-5.62	5.62	31.88	0.65	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.71	44.50	-5.65	5.65	31.74	0.66	48.89	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.74	44.50	-5.69	5.69	31.60	0.67	48.90	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.76	44.50	-5.73	5.73	31.46	0.68	48.91	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.79	44.50	-5.77	5.77	31.32	0.68	48.92	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.81	44.50	-5.81	5.81	31.17	0.69	48.93	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.84	44.50	-5.84	5.84	31.03	0.70	48.94	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.86	44.50	-5.88	5.88	30.89	0.71	48.95	Vu < PhiVc/2	Not Reqd 1	48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.89	44.50	-5.92	5.92	30.74	0.71	48.96	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.91	44.50	-5.96	5.96	30.60	0.72	48.97	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.93	44.50	-6.00	6.00	30.45	0.73	48.98	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.96	44.50	-6.03	6.03	30.30	0.74	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	9.98	44.50	-6.07	6.07	30.15	0.75	48.99	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.01	44.50	-6.11	6.11	30.00	0.75	49.00	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.03	44.50	-6.15	6.15	29.85	0.76	49.01	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.06	44.50	-6.18	6.18	29.70	0.77	49.02	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.08	44.50	-6.22	6.22	29.55	0.78	49.03	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.11	44.50	-6.26	6.26	29.39	0.79	49.04	Vu < PhiVc/2	Not Reqd 1	49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.13	44.50	-6.29	6.29	29.24	0.80	49.05	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.16	44.50	-6.33	6.33	29.08	0.81	49.07	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.18	44.50	-6.37	6.37	28.93	0.82	49.08	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.20	44.50	-6.41	6.41	28.77	0.83	49.09	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.23	44.50	-6.44	6.44	28.61	0.84	49.10	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.25	44.50	-6.48	6.48	28.45	0.84	49.11	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.28	44.50	-6.52	6.52	28.29	0.85	49.12	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.30	44.50	-6.55	6.55	28.13	0.86	49.13	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	10.33	44.50	-6.59	6.59	27.97	0.87	49.14	Vu < PhiVc/2	Not Reqd 1	49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.35	44.50	-6.63	6.63	27.81	0.88	49.15	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.38	44.50	-6.66	6.66	27.65	0.89	49.17	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.40	44.50	-6.70	6.70	27.48	0.90	49.18	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.43	44.50	-6.74	6.74	27.32	0.91	49.19	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.45	44.50	-6.77	6.77	27.15	0.93	49.20	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.48	44.50	-6.81	6.81	26.98	0.94	49.21	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.50	44.50	-6.85	6.85	26.82	0.95	49.23	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.52	44.50	-6.88	6.88	26.65	0.96	49.24	Vu < PhiVc/2	Not Reqd 1	49.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.55	44.50	-6.92	6.92	26.48	0.97	49.25	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.57	44.50	-6.96	6.96	26.31	0.98	49.27	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.60	44.50	-6.99	6.99	26.13	0.99	49.28	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.62	44.50	-7.03	7.03	25.96	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.65	44.50	-7.07	7.07	25.79	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.67	44.50	-7.10	7.10	25.62	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.70	44.50	-7.14	7.14	25.44	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.72	44.50	-7.17	7.17	25.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.75	44.50	-7.21	7.21	25.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.77	44.50	-7.25	7.25	24.91	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.80	44.50	-7.28	7.28	24.73	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.82	44.50	-7.32	7.32	24.55	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.84	44.50	-7.35	7.35	24.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.87	44.50	-7.39	7.39	24.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.89	44.50	-7.42	7.42	24.01	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.92	44.50	-7.46	7.46	23.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.94	44.50	-7.49	7.49	23.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.97	44.50	-7.53	7.53	23.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	10.99	44.50	-7.57	7.57	23.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.02	44.50	-7.60	7.60	23.08	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.04	44.50	-7.64	7.64	22.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.07	44.50	-7.67	7.67	22.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.09	44.50	-7.71	7.71	22.52	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.11	44.50	-7.74	7.74	22.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.14	44.50	-7.78	7.78	22.14	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.16	44.50	-7.81	7.81	21.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.19	44.50	-7.85	7.85	21.75	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.21	44.50	-7.88	7.88	21.56	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.24	44.50	-7.92	7.92	21.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.26	44.50	-7.95	7.95	21.17	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.29	44.50	-7.99	7.99	20.98	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.31	44.50	-8.02	8.02	20.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.34	44.50	-8.06	8.06	20.58	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.36	44.50	-8.09	8.09	20.38	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.39	44.50	-8.13	8.13	20.18	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.41	44.50	-8.16	8.16	19.98	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.43	44.50	-8.19	8.19	19.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.46	44.50	-8.23	8.23	19.58	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.48	44.50	-8.26	8.26	19.38	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.51	44.50	-8.30	8.30	19.17	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.53	44.50	-8.33	8.33	18.97	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.56	44.50	-8.37	8.37	18.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.58	44.50	-8.40	8.40	18.56	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.61	44.50	-8.43	8.43	18.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.63	44.50	-8.47	8.47	18.14	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	11.66	44.50	-8.50	8.50	17.93	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.68	44.50	-8.54	8.54	17.72	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.70	44.50	-8.57	8.57	17.51	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.73	44.50	-8.60	8.60	17.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.75	44.50	-8.64	8.64	17.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.78	44.50	-8.67	8.67	16.88	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.80	44.50	-8.70	8.70	16.67	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.83	44.50	-8.74	8.74	16.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.85	44.50	-8.77	8.77	16.24	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.88	44.50	-8.80	8.80	16.02	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.90	44.50	-8.84	8.84	15.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.93	44.50	-8.87	8.87	15.58	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.95	44.50	-8.91	8.91	15.37	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	11.98	44.50	-8.94	8.94	15.15	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.00	44.50	-8.97	8.97	14.93	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.02	44.50	-9.00	9.00	14.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.05	44.50	-9.04	9.04	14.48	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.07	44.50	-9.07	9.07	14.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.10	44.50	-9.10	9.10	14.04	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.12	44.50	-9.14	9.14	13.81	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.15	44.50	-9.17	9.17	13.59	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.17	44.50	-9.20	9.20	13.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.20	44.50	-9.24	9.24	13.14	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.22	44.50	-9.27	9.27	12.91	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.25	44.50	-9.30	9.30	12.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.27	44.50	-9.33	9.33	12.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.30	44.50	-9.37	9.37	12.22	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.32	44.50	-9.40	9.40	11.99	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.34	44.50	-9.43	9.43	11.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.37	44.50	-9.46	9.46	11.53	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.39	44.50	-9.50	9.50	11.29	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.42	44.50	-9.53	9.53	11.06	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.44	44.50	-9.56	9.56	10.82	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.47	44.50	-9.59	9.59	10.59	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.49	44.50	-9.62	9.62	10.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.52	44.50	-9.66	9.66	10.12	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.54	44.50	-9.69	9.69	9.88	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.57	44.50	-9.72	9.72	9.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.59	44.50	-9.75	9.75	9.40	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.61	44.50	-9.78	9.78	9.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.64	44.50	-9.82	9.82	8.92	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.66	44.50	-9.85	9.85	8.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.69	44.50	-9.88	9.88	8.43	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.71	44.50	-9.91	9.91	8.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.74	44.50	-9.94	9.94	7.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.76	44.50	-9.97	9.97	7.70	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.79	44.50	-10.01	10.01	7.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.81	44.50	-10.04	10.04	7.21	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.84	44.50	-10.07	10.07	6.96	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.86	44.50	-10.10	10.10	6.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.89	44.50	-10.13	10.13	6.47	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.91	44.50	-10.16	10.16	6.22	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.93	44.50	-10.19	10.19	5.97	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	12.96	44.50	-10.23	10.23	5.71	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

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Lic. # : KW-06007096
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Description : GB-A-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	12.98	44.50	-10.26	10.26	5.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.01	44.50	-10.29	10.29	5.21	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.03	44.50	-10.32	10.32	4.96	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.06	44.50	-10.35	10.35	4.70	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.08	44.50	-10.38	10.38	4.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.11	44.50	-10.41	10.41	4.19	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.13	44.50	-10.44	10.44	3.94	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.16	44.50	-10.47	10.47	3.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.18	44.50	-10.50	10.50	3.42	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.20	44.50	-10.53	10.53	3.16	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.23	44.50	-10.56	10.56	2.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.25	44.50	-10.60	10.60	2.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.28	44.50	-10.63	10.63	2.38	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.30	44.50	-10.66	10.66	2.12	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.33	44.50	-10.69	10.69	1.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.35	44.50	-10.72	10.72	1.59	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.38	44.50	-10.75	10.75	1.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.40	44.50	-10.78	10.78	1.07	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.43	44.50	-10.81	10.81	0.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.45	44.50	-10.84	10.84	0.53	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.48	44.50	-10.87	10.87	0.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	13.50	44.50	-10.90	10.90	0.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	13.500	41.42	126.73	0.33
+1.40D+1.60H					
Span # 1	1	13.500	37.21	126.73	0.29
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	13.500	41.42	126.73	0.33
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	13.500	41.42	126.73	0.33
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	13.500	34.87	126.73	0.28
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	13.500	31.89	126.73	0.25
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	13.500	34.87	126.73	0.28
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	13.500	31.89	126.73	0.25
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	13.500	34.87	126.73	0.28
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	13.500	34.87	126.73	0.28
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	13.500	34.87	126.73	0.28
+0.90D+W+0.90H					
Span # 1	1	13.500	23.92	126.73	0.19
+0.90D+E+0.90H					
Span # 1	1	13.500	23.92	126.73	0.19

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0031	6.750		0.0000	0.000

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

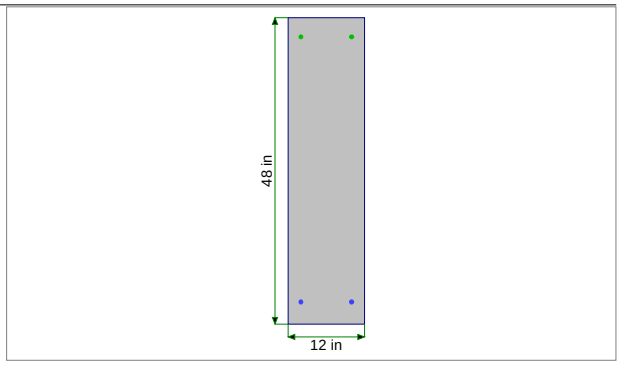
Description : GB-B-62R

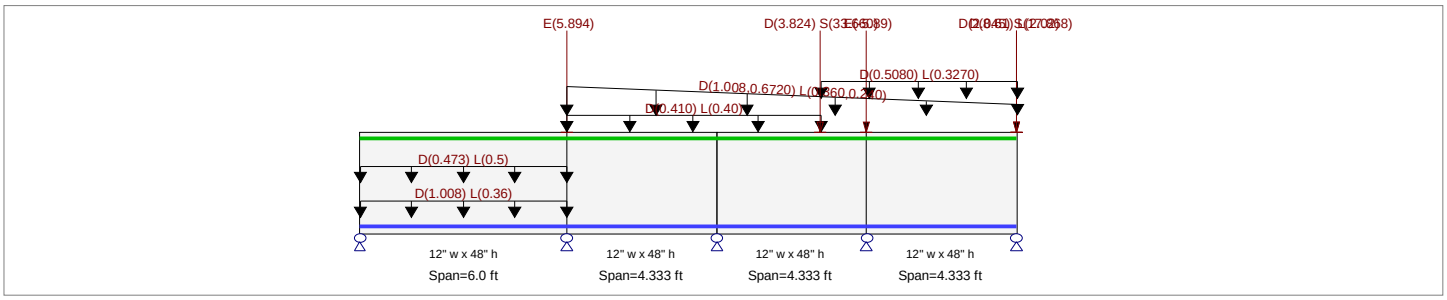
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 48.0 in

Span #1 Reinforcing....
- 2-#5 at 3.50 in from Bottom, from 0.0 to 6.0 ft in this span
- 2-#5 at 3.0 in from Top, from 0.0 to 6.0 ft in this span

Span #2 Reinforcing....
- 2-#5 at 3.50 in from Bottom, from 0.0 to 4.333 ft in this span
- 2-#5 at 3.0 in from Top, from 0.0 to 4.333 ft in this span

Span #3 Reinforcing....
- 2-#5 at 3.50 in from Bottom, from 0.0 to 4.333 ft in this span
- 2-#5 at 3.0 in from Top, from 0.0 to 4.333 ft in this span

Span #4 Reinforcing....
- 2-#5 at 3.50 in from Bottom, from 0.0 to 4.333 ft in this span
- 2-#5 at 3.0 in from Top, from 0.0 to 4.333 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 0.410, L = 0.40 k/ft, Extent = 6.0 -->> 13.333 ft
- Varying Uniform Load : D(S,E) = 1.008->0.6720, Lf(S,E) = 0.360->0.240 k/ft, Extent = 6.0 -->> 19.0 ft
- Partial Length Uniform Load : D = 0.5080, L = 0.3270 k/ft, Extent = 13.333 -->> 19.0 ft
- Point Load : D = 3.824, S = 33.660 k, Starting at : 13.333 ft and placed every 0.0 ft thereafter

Load for Span Number 1
- Uniform Load : D = 0.1120, L = 0.040 ksf, Tributary Width = 9.0 ft, (SLAB LOAD)
- Uniform Load : D = 0.4730, L = 0.50 k/ft, Tributary Width = 1.0 ft, (WALL C)

Load for Span Number 2
- Point Load : E = 5.894 k @ 0.0 ft, (MOT)

Load for Span Number 4
- Point Load : D = 2.045, S = 17.868 k @ 4.333 ft, (P3)
- Point Load : D = 8.610, L = 2.020 k @ 4.333 ft, (BG-A-62R)
- Point Load : E = -5.890 k @ 0.0 ft, (MOT)

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.291** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	36.840	k-ft
Mn * Phi : Allowable	126.735	k-ft
Location of maximum on span	3.010	ft
Span # where maximum occurs	Span # 3	

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	7.265	17.906	19.561	39.120	28.637
Overall MINimum	-0.007	0.061	-0.270	-0.048	0.008
+D+H	5.058	12.507	7.835	12.430	13.359
+D+L+H, LL Comb Run (***L)	5.051	12.569	7.565	14.103	16.465
+D+L+H, LL Comb Run (**L*)	5.082	12.291	9.557	13.979	13.215
+D+L+H, LL Comb Run (**LL)	5.075	12.353	9.287	15.652	16.321
+D+L+H, LL Comb Run (*L**)	4.963	14.172	9.694	12.162	13.403
+D+L+H, LL Comb Run (*L*L)	4.957	14.233	9.424	13.835	16.510
+D+L+H, LL Comb Run (*LL*)	4.988	13.956	11.417	13.711	13.259
+D+L+H, LL Comb Run (*LLL)	4.981	14.017	11.146	15.384	16.365
+D+L+H, LL Comb Run (L***)	7.241	16.180	6.956	12.649	13.322
+D+L+H, LL Comb Run (L**L)	7.235	16.241	6.686	14.322	16.428
+D+L+H, LL Comb Run (L*L*)	7.265	15.964	8.678	14.199	13.178
+D+L+H, LL Comb Run (L*LL)	7.259	16.025	8.408	15.872	16.284
+D+L+H, LL Comb Run (LL**)	7.147	17.845	8.815	12.382	13.367
+D+L+H, LL Comb Run (LL*L)	7.140	17.906	8.545	14.055	16.473
+D+L+H, LL Comb Run (LLL*)	7.171	17.629	10.538	13.931	13.223
+D+L+H, LL Comb Run (LLLL)	7.164	17.690	10.267	15.604	16.329
+D+Lr+H, LL Comb Run (***L)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (**L*)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (**LL)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (*L**)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (*L*L)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (*LL*)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (*LLL)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (L***)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (L**L)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (L*L*)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (L*LL)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (LL**)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (LL*L)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (LLL*)	5.058	12.507	7.835	12.430	13.359
+D+Lr+H, LL Comb Run (LLLL)	5.058	12.507	7.835	12.430	13.359
+D+S+H	5.329	10.070	19.561	39.120	28.637
+D+0.750Lr+0.750L+H, LL Comb Run (	5.053	12.553	7.632	13.684	15.688
+D+0.750Lr+0.750L+H, LL Comb Run (	5.076	12.345	9.127	13.592	13.251
+D+0.750Lr+0.750L+H, LL Comb Run (	5.071	12.391	8.924	14.846	15.580
+D+0.750Lr+0.750L+H, LL Comb Run (	4.987	13.756	9.229	12.229	13.392
+D+0.750Lr+0.750L+H, LL Comb Run (	4.982	13.802	9.027	13.484	15.722
+D+0.750Lr+0.750L+H, LL Comb Run (	5.005	13.594	10.521	13.391	13.284
+D+0.750Lr+0.750L+H, LL Comb Run (	5.000	13.640	10.318	14.646	15.614
+D+0.750Lr+0.750L+H, LL Comb Run (	6.696	15.262	7.176	12.594	13.331
+D+0.750Lr+0.750L+H, LL Comb Run (	6.690	15.308	6.973	13.849	15.661
+D+0.750Lr+0.750L+H, LL Comb Run (	6.714	15.100	8.467	13.757	13.223
+D+0.750Lr+0.750L+H, LL Comb Run (	6.708	15.146	8.265	15.011	15.553
+D+0.750Lr+0.750L+H, LL Comb Run (	6.625	16.510	8.570	12.394	13.365
+D+0.750Lr+0.750L+H, LL Comb Run (	6.619	16.556	8.368	13.648	15.694
+D+0.750Lr+0.750L+H, LL Comb Run (	6.643	16.348	9.862	13.556	13.257
+D+0.750Lr+0.750L+H, LL Comb Run (	6.638	16.394	9.659	14.811	15.586
+D+0.750L+0.750S+H, LL Comb Run (*	5.256	10.725	16.427	33.702	27.147

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+H, LL Comb Run (*	5.279	10.517	17.921	33.609	24.709
+D+0.750L+0.750S+H, LL Comb Run (*	5.274	10.563	17.719	34.864	27.039
+D+0.750L+0.750S+H, LL Comb Run (*	5.191	11.928	18.024	32.246	24.851
+D+0.750L+0.750S+H, LL Comb Run (*	5.185	11.974	17.821	33.501	27.180
+D+0.750L+0.750S+H, LL Comb Run (*	5.209	11.766	19.316	33.409	24.743
+D+0.750L+0.750S+H, LL Comb Run (*	5.203	11.812	19.113	34.663	27.072
+D+0.750L+0.750S+H, LL Comb Run (L	6.899	13.433	15.970	32.612	24.790
+D+0.750L+0.750S+H, LL Comb Run (L	6.894	13.479	15.768	33.867	27.120
+D+0.750L+0.750S+H, LL Comb Run (L	6.917	13.271	17.262	33.774	24.682
+D+0.750L+0.750S+H, LL Comb Run (L	6.912	13.317	17.060	35.029	27.011
+D+0.750L+0.750S+H, LL Comb Run (L	6.828	14.682	17.365	32.411	24.823
+D+0.750L+0.750S+H, LL Comb Run (L	6.823	14.728	17.162	33.666	27.153
+D+0.750L+0.750S+H, LL Comb Run (L	6.846	14.520	18.657	33.573	24.715
+D+0.750L+0.750S+H, LL Comb Run (L	6.841	14.566	18.454	34.828	27.045
+D+0.60W+H	5.058	12.507	7.835	12.430	13.359
+D+0.70E+H	5.058	12.507	7.835	12.430	13.359
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.053	12.553	7.632	13.684	15.688
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.076	12.345	9.127	13.592	13.251
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.071	12.391	8.924	14.846	15.580
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.987	13.756	9.229	12.229	13.392
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.982	13.802	9.027	13.484	15.722
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.005	13.594	10.521	13.391	13.284
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.000	13.640	10.318	14.646	15.614
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.696	15.262	7.176	12.594	13.331
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.690	15.308	6.973	13.849	15.661
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.714	15.100	8.467	13.757	13.223
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.708	15.146	8.265	15.011	15.553
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.625	16.510	8.570	12.394	13.365
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.619	16.556	8.368	13.648	15.694
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.643	16.348	9.862	13.556	13.257
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.638	16.394	9.659	14.811	15.586
+D+0.750L+0.750S+0.450W+H, LL Comb	5.256	10.725	16.427	33.702	27.147
+D+0.750L+0.750S+0.450W+H, LL Comb	5.279	10.517	17.921	33.609	24.709
+D+0.750L+0.750S+0.450W+H, LL Comb	5.274	10.563	17.719	34.864	27.039
+D+0.750L+0.750S+0.450W+H, LL Comb	5.191	11.928	18.024	32.246	24.851
+D+0.750L+0.750S+0.450W+H, LL Comb	5.185	11.974	17.821	33.501	27.180
+D+0.750L+0.750S+0.450W+H, LL Comb	5.209	11.766	19.316	33.409	24.743
+D+0.750L+0.750S+0.450W+H, LL Comb	5.203	11.812	19.113	34.663	27.072
+D+0.750L+0.750S+0.450W+H, LL Comb	6.899	13.433	15.970	32.612	24.790
+D+0.750L+0.750S+0.450W+H, LL Comb	6.894	13.479	15.768	33.867	27.120
+D+0.750L+0.750S+0.450W+H, LL Comb	6.917	13.271	17.262	33.774	24.682
+D+0.750L+0.750S+0.450W+H, LL Comb	6.912	13.317	17.060	35.029	27.011
+D+0.750L+0.750S+0.450W+H, LL Comb	6.828	14.682	17.365	32.411	24.823
+D+0.750L+0.750S+0.450W+H, LL Comb	6.823	14.728	17.162	33.666	27.153
+D+0.750L+0.750S+0.450W+H, LL Comb	6.846	14.520	18.657	33.573	24.715
+D+0.750L+0.750S+0.450W+H, LL Comb	6.841	14.566	18.454	34.828	27.045
+D+0.750L+0.750S+0.5250E+H, LL Com	5.256	10.725	16.427	33.702	27.147
+D+0.750L+0.750S+0.5250E+H, LL Com	5.279	10.517	17.921	33.609	24.709
+D+0.750L+0.750S+0.5250E+H, LL Com	5.274	10.563	17.719	34.864	27.039
+D+0.750L+0.750S+0.5250E+H, LL Com	5.191	11.928	18.024	32.246	24.851
+D+0.750L+0.750S+0.5250E+H, LL Com	5.185	11.974	17.821	33.501	27.180
+D+0.750L+0.750S+0.5250E+H, LL Com	5.209	11.766	19.316	33.409	24.743
+D+0.750L+0.750S+0.5250E+H, LL Com	5.203	11.812	19.113	34.663	27.072
+D+0.750L+0.750S+0.5250E+H, LL Com	6.899	13.433	15.970	32.612	24.790
+D+0.750L+0.750S+0.5250E+H, LL Com	6.894	13.479	15.768	33.867	27.120
+D+0.750L+0.750S+0.5250E+H, LL Com	6.917	13.271	17.262	33.774	24.682
+D+0.750L+0.750S+0.5250E+H, LL Com	6.912	13.317	17.060	35.029	27.011
+D+0.750L+0.750S+0.5250E+H, LL Com	6.828	14.682	17.365	32.411	24.823
+D+0.750L+0.750S+0.5250E+H, LL Com	6.823	14.728	17.162	33.666	27.153

Concrete Beam

Lic. # : KW-06007096
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Description : GB-B-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+0.5250E+H, LL Com	6.846	14.520	18.657	33.573	24.715
+D+0.750L+0.750S+0.5250E+H, LL Com	6.841	14.566	18.454	34.828	27.045
+0.60D+0.60W+0.60H	3.035	7.504	4.701	7.458	8.015
+0.60D+0.70E+0.60H	3.035	7.504	4.701	7.458	8.015
D Only	5.058	12.507	7.835	12.430	13.359
Lr Only, LL Comb Run (***L)					
Lr Only, LL Comb Run (**L*)					
Lr Only, LL Comb Run (**LL)					
Lr Only, LL Comb Run (*L**)					
Lr Only, LL Comb Run (*L*L)					
Lr Only, LL Comb Run (*LL*)					
Lr Only, LL Comb Run (*LLL)					
Lr Only, LL Comb Run (L***)					
Lr Only, LL Comb Run (L**L)					
Lr Only, LL Comb Run (L*L*)					
Lr Only, LL Comb Run (L*LL)					
Lr Only, LL Comb Run (LL**)					
Lr Only, LL Comb Run (LL*L)					
Lr Only, LL Comb Run (LLL*)					
Lr Only, LL Comb Run (LLLL)					
L Only, LL Comb Run (***L)	-0.007	0.061	-0.270	1.673	3.106
L Only, LL Comb Run (**L*)	0.024	-0.216	1.722	1.550	-0.144
L Only, LL Comb Run (**LL)	0.017	-0.155	1.452	3.223	2.962
L Only, LL Comb Run (*L**)	-0.095	1.665	1.859	-0.268	0.045
L Only, LL Comb Run (*L*L)	-0.101	1.726	1.589	1.405	3.151
L Only, LL Comb Run (*LL*)	-0.071	1.449	3.582	1.282	-0.100
L Only, LL Comb Run (*LLL)	-0.077	1.510	3.312	2.955	3.007
L Only, LL Comb Run (L***)	2.183	3.673	-0.879	0.220	-0.037
L Only, LL Comb Run (L**L)	2.176	3.734	-1.149	1.893	3.070
L Only, LL Comb Run (L*L*)	2.207	3.457	0.843	1.769	-0.181
L Only, LL Comb Run (L*LL)	2.200	3.518	0.573	3.442	2.925
L Only, LL Comb Run (LL**)	2.089	5.337	0.980	-0.048	0.008
L Only, LL Comb Run (LL*L)	2.082	5.399	0.710	1.625	3.114
L Only, LL Comb Run (LLL*)	2.113	5.121	2.703	1.502	-0.136
L Only, LL Comb Run (LLLL)	2.106	5.183	2.433	3.175	2.970
S Only	0.271	-2.438	11.726	26.690	15.278
W Only					
E Only					
H Only					

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.00	44.50	9.74	9.74	0.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.06	44.50	9.49	9.49	0.61	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.13	44.50	9.25	9.25	1.20	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.19	44.50	9.01	9.01	1.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.25	44.50	8.76	8.76	2.34	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.32	44.50	8.52	8.52	2.88	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.38	44.50	8.28	8.28	3.41	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.44	44.50	8.04	8.04	3.93	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.51	44.50	7.79	7.79	4.43	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.57	44.50	7.55	7.55	4.91	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.63	44.50	7.31	7.31	5.38	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.69	44.50	7.06	7.06	5.84	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.76	44.50	6.82	6.82	6.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.82	44.50	6.58	6.58	6.70	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.88	44.50	6.33	6.33	7.10	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	0.95	44.50	6.09	6.09	7.50	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.01	44.50	5.85	5.85	7.87	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.07	44.50	5.60	5.60	8.24	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.14	44.50	5.36	5.36	8.58	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.20	44.50	5.12	5.12	8.91	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.26	44.50	4.87	4.87	9.23	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.33	44.50	4.63	4.63	9.53	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.39	44.50	4.39	4.39	9.81	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.45	44.50	4.15	4.15	10.08	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.52	44.50	3.90	3.90	10.34	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.58	44.50	3.66	3.66	10.58	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.64	44.50	3.42	3.42	10.80	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.71	44.50	3.17	3.17	11.01	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.77	44.50	2.93	2.93	11.20	0.97	49.25	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.83	44.50	2.69	2.69	11.38	0.88	49.14	Vu < PhiVc/2	Not Reqd	1 49.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.89	44.50	2.44	2.44	11.54	0.79	49.04	Vu < PhiVc/2	Not Reqd	1 49.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.96	44.50	2.20	2.20	11.69	0.70	48.94	Vu < PhiVc/2	Not Reqd	1 48.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.02	44.50	1.96	1.96	11.82	0.61	48.84	Vu < PhiVc/2	Not Reqd	1 48.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.08	44.50	1.71	1.71	11.93	0.53	48.75	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.15	44.50	1.47	1.47	12.03	0.45	48.65	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.21	44.50	1.23	1.23	12.12	0.38	48.56	Vu < PhiVc/2	Not Reqd	1 48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.27	44.50	1.01	1.01	9.79	0.38	48.57	Vu < PhiVc/2	Not Reqd	1 48.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.34	44.50	0.82	0.82	9.85	0.31	48.49	Vu < PhiVc/2	Not Reqd	1 48.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.40	44.50	0.64	0.64	9.90	0.24	48.41	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.46	44.50	0.46	0.46	9.93	0.17	48.32	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.53	44.50	-0.34	0.34	7.03	0.18	48.34	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.59	44.50	-0.57	0.57	11.44	0.18	48.34	Vu < PhiVc/2	Not Reqd	1 48.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.65	44.50	-0.81	0.81	11.39	0.26	48.43	Vu < PhiVc/2	Not Reqd	1 48.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.72	44.50	-1.05	1.05	11.34	0.34	48.53	Vu < PhiVc/2	Not Reqd	1 48.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.78	44.50	-1.30	1.30	11.26	0.43	48.62	Vu < PhiVc/2	Not Reqd	1 48.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.84	44.50	-1.54	1.54	11.17	0.51	48.72	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.91	44.50	-1.78	1.78	11.07	0.60	48.82	Vu < PhiVc/2	Not Reqd	1 48.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.97	44.50	-2.03	2.03	10.95	0.69	48.92	Vu < PhiVc/2	Not Reqd	1 48.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.03	44.50	-2.27	2.27	10.81	0.78	49.03	Vu < PhiVc/2	Not Reqd	1 49.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.09	44.50	-2.51	2.51	10.66	0.87	49.14	Vu < PhiVc/2	Not Reqd	1 49.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.16	44.50	-2.75	2.75	10.49	0.97	49.26	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.22	44.50	-3.00	3.00	10.31	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.28	44.50	-3.24	3.24	10.12	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.35	44.50	-3.48	3.48	9.90	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.41	44.50	-3.73	3.73	9.68	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.47	44.50	-3.97	3.97	9.43	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.54	44.50	-4.21	4.21	9.17	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.60	44.50	-4.46	4.46	8.90	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.66	44.50	-4.70	4.70	8.61	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.73	44.50	-4.94	4.94	8.31	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.79	44.50	-5.19	5.19	7.99	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.85	44.50	-5.43	5.43	7.65	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.92	44.50	-5.67	5.67	7.30	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.98	44.50	-5.92	5.92	6.93	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.04	44.50	-6.16	6.16	6.55	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.11	44.50	-6.40	6.40	6.16	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.17	44.50	-6.64	6.64	5.74	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.23	44.50	-6.89	6.89	5.32	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.29	44.50	-7.13	7.13	4.87	1.00	49.29	Vu < PhiVc/2	Not Reqd	1 49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
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Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	1	4.36	44.50	-7.37	7.37	4.42	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.42	44.50	-7.62	7.62	3.94	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.48	44.50	-7.86	7.86	3.45	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.55	44.50	-8.10	8.10	2.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.61	44.50	-8.35	8.35	2.43	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.67	44.50	-8.59	8.59	1.90	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.74	44.50	-8.83	8.83	1.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.80	44.50	-9.08	9.08	0.78	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.86	44.50	-9.32	9.32	0.20	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.93	45.00	-9.56	9.56	0.40	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.99	45.00	-9.80	9.80	1.01	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.05	45.00	-10.05	10.05	1.63	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.12	45.00	-10.29	10.29	2.28	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.18	45.00	-10.53	10.53	2.93	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.24	45.00	-10.78	10.78	3.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.31	45.00	-11.02	11.02	4.30	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.37	45.00	-11.26	11.26	5.00	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.43	45.00	-11.51	11.51	5.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.49	45.00	-11.75	11.75	6.45	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.56	45.00	-11.99	11.99	7.20	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.62	45.00	-12.24	12.24	7.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.68	45.00	-12.48	12.48	8.75	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.75	45.00	-12.72	12.72	9.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.81	45.00	-12.97	12.97	10.36	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.87	45.00	-13.21	13.21	11.18	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.94	45.00	-13.45	13.45	12.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.00	45.00	9.95	9.95	12.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.05	45.00	9.79	9.79	12.43	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.09	45.00	9.62	9.62	11.99	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.14	45.00	9.46	9.46	11.55	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.18	45.00	9.29	9.29	11.13	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.23	45.00	9.13	9.13	10.71	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.27	45.00	8.96	8.96	10.29	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.32	45.00	8.80	8.80	9.89	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.36	45.00	8.64	8.64	9.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.41	45.00	8.47	8.47	9.10	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.46	45.00	8.31	8.31	8.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.50	45.00	8.14	8.14	8.34	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.55	45.00	7.98	7.98	7.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.59	45.00	7.82	7.82	7.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.64	45.00	7.65	7.65	7.26	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.68	45.00	7.49	7.49	6.92	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.73	45.00	7.33	7.33	6.58	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.78	45.00	7.16	7.16	6.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.82	45.00	7.00	7.00	5.92	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.87	45.00	6.84	6.84	5.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.91	45.00	6.67	6.67	5.30	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	6.96	45.00	6.51	6.51	5.00	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.00	45.00	6.35	6.35	4.71	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.05	45.00	6.19	6.19	4.42	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.09	45.00	6.02	6.02	4.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.14	45.00	5.86	5.86	3.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.19	45.00	5.70	5.70	3.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.23	45.00	5.54	5.54	3.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	7.28	45.00	5.37	5.37	3.10	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.32	45.00	5.21	5.21	2.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.37	45.00	5.05	5.05	2.63	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.41	45.00	4.89	4.89	2.40	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.46	45.00	4.73	4.73	2.18	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.51	45.00	4.56	4.56	1.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.55	45.00	4.40	4.40	1.76	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.60	45.00	4.24	4.24	1.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.64	45.00	4.08	4.08	1.38	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.69	45.00	3.92	3.92	1.20	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.73	45.00	3.76	3.76	1.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.78	45.00	3.60	3.60	0.85	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.82	45.00	3.44	3.44	0.69	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.87	45.00	3.27	3.27	0.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.92	45.00	3.11	3.11	0.39	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.96	45.00	2.95	2.95	0.26	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.01	45.00	2.79	2.79	0.12	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.05	44.50	2.63	2.63	0.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.10	45.00	2.48	2.48	1.59	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.14	45.00	-2.41	2.41	4.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.19	45.00	-2.53	2.53	4.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.23	45.00	-2.66	2.66	4.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.28	45.00	-2.78	2.78	4.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.33	45.00	-2.90	2.90	5.09	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.37	45.00	-3.03	3.03	5.23	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.42	45.00	-3.15	3.15	5.37	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.46	45.00	-3.27	3.27	5.52	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.51	45.00	-3.39	3.39	5.67	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.55	45.00	-3.52	3.52	5.83	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.60	45.00	-3.64	3.64	5.99	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.65	45.00	-3.76	3.76	6.16	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.69	45.00	-3.88	3.88	6.33	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.74	45.00	-4.01	4.01	6.51	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.78	45.00	-4.13	4.13	6.70	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.83	45.00	-4.25	4.25	6.89	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.87	45.00	-4.37	4.37	7.09	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.92	45.00	-4.49	4.49	7.29	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	8.96	45.00	-4.62	4.62	7.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.01	45.00	-4.74	4.74	7.71	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.06	45.00	-4.86	4.86	7.93	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.10	45.00	-4.98	4.98	8.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.15	45.00	-5.10	5.10	8.38	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.19	45.00	-5.22	5.22	8.62	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.24	45.00	-5.35	5.35	8.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.28	45.00	-5.47	5.47	9.11	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.33	45.00	-5.59	5.59	9.36	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.38	45.00	-5.71	5.71	9.62	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.42	45.00	-5.83	5.83	9.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.47	45.00	-5.95	5.95	10.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.51	45.00	-6.07	6.07	10.42	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.56	45.00	-6.19	6.19	10.70	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.60	45.00	-6.32	6.32	10.99	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.65	45.00	-6.44	6.44	11.28	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	2	9.69	45.00	-6.56	6.56	11.57	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	9.74	45.00	-6.68	6.68	11.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.79	45.00	-6.80	6.80	12.18	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.83	45.00	-6.92	6.92	12.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.88	45.00	-7.04	7.04	12.81	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.92	45.00	-7.16	7.16	13.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.97	45.00	-7.28	7.28	13.47	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.01	45.00	-7.40	7.40	13.80	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.06	45.00	-7.52	7.52	14.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.10	45.00	-7.64	7.64	14.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.15	45.00	-7.76	7.76	14.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.20	45.00	-7.88	7.88	15.20	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.24	45.00	-8.00	8.00	15.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.29	45.00	-8.12	8.12	15.93	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.33	45.00	21.72	21.72	16.30	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.38	45.00	21.60	21.60	15.31	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.42	45.00	21.48	21.48	14.33	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.47	45.00	21.36	21.36	13.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.52	45.00	21.24	21.24	12.38	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.56	45.00	21.12	21.12	11.41	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.61	45.00	21.00	21.00	10.45	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.65	45.00	20.88	20.88	9.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.70	45.00	20.76	20.76	8.55	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.74	45.00	20.64	20.64	7.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.79	45.00	20.52	20.52	6.67	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.83	45.00	20.40	20.40	5.73	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.88	45.00	20.29	20.29	4.80	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.93	45.00	20.17	20.17	3.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.97	45.00	20.05	20.05	2.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	45.00	19.93	19.93	2.05	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.06	45.00	19.81	19.81	1.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.11	45.00	19.69	19.69	0.25	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.15	44.50	19.57	19.57	0.65	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.20	44.50	19.46	19.46	1.54	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.25	44.50	19.34	19.34	2.42	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.29	44.50	19.22	19.22	3.30	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.34	44.50	19.10	19.10	4.18	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.38	44.50	18.98	18.98	5.05	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.43	44.50	18.87	18.87	5.91	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.47	44.50	18.75	18.75	6.77	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.52	44.50	18.63	18.63	7.62	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.56	44.50	18.51	18.51	8.47	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.61	44.50	18.39	18.39	9.31	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.66	44.50	18.28	18.28	10.14	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.70	44.50	18.16	18.16	10.97	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.75	44.50	18.04	18.04	11.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.79	44.50	17.93	17.93	12.62	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.84	44.50	17.81	17.81	13.44	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.88	44.50	17.69	17.69	14.25	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.93	44.50	17.57	17.57	15.05	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.97	44.50	17.46	17.46	15.85	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.02	44.50	17.34	17.34	16.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.07	44.50	17.22	17.22	17.43	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.11	44.50	17.11	17.11	18.21	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.16	44.50	16.99	16.99	18.99	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	12.20	44.50	16.87	16.87	19.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.25	44.50	16.76	16.76	20.53	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.29	44.50	16.64	16.64	21.29	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.34	44.50	16.52	16.52	22.05	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.39	44.50	16.41	16.41	22.80	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.43	44.50	16.29	16.29	23.54	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.48	44.50	16.17	16.17	24.28	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.52	44.50	16.07	16.07	24.54	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.57	44.50	15.97	15.97	25.27	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.61	44.50	15.87	15.87	26.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.66	44.50	15.77	15.77	26.72	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.70	44.50	15.67	15.67	27.44	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.75	44.50	15.57	15.57	28.15	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.80	44.50	15.47	15.47	28.86	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.84	44.50	15.37	15.37	29.56	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.89	44.50	15.27	15.27	30.26	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.93	44.50	15.17	15.17	30.95	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.98	44.50	15.07	15.07	31.64	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.02	44.50	14.97	14.97	32.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.07	44.50	14.87	14.87	33.01	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.12	44.50	14.77	14.77	33.69	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.16	44.50	14.67	14.67	34.36	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.21	44.50	14.58	14.58	35.02	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.25	44.50	14.48	14.48	35.69	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.30	44.50	14.38	14.38	36.35	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.34	44.50	-44.78	44.78	36.61	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.39	44.50	-44.89	44.89	34.57	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.43	44.50	-45.01	45.01	32.52	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.48	44.50	-45.13	45.13	30.46	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.53	44.50	-45.25	45.25	28.40	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.57	44.50	-45.37	45.37	26.33	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.62	44.50	-45.49	45.49	24.26	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.66	44.50	-45.60	45.60	22.18	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.71	44.50	-45.72	45.72	20.10	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	44.50	-45.84	45.84	18.01	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.80	44.50	-45.96	45.96	15.92	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.85	44.50	-46.07	46.07	13.82	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.89	44.50	-46.19	46.19	11.72	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.94	44.50	-46.31	46.31	9.61	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	44.50	-46.43	46.43	7.49	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.03	44.50	-46.54	46.54	5.37	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.07	44.50	-46.66	46.66	3.25	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.12	44.50	-46.78	46.78	1.12	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.16	45.00	-46.90	46.90	1.02	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.21	45.00	-47.01	47.01	3.16	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.26	45.00	-47.13	47.13	5.31	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.30	45.00	-47.25	47.25	7.46	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.35	45.00	-47.36	47.36	9.62	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.39	45.00	-47.48	47.48	11.78	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.44	45.00	-47.60	47.60	13.95	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.48	45.00	-47.71	47.71	16.12	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.53	45.00	-47.83	47.83	18.30	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.57	45.00	-47.95	47.95	20.49	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	3	14.62	45.00	-48.06	48.06	22.68	1.00	49.83	PhiVc/2 < Vu <=	Min 11.5.6	71.0	14.7	14.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	14.67	45.00	11.16	11.16	24.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.71	45.00	11.04	11.04	24.36	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.76	45.00	10.93	10.93	23.86	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.80	45.00	10.81	10.81	23.37	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.85	45.00	10.70	10.70	22.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.89	45.00	10.58	10.58	22.39	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.94	45.00	10.46	10.46	21.91	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	14.99	45.00	10.35	10.35	21.44	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.03	45.00	10.23	10.23	20.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.08	45.00	10.12	10.12	20.50	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.12	45.00	10.00	10.00	20.04	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.17	45.00	9.89	9.89	19.59	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.21	45.00	9.77	9.77	19.14	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.26	45.00	9.66	9.66	18.70	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.30	45.00	9.54	9.54	18.26	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.35	45.00	9.42	9.42	17.83	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.40	45.00	9.31	9.31	17.40	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.44	45.00	9.19	9.19	16.98	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.49	45.00	9.08	9.08	16.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.53	45.00	8.96	8.96	16.15	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.58	45.00	8.85	8.85	15.75	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.62	45.00	8.73	8.73	15.35	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.67	45.00	8.62	8.62	14.95	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.72	45.00	8.51	8.51	14.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.76	45.00	8.39	8.39	14.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.81	45.00	8.28	8.28	13.79	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.85	45.00	8.16	8.16	13.42	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.90	45.00	8.05	8.05	13.05	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.94	45.00	7.93	7.93	12.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.99	45.00	7.82	7.82	12.33	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.03	45.00	7.71	7.71	11.97	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.08	45.00	7.59	7.59	11.62	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.13	45.00	7.48	7.48	11.28	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.17	45.00	7.36	7.36	10.94	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.22	45.00	7.25	7.25	10.61	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.26	45.00	7.14	7.14	10.28	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.31	45.00	7.02	7.02	9.96	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.35	45.00	6.91	6.91	9.64	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.40	45.00	6.79	6.79	9.33	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.44	45.00	6.68	6.68	9.02	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.49	45.00	6.57	6.57	8.72	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.54	45.00	6.45	6.45	8.42	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.58	45.00	6.34	6.34	8.13	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.63	45.00	6.23	6.23	7.84	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.67	45.00	6.12	6.12	7.56	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.72	45.00	6.00	6.00	7.28	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.76	45.00	5.89	5.89	7.01	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.81	45.00	5.78	5.78	6.75	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.86	45.00	5.66	5.66	6.48	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.90	45.00	5.55	5.55	6.23	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.95	45.00	5.44	5.44	5.98	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.99	45.00	5.33	5.33	5.73	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.04	45.00	5.21	5.21	5.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.08	45.00	5.10	5.10	5.26	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	17.13	45.00	4.99	4.99	5.54	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.17	45.00	4.89	4.89	5.32	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.22	45.00	4.80	4.80	5.10	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.27	45.00	4.70	4.70	4.88	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.31	45.00	4.60	4.60	4.67	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.36	45.00	4.50	4.50	4.46	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.40	45.00	4.40	4.40	4.26	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.45	45.00	4.30	4.30	4.06	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.49	45.00	4.20	4.20	3.87	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.54	45.00	4.11	4.11	3.68	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.59	45.00	4.01	4.01	3.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.63	45.00	3.91	3.91	3.31	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.68	45.00	3.81	3.81	3.13	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.72	45.00	3.71	3.71	2.96	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.77	45.00	3.61	3.61	2.80	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.81	45.00	3.52	3.52	2.63	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.86	45.00	3.42	3.42	2.47	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.90	45.00	3.32	3.32	2.32	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.95	45.00	3.22	3.22	2.17	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.00	45.00	3.12	3.12	2.03	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.04	45.00	3.03	3.03	1.89	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.09	45.00	2.93	2.93	1.75	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.13	45.00	2.83	2.83	1.62	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.18	45.00	2.73	2.73	1.49	1.00	49.83	Vu < PhiVc/2	Not Reqd 1	49.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.22	44.50	-2.70	2.70	3.02	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.27	44.50	-2.84	2.84	2.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.31	44.50	-2.98	2.98	2.76	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.36	44.50	-3.12	3.12	2.62	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.41	44.50	-3.26	3.26	2.48	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.45	44.50	-3.39	3.39	2.33	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.50	44.50	-3.53	3.53	2.17	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.54	44.50	-3.67	3.67	2.00	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.59	44.50	-3.81	3.81	1.83	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.63	44.50	-3.95	3.95	1.66	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.68	44.50	-4.09	4.09	1.47	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.73	44.50	-4.23	4.23	1.28	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.77	44.50	-4.36	4.36	1.09	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.82	44.50	-4.50	4.50	0.89	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.86	44.50	-4.64	4.64	0.68	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.91	44.50	-4.78	4.78	0.46	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.95	44.50	-4.92	4.92	0.24	1.00	49.29	Vu < PhiVc/2	Not Reqd 1	49.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.00	44.50	-42.05	42.05	0.00	1.00	49.29	PhiVc/2 < Vu <=	Min 11.5.6	70.3	14.7	14.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.000	12.32	126.73	0.10
Span # 2	2	4.333	-15.93	130.05	0.12
Span # 3	3	4.333	36.84	126.73	0.29
Span # 4	4	4.333	-24.87	130.05	0.19
+1.40D+1.60H					
Span # 1	1	6.000	8.69	126.73	0.07
Span # 2	2	4.333	-9.45	130.05	0.07
Span # 3	3	4.333	-6.75	130.05	0.05
Span # 4	4	4.333	-7.21	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L)					

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.000	-7.62	130.05	0.06
Span # 2	2	4.333	-8.16	130.05	0.06
Span # 3	3	4.333	-6.95	130.05	0.05
Span # 4	4	4.333	-7.36	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.000	7.54	126.73	0.06
Span # 2	2	4.333	-7.87	130.05	0.06
Span # 3	3	4.333	-6.68	130.05	0.05
Span # 4	4	4.333	-7.18	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.000	7.52	126.73	0.06
Span # 2	2	4.333	-7.93	130.05	0.06
Span # 3	3	4.333	-7.85	130.05	0.06
Span # 4	4	4.333	-8.36	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.000	-8.45	130.05	0.06
Span # 2	2	4.333	-9.01	130.05	0.07
Span # 3	3	4.333	-5.49	130.05	0.04
Span # 4	4	4.333	-5.87	130.05	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.000	-8.51	130.05	0.07
Span # 2	2	4.333	-9.07	130.05	0.07
Span # 3	3	4.333	-6.66	130.05	0.05
Span # 4	4	4.333	-7.05	130.05	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.000	-8.22	130.05	0.06
Span # 2	2	4.333	-8.78	130.05	0.07
Span # 3	3	4.333	-6.39	130.05	0.05
Span # 4	4	4.333	-6.87	130.05	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.000	-8.29	130.05	0.06
Span # 2	2	4.333	-8.84	130.05	0.07
Span # 3	3	4.333	-7.56	130.05	0.06
Span # 4	4	4.333	-8.05	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***)					
Span # 1	1	6.000	11.88	126.73	0.09
Span # 2	2	4.333	-11.91	130.05	0.09
Span # 3	3	4.333	-6.02	130.05	0.05
Span # 4	4	4.333	-6.43	130.05	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.000	11.85	126.73	0.09
Span # 2	2	4.333	-11.97	130.05	0.09
Span # 3	3	4.333	-7.19	130.05	0.06
Span # 4	4	4.333	-7.62	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.000	11.97	126.73	0.09
Span # 2	2	4.333	-11.68	130.05	0.09
Span # 3	3	4.333	-6.92	130.05	0.05
Span # 4	4	4.333	-7.43	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.000	11.95	126.73	0.09
Span # 2	2	4.333	-11.74	130.05	0.09
Span # 3	3	4.333	-8.09	130.05	0.06
Span # 4	4	4.333	-8.61	130.05	0.07
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.000	-11.96	130.05	0.09
Span # 2	2	4.333	-12.82	130.05	0.10
Span # 3	3	4.333	-5.73	130.05	0.04
Span # 4	4	4.333	-6.12	130.05	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.000	-12.02	130.05	0.09
Span # 2	2	4.333	-12.88	130.05	0.10
Span # 3	3	4.333	-6.90	130.05	0.05
Span # 4	4	4.333	-7.31	130.05	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.000	11.60	126.73	0.09
Span # 2	2	4.333	-12.59	130.05	0.10
Span # 3	3	4.333	-6.63	130.05	0.05
Span # 4	4	4.333	-7.12	130.05	0.05

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.000	11.57	126.73	0.09
Span # 2	2	4.333	-12.65	130.05	0.10
Span # 3	3	4.333	-7.80	130.05	0.06
Span # 4	4	4.333	-8.31	130.05	0.06
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L)					
Span # 1	1	6.000	7.76	126.73	0.06
Span # 2	2	4.333	-7.35	130.05	0.06
Span # 3	3	4.333	13.05	126.73	0.10
Span # 4	4	4.333	-12.96	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.000	7.88	126.73	0.06
Span # 2	2	4.333	-7.89	130.05	0.06
Span # 3	3	4.333	14.92	126.73	0.12
Span # 4	4	4.333	-12.78	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.000	7.85	126.73	0.06
Span # 2	2	4.333	-7.59	130.05	0.06
Span # 3	3	4.333	14.21	126.73	0.11
Span # 4	4	4.333	-13.96	130.05	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.000	-7.64	130.05	0.06
Span # 2	2	4.333	-8.19	130.05	0.06
Span # 3	3	4.333	13.58	126.73	0.11
Span # 4	4	4.333	-11.47	130.05	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.000	-7.71	130.05	0.06
Span # 2	2	4.333	-8.26	130.05	0.06
Span # 3	3	4.333	12.87	126.73	0.10
Span # 4	4	4.333	-12.66	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.000	7.50	126.73	0.06
Span # 2	2	4.333	-9.01	130.05	0.07
Span # 3	3	4.333	14.74	126.73	0.12
Span # 4	4	4.333	-12.47	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.000	7.48	126.73	0.06
Span # 2	2	4.333	-8.71	130.05	0.07
Span # 3	3	4.333	14.03	126.73	0.11
Span # 4	4	4.333	-13.66	130.05	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***)					
Span # 1	1	6.000	12.22	126.73	0.10
Span # 2	2	4.333	-11.09	130.05	0.09
Span # 3	3	4.333	13.91	126.73	0.11
Span # 4	4	4.333	-12.04	130.05	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.000	12.19	126.73	0.10
Span # 2	2	4.333	-11.16	130.05	0.09
Span # 3	3	4.333	13.20	126.73	0.10
Span # 4	4	4.333	-13.22	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.000	12.32	126.73	0.10
Span # 2	2	4.333	-10.86	130.05	0.08
Span # 3	3	4.333	15.07	126.73	0.12
Span # 4	4	4.333	-13.04	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.000	12.29	126.73	0.10
Span # 2	2	4.333	-10.93	130.05	0.08
Span # 3	3	4.333	14.36	126.73	0.11
Span # 4	4	4.333	-14.22	130.05	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.000	11.84	126.73	0.09
Span # 2	2	4.333	-12.00	130.05	0.09
Span # 3	3	4.333	13.73	126.73	0.11
Span # 4	4	4.333	-11.73	130.05	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.000	11.81	126.73	0.09
Span # 2	2	4.333	-12.07	130.05	0.09
Span # 3	3	4.333	13.02	126.73	0.10

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	4.333	-12.91	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.000	11.93	126.73	0.09
Span # 2	2	4.333	-11.77	130.05	0.09
Span # 3	3	4.333	14.89	126.73	0.12
Span # 4	4	4.333	-12.73	130.05	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.000	11.91	126.73	0.09
Span # 2	2	4.333	-11.84	130.05	0.09
Span # 3	3	4.333	14.18	126.73	0.11
Span # 4	4	4.333	-13.91	130.05	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L)					
Span # 1	1	6.000	7.44	126.73	0.06
Span # 2	2	4.333	-8.12	130.05	0.06
Span # 3	3	4.333	-6.15	130.05	0.05
Span # 4	4	4.333	-6.55	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.000	7.48	126.73	0.06
Span # 2	2	4.333	-8.03	130.05	0.06
Span # 3	3	4.333	-6.06	130.05	0.05
Span # 4	4	4.333	-6.49	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.000	7.47	126.73	0.06
Span # 2	2	4.333	-8.05	130.05	0.06
Span # 3	3	4.333	-6.43	130.05	0.05
Span # 4	4	4.333	-6.86	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.000	-7.83	130.05	0.06
Span # 2	2	4.333	-8.38	130.05	0.06
Span # 3	3	4.333	-5.69	130.05	0.04
Span # 4	4	4.333	-6.08	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.000	-7.85	130.05	0.06
Span # 2	2	4.333	-8.40	130.05	0.06
Span # 3	3	4.333	-6.06	130.05	0.05
Span # 4	4	4.333	-6.45	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.000	-7.76	130.05	0.06
Span # 2	2	4.333	-8.31	130.05	0.06
Span # 3	3	4.333	-5.97	130.05	0.05
Span # 4	4	4.333	-6.39	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.000	-7.78	130.05	0.06
Span # 2	2	4.333	-8.33	130.05	0.06
Span # 3	3	4.333	-6.34	130.05	0.05
Span # 4	4	4.333	-6.76	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***)					
Span # 1	1	6.000	8.83	126.73	0.07
Span # 2	2	4.333	-9.29	130.05	0.07
Span # 3	3	4.333	-5.86	130.05	0.05
Span # 4	4	4.333	-6.26	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.000	8.82	126.73	0.07
Span # 2	2	4.333	-9.31	130.05	0.07
Span # 3	3	4.333	-6.22	130.05	0.05
Span # 4	4	4.333	-6.63	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.000	8.86	126.73	0.07
Span # 2	2	4.333	-9.22	130.05	0.07
Span # 3	3	4.333	-6.14	130.05	0.05
Span # 4	4	4.333	-6.57	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.000	8.85	126.73	0.07
Span # 2	2	4.333	-9.24	130.05	0.07
Span # 3	3	4.333	-6.50	130.05	0.05
Span # 4	4	4.333	-6.94	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.000	8.72	126.73	0.07
Span # 2	2	4.333	-9.57	130.05	0.07

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	4.333	-5.77	130.05	0.04
Span # 4	4	4.333	-6.16	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.000	-8.95	130.05	0.07
Span # 2	2	4.333	-9.59	130.05	0.07
Span # 3	3	4.333	-6.13	130.05	0.05
Span # 4	4	4.333	-6.53	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.000	8.75	126.73	0.07
Span # 2	2	4.333	-9.50	130.05	0.07
Span # 3	3	4.333	-6.05	130.05	0.05
Span # 4	4	4.333	-6.47	130.05	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.000	8.74	126.73	0.07
Span # 2	2	4.333	-9.52	130.05	0.07
Span # 3	3	4.333	-6.41	130.05	0.05
Span # 4	4	4.333	-6.84	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.000	7.45	126.73	0.06

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.000	7.45	126.73	0.06
Span # 2	2	4.333	-8.10	130.05	0.06
Span # 3	3	4.333	-5.78	130.05	0.04
Span # 4	4	4.333	-6.18	130.05	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (***L)					
Span # 1	1	6.000	8.54	126.73	0.07
Span # 2	2	4.333	-15.14	130.05	0.12
Span # 3	3	4.333	36.22	126.73	0.29
Span # 4	4	4.333	-24.48	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.000	8.58	126.73	0.07
Span # 2	2	4.333	-15.58	130.05	0.12
Span # 3	3	4.333	36.80	126.73	0.29
Span # 4	4	4.333	-24.42	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.000	8.57	126.73	0.07
Span # 2	2	4.333	-15.48	130.05	0.12
Span # 3	3	4.333	36.57	126.73	0.29
Span # 4	4	4.333	-24.79	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.000	8.43	126.73	0.07
Span # 2	2	4.333	-15.59	130.05	0.12
Span # 3	3	4.333	36.40	126.73	0.29
Span # 4	4	4.333	-24.01	130.05	0.18
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.000	8.42	126.73	0.07
Span # 2	2	4.333	-15.49	130.05	0.12
Span # 3	3	4.333	36.17	126.73	0.29
Span # 4	4	4.333	-24.38	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.000	8.46	126.73	0.07
Span # 2	2	4.333	-15.93	130.05	0.12
Span # 3	3	4.333	36.75	126.73	0.29
Span # 4	4	4.333	-24.33	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.000	8.45	126.73	0.07
Span # 2	2	4.333	-15.83	130.05	0.12
Span # 3	3	4.333	36.52	126.73	0.29
Span # 4	4	4.333	-24.69	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L***)					
Span # 1	1	6.000	9.93	126.73	0.08
Span # 2	2	4.333	-14.94	130.05	0.11
Span # 3	3	4.333	36.49	126.73	0.29
Span # 4	4	4.333	-24.19	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.000	9.93	126.73	0.08
Span # 2	2	4.333	-14.84	130.05	0.11
Span # 3	3	4.333	36.26	126.73	0.29
Span # 4	4	4.333	-24.56	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L*)					

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.000	9.97	126.73	0.08
Span # 2	2	4.333	-15.27	130.05	0.12
Span # 3	3	4.333	36.84	126.73	0.29
Span # 4	4	4.333	-24.50	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.000	9.96	126.73	0.08
Span # 2	2	4.333	-15.18	130.05	0.12
Span # 3	3	4.333	36.61	126.73	0.29
Span # 4	4	4.333	-24.87	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.000	9.81	126.73	0.08
Span # 2	2	4.333	-15.28	130.05	0.12
Span # 3	3	4.333	36.44	126.73	0.29
Span # 4	4	4.333	-24.09	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.000	9.80	126.73	0.08
Span # 2	2	4.333	-15.19	130.05	0.12
Span # 3	3	4.333	36.21	126.73	0.29
Span # 4	4	4.333	-24.46	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.000	9.84	126.73	0.08
Span # 2	2	4.333	-15.62	130.05	0.12
Span # 3	3	4.333	36.79	126.73	0.29
Span # 4	4	4.333	-24.40	130.05	0.19
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.000	9.83	126.73	0.08
Span # 2	2	4.333	-15.53	130.05	0.12
Span # 3	3	4.333	36.56	126.73	0.29
Span # 4	4	4.333	-24.77	130.05	0.19
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.000	8.55	126.73	0.07
Span # 2	2	4.333	-15.24	130.05	0.12
Span # 3	3	4.333	36.45	126.73	0.29
Span # 4	4	4.333	-24.11	130.05	0.19
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (***					
Span # 1	1	6.000	7.44	126.73	0.06
Span # 2	2	4.333	-8.12	130.05	0.06
Span # 3	3	4.333	-6.15	130.05	0.05
Span # 4	4	4.333	-6.55	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.000	7.48	126.73	0.06
Span # 2	2	4.333	-8.03	130.05	0.06
Span # 3	3	4.333	-6.06	130.05	0.05
Span # 4	4	4.333	-6.49	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.000	7.47	126.73	0.06
Span # 2	2	4.333	-8.05	130.05	0.06
Span # 3	3	4.333	-6.43	130.05	0.05
Span # 4	4	4.333	-6.86	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.000	-7.83	130.05	0.06
Span # 2	2	4.333	-8.38	130.05	0.06
Span # 3	3	4.333	-5.69	130.05	0.04
Span # 4	4	4.333	-6.08	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.000	-7.85	130.05	0.06
Span # 2	2	4.333	-8.40	130.05	0.06
Span # 3	3	4.333	-6.06	130.05	0.05
Span # 4	4	4.333	-6.45	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.000	-7.76	130.05	0.06
Span # 2	2	4.333	-8.31	130.05	0.06
Span # 3	3	4.333	-5.97	130.05	0.05
Span # 4	4	4.333	-6.39	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.000	-7.78	130.05	0.06
Span # 2	2	4.333	-8.33	130.05	0.06
Span # 3	3	4.333	-6.34	130.05	0.05
Span # 4	4	4.333	-6.76	130.05	0.05

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.000	8.83	126.73	0.07
Span # 2	2	4.333	-9.29	130.05	0.07
Span # 3	3	4.333	-5.86	130.05	0.05
Span # 4	4	4.333	-6.26	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.000	8.82	126.73	0.07
Span # 2	2	4.333	-9.31	130.05	0.07
Span # 3	3	4.333	-6.22	130.05	0.05
Span # 4	4	4.333	-6.63	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.000	8.86	126.73	0.07
Span # 2	2	4.333	-9.22	130.05	0.07
Span # 3	3	4.333	-6.14	130.05	0.05
Span # 4	4	4.333	-6.57	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.000	8.85	126.73	0.07
Span # 2	2	4.333	-9.24	130.05	0.07
Span # 3	3	4.333	-6.50	130.05	0.05
Span # 4	4	4.333	-6.94	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.000	8.72	126.73	0.07
Span # 2	2	4.333	-9.57	130.05	0.07
Span # 3	3	4.333	-5.77	130.05	0.04
Span # 4	4	4.333	-6.16	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.000	-8.95	130.05	0.07
Span # 2	2	4.333	-9.59	130.05	0.07
Span # 3	3	4.333	-6.13	130.05	0.05
Span # 4	4	4.333	-6.53	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.000	8.75	126.73	0.07
Span # 2	2	4.333	-9.50	130.05	0.07
Span # 3	3	4.333	-6.05	130.05	0.05
Span # 4	4	4.333	-6.47	130.05	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.000	8.74	126.73	0.07
Span # 2	2	4.333	-9.52	130.05	0.07
Span # 3	3	4.333	-6.41	130.05	0.05
Span # 4	4	4.333	-6.84	130.05	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (***L					
Span # 1	1	6.000	7.78	126.73	0.06
Span # 2	2	4.333	-7.31	130.05	0.06
Span # 3	3	4.333	13.54	126.73	0.11
Span # 4	4	4.333	-12.15	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L*					
Span # 1	1	6.000	7.81	126.73	0.06
Span # 2	2	4.333	-7.21	130.05	0.06
Span # 3	3	4.333	14.13	126.73	0.11
Span # 4	4	4.333	-12.09	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**LL					
Span # 1	1	6.000	7.81	126.73	0.06
Span # 2	2	4.333	-7.23	130.05	0.06
Span # 3	3	4.333	13.90	126.73	0.11
Span # 4	4	4.333	-12.46	130.05	0.10
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L**					
Span # 1	1	6.000	7.67	126.73	0.06
Span # 2	2	4.333	-7.57	130.05	0.06
Span # 3	3	4.333	13.71	126.73	0.11
Span # 4	4	4.333	-11.68	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.000	7.66	126.73	0.06
Span # 2	2	4.333	-7.59	130.05	0.06
Span # 3	3	4.333	13.48	126.73	0.11
Span # 4	4	4.333	-12.05	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.000	7.70	126.73	0.06
Span # 2	2	4.333	-7.50	130.05	0.06
Span # 3	3	4.333	14.07	126.73	0.11

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	4.333	-12.00	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.000	7.69	126.73	0.06
Span # 2	2	4.333	-7.52	130.05	0.06
Span # 3	3	4.333	13.85	126.73	0.11
Span # 4	4	4.333	-12.37	130.05	0.10
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L***					
Span # 1	1	6.000	9.17	126.73	0.07
Span # 2	2	4.333	-8.48	130.05	0.07
Span # 3	3	4.333	13.81	126.73	0.11
Span # 4	4	4.333	-11.86	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**L					
Span # 1	1	6.000	9.16	126.73	0.07
Span # 2	2	4.333	-8.50	130.05	0.07
Span # 3	3	4.333	13.59	126.73	0.11
Span # 4	4	4.333	-12.23	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.000	9.20	126.73	0.07
Span # 2	2	4.333	-8.40	130.05	0.06
Span # 3	3	4.333	14.17	126.73	0.11
Span # 4	4	4.333	-12.17	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.000	9.19	126.73	0.07
Span # 2	2	4.333	-8.42	130.05	0.06
Span # 3	3	4.333	13.95	126.73	0.11
Span # 4	4	4.333	-12.54	130.05	0.10
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL**					
Span # 1	1	6.000	9.05	126.73	0.07
Span # 2	2	4.333	-8.76	130.05	0.07
Span # 3	3	4.333	13.75	126.73	0.11
Span # 4	4	4.333	-11.76	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.000	9.04	126.73	0.07
Span # 2	2	4.333	-8.78	130.05	0.07
Span # 3	3	4.333	13.53	126.73	0.11
Span # 4	4	4.333	-12.13	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.000	9.08	126.73	0.07
Span # 2	2	4.333	-8.69	130.05	0.07
Span # 3	3	4.333	14.12	126.73	0.11
Span # 4	4	4.333	-12.08	130.05	0.09
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.000	9.07	126.73	0.07
Span # 2	2	4.333	-8.71	130.05	0.07
Span # 3	3	4.333	13.89	126.73	0.11
Span # 4	4	4.333	-12.45	130.05	0.10
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (***L					
Span # 1	1	6.000	7.91	126.73	0.06
Span # 2	2	4.333	-8.24	130.05	0.06
Span # 3	3	4.333	17.66	126.73	0.14
Span # 4	4	4.333	-14.39	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L*					
Span # 1	1	6.000	7.95	126.73	0.06
Span # 2	2	4.333	-8.68	130.05	0.07
Span # 3	3	4.333	18.24	126.73	0.14
Span # 4	4	4.333	-14.34	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**LL					
Span # 1	1	6.000	7.94	126.73	0.06
Span # 2	2	4.333	-8.58	130.05	0.07
Span # 3	3	4.333	18.02	126.73	0.14
Span # 4	4	4.333	-14.71	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L**					
Span # 1	1	6.000	7.80	126.73	0.06
Span # 2	2	4.333	-8.69	130.05	0.07
Span # 3	3	4.333	17.82	126.73	0.14
Span # 4	4	4.333	-13.93	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.000	7.79	126.73	0.06
Span # 2	2	4.333	-8.59	130.05	0.07

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	4.333	17.60	126.73	0.14
Span # 4	4	4.333	-14.30	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.000	7.83	126.73	0.06
Span # 2	2	4.333	-9.03	130.05	0.07
Span # 3	3	4.333	18.19	126.73	0.14
Span # 4	4	4.333	-14.24	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.000	7.82	126.73	0.06
Span # 2	2	4.333	-8.93	130.05	0.07
Span # 3	3	4.333	17.96	126.73	0.14
Span # 4	4	4.333	-14.61	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L***					
Span # 1	1	6.000	9.31	126.73	0.07
Span # 2	2	4.333	-8.15	130.05	0.06
Span # 3	3	4.333	17.92	126.73	0.14
Span # 4	4	4.333	-14.10	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**L					
Span # 1	1	6.000	9.30	126.73	0.07
Span # 2	2	4.333	-8.17	130.05	0.06
Span # 3	3	4.333	17.70	126.73	0.14
Span # 4	4	4.333	-14.47	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.000	9.34	126.73	0.07
Span # 2	2	4.333	-8.38	130.05	0.06
Span # 3	3	4.333	18.29	126.73	0.14
Span # 4	4	4.333	-14.41	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.000	9.33	126.73	0.07
Span # 2	2	4.333	-8.28	130.05	0.06
Span # 3	3	4.333	18.07	126.73	0.14
Span # 4	4	4.333	-14.78	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL**					
Span # 1	1	6.000	9.19	126.73	0.07
Span # 2	2	4.333	-8.43	130.05	0.06
Span # 3	3	4.333	17.87	126.73	0.14
Span # 4	4	4.333	-14.01	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.000	9.18	126.73	0.07
Span # 2	2	4.333	-8.45	130.05	0.07
Span # 3	3	4.333	17.65	126.73	0.14
Span # 4	4	4.333	-14.38	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.000	9.22	126.73	0.07
Span # 2	2	4.333	-8.73	130.05	0.07
Span # 3	3	4.333	18.23	126.73	0.14
Span # 4	4	4.333	-14.32	130.05	0.11
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.000	9.21	126.73	0.07
Span # 2	2	4.333	-8.63	130.05	0.07
Span # 3	3	4.333	18.01	126.73	0.14
Span # 4	4	4.333	-14.69	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (***L					
Span # 1	1	6.000	7.91	126.73	0.06
Span # 2	2	4.333	-8.24	130.05	0.06
Span # 3	3	4.333	17.66	126.73	0.14
Span # 4	4	4.333	-14.39	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L*					
Span # 1	1	6.000	7.95	126.73	0.06
Span # 2	2	4.333	-8.68	130.05	0.07
Span # 3	3	4.333	18.24	126.73	0.14
Span # 4	4	4.333	-14.34	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**LL					
Span # 1	1	6.000	7.94	126.73	0.06
Span # 2	2	4.333	-8.58	130.05	0.07
Span # 3	3	4.333	18.02	126.73	0.14
Span # 4	4	4.333	-14.71	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L**					
Span # 1	1	6.000	7.80	126.73	0.06

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	4.333	-8.69	130.05	0.07
Span # 3	3	4.333	17.82	126.73	0.14
Span # 4	4	4.333	-13.93	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.000	7.79	126.73	0.06
Span # 2	2	4.333	-8.59	130.05	0.07
Span # 3	3	4.333	17.60	126.73	0.14
Span # 4	4	4.333	-14.30	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.000	7.83	126.73	0.06
Span # 2	2	4.333	-9.03	130.05	0.07
Span # 3	3	4.333	18.19	126.73	0.14
Span # 4	4	4.333	-14.24	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.000	7.82	126.73	0.06
Span # 2	2	4.333	-8.93	130.05	0.07
Span # 3	3	4.333	17.96	126.73	0.14
Span # 4	4	4.333	-14.61	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L***					
Span # 1	1	6.000	9.31	126.73	0.07
Span # 2	2	4.333	-8.15	130.05	0.06
Span # 3	3	4.333	17.92	126.73	0.14
Span # 4	4	4.333	-14.10	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**L					
Span # 1	1	6.000	9.30	126.73	0.07
Span # 2	2	4.333	-8.17	130.05	0.06
Span # 3	3	4.333	17.70	126.73	0.14
Span # 4	4	4.333	-14.47	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.000	9.34	126.73	0.07
Span # 2	2	4.333	-8.38	130.05	0.06
Span # 3	3	4.333	18.29	126.73	0.14
Span # 4	4	4.333	-14.41	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.000	9.33	126.73	0.07
Span # 2	2	4.333	-8.28	130.05	0.06
Span # 3	3	4.333	18.07	126.73	0.14
Span # 4	4	4.333	-14.78	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL**					
Span # 1	1	6.000	9.19	126.73	0.07
Span # 2	2	4.333	-8.43	130.05	0.06
Span # 3	3	4.333	17.87	126.73	0.14
Span # 4	4	4.333	-14.01	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.000	9.18	126.73	0.07
Span # 2	2	4.333	-8.45	130.05	0.07
Span # 3	3	4.333	17.65	126.73	0.14
Span # 4	4	4.333	-14.38	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.000	9.22	126.73	0.07
Span # 2	2	4.333	-8.73	130.05	0.07
Span # 3	3	4.333	18.23	126.73	0.14
Span # 4	4	4.333	-14.32	130.05	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.000	9.21	126.73	0.07
Span # 2	2	4.333	-8.63	130.05	0.07
Span # 3	3	4.333	18.01	126.73	0.14
Span # 4	4	4.333	-14.69	130.05	0.11
+0.90D+W+0.90H					
Span # 1	1	6.000	5.59	126.73	0.04
Span # 2	2	4.333	-6.07	130.05	0.05
Span # 3	3	4.333	-4.34	130.05	0.03
Span # 4	4	4.333	-4.63	130.05	0.04
+0.90D+E+0.90H					
Span # 1	1	6.000	5.59	126.73	0.04
Span # 2	2	4.333	-6.07	130.05	0.05
Span # 3	3	4.333	-4.34	130.05	0.03
Span # 4	4	4.333	-4.63	130.05	0.04
+0.90D-E+0.90H					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-B-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.000	5.59	126.73	0.04
Span # 2	2	4.333	-6.07	130.05	0.05
Span # 3	3	4.333	-4.34	130.05	0.03
Span # 4	4	4.333	-4.63	130.05	0.04

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S+0.5250E+H, LL C	1	0.0001	2.684	+D+0.750L+0.750S+0.5250E+H, LL C	-0.0000	6.114
+D+S+H	2	0.0000	4.447	+D+0.750L+0.750S+0.5250E+H, LL C	-0.0000	2.167
+D+S+H	3	0.0001	2.395	+D+S+H	-0.0000	4.447
+D+S+H	4	0.0000	4.333	S Only	-0.0001	1.938

Concrete Beam

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ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

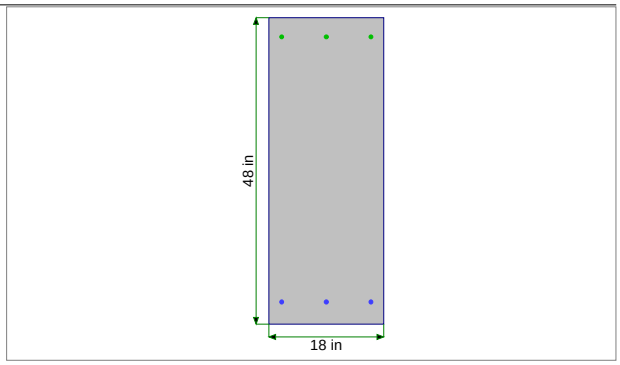
Description : GB-C-62R (2 units)

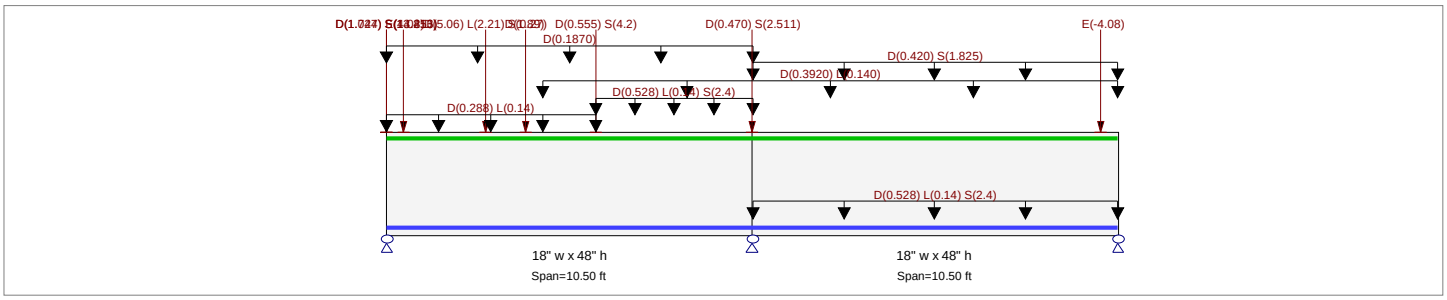
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 48.0 in

Span #1 Reinforcing....
- 3-#5 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Span #2 Reinforcing....
- 3-#5 at 3.50 in from Bottom, from 0.0 to 10.50 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 10.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 4.50 -->> 21.0 ft, Tributary Width = 3.50 ft
- Partial Length Uniform Load : D = 0.420, S = 1.825 k/ft, Extent = 10.50 -->> 21.0 ft
- Partial Length Uniform Load : D = 0.1870 k/ft, Extent = 0.0 -->> 10.50 ft
- Point Load : D = 0.470, S = 2.511 k, Starting at : 10.50 ft and placed every 0.0 ft thereafter

Load for Span Number 1
- Point Load : D = 1.724, S = 14.453 k @ 0.0 ft, (P1)
- Point Load : D = 5.060, L = 2.210, S = 0.270 k @ 2.833 ft, (GB-B-62R)
- Point Load : D = 1.047, S = 13.216 k @ 0.0 ft, (P3)
- Point Load : D = 0.5550, S = 4.20 k @ 6.0 ft, (P4)
- Uniform Load : D = 0.2880, L = 0.140 k/ft, Extent = 0.0 -->> 6.0 ft, Tributary Width = 1.0 ft, (WALL C1)
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Extent = 6.0 -->> 10.50 ft, Tributary Width = 1.0 ft, (WALL C2)
- Point Load : D = 1.890 k @ 4.0 ft, (GB-P)
- Point Load : E = 4.080 k @ 0.50 ft

Load for Span Number 2
- Uniform Load : D = 0.5280, L = 0.140, S = 2.40 k/ft, Tributary Width = 1.0 ft, (WALL C2)
- Point Load : E = -4.080 k @ 10.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.550** : 1	Maximum Deflection				
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.001 in	Ratio =	96998	>=36
Mu : Applied	-107.213 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0	<360
Mn * Phi : Allowable	195.070 k-ft	Max Downward Total Deflection	0.002 in	Ratio =	72545	>=24
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999	<240
Span # where maximum occurs	Span # 2					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3
Overall MAXimum	40.808	73.734	26.776
Overall MINimum	-0.184	0.000	-0.291
+D+H	12.738	30.264	8.503
+D+L+H, LL Comb Run (*L)	12.555	32.102	9.789
+D+L+H, LL Comb Run (L*)	15.036	32.778	8.212
+D+L+H, LL Comb Run (LL)	14.852	34.616	9.498
+D+Lr+H, LL Comb Run (*L)	12.738	30.264	8.503
+D+Lr+H, LL Comb Run (L*)	12.738	30.264	8.503
+D+Lr+H, LL Comb Run (LL)	12.738	30.264	8.503
+D+S+H	40.808	73.734	26.776
+D+0.750Lr+0.750L+H, LL Comb Run (	12.601	31.642	9.468
+D+0.750Lr+0.750L+H, LL Comb Run (	14.461	32.150	8.284
+D+0.750Lr+0.750L+H, LL Comb Run (	14.324	33.528	9.249
+D+0.750L+0.750S+H, LL Comb Run (*	33.653	64.245	23.172
+D+0.750L+0.750S+H, LL Comb Run (L	35.514	64.752	21.989
+D+0.750L+0.750S+H, LL Comb Run (L	35.376	66.130	22.954
+D+0.60W+H	12.738	30.264	8.503
+D+0.70E+H	15.458	30.264	5.783
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.601	31.642	9.468
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.461	32.150	8.284
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.324	33.528	9.249
+D+0.750L+0.750S+0.450W+H, LL Comb	33.653	64.245	23.172
+D+0.750L+0.750S+0.450W+H, LL Comb	35.514	64.752	21.989
+D+0.750L+0.750S+0.450W+H, LL Comb	35.376	66.130	22.954
+D+0.750L+0.750S+0.5250E+H, LL Com	35.693	64.245	21.132
+D+0.750L+0.750S+0.5250E+H, LL Com	37.554	64.752	19.949
+D+0.750L+0.750S+0.5250E+H, LL Com	37.416	66.130	20.914
+0.60D+0.60W+0.60H	7.643	18.159	5.102
+0.60D+0.70E+0.60H	10.363	18.159	2.382
D Only	12.738	30.264	8.503
Lr Only, LL Comb Run (*L)			
Lr Only, LL Comb Run (L*)			
Lr Only, LL Comb Run (LL)			
L Only, LL Comb Run (*L)	-0.184	1.837	1.286
L Only, LL Comb Run (L*)	2.297	2.514	-0.291
L Only, LL Comb Run (LL)	2.114	4.352	0.995
S Only	28.070	43.470	18.273
W Only			
E Only	3.886	0.000	-3.886
H Only			

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	44.50	61.35	61.35	0.00	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+0.70S+E+1.60	1	0.04	44.50	17.20	17.20	0.76	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.09	44.50	17.13	17.13	1.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.13	44.50	17.06	17.06	2.23	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.17	44.50	16.99	16.99	2.96	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.21	44.50	16.92	16.92	3.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.26	44.50	16.84	16.84	4.41	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.30	44.50	16.77	16.77	5.13	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.34	44.50	16.70	16.70	5.84	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.39	44.50	16.63	16.63	6.56	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.43	44.50	16.55	16.55	7.27	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.47	44.50	16.48	16.48	7.98	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.51	44.50	14.89	14.89	7.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.56	44.50	14.81	14.81	8.55	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	0.60	44.50	14.73	14.73	9.19	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.64	44.50	14.66	14.66	9.82	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.69	44.50	14.58	14.58	10.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.73	44.50	14.50	14.50	11.06	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.77	44.50	14.42	14.42	11.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.81	44.50	14.34	14.34	12.30	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.86	44.50	14.26	14.26	12.91	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.90	44.50	14.18	14.18	13.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.94	44.50	14.10	14.10	14.13	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.99	44.50	14.03	14.03	14.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.03	44.50	13.95	13.95	15.33	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.07	44.50	13.87	13.87	15.93	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.11	44.50	13.79	13.79	16.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.16	44.50	13.71	13.71	17.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.20	44.50	13.63	13.63	17.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.24	44.50	13.55	13.55	18.28	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.29	44.50	13.47	13.47	18.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.33	44.50	13.40	13.40	19.43	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.37	44.50	13.32	13.32	20.01	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.41	44.50	13.24	13.24	20.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.46	44.50	13.16	13.16	21.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.50	44.50	13.08	13.08	21.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.54	44.50	13.00	13.00	22.26	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.59	44.50	12.92	12.92	22.82	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.63	44.50	12.84	12.84	23.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.67	44.50	12.76	12.76	23.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.71	44.50	12.69	12.69	24.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.76	44.50	12.61	12.61	25.00	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.80	44.50	12.53	12.53	25.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.84	44.50	12.45	12.45	26.08	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.89	44.50	12.37	12.37	26.61	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.93	44.50	12.29	12.29	27.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.97	44.50	12.21	12.21	27.66	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.01	44.50	12.13	12.13	28.19	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.06	44.50	12.06	12.06	28.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.10	44.50	11.98	11.98	29.22	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.14	44.50	11.90	11.90	29.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.19	44.50	11.82	11.82	30.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.23	44.50	11.74	11.74	30.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.27	44.50	11.66	11.66	31.25	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.31	44.50	11.58	11.58	31.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.36	44.50	11.50	11.50	32.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.40	44.50	11.43	11.43	32.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.44	44.50	11.35	11.35	33.22	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.49	44.50	11.27	11.27	33.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.53	44.50	11.19	11.19	34.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.57	44.50	11.11	11.11	34.66	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.61	44.50	11.03	11.03	35.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.66	44.50	10.95	10.95	35.61	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.70	44.50	10.87	10.87	36.07	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.74	44.50	10.80	10.80	36.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.79	44.50	10.72	10.72	37.00	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.83	44.50	10.64	10.64	37.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	2.87	44.50	1.46	1.46	29.32	0.19	72.51	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60S+0.50W+1.60H	1	2.91	44.50	1.39	1.39	29.39	0.18	72.50	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	2.96	44.50	1.33	1.33	29.44	0.17	72.48	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.00	44.50	1.26	1.26	29.50	0.16	72.47	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.04	44.50	1.19	1.19	29.55	0.15	72.45	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.09	44.50	1.12	1.12	29.60	0.14	72.43	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.13	44.50	1.05	1.05	29.65	0.13	72.42	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.17	44.50	0.98	0.98	29.69	0.12	72.40	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.21	44.50	0.91	0.91	29.73	0.11	72.39	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.26	44.50	0.84	0.84	29.77	0.10	72.37	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.30	44.50	0.77	0.77	29.80	0.10	72.36	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.34	44.50	0.70	0.70	29.84	0.09	72.34	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+1.60S+0.50W+1.60H	1	3.39	44.50	0.63	0.63	29.86	0.08	72.33	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.43	44.50	-0.57	0.57	36.08	0.06	72.29	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.47	44.50	-0.65	0.65	36.06	0.07	72.31	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.51	44.50	-0.72	0.72	36.03	0.07	72.32	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.56	44.50	-0.80	0.80	36.00	0.08	72.33	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.60	44.50	-0.88	0.88	35.96	0.09	72.35	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.64	44.50	-0.96	0.96	35.92	0.10	72.36	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.69	44.50	-1.04	1.04	35.88	0.11	72.38	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.73	44.50	-1.12	1.12	35.83	0.12	72.39	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.77	44.50	-1.20	1.20	35.78	0.12	72.41	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.81	44.50	-1.28	1.28	35.73	0.13	72.42	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.86	44.50	-1.35	1.35	35.67	0.14	72.44	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.90	44.50	-1.43	1.43	35.61	0.15	72.45	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.94	44.50	-1.51	1.51	35.55	0.16	72.47	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	3.99	44.50	-1.59	1.59	35.48	0.17	72.48	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.03	44.50	-3.94	3.94	35.35	0.41	72.91	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.07	44.50	-4.02	4.02	35.18	0.42	72.93	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.11	44.50	-4.10	4.10	35.00	0.43	72.95	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.16	44.50	-4.17	4.17	34.83	0.44	72.97	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.20	44.50	-4.25	4.25	34.65	0.46	72.98	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.24	44.50	-4.33	4.33	34.46	0.47	73.00	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.29	44.50	-4.41	4.41	34.27	0.48	73.02	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.33	44.50	-4.49	4.49	34.08	0.49	73.04	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.37	44.50	-4.57	4.57	33.89	0.50	73.06	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.41	44.50	-4.65	4.65	33.69	0.51	73.08	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.46	44.50	-4.73	4.73	33.49	0.52	73.10	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.50	44.50	-4.80	4.80	33.29	0.54	73.12	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.54	44.50	-4.91	4.91	33.08	0.55	73.15	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.59	44.50	-5.02	5.02	32.87	0.57	73.18	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.63	44.50	-5.13	5.13	32.65	0.58	73.21	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.67	44.50	-5.24	5.24	32.43	0.60	73.23	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.71	44.50	-5.35	5.35	32.20	0.62	73.26	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.76	44.50	-5.46	5.46	31.97	0.63	73.29	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.80	44.50	-5.56	5.56	31.73	0.65	73.32	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.84	44.50	-5.67	5.67	31.49	0.67	73.35	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.89	44.50	-5.78	5.78	31.25	0.69	73.39	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.93	44.50	-5.89	5.89	31.00	0.70	73.42	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	4.97	44.50	-6.00	6.00	30.74	0.72	73.45	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.01	44.50	-6.11	6.11	30.48	0.74	73.49	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.06	44.50	-6.22	6.22	30.22	0.76	73.52	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.10	44.50	-6.32	6.32	29.95	0.78	73.56	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.14	44.50	-6.43	6.43	29.67	0.80	73.59	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.19	44.50	-6.54	6.54	29.40	0.83	73.63	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	1	5.23	44.50	-6.65	6.65	29.11	0.85	73.67	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.27	44.50	-6.76	6.76	28.83	0.87	73.71	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.31	44.50	-6.87	6.87	28.53	0.89	73.75	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.36	44.50	-6.98	6.98	28.24	0.92	73.79	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.40	44.50	-7.08	7.08	27.94	0.94	73.83	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.44	44.50	-7.19	7.19	27.63	0.97	73.87	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.49	44.50	-7.30	7.30	27.32	0.99	73.92	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.53	44.50	-7.41	7.41	27.01	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.57	44.50	-7.52	7.52	26.69	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.61	44.50	-7.63	7.63	26.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.66	44.50	-7.73	7.73	26.03	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.70	44.50	-7.84	7.84	25.70	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.74	44.50	-7.95	7.95	25.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.79	44.50	-8.06	8.06	25.02	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.83	44.50	-8.17	8.17	24.67	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.87	44.50	-8.28	8.28	24.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.91	44.50	-8.39	8.39	23.96	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	5.96	44.50	-8.49	8.49	23.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.00	44.50	-14.52	14.52	22.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.04	44.50	-14.79	14.79	21.81	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.09	44.50	-15.06	15.06	21.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.13	44.50	-15.34	15.34	20.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.17	44.50	-15.61	15.61	19.86	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.21	44.50	-15.88	15.88	19.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.26	44.50	-16.15	16.15	18.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.30	44.50	-16.42	16.42	17.80	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.34	44.50	-16.70	16.70	17.09	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.39	44.50	-16.97	16.97	16.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.43	44.50	-17.24	17.24	15.63	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.47	44.50	-17.51	17.51	14.89	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.51	44.50	-17.79	17.79	14.13	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.56	44.50	-18.06	18.06	13.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.60	44.50	-18.33	18.33	12.58	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.64	44.50	-18.60	18.60	11.79	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.69	44.50	-18.87	18.87	10.99	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.73	44.50	-19.15	19.15	10.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.77	44.50	-19.42	19.42	9.35	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.81	44.50	-19.69	19.69	8.51	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.86	44.50	-19.96	19.96	7.66	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.90	44.50	-20.24	20.24	6.80	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.94	44.50	-20.51	20.51	5.93	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	6.99	44.50	-20.78	20.78	5.04	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.03	44.50	-21.05	21.05	4.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.07	44.50	-21.32	21.32	3.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.11	44.50	-21.60	21.60	2.32	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.16	44.50	-21.87	21.87	1.38	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.20	44.50	-22.14	22.14	0.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.24	45.00	-22.41	22.41	0.51	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.29	45.00	-22.69	22.69	1.48	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.33	45.00	-22.96	22.96	2.46	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.37	45.00	-23.23	23.23	3.45	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.41	45.00	-23.50	23.50	4.45	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.46	45.00	-23.77	23.77	5.46	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	1	7.50	45.00	-24.05	24.05	6.49	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	7.54	45.00	-24.32	24.32	7.52	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.59	45.00	-24.59	24.59	8.57	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.63	45.00	-24.86	24.86	9.63	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.67	45.00	-25.14	25.14	10.70	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.71	45.00	-25.41	25.41	11.79	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.76	45.00	-25.68	25.68	12.88	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.80	45.00	-25.95	25.95	13.99	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.84	45.00	-26.22	26.22	15.10	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.89	45.00	-26.50	26.50	16.23	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.93	45.00	-26.77	26.77	17.38	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	7.97	45.00	-27.04	27.04	18.53	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.01	45.00	-27.31	27.31	19.69	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.06	45.00	-27.59	27.59	20.87	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.10	45.00	-27.86	27.86	22.06	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.14	45.00	-28.13	28.13	23.26	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.19	45.00	-28.40	28.40	24.47	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.23	45.00	-28.68	28.68	25.69	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.27	45.00	-28.95	28.95	26.93	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.31	45.00	-29.22	29.22	28.17	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.36	45.00	-29.49	29.49	29.43	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.40	45.00	-29.76	29.76	30.70	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.44	45.00	-30.04	30.04	31.98	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.49	45.00	-30.31	30.31	33.28	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.53	45.00	-30.58	30.58	34.58	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.57	45.00	-30.85	30.85	35.90	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.61	45.00	-31.13	31.13	37.23	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.66	45.00	-31.40	31.40	38.57	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.70	45.00	-31.67	31.67	39.92	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.74	45.00	-31.94	31.94	41.28	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.79	45.00	-32.21	32.21	42.65	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.83	45.00	-32.49	32.49	44.04	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.87	45.00	-32.76	32.76	45.44	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.91	45.00	-33.03	33.03	46.85	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	8.96	45.00	-33.30	33.30	48.27	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.00	45.00	-33.58	33.58	49.70	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.04	45.00	-33.85	33.85	51.15	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.09	45.00	-34.12	34.12	52.60	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.13	45.00	-34.39	34.39	54.07	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.17	45.00	-34.66	34.66	55.55	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.21	45.00	-34.94	34.94	57.04	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.26	45.00	-35.21	35.21	58.55	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.30	45.00	-35.48	35.48	60.06	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.34	45.00	-35.75	35.75	61.59	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.39	45.00	-36.03	36.03	63.13	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.43	45.00	-36.30	36.30	64.68	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.47	45.00	-36.57	36.57	66.24	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.51	45.00	-36.84	36.84	67.81	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.56	45.00	-37.11	37.11	69.40	1.00	74.74	Vu < PhiVc/2	Not Reqd 1	74.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	9.60	45.00	-37.39	37.39	70.99	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.64	45.00	-37.66	37.66	72.60	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.69	45.00	-37.93	37.93	74.22	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.73	45.00	-38.20	38.20	75.85	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.77	45.00	-38.48	38.48	77.49	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.81	45.00	-38.75	38.75	79.15	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	9.86	45.00	-39.02	39.02	80.82	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.90	45.00	-39.29	39.29	82.49	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.94	45.00	-39.56	39.56	84.18	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	9.99	45.00	-39.84	39.84	85.89	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.03	45.00	-40.11	40.11	87.60	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.07	45.00	-40.38	40.38	89.32	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.11	45.00	-40.65	40.65	91.06	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.16	45.00	-40.93	40.93	92.81	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.20	45.00	-41.20	41.20	94.57	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.24	45.00	-41.47	41.47	96.34	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.29	45.00	-41.74	41.74	98.12	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.33	45.00	-42.02	42.02	99.92	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.37	45.00	-42.29	42.29	101.72	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.41	45.00	-42.56	42.56	103.54	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	1	10.46	45.00	-42.83	42.83	105.37	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.50	45.00	64.94	64.94	107.21	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.54	45.00	59.95	59.95	104.64	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.59	45.00	59.54	59.54	102.07	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.63	45.00	59.13	59.13	99.53	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.67	45.00	58.72	58.72	97.01	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.71	45.00	58.31	58.31	94.50	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.76	45.00	57.90	57.90	92.01	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.80	45.00	57.49	57.49	89.54	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.84	45.00	57.08	57.08	87.08	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.89	45.00	56.67	56.67	84.64	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.93	45.00	56.27	56.27	82.22	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	10.97	45.00	55.86	55.86	79.82	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.01	45.00	55.45	55.45	77.43	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.06	45.00	55.04	55.04	75.07	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.10	45.00	54.63	54.63	72.72	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.14	45.00	54.22	54.22	70.38	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.19	45.00	53.81	53.81	68.07	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.23	45.00	53.40	53.40	65.77	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.27	45.00	52.99	52.99	63.49	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.31	45.00	52.58	52.58	61.23	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.36	45.00	52.17	52.17	58.99	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.40	45.00	51.76	51.76	56.76	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.44	45.00	51.35	51.35	54.55	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.49	45.00	50.94	50.94	52.36	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.53	45.00	50.53	50.53	50.18	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.57	45.00	50.12	50.12	48.03	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.61	45.00	49.72	49.72	45.89	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.66	45.00	49.31	49.31	43.76	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.70	45.00	48.90	48.90	41.66	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.74	45.00	48.49	48.49	39.57	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.79	45.00	48.08	48.08	37.50	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.83	45.00	47.67	47.67	35.45	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.87	45.00	47.26	47.26	33.42	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.91	45.00	46.85	46.85	31.40	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	11.96	45.00	46.44	46.44	29.40	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.00	45.00	46.03	46.03	27.42	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.04	45.00	45.62	45.62	25.46	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.09	45.00	45.21	45.21	23.51	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.13	45.00	44.80	44.80	21.58	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	12.17	45.00	44.39	44.39	19.67	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.21	45.00	43.98	43.98	17.78	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.26	45.00	43.57	43.57	15.90	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.30	45.00	43.17	43.17	14.04	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.34	45.00	42.76	42.76	12.20	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.39	45.00	42.35	42.35	10.38	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.43	45.00	41.94	41.94	8.57	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.47	45.00	41.53	41.53	6.78	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.51	45.00	41.12	41.12	5.01	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.56	45.00	40.71	40.71	3.26	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.60	45.00	40.30	40.30	1.52	1.00	74.74	PhiVc/2 < Vu <=	Min 11.5.6	107.7	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.64	44.50	39.89	39.89	0.20	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.69	44.50	39.48	39.48	1.90	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.73	44.50	39.07	39.07	3.58	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.77	44.50	38.66	38.66	5.25	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.81	44.50	38.25	38.25	6.89	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.86	44.50	37.84	37.84	8.53	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.90	44.50	37.43	37.43	10.14	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.94	44.50	37.02	37.02	11.73	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	12.99	44.50	36.62	36.62	13.31	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.03	44.50	36.21	36.21	14.87	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.07	44.50	35.80	35.80	16.42	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.11	44.50	35.39	35.39	17.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.16	44.50	34.98	34.98	19.45	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.20	44.50	34.57	34.57	20.94	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.24	44.50	34.16	34.16	22.41	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.29	44.50	33.75	33.75	23.87	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.33	44.50	33.34	33.34	25.30	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.37	44.50	32.93	32.93	26.72	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.41	44.50	32.52	32.52	28.13	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.46	44.50	32.11	32.11	29.51	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.50	44.50	31.70	31.70	30.88	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.54	44.50	31.29	31.29	32.23	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.59	44.50	30.88	30.88	33.56	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.63	44.50	30.47	30.47	34.88	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.67	44.50	30.07	30.07	36.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.71	44.50	29.66	29.66	37.45	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.76	44.50	29.25	29.25	38.72	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.80	44.50	28.84	28.84	39.96	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.84	44.50	28.43	28.43	41.19	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.89	44.50	28.02	28.02	42.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.93	44.50	27.61	27.61	43.59	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	13.97	44.50	27.20	27.20	44.76	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.01	44.50	26.79	26.79	45.92	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.06	44.50	26.38	26.38	47.06	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.10	44.50	25.97	25.97	48.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.14	44.50	25.56	25.56	49.29	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.19	44.50	25.15	25.15	50.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.23	44.50	24.74	24.74	51.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.27	44.50	24.33	24.33	52.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.31	44.50	23.92	23.92	53.53	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.36	44.50	23.52	23.52	54.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.40	44.50	23.11	23.11	55.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.44	44.50	22.70	22.70	56.52	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	2	14.49	44.50	22.29	22.29	57.49	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.53	44.50	21.88	21.88	58.43	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.57	44.50	21.47	21.47	59.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.61	44.50	21.06	21.06	60.28	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.66	44.50	20.65	20.65	61.17	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.70	44.50	20.24	20.24	62.05	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.74	44.50	19.83	19.83	62.90	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.79	44.50	19.42	19.42	63.74	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.83	44.50	19.01	19.01	64.57	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.87	44.50	18.60	18.60	65.37	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.91	44.50	18.19	18.19	66.16	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	14.96	44.50	17.78	17.78	66.93	0.99	73.91	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.00	44.50	17.37	17.37	67.69	0.95	73.85	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.04	44.50	16.97	16.97	68.42	0.92	73.79	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.09	44.50	16.56	16.56	69.14	0.89	73.74	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.13	44.50	16.15	16.15	69.84	0.86	73.69	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.17	44.50	15.74	15.74	70.53	0.83	73.63	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.21	44.50	15.33	15.33	71.19	0.80	73.58	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.26	44.50	14.92	14.92	71.84	0.77	73.53	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.30	44.50	14.51	14.51	72.47	0.74	73.48	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.34	44.50	14.10	14.10	73.08	0.72	73.44	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.39	44.50	13.69	13.69	73.68	0.69	73.39	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.43	44.50	13.28	13.28	74.26	0.66	73.35	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.47	44.50	12.87	12.87	74.82	0.64	73.30	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.51	44.50	12.46	12.46	75.36	0.61	73.26	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.56	44.50	12.05	12.05	75.89	0.59	73.22	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.60	44.50	11.64	11.64	76.39	0.57	73.18	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.64	44.50	11.23	11.23	76.88	0.54	73.13	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.69	44.50	10.82	10.82	77.36	0.52	73.09	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.73	44.50	10.42	10.42	77.81	0.50	73.06	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.77	44.50	10.01	10.01	78.25	0.47	73.02	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.81	44.50	9.60	9.60	78.67	0.45	72.98	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.86	44.50	9.19	9.19	79.07	0.43	72.94	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.90	44.50	8.78	8.78	79.46	0.41	72.90	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.94	44.50	8.37	8.37	79.82	0.39	72.87	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	15.99	44.50	7.96	7.96	80.17	0.37	72.83	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.03	44.50	7.55	7.55	80.51	0.35	72.80	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.07	44.50	7.14	7.14	80.82	0.33	72.76	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.11	44.50	6.73	6.73	81.12	0.31	72.73	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.16	44.50	6.32	6.32	81.40	0.29	72.69	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.20	44.50	5.91	5.91	81.66	0.27	72.66	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.24	44.50	5.50	5.50	81.90	0.25	72.62	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.29	44.50	5.09	5.09	82.13	0.23	72.59	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.33	44.50	4.68	4.68	82.34	0.21	72.56	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.37	44.50	4.27	4.27	82.53	0.19	72.52	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.41	44.50	3.87	3.87	81.23	0.18	72.50	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.46	44.50	3.46	3.46	81.39	0.16	72.47	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.50	44.50	3.06	3.06	81.53	0.14	72.43	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.54	44.50	2.66	2.66	81.65	0.12	72.40	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.59	44.50	2.25	2.25	81.75	0.10	72.37	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.63	44.50	1.95	1.95	36.98	0.20	72.53	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	16.67	44.50	1.75	1.75	37.06	0.18	72.50	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.71	44.50	1.63	1.63	17.38	0.35	72.80	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.76	44.50	1.51	1.51	17.44	0.32	72.75	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	16.80	44.50	1.40	1.40	17.51	0.30	72.71	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.84	44.50	1.29	1.29	17.56	0.27	72.66	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	16.89	44.50	1.17	1.17	17.62	0.25	72.62	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.93	44.50	-1.19	1.19	84.03	0.05	72.28	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	16.97	44.50	-1.60	1.60	83.97	0.07	72.31	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.01	44.50	-2.01	2.01	83.89	0.09	72.35	Vu < PhiVc/2	Not Reqd 1	72.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.06	44.50	-2.42	2.42	83.79	0.11	72.38	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.10	44.50	-2.83	2.83	83.68	0.13	72.41	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.14	44.50	-3.24	3.24	83.55	0.14	72.44	Vu < PhiVc/2	Not Reqd 1	72.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.19	44.50	-3.65	3.65	83.40	0.16	72.47	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.23	44.50	-4.06	4.06	83.24	0.18	72.51	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.27	44.50	-4.47	4.47	83.05	0.20	72.54	Vu < PhiVc/2	Not Reqd 1	72.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.31	44.50	-4.88	4.88	82.85	0.22	72.57	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.36	44.50	-5.29	5.29	82.64	0.24	72.60	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.40	44.50	-5.70	5.70	82.40	0.26	72.64	Vu < PhiVc/2	Not Reqd 1	72.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.44	44.50	-6.11	6.11	82.15	0.28	72.67	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.49	44.50	-6.51	6.51	81.88	0.30	72.70	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.53	44.50	-6.92	6.92	81.59	0.31	72.74	Vu < PhiVc/2	Not Reqd 1	72.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.57	44.50	-7.33	7.33	81.28	0.33	72.77	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.61	44.50	-7.74	7.74	80.96	0.35	72.81	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.66	44.50	-8.15	8.15	80.62	0.37	72.84	Vu < PhiVc/2	Not Reqd 1	72.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.70	44.50	-8.56	8.56	80.26	0.40	72.88	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.74	44.50	-8.97	8.97	79.89	0.42	72.92	Vu < PhiVc/2	Not Reqd 1	72.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.79	44.50	-9.38	9.38	79.49	0.44	72.95	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.83	44.50	-9.79	9.79	79.08	0.46	72.99	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.87	44.50	-10.20	10.20	78.65	0.48	73.03	Vu < PhiVc/2	Not Reqd 1	73.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.91	44.50	-10.61	10.61	78.21	0.50	73.07	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	17.96	44.50	-11.02	11.02	77.75	0.53	73.11	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.00	44.50	-11.43	11.43	77.26	0.55	73.15	Vu < PhiVc/2	Not Reqd 1	73.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.04	44.50	-11.84	11.84	76.77	0.57	73.19	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.09	44.50	-12.25	12.25	76.25	0.60	73.23	Vu < PhiVc/2	Not Reqd 1	73.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.13	44.50	-12.66	12.66	75.72	0.62	73.27	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.17	44.50	-13.06	13.06	75.17	0.64	73.31	Vu < PhiVc/2	Not Reqd 1	73.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.21	44.50	-13.47	13.47	74.60	0.67	73.36	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.26	44.50	-13.88	13.88	74.01	0.70	73.40	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.30	44.50	-14.29	14.29	73.41	0.72	73.45	Vu < PhiVc/2	Not Reqd 1	73.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.34	44.50	-14.70	14.70	72.79	0.75	73.50	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.39	44.50	-15.11	15.11	72.15	0.78	73.54	Vu < PhiVc/2	Not Reqd 1	73.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.43	44.50	-15.52	15.52	71.49	0.81	73.59	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.47	44.50	-15.93	15.93	70.82	0.83	73.64	Vu < PhiVc/2	Not Reqd 1	73.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.51	44.50	-16.34	16.34	70.12	0.86	73.70	Vu < PhiVc/2	Not Reqd 1	73.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.56	44.50	-16.75	16.75	69.42	0.89	73.75	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.60	44.50	-17.16	17.16	68.69	0.93	73.81	Vu < PhiVc/2	Not Reqd 1	73.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.64	44.50	-17.57	17.57	67.95	0.96	73.86	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.69	44.50	-17.98	17.98	67.18	0.99	73.92	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.73	44.50	-18.39	18.39	66.40	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.77	44.50	-18.80	18.80	65.61	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.81	44.50	-19.20	19.20	64.79	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.86	44.50	-19.61	19.61	63.96	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.90	44.50	-20.02	20.02	63.11	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.94	44.50	-20.43	20.43	62.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	18.99	44.50	-20.84	20.84	61.36	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.03	44.50	-21.25	21.25	60.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.07	44.50	-21.66	21.66	59.54	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	19.11	44.50	-22.07	22.07	58.60	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.16	44.50	-22.48	22.48	57.65	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.20	44.50	-22.89	22.89	56.67	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.24	44.50	-23.30	23.30	55.69	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.29	44.50	-23.71	23.71	54.68	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.33	44.50	-24.12	24.12	53.65	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.37	44.50	-24.53	24.53	52.61	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.41	44.50	-24.94	24.94	51.55	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.46	44.50	-25.35	25.35	50.47	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.50	44.50	-25.75	25.75	49.38	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.54	44.50	-26.16	26.16	48.27	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.59	44.50	-26.57	26.57	47.14	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.63	44.50	-26.98	26.98	45.99	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.67	44.50	-27.39	27.39	44.82	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.71	44.50	-27.80	27.80	43.64	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.76	44.50	-28.21	28.21	42.44	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.80	44.50	-28.62	28.62	41.22	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.84	44.50	-29.03	29.03	39.99	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.89	44.50	-29.44	29.44	38.73	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.93	44.50	-29.85	29.85	37.46	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	19.97	44.50	-30.26	30.26	36.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.01	44.50	-30.67	30.67	34.87	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.06	44.50	-31.08	31.08	33.55	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.10	44.50	-31.49	31.49	32.21	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.14	44.50	-31.90	31.90	30.85	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.19	44.50	-32.30	32.30	29.47	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.23	44.50	-32.71	32.71	28.08	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.27	44.50	-33.12	33.12	26.67	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.31	44.50	-33.53	33.53	25.24	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.36	44.50	-33.94	33.94	23.79	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.40	44.50	-34.35	34.35	22.33	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.44	44.50	-34.76	34.76	20.85	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.49	44.50	-35.17	35.17	19.35	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.53	44.50	-35.58	35.58	17.83	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.57	44.50	-35.99	35.99	16.30	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.61	44.50	-36.40	36.40	14.75	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.66	44.50	-36.81	36.81	13.18	1.00	73.93	Vu < PhiVc/2	Not Reqd 1	73.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	20.70	44.50	-37.22	37.22	11.60	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.74	44.50	-37.63	37.63	9.99	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.79	44.50	-38.04	38.04	8.37	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.83	44.50	-38.45	38.45	6.73	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.87	44.50	-38.85	38.85	5.07	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.91	44.50	-39.26	39.26	3.40	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	20.96	44.50	-39.67	39.67	1.71	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	2	21.00	44.50	-40.08	40.08	0.00	1.00	73.93	PhiVc/2 < Vu <=	Min 11.5.6	106.6	9.8	9.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	10.500	-105.37	195.07	0.54
Span # 2	2	10.500	-107.21	195.07	0.55
+1.40D+1.60H					
Span # 1	1	10.500	-44.66	195.07	0.23
Span # 2	2	10.500	-45.56	195.07	0.23
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L)					

Description : GB-C-62R (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	10.500	-41.36	195.07	0.21
Span # 2	2	10.500	-42.14	195.07	0.22
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-43.02	195.07	0.22
Span # 2	2	10.500	-43.95	195.07	0.23
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-46.10	195.07	0.24
Span # 2	2	10.500	-47.04	195.07	0.24
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-61.56	195.07	0.32
Span # 2	2	10.500	-62.66	195.07	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-63.23	195.07	0.32
Span # 2	2	10.500	-64.47	195.07	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-66.30	195.07	0.34
Span # 2	2	10.500	-67.56	195.07	0.35
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-39.24	195.07	0.20
Span # 2	2	10.500	-40.02	195.07	0.21
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-39.76	195.07	0.20
Span # 2	2	10.500	-40.59	195.07	0.21
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-40.72	195.07	0.21
Span # 2	2	10.500	-41.55	195.07	0.21
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-38.28	195.07	0.20
Span # 2	2	10.500	-39.06	195.07	0.20
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-38.28	195.07	0.20
Span # 2	2	10.500	-39.06	195.07	0.20
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-38.28	195.07	0.20
Span # 2	2	10.500	-39.06	195.07	0.20
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-103.89	195.07	0.53
Span # 2	2	10.500	-105.68	195.07	0.54
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-104.41	195.07	0.54
Span # 2	2	10.500	-106.25	195.07	0.54
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-105.37	195.07	0.54
Span # 2	2	10.500	-107.21	195.07	0.55
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	10.500	-102.93	195.07	0.53
Span # 2	2	10.500	-104.72	195.07	0.54
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-39.24	195.07	0.20
Span # 2	2	10.500	-40.02	195.07	0.21
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-39.76	195.07	0.20
Span # 2	2	10.500	-40.59	195.07	0.21
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-40.72	195.07	0.21
Span # 2	2	10.500	-41.55	195.07	0.21
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-59.44	195.07	0.30
Span # 2	2	10.500	-60.54	195.07	0.31
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-59.97	195.07	0.31
Span # 2	2	10.500	-61.10	195.07	0.31
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-60.93	195.07	0.31
Span # 2	2	10.500	-62.07	195.07	0.32
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-67.52	195.07	0.35
Span # 2	2	10.500	-68.75	195.07	0.35
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*)					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-C-62R (2 units)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	10.500	-68.04	195.07	0.35
Span # 2	2	10.500	-69.31	195.07	0.36
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-69.00	195.07	0.35
Span # 2	2	10.500	-70.28	195.07	0.36
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L)					
Span # 1	1	10.500	-67.53	195.07	0.35
Span # 2	2	10.500	-68.75	195.07	0.35
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*)					
Span # 1	1	10.500	-68.06	195.07	0.35
Span # 2	2	10.500	-69.31	195.07	0.36
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL)					
Span # 1	1	10.500	-69.02	195.07	0.35
Span # 2	2	10.500	-70.28	195.07	0.36
+0.90D+W+0.90H					
Span # 1	1	10.500	-28.71	195.07	0.15
Span # 2	2	10.500	-29.29	195.07	0.15
+0.90D+E+0.90H					
Span # 1	1	10.500	-28.70	195.07	0.15
Span # 2	2	10.500	-29.29	195.07	0.15
+0.90D-E+0.90H					
Span # 1	1	10.500	-28.72	195.07	0.15
Span # 2	2	10.500	-29.29	195.07	0.15

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*)	1	0.0008	4.350	S Only	-0.0001	9.450
+D+S+H	2	0.0017	5.850		0.0000	9.450

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Title Block Line 6

Project Title:
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Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

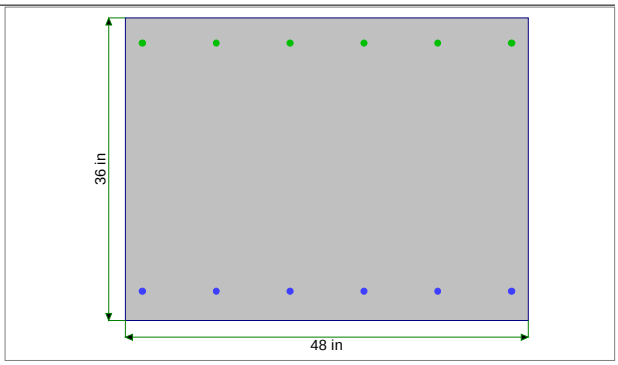
Description : GB-D-62R

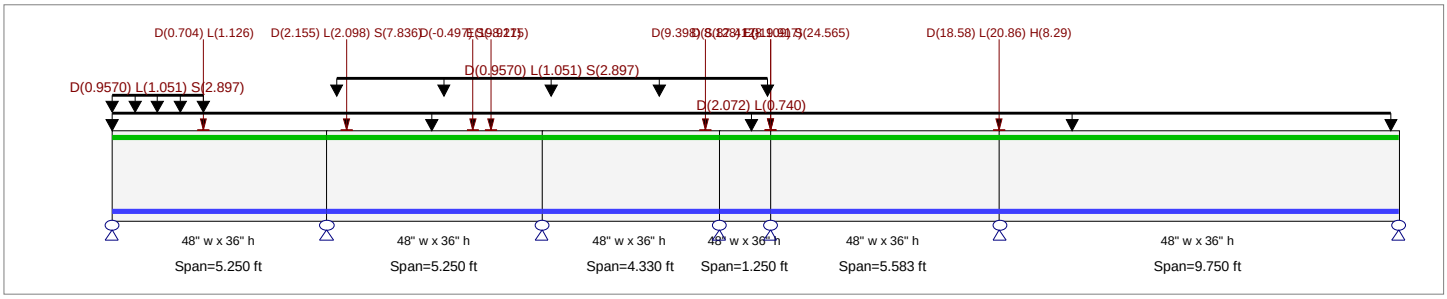
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 48.0 in, Height = 36.0 in

Span #1 Reinforcing....	
6-#6 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span	6-#6 at 3.0 in from Top, from 0.0 to 5.250 ft in this span
Span #2 Reinforcing....	
5-#6 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span	5-#6 at 3.0 in from Top, from 0.0 to 5.250 ft in this span
Span #3 Reinforcing....	
5-#6 at 3.50 in from Bottom, from 0.0 to 4.330 ft in this span	5-#6 at 3.0 in from Top, from 0.0 to 4.330 ft in this span
Span #4 Reinforcing....	
5-#6 at 3.50 in from Bottom, from 0.0 to 1.250 ft in this span	5-#6 at 3.0 in from Top, from 0.0 to 1.250 ft in this span
Span #5 Reinforcing....	
5-#6 at 3.50 in from Bottom, from 0.0 to 15.50 ft in this span	5-#6 at 3.0 in from Top, from 0.0 to 15.50 ft in this span
Span #6 Reinforcing....	
6-#6 at 3.50 in from Bottom, from 0.0 to 9.750 ft in this span	6-#6 at 3.0 in from Top, from 0.0 to 9.750 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 0.0 -->> 31.250 ft, Tributary Width = 18.50 ft
Partial Length Uniform Load : D = 0.9570, L = 1.051, S = 2.897 k/ft, Extent = 0.0 -->> 2.250 ft
Partial Length Uniform Load : D = 0.9570, L = 1.051, S = 2.897 k/ft, Extent = 5.50 -->> 16.0 ft
Load for Span Number 1
Point Load : D = 0.7040, L = 1.126 k @ 2.250 ft, (P17)
Load for Span Number 2
Point Load : D = 2.155, L = 2.098, S = 7.836 k @ 0.50 ft, (P18)
Point Load : D = -0.4970, S = -8.215 k @ 3.583 ft, (P19)
Point Load : E = 19.917 k @ 4.0 ft, (MOT)
Load for Span Number 3
Point Load : D = 9.398, S = 87.412 k @ 4.0 ft, (P20)
Load for Span Number 4
Point Load : D = 8.128, L = 8.109, S = 24.565 k @ 1.250 ft, (P21)
Point Load : E = -19.917 k @ 1.250 ft, (MOT)
Load for Span Number 6
Point Load : D = 18.580, L = 20.860, H = 8.290 k @ 0.0 ft, (GB-K-62R)

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Title Block Line 6

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Engineer:
Project Descr:

Project ID:

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Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-D-62R

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.143** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in Ratio = 0 <360
Mu : Applied	-49.317 k-ft	Max Upward Transient Deflection	0.000 in Ratio = 0 <360
Mn * Phi : Allowable	345.335 k-ft	Max Downward Total Deflection	0.000 in Ratio = 999 <240
Location of maximum on span	5.456 ft	Max Upward Total Deflection	0.000 in Ratio = 999 <240
Span # where maximum occurs	Span # 5		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Overall MAXimum	15.814	48.638	49.315	143.345	21.529	47.148	17.564
Overall MINimum	-0.001	0.003	-0.017	-0.087	0.013	0.007	-0.001
+D+H	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+L+H, LL Comb Run (*****L)	9.508	28.271	22.873	32.153	3.024	45.202	17.561
+D+L+H, LL Comb Run (****L*)	9.515	28.232	23.070	27.850	11.017	41.322	14.624
+D+L+H, LL Comb Run (****LL)	9.511	28.253	22.963	30.183	7.243	47.078	17.493
+D+L+H, LL Comb Run (***L**)	9.511	28.255	22.952	30.978	15.939	39.432	14.694
+D+L+H, LL Comb Run (***L*L)	9.507	28.277	22.846	33.311	12.165	45.188	17.562
+D+L+H, LL Comb Run (***LL*)	9.514	28.237	23.042	29.009	20.158	41.308	14.626
+D+L+H, LL Comb Run (***LLL)	9.510	28.259	22.936	31.342	16.383	47.064	17.494
+D+L+H, LL Comb Run (**L***)	9.577	27.859	26.862	36.441	4.317	39.509	14.688
+D+L+H, LL Comb Run (**L**L)	9.574	27.881	26.756	38.774	0.543	45.265	17.556
+D+L+H, LL Comb Run (**L*L*)	9.580	27.841	26.952	34.472	8.536	41.385	14.619
+D+L+H, LL Comb Run (**L*LL)	9.577	27.862	26.845	36.805	4.761	47.141	17.487
+D+L+H, LL Comb Run (**LL**)	9.576	27.865	26.835	37.600	13.458	39.495	14.689
+D+L+H, LL Comb Run (**LL*L)	9.573	27.886	26.728	39.933	9.684	45.251	17.557
+D+L+H, LL Comb Run (**LLL*)	9.579	27.847	26.925	35.631	17.677	41.370	14.621
+D+L+H, LL Comb Run (**LLLL)	9.576	27.868	26.818	37.964	13.902	47.126	17.489
+D+L+H, LL Comb Run (*L****)	8.993	35.022	28.992	27.690	7.926	39.418	14.695
+D+L+H, LL Comb Run (*L***L)	8.990	35.043	28.885	30.024	4.152	45.174	17.563
+D+L+H, LL Comb Run (*L**L*)	8.996	35.004	29.081	25.721	12.145	41.293	14.627
+D+L+H, LL Comb Run (*L**LL)	8.993	35.025	28.975	28.054	8.371	47.049	17.495
+D+L+H, LL Comb Run (*L*L**)	8.992	35.027	28.964	28.849	17.067	39.403	14.696
+D+L+H, LL Comb Run (*L*L*L)	8.989	35.049	28.858	31.182	13.293	45.159	17.564
+D+L+H, LL Comb Run (*L*LL*)	8.995	35.009	29.054	26.880	21.286	41.279	14.628
+D+L+H, LL Comb Run (*L*LLL)	8.992	35.031	28.948	29.213	17.511	47.035	17.496
+D+L+H, LL Comb Run (*LL***)	9.058	34.631	32.874	34.312	5.445	39.480	14.690
+D+L+H, LL Comb Run (*LL**L)	9.055	34.652	32.768	36.645	1.671	45.236	17.558
+D+L+H, LL Comb Run (*LL*L*)	9.061	34.613	32.964	32.343	9.664	41.356	14.622
+D+L+H, LL Comb Run (*LL*LL)	9.058	34.634	32.857	34.676	5.889	47.112	17.490
+D+L+H, LL Comb Run (*LLL**)	9.057	34.637	32.847	35.471	14.586	39.466	14.691
+D+L+H, LL Comb Run (*LLL*L)	9.054	34.658	32.740	37.804	10.812	45.222	17.559
+D+L+H, LL Comb Run (*LLLL*)	9.061	34.618	32.937	33.502	18.804	41.342	14.623
+D+L+H, LL Comb Run (*LLLLL)	9.057	34.640	32.830	35.835	15.030	47.098	17.491
+D+L+H, LL Comb Run (L*****)	13.462	32.317	22.087	30.338	6.523	39.453	14.692
+D+L+H, LL Comb Run (L****L)	13.459	32.338	21.981	32.672	2.749	45.209	17.560
+D+L+H, LL Comb Run (L***L*)	13.465	32.299	22.177	28.369	10.742	41.329	14.624
+D+L+H, LL Comb Run (L***LL)	13.462	32.320	22.071	30.702	6.968	47.085	17.492
+D+L+H, LL Comb Run (L**L**)	13.462	32.322	22.060	31.497	15.664	39.439	14.693
+D+L+H, LL Comb Run (L**L*L)	13.458	32.344	21.954	33.830	11.890	45.195	17.561
+D+L+H, LL Comb Run (L**LL*)	13.465	32.304	22.150	29.528	19.883	41.315	14.625
+D+L+H, LL Comb Run (L**LLL)	13.461	32.326	22.044	31.861	16.108	47.071	17.493
+D+L+H, LL Comb Run (L*L***)	13.528	31.926	25.970	36.960	4.042	39.516	14.687
+D+L+H, LL Comb Run (L*L**L)	13.524	31.948	25.863	39.293	0.268	45.272	17.555
+D+L+H, LL Comb Run (L*L*L*)	13.531	31.908	26.060	34.991	8.261	41.392	14.619
+D+L+H, LL Comb Run (L*L*LL)	13.527	31.930	25.953	37.324	4.486	47.148	17.487
+D+L+H, LL Comb Run (L*LL**)	13.527	31.932	25.942	38.119	13.183	39.502	14.688
+D+L+H, LL Comb Run (L*LL*L)	13.523	31.953	25.836	40.452	9.409	45.257	17.556
+D+L+H, LL Comb Run (L*LLL*)	13.530	31.914	26.032	36.150	17.401	41.377	14.620
+D+L+H, LL Comb Run (L*LLLL)	13.526	31.935	25.926	38.483	13.627	47.133	17.488

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+L+H, LL Comb Run (LL****)	12.944	39.089	28.099	28.210	7.651	39.425	14.695
+D+L+H, LL Comb Run (LL***L)	12.940	39.110	27.993	30.543	3.877	45.180	17.563
+D+L+H, LL Comb Run (LL**L*)	12.947	39.071	28.189	26.240	11.870	41.300	14.626
+D+L+H, LL Comb Run (LL**LL)	12.943	39.092	28.083	28.573	8.096	47.056	17.494
+D+L+H, LL Comb Run (LL*L**)	12.943	39.094	28.072	29.368	16.792	39.410	14.696
+D+L+H, LL Comb Run (LL*L*L)	12.939	39.116	27.966	31.701	13.018	45.166	17.564
+D+L+H, LL Comb Run (LL*LL*)	12.946	39.076	28.162	27.399	21.011	41.286	14.627
+D+L+H, LL Comb Run (LL*LLL)	12.942	39.098	28.055	29.732	17.236	47.042	17.495
+D+L+H, LL Comb Run (LLL***)	13.009	38.698	31.982	34.831	5.170	39.487	14.689
+D+L+H, LL Comb Run (LLL**L)	13.005	38.719	31.875	37.164	1.396	45.243	17.558
+D+L+H, LL Comb Run (LLL*L*)	13.012	38.680	32.072	32.862	9.389	41.363	14.621
+D+L+H, LL Comb Run (LLL*LL)	13.008	38.701	31.965	35.195	5.614	47.119	17.489
+D+L+H, LL Comb Run (LLLL**)	13.008	38.704	31.954	35.990	14.311	39.473	14.691
+D+L+H, LL Comb Run (LLLL*L)	13.004	38.725	31.848	38.323	10.537	45.229	17.559
+D+L+H, LL Comb Run (LLLLL*)	13.011	38.686	32.044	34.021	18.529	41.349	14.622
+D+L+H, LL Comb Run (LLLLLL)	13.007	38.707	31.938	36.354	14.755	47.105	17.490
+D+Lr+H, LL Comb Run (*****L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (****L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (****LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (***L**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (***L*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (***LL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (***LLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**L***)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**L**L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**L*L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**L*LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**LL**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**LL*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**LLL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (**LLLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L****)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L***L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L**L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L**LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L*L**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L*L*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L*LL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*L*LLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LL***)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LL**L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LL*L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LL*LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LLL**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LLL*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LLLL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (*LLLLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*****)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L****L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L***L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L***LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L**L**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L**L*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L**LL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L**LLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*L***)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*L**L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*L*L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*L*LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+Lr+H, LL Comb Run (L*LL**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*LL*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*LLL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (L*LLLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL****)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL***L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL**L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL**LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL*L**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL*L*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL*LL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LL*LLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLL***)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLL**L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLL*L*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLL*LL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLLL**)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLLL*L)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLLLL*)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+Lr+H, LL Comb Run (LLLLLL)	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+S+H	13.895	41.475	34.761	143.345	11.952	39.954	14.652
+D+0.750Lr+0.750L+H, LL Comb Run (	9.509	28.266	22.900	31.569	3.968	43.763	16.844
+D+0.750Lr+0.750L+H, LL Comb Run (	9.514	28.236	23.047	28.343	9.962	40.853	14.642
+D+0.750Lr+0.750L+H, LL Comb Run (	9.512	28.252	22.967	30.092	7.132	45.170	16.793
+D+0.750Lr+0.750L+H, LL Comb Run (	9.511	28.254	22.959	30.688	13.654	39.435	14.694
+D+0.750Lr+0.750L+H, LL Comb Run (	9.509	28.270	22.879	32.438	10.823	43.752	16.845
+D+0.750Lr+0.750L+H, LL Comb Run (	9.514	28.241	23.027	29.211	16.818	40.842	14.642
+D+0.750Lr+0.750L+H, LL Comb Run (	9.511	28.257	22.947	30.961	13.987	45.159	16.793
+D+0.750Lr+0.750L+H, LL Comb Run (	9.561	27.957	25.891	34.786	4.938	39.493	14.689
+D+0.750Lr+0.750L+H, LL Comb Run (	9.558	27.973	25.812	36.536	2.107	43.810	16.840
+D+0.750Lr+0.750L+H, LL Comb Run (	9.563	27.943	25.959	33.309	8.101	40.900	14.638
+D+0.750Lr+0.750L+H, LL Comb Run (	9.560	27.959	25.879	35.059	5.271	45.217	16.789
+D+0.750Lr+0.750L+H, LL Comb Run (	9.560	27.961	25.871	35.655	11.793	39.482	14.690
+D+0.750Lr+0.750L+H, LL Comb Run (	9.557	27.977	25.791	37.405	8.963	43.799	16.841
+D+0.750Lr+0.750L+H, LL Comb Run (	9.562	27.947	25.938	34.178	14.957	40.889	14.639
+D+0.750Lr+0.750L+H, LL Comb Run (	9.560	27.963	25.859	35.928	12.126	45.206	16.790
+D+0.750Lr+0.750L+H, LL Comb Run (	9.123	33.329	27.489	28.223	7.644	39.425	14.695
+D+0.750Lr+0.750L+H, LL Comb Run (	9.120	33.345	27.409	29.973	4.814	43.742	16.846
+D+0.750Lr+0.750L+H, LL Comb Run (	9.125	33.315	27.556	26.746	10.808	40.832	14.643
+D+0.750Lr+0.750L+H, LL Comb Run (	9.123	33.331	27.476	28.496	7.978	45.149	16.794
+D+0.750Lr+0.750L+H, LL Comb Run (	9.122	33.333	27.468	29.092	14.500	39.414	14.695
+D+0.750Lr+0.750L+H, LL Comb Run (	9.120	33.349	27.388	30.842	11.669	43.731	16.846
+D+0.750Lr+0.750L+H, LL Comb Run (	9.125	33.319	27.536	27.615	17.664	40.821	14.644
+D+0.750Lr+0.750L+H, LL Comb Run (	9.122	33.336	27.456	29.365	14.833	45.138	16.795
+D+0.750Lr+0.750L+H, LL Comb Run (	9.172	33.036	30.400	33.189	5.784	39.472	14.691
+D+0.750Lr+0.750L+H, LL Comb Run (	9.169	33.052	30.321	34.939	2.953	43.789	16.842
+D+0.750Lr+0.750L+H, LL Comb Run (	9.174	33.022	30.468	31.712	8.947	40.879	14.639
+D+0.750Lr+0.750L+H, LL Comb Run (	9.171	33.038	30.388	33.462	6.117	45.196	16.791
+D+0.750Lr+0.750L+H, LL Comb Run (	9.171	33.040	30.380	34.058	12.639	39.461	14.692
+D+0.750Lr+0.750L+H, LL Comb Run (	9.168	33.056	30.300	35.808	9.809	43.778	16.843
+D+0.750Lr+0.750L+H, LL Comb Run (	9.173	33.026	30.447	32.581	15.803	40.868	14.640
+D+0.750Lr+0.750L+H, LL Comb Run (	9.171	33.042	30.368	34.331	12.972	45.185	16.791
+D+0.750Lr+0.750L+H, LL Comb Run (	12.475	31.300	22.311	30.209	6.592	39.451	14.692
+D+0.750Lr+0.750L+H, LL Comb Run (	12.472	31.316	22.231	31.959	3.762	43.768	16.843
+D+0.750Lr+0.750L+H, LL Comb Run (	12.477	31.287	22.378	28.732	9.756	40.858	14.641
+D+0.750Lr+0.750L+H, LL Comb Run (	12.474	31.303	22.298	30.482	6.925	45.175	16.792
+D+0.750Lr+0.750L+H, LL Comb Run (	12.474	31.304	22.290	31.078	13.448	39.441	14.693
+D+0.750Lr+0.750L+H, LL Comb Run (	12.471	31.320	22.210	32.828	10.617	43.758	16.844
+D+0.750Lr+0.750L+H, LL Comb Run (	12.476	31.291	22.357	29.601	16.612	40.848	14.642

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+H, LL Comb Run (	12.474	31.307	22.278	31.351	13.781	45.164	16.793
+D+0.750Lr+0.750L+H, LL Comb Run (	12.524	31.007	25.222	35.175	4.731	39.498	14.689
+D+0.750Lr+0.750L+H, LL Comb Run (	12.521	31.023	25.142	36.925	1.901	43.815	16.840
+D+0.750Lr+0.750L+H, LL Comb Run (	12.526	30.994	25.290	33.698	7.895	40.905	14.637
+D+0.750Lr+0.750L+H, LL Comb Run (	12.523	31.010	25.210	35.448	5.064	45.222	16.788
+D+0.750Lr+0.750L+H, LL Comb Run (	12.523	31.011	25.202	36.044	11.587	39.488	14.689
+D+0.750Lr+0.750L+H, LL Comb Run (	12.520	31.027	25.122	37.794	8.756	43.805	16.840
+D+0.750Lr+0.750L+H, LL Comb Run (	12.525	30.998	25.269	34.567	14.751	40.895	14.638
+D+0.750Lr+0.750L+H, LL Comb Run (	12.523	31.014	25.189	36.317	11.920	45.212	16.789
+D+0.750Lr+0.750L+H, LL Comb Run (	12.086	36.379	26.819	28.612	7.438	39.430	14.694
+D+0.750Lr+0.750L+H, LL Comb Run (	12.083	36.395	26.740	30.362	4.608	43.747	16.845
+D+0.750Lr+0.750L+H, LL Comb Run (	12.088	36.366	26.887	27.135	10.602	40.837	14.643
+D+0.750Lr+0.750L+H, LL Comb Run (	12.085	36.382	26.807	28.885	7.771	45.154	16.794
+D+0.750Lr+0.750L+H, LL Comb Run (	12.085	36.383	26.799	29.481	14.294	39.419	14.695
+D+0.750Lr+0.750L+H, LL Comb Run (	12.082	36.399	26.719	31.231	11.463	43.736	16.846
+D+0.750Lr+0.750L+H, LL Comb Run (	12.087	36.370	26.866	28.004	17.458	40.826	14.644
+D+0.750Lr+0.750L+H, LL Comb Run (	12.085	36.386	26.787	29.754	14.627	45.143	16.795
+D+0.750Lr+0.750L+H, LL Comb Run (	12.135	36.086	29.731	33.578	5.577	39.477	14.690
+D+0.750Lr+0.750L+H, LL Comb Run (	12.132	36.102	29.651	35.328	2.747	43.794	16.841
+D+0.750Lr+0.750L+H, LL Comb Run (	12.137	36.073	29.799	32.101	8.741	40.884	14.639
+D+0.750Lr+0.750L+H, LL Comb Run (	12.134	36.089	29.719	33.851	5.910	45.201	16.790
+D+0.750Lr+0.750L+H, LL Comb Run (	12.134	36.090	29.711	34.447	12.433	39.466	14.691
+D+0.750Lr+0.750L+H, LL Comb Run (	12.131	36.106	29.631	36.197	9.602	43.783	16.842
+D+0.750Lr+0.750L+H, LL Comb Run (	12.136	36.077	29.778	32.970	15.597	40.873	14.640
+D+0.750Lr+0.750L+H, LL Comb Run (	12.134	36.093	29.698	34.720	12.766	45.190	16.791
+D+0.750L+0.750S+H, LL Comb Run (*	12.797	38.185	31.736	116.713	7.833	44.144	16.813
+D+0.750L+0.750S+H, LL Comb Run (*	12.802	38.155	31.883	113.487	13.827	41.234	14.611
+D+0.750L+0.750S+H, LL Comb Run (*	12.799	38.171	31.803	115.236	10.997	45.551	16.762
+D+0.750L+0.750S+H, LL Comb Run (*	12.799	38.173	31.795	115.832	17.519	39.816	14.663
+D+0.750L+0.750S+H, LL Comb Run (*	12.796	38.189	31.715	117.582	14.689	44.133	16.814
+D+0.750L+0.750S+H, LL Comb Run (*	12.801	38.159	31.862	114.356	20.683	41.223	14.612
+D+0.750L+0.750S+H, LL Comb Run (*	12.798	38.175	31.783	116.105	17.853	45.540	16.763
+D+0.750L+0.750S+H, LL Comb Run (*	12.848	37.875	34.727	119.930	8.803	39.874	14.658
+D+0.750L+0.750S+H, LL Comb Run (*	12.846	37.891	34.648	121.680	5.972	44.191	16.809
+D+0.750L+0.750S+H, LL Comb Run (*	12.851	37.862	34.795	118.453	11.967	41.281	14.607
+D+0.750L+0.750S+H, LL Comb Run (*	12.848	37.878	34.715	120.203	9.136	45.598	16.758
+D+0.750L+0.750S+H, LL Comb Run (*	12.848	37.879	34.707	120.799	15.659	39.863	14.659
+D+0.750L+0.750S+H, LL Comb Run (*	12.845	37.896	34.627	122.549	12.828	44.180	16.810
+D+0.750L+0.750S+H, LL Comb Run (*	12.850	37.866	34.774	119.322	18.822	41.270	14.608
+D+0.750L+0.750S+H, LL Comb Run (*	12.847	37.882	34.694	121.072	15.992	45.587	16.759
+D+0.750L+0.750S+H, LL Comb Run (*	12.411	43.247	36.325	113.367	11.510	39.805	14.664
+D+0.750L+0.750S+H, LL Comb Run (*	12.408	43.263	36.245	115.117	8.679	44.122	16.815
+D+0.750L+0.750S+H, LL Comb Run (*	12.413	43.234	36.392	111.890	14.673	41.212	14.612
+D+0.750L+0.750S+H, LL Comb Run (*	12.410	43.250	36.312	113.640	11.843	45.529	16.763
+D+0.750L+0.750S+H, LL Comb Run (*	12.410	43.252	36.304	114.236	18.365	39.795	14.665
+D+0.750L+0.750S+H, LL Comb Run (*	12.407	43.268	36.224	115.986	15.535	44.111	16.816
+D+0.750L+0.750S+H, LL Comb Run (*	12.412	43.238	36.371	112.759	21.529	41.201	14.613
+D+0.750L+0.750S+H, LL Comb Run (*	12.409	43.254	36.292	114.509	18.698	45.518	16.764
+D+0.750L+0.750S+H, LL Comb Run (*	12.459	42.954	39.236	118.333	9.649	39.852	14.660
+D+0.750L+0.750S+H, LL Comb Run (*	12.457	42.970	39.156	120.083	6.818	44.169	16.811
+D+0.750L+0.750S+H, LL Comb Run (*	12.462	42.941	39.304	116.856	12.813	41.259	14.609
+D+0.750L+0.750S+H, LL Comb Run (*	12.459	42.957	39.224	118.606	9.982	45.576	16.760
+D+0.750L+0.750S+H, LL Comb Run (*	12.459	42.958	39.216	119.202	16.505	39.842	14.661
+D+0.750L+0.750S+H, LL Comb Run (*	12.456	42.974	39.136	120.952	13.674	44.159	16.812
+D+0.750L+0.750S+H, LL Comb Run (*	12.461	42.945	39.283	117.725	19.668	41.249	14.609
+D+0.750L+0.750S+H, LL Comb Run (*	12.458	42.961	39.203	119.475	16.838	45.565	16.761
+D+0.750L+0.750S+H, LL Comb Run (L	15.762	41.219	31.146	115.353	10.458	39.832	14.662
+D+0.750L+0.750S+H, LL Comb Run (L	15.760	41.235	31.067	117.103	7.627	44.149	16.813
+D+0.750L+0.750S+H, LL Comb Run (L	15.765	41.205	31.214	113.876	13.621	41.239	14.610

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+H, LL Comb Run (L	15.762	41.221	31.134	115.626	10.791	45.556	16.761
+D+0.750L+0.750S+H, LL Comb Run (L	15.762	41.223	31.126	116.222	17.313	39.821	14.662
+D+0.750L+0.750S+H, LL Comb Run (L	15.759	41.239	31.046	117.972	14.483	44.138	16.813
+D+0.750L+0.750S+H, LL Comb Run (L	15.764	41.209	31.193	114.745	20.477	41.228	14.611
+D+0.750L+0.750S+H, LL Comb Run (L	15.761	41.225	31.113	116.495	17.646	45.545	16.762
+D+0.750L+0.750S+H, LL Comb Run (L	15.811	40.926	34.058	120.319	8.597	39.879	14.658
+D+0.750L+0.750S+H, LL Comb Run (L	15.809	40.942	33.978	122.069	5.766	44.196	16.809
+D+0.750L+0.750S+H, LL Comb Run (L	15.814	40.912	34.126	118.842	11.760	41.286	14.606
+D+0.750L+0.750S+H, LL Comb Run (L	15.811	40.928	34.046	120.592	8.930	45.603	16.758
+D+0.750L+0.750S+H, LL Comb Run (L	15.811	40.930	34.038	121.188	15.452	39.868	14.659
+D+0.750L+0.750S+H, LL Comb Run (L	15.808	40.946	33.958	122.938	12.622	44.185	16.810
+D+0.750L+0.750S+H, LL Comb Run (L	15.813	40.916	34.105	119.711	18.616	41.275	14.607
+D+0.750L+0.750S+H, LL Comb Run (L	15.810	40.932	34.025	121.461	15.785	45.592	16.758
+D+0.750L+0.750S+H, LL Comb Run (L	15.373	46.298	35.655	113.756	11.303	39.810	14.663
+D+0.750L+0.750S+H, LL Comb Run (L	15.371	46.314	35.576	115.506	8.473	44.127	16.814
+D+0.750L+0.750S+H, LL Comb Run (L	15.376	46.284	35.723	112.279	14.467	41.217	14.612
+D+0.750L+0.750S+H, LL Comb Run (L	15.373	46.300	35.643	114.029	11.637	45.534	16.763
+D+0.750L+0.750S+H, LL Comb Run (L	15.373	46.302	35.635	114.625	18.159	39.800	14.664
+D+0.750L+0.750S+H, LL Comb Run (L	15.370	46.318	35.555	116.375	15.328	44.117	16.815
+D+0.750L+0.750S+H, LL Comb Run (L	15.375	46.288	35.702	113.148	21.323	41.207	14.613
+D+0.750L+0.750S+H, LL Comb Run (L	15.372	46.304	35.622	114.898	18.492	45.524	16.764
+D+0.750L+0.750S+H, LL Comb Run (L	15.422	46.005	38.567	118.722	9.443	39.858	14.659
+D+0.750L+0.750S+H, LL Comb Run (L	15.420	46.021	38.487	120.472	6.612	44.174	16.810
+D+0.750L+0.750S+H, LL Comb Run (L	15.425	45.991	38.635	117.245	12.606	41.264	14.608
+D+0.750L+0.750S+H, LL Comb Run (L	15.422	46.007	38.555	118.995	9.776	45.581	16.759
+D+0.750L+0.750S+H, LL Comb Run (L	15.422	46.009	38.547	119.591	16.298	39.847	14.660
+D+0.750L+0.750S+H, LL Comb Run (L	15.419	46.025	38.467	121.341	13.468	44.164	16.811
+D+0.750L+0.750S+H, LL Comb Run (L	15.424	45.995	38.614	118.114	19.462	41.254	14.609
+D+0.750L+0.750S+H, LL Comb Run (L	15.421	46.011	38.534	119.864	16.631	45.571	16.760
+D+0.60W+H	9.512	28.250	22.980	29.819	6.798	39.446	14.693
+D+0.70E+H	9.028	31.344	36.328	25.632	-4.922	39.391	14.697
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.509	28.266	22.900	31.569	3.968	43.763	16.844
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.514	28.236	23.047	28.343	9.962	40.853	14.642
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.512	28.252	22.967	30.092	7.132	45.170	16.793
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.511	28.254	22.959	30.688	13.654	39.435	14.694
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.509	28.270	22.879	32.438	10.823	43.752	16.845
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.514	28.241	23.027	29.211	16.818	40.842	14.642
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.511	28.257	22.947	30.961	13.987	45.159	16.793
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.561	27.957	25.891	34.786	4.938	39.493	14.689
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.558	27.973	25.812	36.536	2.107	43.810	16.840
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.563	27.943	25.959	33.309	8.101	40.900	14.638
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.560	27.959	25.879	35.059	5.271	45.217	16.789
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.560	27.961	25.871	35.655	11.793	39.482	14.690
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.557	27.977	25.791	37.405	8.963	43.799	16.841
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.562	27.947	25.938	34.178	14.957	40.889	14.639
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.560	27.963	25.859	35.928	12.126	45.206	16.790
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.123	33.329	27.489	28.223	7.644	39.425	14.695
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.120	33.345	27.409	29.973	4.814	43.742	16.846
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.125	33.315	27.556	26.746	10.808	40.832	14.643
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.123	33.331	27.476	28.496	7.978	45.149	16.794
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.122	33.333	27.468	29.092	14.500	39.414	14.695
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.120	33.349	27.388	30.842	11.669	43.731	16.846
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.125	33.319	27.536	27.615	17.664	40.821	14.644
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.122	33.336	27.456	29.365	14.833	45.138	16.795
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.172	33.036	30.400	33.189	5.784	39.472	14.691
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.169	33.052	30.321	34.939	2.953	43.789	16.842
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.174	33.022	30.468	31.712	8.947	40.879	14.639
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.171	33.038	30.388	33.462	6.117	45.196	16.791
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.171	33.040	30.380	34.058	12.639	39.461	14.692

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.168	33.056	30.300	35.808	9.809	43.778	16.843
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.173	33.026	30.447	32.581	15.803	40.868	14.640
+D+0.750Lr+0.750L+0.450W+H, LL Com	9.171	33.042	30.368	34.331	12.972	45.185	16.791
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.475	31.300	22.311	30.209	6.592	39.451	14.692
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.472	31.316	22.231	31.959	3.762	43.768	16.843
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.477	31.287	22.378	28.732	9.756	40.858	14.641
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.474	31.303	22.298	30.482	6.925	45.175	16.792
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.474	31.304	22.290	31.078	13.448	39.441	14.693
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.471	31.320	22.210	32.828	10.617	43.758	16.844
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.476	31.291	22.357	29.601	16.612	40.848	14.642
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.474	31.307	22.278	31.351	13.781	45.164	16.793
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.524	31.007	25.222	35.175	4.731	39.498	14.689
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.521	31.023	25.142	36.925	1.901	43.815	16.840
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.526	30.994	25.290	33.698	7.895	40.905	14.637
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.523	31.010	25.210	35.448	5.064	45.222	16.788
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.523	31.011	25.202	36.044	11.587	39.488	14.689
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.520	31.027	25.122	37.794	8.756	43.805	16.840
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.525	30.998	25.269	34.567	14.751	40.895	14.638
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.523	31.014	25.189	36.317	11.920	45.212	16.789
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.086	36.379	26.819	28.612	7.438	39.430	14.694
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.083	36.395	26.740	30.362	4.608	43.747	16.845
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.088	36.366	26.887	27.135	10.602	40.837	14.643
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.085	36.382	26.807	28.885	7.771	45.154	16.794
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.085	36.383	26.799	29.481	14.294	39.419	14.695
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.082	36.399	26.719	31.231	11.463	43.736	16.846
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.087	36.370	26.866	28.004	17.458	40.826	14.644
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.085	36.386	26.787	29.754	14.627	45.143	16.795
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.135	36.086	29.731	33.578	5.577	39.477	14.690
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.132	36.102	29.651	35.328	2.747	43.794	16.841
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.137	36.073	29.799	32.101	8.741	40.884	14.639
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.134	36.089	29.719	33.851	5.910	45.201	16.790
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.134	36.090	29.711	34.447	12.433	39.466	14.691
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.131	36.106	29.631	36.197	9.602	43.783	16.842
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.136	36.077	29.778	32.970	15.597	40.873	14.640
+D+0.750Lr+0.750L+0.450W+H, LL Com	12.134	36.093	29.698	34.720	12.766	45.190	16.791
+D+0.750L+0.750S+0.450W+H, LL Comb	12.797	38.185	31.736	116.713	7.833	44.144	16.813
+D+0.750L+0.750S+0.450W+H, LL Comb	12.802	38.155	31.883	113.487	13.827	41.234	14.611
+D+0.750L+0.750S+0.450W+H, LL Comb	12.799	38.171	31.803	115.236	10.997	45.551	16.762
+D+0.750L+0.750S+0.450W+H, LL Comb	12.799	38.173	31.795	115.832	17.519	39.816	14.663
+D+0.750L+0.750S+0.450W+H, LL Comb	12.796	38.189	31.715	117.582	14.689	44.133	16.814
+D+0.750L+0.750S+0.450W+H, LL Comb	12.801	38.159	31.862	114.356	20.683	41.223	14.612
+D+0.750L+0.750S+0.450W+H, LL Comb	12.798	38.175	31.783	116.105	17.853	45.540	16.763
+D+0.750L+0.750S+0.450W+H, LL Comb	12.848	37.875	34.727	119.930	8.803	39.874	14.658
+D+0.750L+0.750S+0.450W+H, LL Comb	12.846	37.891	34.648	121.680	5.972	44.191	16.809
+D+0.750L+0.750S+0.450W+H, LL Comb	12.851	37.862	34.795	118.453	11.967	41.281	14.607
+D+0.750L+0.750S+0.450W+H, LL Comb	12.848	37.878	34.715	120.203	9.136	45.598	16.758
+D+0.750L+0.750S+0.450W+H, LL Comb	12.848	37.879	34.707	120.799	15.659	39.863	14.659
+D+0.750L+0.750S+0.450W+H, LL Comb	12.845	37.896	34.627	122.549	12.828	44.180	16.810
+D+0.750L+0.750S+0.450W+H, LL Comb	12.850	37.866	34.774	119.322	18.822	41.270	14.608
+D+0.750L+0.750S+0.450W+H, LL Comb	12.847	37.882	34.694	121.072	15.992	45.587	16.759
+D+0.750L+0.750S+0.450W+H, LL Comb	12.411	43.247	36.325	113.367	11.510	39.805	14.664
+D+0.750L+0.750S+0.450W+H, LL Comb	12.408	43.263	36.245	115.117	8.679	44.122	16.815
+D+0.750L+0.750S+0.450W+H, LL Comb	12.413	43.234	36.392	111.890	14.673	41.212	14.612
+D+0.750L+0.750S+0.450W+H, LL Comb	12.410	43.250	36.312	113.640	11.843	45.529	16.763
+D+0.750L+0.750S+0.450W+H, LL Comb	12.410	43.252	36.304	114.236	18.365	39.795	14.665
+D+0.750L+0.750S+0.450W+H, LL Comb	12.407	43.268	36.224	115.986	15.535	44.111	16.816
+D+0.750L+0.750S+0.450W+H, LL Comb	12.412	43.238	36.371	112.759	21.529	41.201	14.613
+D+0.750L+0.750S+0.450W+H, LL Comb	12.409	43.254	36.292	114.509	18.698	45.518	16.764
+D+0.750L+0.750S+0.450W+H, LL Comb	12.459	42.954	39.236	118.333	9.649	39.852	14.660

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.450W+H, LL Comb	12.457	42.970	39.156	120.083	6.818	44.169	16.811
+D+0.750L+0.750S+0.450W+H, LL Comb	12.462	42.941	39.304	116.856	12.813	41.259	14.609
+D+0.750L+0.750S+0.450W+H, LL Comb	12.459	42.957	39.224	118.606	9.982	45.576	16.760
+D+0.750L+0.750S+0.450W+H, LL Comb	12.459	42.958	39.216	119.202	16.505	39.842	14.661
+D+0.750L+0.750S+0.450W+H, LL Comb	12.456	42.974	39.136	120.952	13.674	44.159	16.812
+D+0.750L+0.750S+0.450W+H, LL Comb	12.461	42.945	39.283	117.725	19.668	41.249	14.609
+D+0.750L+0.750S+0.450W+H, LL Comb	12.458	42.961	39.203	119.475	16.838	45.565	16.761
+D+0.750L+0.750S+0.450W+H, LL Comb	15.762	41.219	31.146	115.353	10.458	39.832	14.662
+D+0.750L+0.750S+0.450W+H, LL Comb	15.760	41.235	31.067	117.103	7.627	44.149	16.813
+D+0.750L+0.750S+0.450W+H, LL Comb	15.765	41.205	31.214	113.876	13.621	41.239	14.610
+D+0.750L+0.750S+0.450W+H, LL Comb	15.762	41.221	31.134	115.626	10.791	45.556	16.761
+D+0.750L+0.750S+0.450W+H, LL Comb	15.762	41.223	31.126	116.222	17.313	39.821	14.662
+D+0.750L+0.750S+0.450W+H, LL Comb	15.759	41.239	31.046	117.972	14.483	44.138	16.813
+D+0.750L+0.750S+0.450W+H, LL Comb	15.764	41.209	31.193	114.745	20.477	41.228	14.611
+D+0.750L+0.750S+0.450W+H, LL Comb	15.761	41.225	31.113	116.495	17.646	45.545	16.762
+D+0.750L+0.750S+0.450W+H, LL Comb	15.811	40.926	34.058	120.319	8.597	39.879	14.658
+D+0.750L+0.750S+0.450W+H, LL Comb	15.809	40.942	33.978	122.069	5.766	44.196	16.809
+D+0.750L+0.750S+0.450W+H, LL Comb	15.814	40.912	34.126	118.842	11.760	41.286	14.606
+D+0.750L+0.750S+0.450W+H, LL Comb	15.811	40.928	34.046	120.592	8.930	45.603	16.758
+D+0.750L+0.750S+0.450W+H, LL Comb	15.811	40.930	34.038	121.188	15.452	39.868	14.659
+D+0.750L+0.750S+0.450W+H, LL Comb	15.808	40.946	33.958	122.938	12.622	44.185	16.810
+D+0.750L+0.750S+0.450W+H, LL Comb	15.813	40.916	34.105	119.711	18.616	41.275	14.607
+D+0.750L+0.750S+0.450W+H, LL Comb	15.810	40.932	34.025	121.461	15.785	45.592	16.758
+D+0.750L+0.750S+0.450W+H, LL Comb	15.373	46.298	35.655	113.756	11.303	39.810	14.663
+D+0.750L+0.750S+0.450W+H, LL Comb	15.371	46.314	35.576	115.506	8.473	44.127	16.814
+D+0.750L+0.750S+0.450W+H, LL Comb	15.376	46.284	35.723	112.279	14.467	41.217	14.612
+D+0.750L+0.750S+0.450W+H, LL Comb	15.373	46.300	35.643	114.029	11.637	45.534	16.763
+D+0.750L+0.750S+0.450W+H, LL Comb	15.373	46.302	35.635	114.625	18.159	39.800	14.664
+D+0.750L+0.750S+0.450W+H, LL Comb	15.370	46.318	35.555	116.375	15.328	44.117	16.815
+D+0.750L+0.750S+0.450W+H, LL Comb	15.375	46.288	35.702	113.148	21.323	41.207	14.613
+D+0.750L+0.750S+0.450W+H, LL Comb	15.372	46.304	35.622	114.898	18.492	45.524	16.764
+D+0.750L+0.750S+0.450W+H, LL Comb	15.422	46.005	38.567	118.722	9.443	39.858	14.659
+D+0.750L+0.750S+0.450W+H, LL Comb	15.420	46.021	38.487	120.472	6.612	44.174	16.810
+D+0.750L+0.750S+0.450W+H, LL Comb	15.425	45.991	38.635	117.245	12.606	41.264	14.608
+D+0.750L+0.750S+0.450W+H, LL Comb	15.422	46.007	38.555	118.995	9.776	45.581	16.759
+D+0.750L+0.750S+0.450W+H, LL Comb	15.422	46.009	38.547	119.591	16.298	39.847	14.660
+D+0.750L+0.750S+0.450W+H, LL Comb	15.419	46.025	38.467	121.341	13.468	44.164	16.811
+D+0.750L+0.750S+0.450W+H, LL Comb	15.424	45.995	38.614	118.114	19.462	41.254	14.609
+D+0.750L+0.750S+0.450W+H, LL Comb	15.421	46.011	38.534	119.864	16.631	45.571	16.760
+D+0.750L+0.750S+0.5250E+H, LL Com	12.434	40.505	41.747	113.573	-0.957	44.102	16.816
+D+0.750L+0.750S+0.5250E+H, LL Com	12.439	40.475	41.894	110.346	5.037	41.192	14.614
+D+0.750L+0.750S+0.5250E+H, LL Com	12.436	40.491	41.815	112.096	2.207	45.509	16.765
+D+0.750L+0.750S+0.5250E+H, LL Com	12.436	40.493	41.807	112.692	8.729	39.774	14.666
+D+0.750L+0.750S+0.5250E+H, LL Com	12.433	40.509	41.727	114.442	5.899	44.091	16.817
+D+0.750L+0.750S+0.5250E+H, LL Com	12.438	40.479	41.874	111.215	11.893	41.181	14.615
+D+0.750L+0.750S+0.5250E+H, LL Com	12.435	40.495	41.794	112.965	9.062	45.498	16.766
+D+0.750L+0.750S+0.5250E+H, LL Com	12.485	40.196	44.739	116.789	0.013	39.832	14.661
+D+0.750L+0.750S+0.5250E+H, LL Com	12.483	40.212	44.659	118.539	-2.818	44.149	16.813
+D+0.750L+0.750S+0.5250E+H, LL Com	12.487	40.182	44.806	115.313	3.177	41.239	14.610
+D+0.750L+0.750S+0.5250E+H, LL Com	12.485	40.198	44.726	117.062	0.346	45.556	16.761
+D+0.750L+0.750S+0.5250E+H, LL Com	12.485	40.200	44.718	117.658	6.868	39.821	14.662
+D+0.750L+0.750S+0.5250E+H, LL Com	12.482	40.216	44.639	119.408	4.038	44.138	16.813
+D+0.750L+0.750S+0.5250E+H, LL Com	12.487	40.186	44.786	116.182	10.032	41.228	14.611
+D+0.750L+0.750S+0.5250E+H, LL Com	12.484	40.202	44.706	117.931	7.202	45.545	16.762
+D+0.750L+0.750S+0.5250E+H, LL Com	12.047	45.568	46.336	110.226	2.720	39.764	14.667
+D+0.750L+0.750S+0.5250E+H, LL Com	12.045	45.584	46.256	111.976	-0.111	44.081	16.818
+D+0.750L+0.750S+0.5250E+H, LL Com	12.050	45.554	46.403	108.749	5.883	41.171	14.616
+D+0.750L+0.750S+0.5250E+H, LL Com	12.047	45.570	46.324	110.499	3.053	45.487	16.767
+D+0.750L+0.750S+0.5250E+H, LL Com	12.047	45.572	46.316	111.095	9.575	39.753	14.668

Concrete Beam

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.5250E+H, LL Com	12.044	45.588	46.236	112.845	6.745	44.070	16.819
+D+0.750L+0.750S+0.5250E+H, LL Com	12.049	45.558	46.383	109.618	12.739	41.160	14.617
+D+0.750L+0.750S+0.5250E+H, LL Com	12.046	45.574	46.303	111.368	9.908	45.477	16.768
+D+0.750L+0.750S+0.5250E+H, LL Com	12.096	45.275	49.248	115.193	0.859	39.811	14.663
+D+0.750L+0.750S+0.5250E+H, LL Com	12.094	45.291	49.168	116.943	-1.972	44.128	16.814
+D+0.750L+0.750S+0.5250E+H, LL Com	12.099	45.261	49.315	113.716	4.022	41.218	14.612
+D+0.750L+0.750S+0.5250E+H, LL Com	12.096	45.277	49.235	115.466	1.192	45.535	16.763
+D+0.750L+0.750S+0.5250E+H, LL Com	12.096	45.279	49.227	116.062	7.714	39.800	14.664
+D+0.750L+0.750S+0.5250E+H, LL Com	12.093	45.295	49.148	117.812	4.884	44.117	16.815
+D+0.750L+0.750S+0.5250E+H, LL Com	12.098	45.265	49.295	114.585	10.878	41.207	14.613
+D+0.750L+0.750S+0.5250E+H, LL Com	12.095	45.281	49.215	116.335	8.048	45.524	16.764
+D+0.750L+0.750S+0.5250E+H, LL Com	15.399	43.539	41.158	112.212	1.667	39.790	14.665
+D+0.750L+0.750S+0.5250E+H, LL Com	15.397	43.555	41.078	113.962	-1.163	44.107	16.816
+D+0.750L+0.750S+0.5250E+H, LL Com	15.402	43.526	41.225	110.736	4.831	41.197	14.614
+D+0.750L+0.750S+0.5250E+H, LL Com	15.399	43.542	41.145	112.485	2.000	45.514	16.765
+D+0.750L+0.750S+0.5250E+H, LL Com	15.399	43.543	41.137	113.081	8.523	39.780	14.666
+D+0.750L+0.750S+0.5250E+H, LL Com	15.396	43.559	41.058	114.831	5.692	44.096	16.817
+D+0.750L+0.750S+0.5250E+H, LL Com	15.401	43.530	41.205	111.605	11.687	41.186	14.615
+D+0.750L+0.750S+0.5250E+H, LL Com	15.398	43.546	41.125	113.354	8.856	45.503	16.766
+D+0.750L+0.750S+0.5250E+H, LL Com	15.448	43.246	44.070	117.179	-0.193	39.837	14.661
+D+0.750L+0.750S+0.5250E+H, LL Com	15.445	43.262	43.990	118.929	-3.024	44.154	16.812
+D+0.750L+0.750S+0.5250E+H, LL Com	15.450	43.232	44.137	115.702	2.970	41.244	14.610
+D+0.750L+0.750S+0.5250E+H, LL Com	15.448	43.248	44.057	117.452	0.140	45.561	16.761
+D+0.750L+0.750S+0.5250E+H, LL Com	15.447	43.250	44.049	118.048	6.662	39.827	14.662
+D+0.750L+0.750S+0.5250E+H, LL Com	15.445	43.266	43.969	119.798	3.832	44.144	16.813
+D+0.750L+0.750S+0.5250E+H, LL Com	15.450	43.237	44.117	116.571	9.826	41.234	14.611
+D+0.750L+0.750S+0.5250E+H, LL Com	15.447	43.253	44.037	118.321	6.995	45.550	16.762
+D+0.750L+0.750S+0.5250E+H, LL Com	15.010	48.618	45.667	110.616	2.513	39.769	14.667
+D+0.750L+0.750S+0.5250E+H, LL Com	15.008	48.634	45.587	112.366	-0.317	44.086	16.818
+D+0.750L+0.750S+0.5250E+H, LL Com	15.013	48.604	45.734	109.139	5.677	41.176	14.615
+D+0.750L+0.750S+0.5250E+H, LL Com	15.010	48.621	45.654	110.889	2.846	45.493	16.766
+D+0.750L+0.750S+0.5250E+H, LL Com	15.010	48.622	45.646	111.485	9.369	39.758	14.667
+D+0.750L+0.750S+0.5250E+H, LL Com	15.007	48.638	45.567	113.235	6.538	44.075	16.819
+D+0.750L+0.750S+0.5250E+H, LL Com	15.012	48.609	45.714	110.008	12.533	41.165	14.616
+D+0.750L+0.750S+0.5250E+H, LL Com	15.009	48.625	45.634	111.758	9.702	45.482	16.767
+D+0.750L+0.750S+0.5250E+H, LL Com	15.059	48.325	48.579	115.582	0.653	39.816	14.663
+D+0.750L+0.750S+0.5250E+H, LL Com	15.056	48.341	48.499	117.332	-2.178	44.133	16.814
+D+0.750L+0.750S+0.5250E+H, LL Com	15.061	48.311	48.646	114.105	3.816	41.223	14.612
+D+0.750L+0.750S+0.5250E+H, LL Com	15.059	48.327	48.566	115.855	0.986	45.540	16.763
+D+0.750L+0.750S+0.5250E+H, LL Com	15.058	48.329	48.558	116.451	7.508	39.805	14.664
+D+0.750L+0.750S+0.5250E+H, LL Com	15.056	48.345	48.478	118.201	4.678	44.122	16.815
+D+0.750L+0.750S+0.5250E+H, LL Com	15.061	48.315	48.626	114.974	10.672	41.212	14.612
+D+0.750L+0.750S+0.5250E+H, LL Com	15.058	48.332	48.546	116.724	7.841	45.529	16.763
+0.60D+0.60W+0.60H	5.707	16.950	13.788	17.892	4.079	23.668	8.816
+0.60D+0.70E+0.60H	5.223	20.044	27.137	13.705	-7.641	23.612	8.820
D Only	9.512	28.250	22.980	29.819	6.798	39.446	14.693
Lr Only, LL Comb Run (*****L)							
Lr Only, LL Comb Run (****L*)							
Lr Only, LL Comb Run (****LL)							
Lr Only, LL Comb Run (***L**)							
Lr Only, LL Comb Run (***L*L)							
Lr Only, LL Comb Run (***LL*)							
Lr Only, LL Comb Run (***LLL)							
Lr Only, LL Comb Run (**L***)							
Lr Only, LL Comb Run (**L**L)							
Lr Only, LL Comb Run (**L*L*)							
Lr Only, LL Comb Run (**L*LL)							
Lr Only, LL Comb Run (**LL**)							
Lr Only, LL Comb Run (**LL*L)							

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Lr Only, LL Comb Run (**LLL*)							
Lr Only, LL Comb Run (**LLLL)							
Lr Only, LL Comb Run (*L****)							
Lr Only, LL Comb Run (*L***L)							
Lr Only, LL Comb Run (*L**L*)							
Lr Only, LL Comb Run (*L**LL)							
Lr Only, LL Comb Run (*L*L**)							
Lr Only, LL Comb Run (*L*L*L)							
Lr Only, LL Comb Run (*L*LL*)							
Lr Only, LL Comb Run (*L*LLL)							
Lr Only, LL Comb Run (*LL***)							
Lr Only, LL Comb Run (*LL**L)							
Lr Only, LL Comb Run (*LL*L*)							
Lr Only, LL Comb Run (*LL*LL)							
Lr Only, LL Comb Run (*LLL**)							
Lr Only, LL Comb Run (*LLL*L)							
Lr Only, LL Comb Run (*LLLL*)							
Lr Only, LL Comb Run (*LLLLL)							
Lr Only, LL Comb Run (L*****)							
Lr Only, LL Comb Run (L****L)							
Lr Only, LL Comb Run (L***L*)							
Lr Only, LL Comb Run (L***LL)							
Lr Only, LL Comb Run (L**L**)							
Lr Only, LL Comb Run (L**L*L)							
Lr Only, LL Comb Run (L**LL*)							
Lr Only, LL Comb Run (L**LLL)							
Lr Only, LL Comb Run (L*L***)							
Lr Only, LL Comb Run (L*L**L)							
Lr Only, LL Comb Run (L*L*L*)							
Lr Only, LL Comb Run (L*L*LL)							
Lr Only, LL Comb Run (L*LL**)							
Lr Only, LL Comb Run (L*LL*L)							
Lr Only, LL Comb Run (L*LLL*)							
Lr Only, LL Comb Run (L*LLLL)							
Lr Only, LL Comb Run (LL****)							
Lr Only, LL Comb Run (LL***L)							
Lr Only, LL Comb Run (LL**L*)							
Lr Only, LL Comb Run (LL**LL)							
Lr Only, LL Comb Run (LL*L**)							
Lr Only, LL Comb Run (LL*L*L)							
Lr Only, LL Comb Run (LL*LL*)							
Lr Only, LL Comb Run (LL*LLL)							
Lr Only, LL Comb Run (LLL***)							
Lr Only, LL Comb Run (LLL**L)							
Lr Only, LL Comb Run (LLL*L*)							
Lr Only, LL Comb Run (LLL*LL)							
Lr Only, LL Comb Run (LLLL**)							
Lr Only, LL Comb Run (LLLL*L)							
Lr Only, LL Comb Run (LLLLL*)							
Lr Only, LL Comb Run (LLLLLL)							
L Only, LL Comb Run (*****L)	-0.004	0.021	-0.106	2.333	-3.774	5.756	2.868
L Only, LL Comb Run (****L*)	0.003	-0.018	0.090	-1.969	4.218	1.876	-0.068
L Only, LL Comb Run (****LL)	-0.001	0.003	-0.017	0.364	0.444	7.632	2.800
L Only, LL Comb Run (***L**)	-0.001	0.005	-0.027	1.159	9.141	-0.014	0.001
L Only, LL Comb Run (***L*L)	-0.004	0.027	-0.134	3.492	5.367	5.742	2.869
L Only, LL Comb Run (***LL*)	0.002	-0.013	0.063	-0.811	13.359	1.862	-0.067
L Only, LL Comb Run (***LLL)	-0.001	0.009	-0.044	1.523	9.585	7.618	2.801
L Only, LL Comb Run (**L***)	0.065	-0.391	3.882	6.622	-2.481	0.063	-0.005
L Only, LL Comb Run (**L**L)	0.062	-0.369	3.776	8.955	-6.255	5.819	2.863

Concrete Beam

Description : GB-D-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (**L*L*)	0.068	-0.409	3.972	4.653	1.737	1.939	-0.073
L Only, LL Comb Run (**L*LL)	0.065	-0.387	3.866	6.986	-2.037	7.695	2.795
L Only, LL Comb Run (**LL**)	0.064	-0.385	3.855	7.780	6.660	0.048	-0.004
L Only, LL Comb Run (**LL*L)	0.061	-0.364	3.749	10.114	2.886	5.804	2.864
L Only, LL Comb Run (**LLL*)	0.067	-0.403	3.945	5.811	10.878	1.924	-0.072
L Only, LL Comb Run (**LLLL)	0.064	-0.382	3.838	8.144	7.104	7.680	2.796
L Only, LL Comb Run (*L****)	-0.519	6.772	6.012	-2.129	1.128	-0.029	0.002
L Only, LL Comb Run (*L***L)	-0.522	6.793	5.906	0.204	-2.646	5.727	2.870
L Only, LL Comb Run (*L**L*)	-0.516	6.754	6.102	-4.098	5.346	1.847	-0.066
L Only, LL Comb Run (*L**LL)	-0.519	6.775	5.995	-1.765	1.572	7.603	2.802
L Only, LL Comb Run (*L*L**)	-0.520	6.777	5.985	-0.970	10.269	-0.043	0.003
L Only, LL Comb Run (*L*L*L)	-0.523	6.799	5.878	1.363	6.495	5.713	2.872
L Only, LL Comb Run (*L*LL*)	-0.517	6.759	6.074	-2.939	14.487	1.833	-0.065
L Only, LL Comb Run (*L*LLL)	-0.520	6.781	5.968	-0.606	10.713	7.589	2.803
L Only, LL Comb Run (*LL***)	-0.454	6.381	9.894	4.493	-1.353	0.034	-0.003
L Only, LL Comb Run (*LL**L)	-0.457	6.402	9.788	6.826	-5.127	5.790	2.865
L Only, LL Comb Run (*LL*L*)	-0.451	6.363	9.984	2.524	2.865	1.910	-0.071
L Only, LL Comb Run (*LL*LL)	-0.454	6.384	9.878	4.857	-0.909	7.666	2.797
L Only, LL Comb Run (*LLL**)	-0.454	6.387	9.867	5.652	7.788	0.020	-0.002
L Only, LL Comb Run (*LLL*L)	-0.458	6.408	9.761	7.985	4.013	5.776	2.866
L Only, LL Comb Run (*LLLL*)	-0.451	6.369	9.957	3.682	12.006	1.896	-0.070
L Only, LL Comb Run (*LLLLL)	-0.455	6.390	9.850	6.015	8.232	7.652	2.798
L Only, LL Comb Run (L*****)	3.951	4.067	-0.892	0.519	-0.275	0.007	-0.001
L Only, LL Comb Run (L****L)	3.947	4.088	-0.999	2.852	-4.049	5.763	2.868
L Only, LL Comb Run (L***L*)	3.954	4.049	-0.802	-1.450	3.943	1.883	-0.069
L Only, LL Comb Run (L***LL)	3.950	4.070	-0.909	0.883	0.169	7.639	2.799
L Only, LL Comb Run (L**L**)	3.950	4.073	-0.920	1.678	8.866	-0.007	0.001
L Only, LL Comb Run (L**L*L)	3.946	4.094	-1.026	4.011	5.092	5.749	2.869
L Only, LL Comb Run (L**LL*)	3.953	4.054	-0.830	-0.291	13.084	1.869	-0.068
L Only, LL Comb Run (L**LLL)	3.949	4.076	-0.936	2.042	9.310	7.624	2.800
L Only, LL Comb Run (L*L***)	4.016	3.676	2.990	7.141	-2.756	0.070	-0.006
L Only, LL Comb Run (L*L**L)	4.012	3.698	2.884	9.474	-6.530	5.826	2.862
L Only, LL Comb Run (L*L*L*)	4.019	3.658	3.080	5.172	1.462	1.946	-0.074
L Only, LL Comb Run (L*L*LL)	4.015	3.680	2.974	7.505	-2.312	7.702	2.794
L Only, LL Comb Run (L*LL**)	4.015	3.682	2.963	8.300	6.385	0.055	-0.004
L Only, LL Comb Run (L*LL*L)	4.011	3.703	2.856	10.633	2.611	5.811	2.864
L Only, LL Comb Run (L*LLL*)	4.018	3.664	3.053	6.330	10.603	1.931	-0.073
L Only, LL Comb Run (L*LLLL)	4.014	3.685	2.946	8.664	6.829	7.687	2.795
L Only, LL Comb Run (LL****)	3.432	10.839	5.120	-1.610	0.853	-0.022	0.002
L Only, LL Comb Run (LL***L)	3.428	10.860	5.013	0.723	-2.921	5.734	2.870
L Only, LL Comb Run (LL**L*)	3.435	10.821	5.210	-3.579	5.071	1.854	-0.067
L Only, LL Comb Run (LL**LL)	3.431	10.842	5.103	-1.246	1.297	7.610	2.802
L Only, LL Comb Run (LL*L**)	3.431	10.844	5.092	-0.451	9.994	-0.036	0.003
L Only, LL Comb Run (LL*L*L)	3.427	10.866	4.986	1.882	6.220	5.720	2.871
L Only, LL Comb Run (LL*LL*)	3.434	10.826	5.182	-2.420	14.212	1.840	-0.065
L Only, LL Comb Run (LL*LLL)	3.430	10.848	5.076	-0.087	10.438	7.596	2.803
L Only, LL Comb Run (LLL***)	3.497	10.448	9.002	5.012	-1.628	0.041	-0.003
L Only, LL Comb Run (LLL**L)	3.493	10.470	8.896	7.345	-5.402	5.797	2.865
L Only, LL Comb Run (LLL*L*)	3.500	10.430	9.092	3.043	2.590	1.917	-0.072
L Only, LL Comb Run (LLL*LL)	3.496	10.451	8.985	5.376	-1.184	7.673	2.796
L Only, LL Comb Run (LLLL**)	3.496	10.454	8.975	6.171	7.513	0.027	-0.002
L Only, LL Comb Run (LLLL*L)	3.493	10.475	8.868	8.504	3.738	5.783	2.866
L Only, LL Comb Run (LLLLL*)	3.499	10.436	9.065	4.201	11.731	1.903	-0.071
L Only, LL Comb Run (LLLLLL)	3.496	10.457	8.958	6.535	7.957	7.659	2.798
S Only	4.384	13.225	11.781	113.525	5.154	0.507	-0.041
W Only							
E Only	-0.692	4.420	19.070	-5.982	-16.743	-0.079	0.006
H Only							

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	32.50	20.44	20.44	0.00	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.12	32.50	19.09	19.09	2.36	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.24	32.50	17.75	17.75	4.56	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.36	32.50	16.44	16.44	6.53	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.48	32.50	15.25	15.25	8.42	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.60	32.50	14.05	14.05	10.17	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.72	32.50	12.85	12.85	11.77	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.84	32.50	11.65	11.65	13.23	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	0.95	32.50	10.46	10.46	14.55	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.07	32.50	9.26	9.26	15.73	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.19	32.50	8.06	8.06	16.76	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.31	32.50	6.86	6.86	17.65	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.43	32.50	5.66	5.66	18.40	0.83	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.55	32.50	4.52	4.52	17.35	0.71	144.09	Vu < PhiVc/2	Not Reqd 1	144.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.67	32.50	3.50	3.50	17.83	0.53	143.23	Vu < PhiVc/2	Not Reqd 1	143.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.79	32.50	2.47	2.47	18.18	0.37	142.42	Vu < PhiVc/2	Not Reqd 1	142.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.91	32.50	-1.61	1.61	15.81	0.28	141.96	Vu < PhiVc/2	Not Reqd 1	142.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.03	32.50	-2.84	2.84	15.54	0.50	143.05	Vu < PhiVc/2	Not Reqd 1	143.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.15	32.50	-4.08	4.08	15.13	0.73	144.21	Vu < PhiVc/2	Not Reqd 1	144.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.27	32.50	-6.67	6.67	16.72	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.39	32.50	-7.26	7.26	15.89	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.51	32.50	-7.85	7.85	14.99	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.63	32.50	-8.44	8.44	14.02	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.74	32.50	-9.03	9.03	12.97	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.86	32.50	-9.67	9.67	12.69	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.98	32.50	-10.36	10.36	11.50	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.10	32.50	-11.05	11.05	10.22	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.22	32.50	-11.73	11.73	8.86	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.34	32.50	-12.42	12.42	7.42	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.46	32.50	-13.11	13.11	5.90	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.58	32.50	-13.80	13.80	4.29	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.70	32.50	-14.48	14.48	2.61	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.82	32.50	-15.17	15.17	0.84	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.94	33.00	-15.86	15.86	1.01	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.06	33.00	-16.54	16.54	2.95	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.18	33.00	-17.23	17.23	4.96	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.30	33.00	-17.92	17.92	7.06	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.41	33.00	-18.61	18.61	9.24	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.53	33.00	-19.29	19.29	11.50	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.65	33.00	-19.98	19.98	13.84	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.77	33.00	-20.67	20.67	16.27	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.89	33.00	-21.35	21.35	18.77	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.01	33.00	-22.04	22.04	21.36	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.13	33.00	-22.73	22.73	24.03	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.25	33.00	39.07	39.07	25.18	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.37	33.00	38.48	38.48	20.55	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.49	33.00	37.89	37.89	15.99	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.61	33.00	36.62	36.62	11.54	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.73	33.00	35.28	35.28	7.25	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	5.85	33.00	19.70	19.70	8.45	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	5.97	33.00	18.51	18.51	6.17	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	6.09	33.00	17.40	17.40	3.33	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	6.20	33.00	16.37	16.37	1.31	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	6.32	32.50	15.34	15.34	0.58	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	2	6.44	32.50	14.31	14.31	2.35	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	6.56	32.50	13.28	13.28	4.00	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	6.68	32.50	12.25	12.25	5.52	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	6.80	32.50	11.21	11.21	6.92	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	6.92	32.50	10.18	10.18	8.19	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	7.04	32.50	9.15	9.15	9.35	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	7.16	32.50	8.12	8.12	10.38	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	7.28	32.50	7.09	7.09	11.29	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+0.90D+E+0.90H	2	7.40	32.50	6.19	6.19	8.27	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+0.90D+E+0.90H	2	7.52	32.50	5.68	5.68	8.98	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+0.90D+E+0.90H	2	7.64	32.50	5.16	5.16	9.62	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	7.76	32.50	-5.00	5.00	2.49	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	7.88	32.50	-6.03	6.03	1.83	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	7.99	32.50	-7.06	7.06	1.05	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.11	32.50	-8.25	8.25	6.71	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.23	32.50	-9.59	9.59	5.65	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.35	32.50	-10.94	10.94	4.42	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.47	32.50	-12.28	12.28	3.04	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.59	32.50	-13.62	13.62	1.49	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.71	33.00	-14.96	14.96	0.21	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.83	33.00	-16.31	16.31	2.08	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	8.95	32.50	-9.08	9.08	5.83	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.07	32.50	-10.10	10.10	4.69	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	9.19	32.50	-11.13	11.13	3.42	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.31	32.50	-24.52	24.52	9.20	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.43	32.50	-25.56	25.56	6.21	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.55	32.50	-26.59	26.59	3.10	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.66	33.00	-27.62	27.62	0.14	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.78	33.00	-28.65	28.65	3.49	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.90	33.00	-29.68	29.68	6.97	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.02	33.00	-30.71	30.71	10.58	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.14	33.00	-31.75	31.75	14.30	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.26	33.00	-32.78	32.78	18.15	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.38	33.00	-33.81	33.81	22.12	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.50	33.00	30.05	30.05	22.11	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.60	33.00	28.94	28.94	19.21	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.70	33.00	27.84	27.84	16.42	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	33.00	26.73	26.73	13.73	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.89	33.00	25.62	25.62	11.16	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.99	33.00	24.51	24.51	8.69	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.09	33.00	23.41	23.41	6.33	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.19	33.00	22.30	22.30	4.08	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.29	33.00	21.19	21.19	1.94	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.39	32.50	20.08	20.08	0.09	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.48	32.50	18.98	18.98	2.01	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.58	32.50	17.87	17.87	3.82	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.68	32.50	16.76	16.76	5.53	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.78	32.50	15.66	15.66	7.12	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.88	32.50	14.55	14.55	8.61	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.98	32.50	13.44	13.44	9.99	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.07	32.50	12.33	12.33	11.25	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.17	32.50	11.23	11.23	12.41	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.27	32.50	10.12	10.12	13.46	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.37	32.50	9.01	9.01	14.40	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S+E+1.60H	3	12.47	32.50	8.03	8.03	6.32	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	12.57	32.50	7.25	7.25	5.99	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	12.67	32.50	6.49	6.49	6.67	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	12.76	32.50	5.72	5.72	7.27	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	12.86	32.50	4.96	4.96	7.80	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	12.96	32.50	4.20	4.20	8.25	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+0.90D-E+0.90H	3	13.06	32.50	-3.59	3.59	5.44	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.16	32.50	-4.42	4.42	12.53	0.96	144.54	Vu < PhiVc/2	Not Reqd 1	144.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.26	32.50	-5.27	5.27	12.05	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.35	32.50	-6.12	6.12	11.49	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.45	32.50	-6.97	6.97	10.85	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.55	32.50	-7.83	7.83	10.12	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.65	32.50	-8.68	8.68	9.31	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	13.75	32.50	-9.53	9.53	8.41	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	13.85	32.50	-10.39	10.39	6.76	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	13.94	32.50	-11.38	11.38	5.68	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	14.04	32.50	-12.37	12.37	4.52	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	14.14	32.50	-13.35	13.35	3.25	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	14.24	32.50	-14.34	14.34	1.89	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	14.34	32.50	-15.33	15.33	0.43	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	14.44	33.00	-16.32	16.32	1.13	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.53	32.50	-167.22	167.22	1.39	1.00	144.72	PhiVc < Vu	22.502	216.2	3.9	3.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.63	33.00	-168.33	168.33	15.12	1.00	146.88	PhiVc < Vu	21.447	219.5	3.9	3.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.73	33.00	-169.44	169.44	31.74	1.00	146.88	PhiVc < Vu	22.554	219.5	3.9	3.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.83	33.00	52.20	52.20	48.46	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.86	33.00	51.88	51.88	46.99	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.89	33.00	51.56	51.56	45.52	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.92	33.00	51.24	51.24	44.06	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.94	33.00	50.92	50.92	42.61	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	14.97	33.00	50.60	50.60	41.16	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.00	33.00	50.28	50.28	39.73	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.03	33.00	49.96	49.96	38.31	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.06	33.00	49.64	49.64	36.89	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.09	33.00	49.32	49.32	35.49	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.11	33.00	49.00	49.00	34.09	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.14	33.00	48.68	48.68	32.70	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.17	33.00	48.36	48.36	31.32	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.20	33.00	48.04	48.04	29.95	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.23	33.00	47.72	47.72	28.59	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.26	33.00	47.40	47.40	27.24	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.28	33.00	47.08	47.08	25.90	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.31	33.00	46.76	46.76	24.57	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.34	33.00	46.44	46.44	23.24	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.37	33.00	46.12	46.12	21.93	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.40	33.00	45.80	45.80	20.62	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.43	33.00	45.48	45.48	19.33	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.46	33.00	45.16	45.16	18.04	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.48	33.00	44.86	44.86	16.90	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.51	33.00	44.57	44.57	15.63	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.54	33.00	44.27	44.27	14.37	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.57	33.00	43.98	43.98	13.12	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.60	33.00	43.68	43.68	11.87	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.63	33.00	43.39	43.39	10.63	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.65	33.00	43.09	43.09	9.41	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	4	15.68	33.00	42.80	42.80	8.19	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.71	33.00	42.51	42.51	6.97	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.74	33.00	42.21	42.21	5.77	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.77	33.00	41.92	41.92	4.57	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	33.00	41.62	41.62	3.39	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.82	33.00	41.33	41.33	2.21	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.85	33.00	41.03	41.03	1.04	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.88	32.50	40.74	40.74	0.12	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	32.50	40.45	40.45	1.27	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.94	32.50	40.15	40.15	2.42	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.97	32.50	39.86	39.86	3.56	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.99	32.50	39.56	39.56	4.68	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	32.50	39.40	39.40	5.81	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.05	32.50	39.27	39.27	6.92	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.08	33.00	8.55	8.55	0.60	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.21	32.50	7.82	7.82	0.44	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.33	32.50	7.09	7.09	1.39	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.46	32.50	6.36	6.36	2.24	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.59	32.50	5.63	5.63	3.00	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.71	32.50	4.90	4.90	3.67	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.84	32.50	4.16	4.16	4.24	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	16.97	32.50	3.43	3.43	4.72	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	17.10	32.50	2.70	2.70	5.11	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.22	32.50	-3.24	3.24	7.94	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.35	32.50	-3.82	3.82	7.49	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.48	32.50	-4.40	4.40	6.97	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.60	32.50	-4.98	4.98	6.37	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.73	32.50	-5.56	5.56	5.70	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.86	32.50	-6.14	6.14	4.96	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	17.98	32.50	-6.72	6.72	4.14	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.11	32.50	-7.30	7.30	3.25	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.24	32.50	-7.88	7.88	2.29	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.36	32.50	-8.46	8.46	1.25	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.49	32.50	-9.04	9.04	0.14	1.00	144.72	Vu < PhiVc/2	Not Reqd 1	144.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.62	33.00	-9.62	9.62	1.04	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.74	33.00	-10.20	10.20	2.30	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	18.87	33.00	-10.79	10.79	3.63	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.00	33.00	-11.37	11.37	5.04	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.13	33.00	-11.95	11.95	6.51	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.25	33.00	-12.56	12.56	5.60	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.38	33.00	-13.29	13.29	7.24	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.51	33.00	-14.03	14.03	8.98	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.63	33.00	-14.76	14.76	10.80	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.76	33.00	-15.49	15.49	12.72	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	19.89	33.00	-16.22	16.22	14.73	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.01	33.00	-16.95	16.95	16.84	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.14	33.00	-17.68	17.68	19.03	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.27	33.00	-18.41	18.41	21.32	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.39	33.00	-19.14	19.14	23.70	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.52	33.00	-19.87	19.87	26.18	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.65	33.00	-20.60	20.60	28.75	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.77	33.00	-21.33	21.33	31.41	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	20.90	33.00	-22.06	22.06	34.16	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	21.03	33.00	-22.79	22.79	37.01	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-D-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H,	5	21.16	33.00	-23.52	23.52	39.95	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	21.28	33.00	-24.25	24.25	42.98	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	21.41	33.00	-24.99	24.99	46.10	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	21.54	33.00	-25.72	25.72	49.32	1.00	146.88	Vu < PhiVc/2	Not Reqd 1	146.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	21.66	33.00	33.46	33.46	52.63	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	21.88	33.00	32.19	32.19	45.35	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	22.11	33.00	30.91	30.91	38.36	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	22.33	33.00	29.64	29.64	31.65	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	22.55	33.00	28.36	28.36	25.23	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	22.77	33.00	27.08	27.08	19.08	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	22.99	33.00	25.81	25.81	13.22	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	23.21	33.00	24.53	24.53	7.65	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	23.44	33.00	23.26	23.26	2.35	1.00	147.71	Vu < PhiVc/2	Not Reqd 1	147.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	23.66	32.50	21.98	21.98	2.66	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	23.88	32.50	20.70	20.70	7.39	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	24.10	32.50	19.43	19.43	11.84	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	24.32	32.50	18.15	18.15	16.00	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	24.54	32.50	16.88	16.88	19.88	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	24.77	32.50	15.60	15.60	23.48	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	24.99	32.50	14.32	14.32	26.80	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	25.21	32.50	13.05	13.05	29.83	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	25.43	32.50	11.77	11.77	32.58	0.98	145.44	Vu < PhiVc/2	Not Reqd 1	145.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	25.65	32.50	10.50	10.50	35.05	0.81	144.61	Vu < PhiVc/2	Not Reqd 1	144.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	25.87	32.50	9.22	9.22	37.23	0.67	143.92	Vu < PhiVc/2	Not Reqd 1	143.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	26.09	32.50	7.94	7.94	39.13	0.55	143.32	Vu < PhiVc/2	Not Reqd 1	143.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	26.32	32.50	6.67	6.67	40.75	0.44	142.79	Vu < PhiVc/2	Not Reqd 1	142.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	26.54	32.50	5.39	5.39	42.09	0.35	142.31	Vu < PhiVc/2	Not Reqd 1	142.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	26.76	32.50	4.12	4.12	43.14	0.26	141.87	Vu < PhiVc/2	Not Reqd 1	141.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	26.98	32.50	2.84	2.84	43.91	0.18	141.46	Vu < PhiVc/2	Not Reqd 1	141.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	27.20	32.50	1.56	1.56	44.40	0.10	141.07	Vu < PhiVc/2	Not Reqd 1	141.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	27.42	32.50	0.35	0.35	34.97	0.03	140.73	Vu < PhiVc/2	Not Reqd 1	140.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	27.65	32.50	-1.13	1.13	45.07	0.07	140.93	Vu < PhiVc/2	Not Reqd 1	140.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	27.87	32.50	-2.41	2.41	44.68	0.15	141.32	Vu < PhiVc/2	Not Reqd 1	141.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	28.09	32.50	-3.68	3.68	44.01	0.23	141.72	Vu < PhiVc/2	Not Reqd 1	141.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	28.31	32.50	-4.96	4.96	43.05	0.31	142.14	Vu < PhiVc/2	Not Reqd 1	142.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	28.53	32.50	-6.24	6.24	41.81	0.40	142.59	Vu < PhiVc/2	Not Reqd 1	142.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	28.75	32.50	-7.51	7.51	40.28	0.51	143.09	Vu < PhiVc/2	Not Reqd 1	143.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	28.98	32.50	-8.79	8.79	38.48	0.62	143.66	Vu < PhiVc/2	Not Reqd 1	143.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	29.20	32.50	-10.06	10.06	36.39	0.75	144.30	Vu < PhiVc/2	Not Reqd 1	144.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	29.42	32.50	-11.34	11.34	34.02	0.90	145.06	Vu < PhiVc/2	Not Reqd 1	145.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	29.64	32.50	-12.62	12.62	31.36	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	29.86	32.50	-13.89	13.89	28.43	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	30.08	32.50	-15.17	15.17	25.21	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	30.31	32.50	-16.44	16.44	21.70	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	30.53	32.50	-17.72	17.72	17.92	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	30.75	32.50	-19.00	19.00	13.85	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	30.97	32.50	-20.27	20.27	9.50	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	31.19	32.50	-21.55	21.55	4.87	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	31.41	32.50	-22.23	22.23	0.00	1.00	145.54	Vu < PhiVc/2	Not Reqd 1	145.5	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.250	-24.03	408.55	0.06

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-26.79	345.34	0.08
Span # 3	3	4.330	-31.74	345.34	0.09
Span # 4	4	1.250	-48.46	345.34	0.14
Span # 5	5	5.583	-49.32	345.34	0.14
Span # 6	6	9.750	-52.63	408.55	0.13
+1.40D+1.60H					
Span # 1	1	5.250	-16.83	408.55	0.04
Span # 2	2	5.250	-19.03	345.34	0.06
Span # 3	3	4.330	-13.04	345.34	0.04
Span # 4	4	1.250	-10.77	345.34	0.03
Span # 5	5	5.583	-45.51	345.34	0.13
Span # 6	6	9.750	-48.54	408.55	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	-14.46	408.55	0.04
Span # 2	2	5.250	-16.34	345.34	0.05
Span # 3	3	4.330	-11.06	345.34	0.03
Span # 4	4	1.250	-9.73	345.34	0.03
Span # 5	5	5.583	-48.36	345.34	0.14
Span # 6	6	9.750	-51.27	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.40	408.55	0.04
Span # 2	2	5.250	-16.28	345.34	0.05
Span # 3	3	4.330	-11.28	345.34	0.03
Span # 4	4	1.250	-8.82	345.34	0.03
Span # 5	5	5.583	-39.71	345.34	0.11
Span # 6	6	9.750	-42.67	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.16	345.34	0.03
Span # 4	4	1.250	-9.31	345.34	0.03
Span # 5	5	5.583	-49.07	345.34	0.14
Span # 6	6	9.750	-52.34	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.44	408.55	0.04
Span # 2	2	5.250	-16.32	345.34	0.05
Span # 3	3	4.330	-11.15	345.34	0.03
Span # 4	4	1.250	-9.36	345.34	0.03
Span # 5	5	5.583	-38.99	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.47	408.55	0.04
Span # 2	2	5.250	-16.35	345.34	0.05
Span # 3	3	4.330	-11.03	345.34	0.03
Span # 4	4	1.250	-9.85	345.34	0.03
Span # 5	5	5.583	-48.35	345.34	0.14
Span # 6	6	9.750	-51.25	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.41	408.55	0.04
Span # 2	2	5.250	-16.29	345.34	0.05
Span # 3	3	4.330	-11.25	345.34	0.03
Span # 4	4	1.250	-8.94	345.34	0.03
Span # 5	5	5.583	-39.70	345.34	0.11
Span # 6	6	9.750	-42.65	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.44	408.55	0.04
Span # 2	2	5.250	-16.32	345.34	0.05
Span # 3	3	4.330	-11.13	345.34	0.03
Span # 4	4	1.250	-9.44	345.34	0.03
Span # 5	5	5.583	-49.06	345.34	0.14
Span # 6	6	9.750	-52.32	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	-13.89	408.55	0.03
Span # 2	2	5.250	-15.76	345.34	0.05
Span # 3	3	4.330	-13.37	345.34	0.04
Span # 4	4	1.250	-13.64	345.34	0.04
Span # 5	5	5.583	-39.07	345.34	0.11
Span # 6	6	9.750	-41.68	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	-13.92	408.55	0.03
Span # 2	2	5.250	-15.79	345.34	0.05
Span # 3	3	4.330	-13.25	345.34	0.04
Span # 4	4	1.250	-14.14	345.34	0.04
Span # 5	5	5.583	-48.43	345.34	0.14
Span # 6	6	9.750	-51.35	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-13.87	408.55	0.03
Span # 2	2	5.250	-15.74	345.34	0.05
Span # 3	3	4.330	-13.47	345.34	0.04
Span # 4	4	1.250	-13.23	345.34	0.04
Span # 5	5	5.583	-39.78	345.34	0.12
Span # 6	6	9.750	-42.75	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-13.90	408.55	0.03
Span # 2	2	5.250	-15.77	345.34	0.05
Span # 3	3	4.330	-13.35	345.34	0.04
Span # 4	4	1.250	-13.72	345.34	0.04
Span # 5	5	5.583	-49.14	345.34	0.14
Span # 6	6	9.750	-52.42	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-13.90	408.55	0.03
Span # 2	2	5.250	-15.77	345.34	0.05
Span # 3	3	4.330	-13.33	345.34	0.04
Span # 4	4	1.250	-13.77	345.34	0.04
Span # 5	5	5.583	-39.06	345.34	0.11
Span # 6	6	9.750	-41.66	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-13.93	408.55	0.03
Span # 2	2	5.250	-15.80	345.34	0.05
Span # 3	3	4.330	-13.21	345.34	0.04
Span # 4	4	1.250	-14.26	345.34	0.04
Span # 5	5	5.583	-48.41	345.34	0.14
Span # 6	6	9.750	-51.33	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-13.88	408.55	0.03
Span # 2	2	5.250	-15.74	345.34	0.05
Span # 3	3	4.330	-13.44	345.34	0.04
Span # 4	4	1.250	-13.35	345.34	0.04
Span # 5	5	5.583	-39.76	345.34	0.12
Span # 6	6	9.750	-42.73	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-13.91	408.55	0.03
Span # 2	2	5.250	-15.77	345.34	0.05
Span # 3	3	4.330	-13.32	345.34	0.04
Span # 4	4	1.250	-13.85	345.34	0.04
Span # 5	5	5.583	-49.12	345.34	0.14
Span # 6	6	9.750	-52.40	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-18.69	408.55	0.05
Span # 2	2	5.250	-20.67	345.34	0.06
Span # 3	3	4.330	-16.29	345.34	0.05
Span # 4	4	1.250	-7.23	345.34	0.02
Span # 5	5	5.583	-38.97	345.34	0.11
Span # 6	6	9.750	-41.57	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-18.72	408.55	0.05
Span # 2	2	5.250	-20.70	345.34	0.06
Span # 3	3	4.330	-16.17	345.34	0.05
Span # 4	4	1.250	-7.72	345.34	0.02
Span # 5	5	5.583	-48.33	345.34	0.14
Span # 6	6	9.750	-51.24	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-18.66	408.55	0.05
Span # 2	2	5.250	-20.64	345.34	0.06
Span # 3	3	4.330	-16.39	345.34	0.05
Span # 4	4	1.250	-6.81	345.34	0.02
Span # 5	5	5.583	-39.68	345.34	0.11
Span # 6	6	9.750	-42.63	408.55	0.10

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-18.69	408.55	0.05
Span # 2	2	5.250	-20.67	345.34	0.06
Span # 3	3	4.330	-16.27	345.34	0.05
Span # 4	4	1.250	-7.30	345.34	0.02
Span # 5	5	5.583	-49.04	345.34	0.14
Span # 6	6	9.750	-52.30	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-18.69	408.55	0.05
Span # 2	2	5.250	-20.67	345.34	0.06
Span # 3	3	4.330	-16.26	345.34	0.05
Span # 4	4	1.250	-7.35	345.34	0.02
Span # 5	5	5.583	-38.96	345.34	0.11
Span # 6	6	9.750	-41.55	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-18.72	408.55	0.05
Span # 2	2	5.250	-20.70	345.34	0.06
Span # 3	3	4.330	-16.14	345.34	0.05
Span # 4	4	1.250	-7.85	345.34	0.02
Span # 5	5	5.583	-48.32	345.34	0.14
Span # 6	6	9.750	-51.22	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-18.67	408.55	0.05
Span # 2	2	5.250	-20.65	345.34	0.06
Span # 3	3	4.330	-16.36	345.34	0.05
Span # 4	4	1.250	-6.94	345.34	0.02
Span # 5	5	5.583	-39.67	345.34	0.11
Span # 6	6	9.750	-42.61	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-18.70	408.55	0.05
Span # 2	2	5.250	-20.68	345.34	0.06
Span # 3	3	4.330	-16.24	345.34	0.05
Span # 4	4	1.250	-7.43	345.34	0.02
Span # 5	5	5.583	-49.02	345.34	0.14
Span # 6	6	9.750	-52.28	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-18.15	408.55	0.04
Span # 2	2	5.250	-20.12	345.34	0.06
Span # 3	3	4.330	-18.48	345.34	0.05
Span # 4	4	1.250	-11.64	345.34	0.03
Span # 5	5	5.583	-39.04	345.34	0.11
Span # 6	6	9.750	-41.65	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-18.18	408.55	0.04
Span # 2	2	5.250	-20.15	345.34	0.06
Span # 3	3	4.330	-18.36	345.34	0.05
Span # 4	4	1.250	-12.13	345.34	0.04
Span # 5	5	5.583	-48.40	345.34	0.14
Span # 6	6	9.750	-51.32	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	-18.13	408.55	0.04
Span # 2	2	5.250	-20.09	345.34	0.06
Span # 3	3	4.330	-18.58	345.34	0.05
Span # 4	4	1.250	-11.22	345.34	0.03
Span # 5	5	5.583	-39.75	345.34	0.12
Span # 6	6	9.750	-42.71	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	-18.16	408.55	0.04
Span # 2	2	5.250	-20.12	345.34	0.06
Span # 3	3	4.330	-18.46	345.34	0.05
Span # 4	4	1.250	-11.72	345.34	0.03
Span # 5	5	5.583	-49.11	345.34	0.14
Span # 6	6	9.750	-52.38	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-18.16	408.55	0.04
Span # 2	2	5.250	-20.13	345.34	0.06
Span # 3	3	4.330	-18.45	345.34	0.05
Span # 4	4	1.250	-11.76	345.34	0.03
Span # 5	5	5.583	-39.03	345.34	0.11

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	9.750	-41.63	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-18.19	408.55	0.04
Span # 2	2	5.250	-20.16	345.34	0.06
Span # 3	3	4.330	-18.33	345.34	0.05
Span # 4	4	1.250	-12.26	345.34	0.04
Span # 5	5	5.583	-48.38	345.34	0.14
Span # 6	6	9.750	-51.30	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-18.13	408.55	0.04
Span # 2	2	5.250	-20.10	345.34	0.06
Span # 3	3	4.330	-18.55	345.34	0.05
Span # 4	4	1.250	-11.35	345.34	0.03
Span # 5	5	5.583	-39.73	345.34	0.12
Span # 6	6	9.750	-42.69	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-18.16	408.55	0.04
Span # 2	2	5.250	-20.13	345.34	0.06
Span # 3	3	4.330	-18.43	345.34	0.05
Span # 4	4	1.250	-11.84	345.34	0.03
Span # 5	5	5.583	-49.09	345.34	0.14
Span # 6	6	9.750	-52.36	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	18.31	395.01	0.05
Span # 2	2	5.250	-20.45	345.34	0.06
Span # 3	3	4.330	-9.93	345.34	0.03
Span # 4	4	1.250	-9.72	345.34	0.03
Span # 5	5	5.583	-39.01	345.34	0.11
Span # 6	6	9.750	-41.61	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	18.29	395.01	0.05
Span # 2	2	5.250	-20.48	345.34	0.06
Span # 3	3	4.330	-9.81	345.34	0.03
Span # 4	4	1.250	-10.22	345.34	0.03
Span # 5	5	5.583	-48.37	345.34	0.14
Span # 6	6	9.750	-51.28	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	18.32	395.01	0.05
Span # 2	2	5.250	-20.43	345.34	0.06
Span # 3	3	4.330	-10.03	345.34	0.03
Span # 4	4	1.250	-9.30	345.34	0.03
Span # 5	5	5.583	-39.72	345.34	0.12
Span # 6	6	9.750	-42.68	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	18.30	395.01	0.05
Span # 2	2	5.250	-20.46	345.34	0.06
Span # 3	3	4.330	-9.91	345.34	0.03
Span # 4	4	1.250	-9.80	345.34	0.03
Span # 5	5	5.583	-49.08	345.34	0.14
Span # 6	6	9.750	-52.35	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	18.30	395.01	0.05
Span # 2	2	5.250	-20.46	345.34	0.06
Span # 3	3	4.330	-9.90	345.34	0.03
Span # 4	4	1.250	-9.85	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	18.29	395.01	0.05
Span # 2	2	5.250	-20.49	345.34	0.06
Span # 3	3	4.330	-9.78	345.34	0.03
Span # 4	4	1.250	-10.34	345.34	0.03
Span # 5	5	5.583	-48.35	345.34	0.14
Span # 6	6	9.750	-51.26	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	18.31	395.01	0.05
Span # 2	2	5.250	-20.44	345.34	0.06
Span # 3	3	4.330	-10.00	345.34	0.03
Span # 4	4	1.250	-9.43	345.34	0.03

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.583	-39.70	345.34	0.11
Span # 6	6	9.750	-42.66	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	18.30	395.01	0.05
Span # 2	2	5.250	-20.47	345.34	0.06
Span # 3	3	4.330	-9.88	345.34	0.03
Span # 4	4	1.250	-9.93	345.34	0.03
Span # 5	5	5.583	-49.06	345.34	0.14
Span # 6	6	9.750	-52.33	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	18.52	395.01	0.05
Span # 2	2	5.250	-19.91	345.34	0.06
Span # 3	3	4.330	-12.12	345.34	0.04
Span # 4	4	1.250	-14.13	345.34	0.04
Span # 5	5	5.583	-39.08	345.34	0.11
Span # 6	6	9.750	-41.69	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	18.51	395.01	0.05
Span # 2	2	5.250	-19.94	345.34	0.06
Span # 3	3	4.330	-12.00	345.34	0.03
Span # 4	4	1.250	-14.63	345.34	0.04
Span # 5	5	5.583	-48.44	345.34	0.14
Span # 6	6	9.750	-51.36	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	18.53	395.01	0.05
Span # 2	2	5.250	-19.88	345.34	0.06
Span # 3	3	4.330	-12.22	345.34	0.04
Span # 4	4	1.250	-13.72	345.34	0.04
Span # 5	5	5.583	-39.79	345.34	0.12
Span # 6	6	9.750	-42.76	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	18.52	395.01	0.05
Span # 2	2	5.250	-19.91	345.34	0.06
Span # 3	3	4.330	-12.10	345.34	0.04
Span # 4	4	1.250	-14.21	345.34	0.04
Span # 5	5	5.583	-49.15	345.34	0.14
Span # 6	6	9.750	-52.43	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	18.51	395.01	0.05
Span # 2	2	5.250	-19.91	345.34	0.06
Span # 3	3	4.330	-12.09	345.34	0.04
Span # 4	4	1.250	-14.26	345.34	0.04
Span # 5	5	5.583	-39.06	345.34	0.11
Span # 6	6	9.750	-41.67	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	18.50	395.01	0.05
Span # 2	2	5.250	-19.94	345.34	0.06
Span # 3	3	4.330	-11.97	345.34	0.03
Span # 4	4	1.250	-14.75	345.34	0.04
Span # 5	5	5.583	-48.42	345.34	0.14
Span # 6	6	9.750	-51.34	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	18.52	395.01	0.05
Span # 2	2	5.250	-19.89	345.34	0.06
Span # 3	3	4.330	-12.19	345.34	0.04
Span # 4	4	1.250	-13.84	345.34	0.04
Span # 5	5	5.583	-39.77	345.34	0.12
Span # 6	6	9.750	-42.74	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	18.51	395.01	0.05
Span # 2	2	5.250	-19.92	345.34	0.06
Span # 3	3	4.330	-12.07	345.34	0.03
Span # 4	4	1.250	-14.34	345.34	0.04
Span # 5	5	5.583	-49.13	345.34	0.14
Span # 6	6	9.750	-52.41	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	-22.19	408.55	0.05
Span # 2	2	5.250	-24.81	345.34	0.07
Span # 3	3	4.330	-15.04	345.34	0.04

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	1.250	-7.72	345.34	0.02
Span # 5	5	5.583	-38.98	345.34	0.11
Span # 6	6	9.750	-41.58	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	-22.21	408.55	0.05
Span # 2	2	5.250	-24.84	345.34	0.07
Span # 3	3	4.330	-14.92	345.34	0.04
Span # 4	4	1.250	-8.21	345.34	0.02
Span # 5	5	5.583	-48.34	345.34	0.14
Span # 6	6	9.750	-51.24	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	-22.16	408.55	0.05
Span # 2	2	5.250	-24.79	345.34	0.07
Span # 3	3	4.330	-15.14	345.34	0.04
Span # 4	4	1.250	-7.30	345.34	0.02
Span # 5	5	5.583	-39.69	345.34	0.11
Span # 6	6	9.750	-42.64	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	-22.19	408.55	0.05
Span # 2	2	5.250	-24.81	345.34	0.07
Span # 3	3	4.330	-15.02	345.34	0.04
Span # 4	4	1.250	-7.79	345.34	0.02
Span # 5	5	5.583	-49.05	345.34	0.14
Span # 6	6	9.750	-52.31	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	-22.19	408.55	0.05
Span # 2	2	5.250	-24.82	345.34	0.07
Span # 3	3	4.330	-15.01	345.34	0.04
Span # 4	4	1.250	-7.84	345.34	0.02
Span # 5	5	5.583	-38.97	345.34	0.11
Span # 6	6	9.750	-41.56	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	-22.22	408.55	0.05
Span # 2	2	5.250	-24.85	345.34	0.07
Span # 3	3	4.330	-14.89	345.34	0.04
Span # 4	4	1.250	-8.34	345.34	0.02
Span # 5	5	5.583	-48.32	345.34	0.14
Span # 6	6	9.750	-51.23	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	-22.17	408.55	0.05
Span # 2	2	5.250	-24.79	345.34	0.07
Span # 3	3	4.330	-15.11	345.34	0.04
Span # 4	4	1.250	-7.43	345.34	0.02
Span # 5	5	5.583	-39.67	345.34	0.11
Span # 6	6	9.750	-42.62	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	-22.20	408.55	0.05
Span # 2	2	5.250	-24.82	345.34	0.07
Span # 3	3	4.330	-14.99	345.34	0.04
Span # 4	4	1.250	-7.92	345.34	0.02
Span # 5	5	5.583	-49.03	345.34	0.14
Span # 6	6	9.750	-52.29	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	-21.65	408.55	0.05
Span # 2	2	5.250	-24.26	345.34	0.07
Span # 3	3	4.330	-17.23	345.34	0.05
Span # 4	4	1.250	-12.13	345.34	0.04
Span # 5	5	5.583	-39.05	345.34	0.11
Span # 6	6	9.750	-41.66	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	-21.68	408.55	0.05
Span # 2	2	5.250	-24.29	345.34	0.07
Span # 3	3	4.330	-17.11	345.34	0.05
Span # 4	4	1.250	-12.62	345.34	0.04
Span # 5	5	5.583	-48.41	345.34	0.14
Span # 6	6	9.750	-51.32	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	-21.63	408.55	0.05
Span # 2	2	5.250	-24.24	345.34	0.07

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	4.330	-17.33	345.34	0.05
Span # 4	4	1.250	-11.71	345.34	0.03
Span # 5	5	5.583	-39.76	345.34	0.12
Span # 6	6	9.750	-42.72	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	-21.66	408.55	0.05
Span # 2	2	5.250	-24.27	345.34	0.07
Span # 3	3	4.330	-17.21	345.34	0.05
Span # 4	4	1.250	-12.20	345.34	0.04
Span # 5	5	5.583	-49.12	345.34	0.14
Span # 6	6	9.750	-52.39	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	-21.66	408.55	0.05
Span # 2	2	5.250	-24.27	345.34	0.07
Span # 3	3	4.330	-17.20	345.34	0.05
Span # 4	4	1.250	-12.25	345.34	0.04
Span # 5	5	5.583	-39.03	345.34	0.11
Span # 6	6	9.750	-41.64	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	-21.69	408.55	0.05
Span # 2	2	5.250	-24.30	345.34	0.07
Span # 3	3	4.330	-17.08	345.34	0.05
Span # 4	4	1.250	-12.75	345.34	0.04
Span # 5	5	5.583	-48.39	345.34	0.14
Span # 6	6	9.750	-51.31	408.55	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	-21.63	408.55	0.05
Span # 2	2	5.250	-24.25	345.34	0.07
Span # 3	3	4.330	-17.30	345.34	0.05
Span # 4	4	1.250	-11.84	345.34	0.03
Span # 5	5	5.583	-39.74	345.34	0.12
Span # 6	6	9.750	-42.70	408.55	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	-21.66	408.55	0.05
Span # 2	2	5.250	-24.28	345.34	0.07
Span # 3	3	4.330	-17.18	345.34	0.05
Span # 4	4	1.250	-12.33	345.34	0.04
Span # 5	5	5.583	-49.10	345.34	0.14
Span # 6	6	9.750	-52.37	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.250	-16.27	408.55	0.04
Span # 2	2	5.250	-18.28	345.34	0.05
Span # 3	3	4.330	-14.78	345.34	0.04
Span # 4	4	1.250	-21.45	345.34	0.06
Span # 5	5	5.583	-48.53	345.34	0.14
Span # 6	6	9.750	-51.47	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.250	-16.21	408.55	0.04
Span # 2	2	5.250	-18.22	345.34	0.05
Span # 3	3	4.330	-13.97	345.34	0.04
Span # 4	4	1.250	-20.54	345.34	0.06
Span # 5	5	5.583	-39.88	345.34	0.12
Span # 6	6	9.750	-42.87	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	5.250	-16.24	408.55	0.04
Span # 2	2	5.250	-18.25	345.34	0.05
Span # 3	3	4.330	-14.38	345.34	0.04
Span # 4	4	1.250	-21.03	345.34	0.06
Span # 5	5	5.583	-49.24	345.34	0.14
Span # 6	6	9.750	-52.54	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.250	-16.25	408.55	0.04
Span # 2	2	5.250	-18.25	345.34	0.05
Span # 3	3	4.330	-14.42	345.34	0.04
Span # 4	4	1.250	-21.08	345.34	0.06
Span # 5	5	5.583	-39.16	345.34	0.11
Span # 6	6	9.750	-41.79	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.250	-16.28	408.55	0.04

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-18.28	345.34	0.05
Span # 3	3	4.330	-14.90	345.34	0.04
Span # 4	4	1.250	-21.57	345.34	0.06
Span # 5	5	5.583	-48.52	345.34	0.14
Span # 6	6	9.750	-51.45	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.250	-16.22	408.55	0.04
Span # 2	2	5.250	-18.23	345.34	0.05
Span # 3	3	4.330	-14.02	345.34	0.04
Span # 4	4	1.250	-20.66	345.34	0.06
Span # 5	5	5.583	-39.87	345.34	0.12
Span # 6	6	9.750	-42.85	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	5.250	-16.25	408.55	0.04
Span # 2	2	5.250	-18.26	345.34	0.05
Span # 3	3	4.330	-14.50	345.34	0.04
Span # 4	4	1.250	-21.16	345.34	0.06
Span # 5	5	5.583	-49.23	345.34	0.14
Span # 6	6	9.750	-52.52	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L***					
Span # 1	1	5.250	-15.70	408.55	0.04
Span # 2	2	5.250	-17.70	345.34	0.05
Span # 3	3	4.330	-18.06	345.34	0.05
Span # 4	4	1.250	-25.36	345.34	0.07
Span # 5	5	5.583	-39.24	345.34	0.11
Span # 6	6	9.750	-41.88	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L**L					
Span # 1	1	5.250	-15.73	408.55	0.04
Span # 2	2	5.250	-17.73	345.34	0.05
Span # 3	3	4.330	-18.54	345.34	0.05
Span # 4	4	1.250	-25.86	345.34	0.07
Span # 5	5	5.583	-48.60	345.34	0.14
Span # 6	6	9.750	-51.55	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*L*					
Span # 1	1	5.250	-15.68	408.55	0.04
Span # 2	2	5.250	-17.67	345.34	0.05
Span # 3	3	4.330	-17.66	345.34	0.05
Span # 4	4	1.250	-24.95	345.34	0.07
Span # 5	5	5.583	-39.95	345.34	0.12
Span # 6	6	9.750	-42.95	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*LL					
Span # 1	1	5.250	-15.71	408.55	0.04
Span # 2	2	5.250	-17.70	345.34	0.05
Span # 3	3	4.330	-18.14	345.34	0.05
Span # 4	4	1.250	-25.44	345.34	0.07
Span # 5	5	5.583	-49.31	345.34	0.14
Span # 6	6	9.750	-52.62	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL**					
Span # 1	1	5.250	-15.71	408.55	0.04
Span # 2	2	5.250	-17.71	345.34	0.05
Span # 3	3	4.330	-18.19	345.34	0.05
Span # 4	4	1.250	-25.49	345.34	0.07
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.86	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL*L					
Span # 1	1	5.250	-15.74	408.55	0.04
Span # 2	2	5.250	-17.74	345.34	0.05
Span # 3	3	4.330	-18.67	345.34	0.05
Span # 4	4	1.250	-25.98	345.34	0.08
Span # 5	5	5.583	-48.59	345.34	0.14
Span # 6	6	9.750	-51.53	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLL*					
Span # 1	1	5.250	-15.69	408.55	0.04
Span # 2	2	5.250	-17.68	345.34	0.05
Span # 3	3	4.330	-17.78	345.34	0.05
Span # 4	4	1.250	-25.07	345.34	0.07
Span # 5	5	5.583	-39.94	345.34	0.12
Span # 6	6	9.750	-42.93	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLLL					

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	-15.72	408.55	0.04
Span # 2	2	5.250	-17.71	345.34	0.05
Span # 3	3	4.330	-18.26	345.34	0.05
Span # 4	4	1.250	-25.57	345.34	0.07
Span # 5	5	5.583	-49.29	345.34	0.14
Span # 6	6	9.750	-52.60	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L****					
Span # 1	1	5.250	-20.50	408.55	0.05
Span # 2	2	5.250	-22.60	345.34	0.07
Span # 3	3	4.330	-18.98	345.34	0.05
Span # 4	4	1.250	-18.95	345.34	0.05
Span # 5	5	5.583	-39.14	345.34	0.11
Span # 6	6	9.750	-41.77	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L***L					
Span # 1	1	5.250	-20.53	408.55	0.05
Span # 2	2	5.250	-22.63	345.34	0.07
Span # 3	3	4.330	-18.86	345.34	0.05
Span # 4	4	1.250	-19.44	345.34	0.06
Span # 5	5	5.583	-48.50	345.34	0.14
Span # 6	6	9.750	-51.44	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**L*					
Span # 1	1	5.250	-20.47	408.55	0.05
Span # 2	2	5.250	-22.58	345.34	0.07
Span # 3	3	4.330	-19.08	345.34	0.06
Span # 4	4	1.250	-18.53	345.34	0.05
Span # 5	5	5.583	-39.85	345.34	0.12
Span # 6	6	9.750	-42.83	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**LL					
Span # 1	1	5.250	-20.50	408.55	0.05
Span # 2	2	5.250	-22.61	345.34	0.07
Span # 3	3	4.330	-18.96	345.34	0.05
Span # 4	4	1.250	-19.02	345.34	0.06
Span # 5	5	5.583	-49.21	345.34	0.14
Span # 6	6	9.750	-52.50	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L**					
Span # 1	1	5.250	-20.50	408.55	0.05
Span # 2	2	5.250	-22.61	345.34	0.07
Span # 3	3	4.330	-18.95	345.34	0.05
Span # 4	4	1.250	-19.07	345.34	0.06
Span # 5	5	5.583	-39.13	345.34	0.11
Span # 6	6	9.750	-41.75	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L*L					
Span # 1	1	5.250	-20.53	408.55	0.05
Span # 2	2	5.250	-22.64	345.34	0.07
Span # 3	3	4.330	-18.83	345.34	0.05
Span # 4	4	1.250	-19.57	345.34	0.06
Span # 5	5	5.583	-48.49	345.34	0.14
Span # 6	6	9.750	-51.42	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LL*					
Span # 1	1	5.250	-20.48	408.55	0.05
Span # 2	2	5.250	-22.58	345.34	0.07
Span # 3	3	4.330	-19.05	345.34	0.06
Span # 4	4	1.250	-18.66	345.34	0.05
Span # 5	5	5.583	-39.84	345.34	0.12
Span # 6	6	9.750	-42.82	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LLL					
Span # 1	1	5.250	-20.51	408.55	0.05
Span # 2	2	5.250	-22.61	345.34	0.07
Span # 3	3	4.330	-18.93	345.34	0.05
Span # 4	4	1.250	-19.15	345.34	0.06
Span # 5	5	5.583	-49.20	345.34	0.14
Span # 6	6	9.750	-52.48	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL***					
Span # 1	1	5.250	-19.96	408.55	0.05
Span # 2	2	5.250	-22.06	345.34	0.06
Span # 3	3	4.330	-21.17	345.34	0.06
Span # 4	4	1.250	-23.36	345.34	0.07
Span # 5	5	5.583	-39.21	345.34	0.11
Span # 6	6	9.750	-41.85	408.55	0.10

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL**L					
Span # 1	1	5.250	-19.99	408.55	0.05
Span # 2	2	5.250	-22.09	345.34	0.06
Span # 3	3	4.330	-21.05	345.34	0.06
Span # 4	4	1.250	-23.85	345.34	0.07
Span # 5	5	5.583	-48.57	345.34	0.14
Span # 6	6	9.750	-51.52	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*L*					
Span # 1	1	5.250	-19.94	408.55	0.05
Span # 2	2	5.250	-22.03	345.34	0.06
Span # 3	3	4.330	-21.27	345.34	0.06
Span # 4	4	1.250	-22.94	345.34	0.07
Span # 5	5	5.583	-39.92	345.34	0.12
Span # 6	6	9.750	-42.91	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*LL					
Span # 1	1	5.250	-19.97	408.55	0.05
Span # 2	2	5.250	-22.06	345.34	0.06
Span # 3	3	4.330	-21.15	345.34	0.06
Span # 4	4	1.250	-23.44	345.34	0.07
Span # 5	5	5.583	-49.28	345.34	0.14
Span # 6	6	9.750	-52.58	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL**					
Span # 1	1	5.250	-19.97	408.55	0.05
Span # 2	2	5.250	-22.06	345.34	0.06
Span # 3	3	4.330	-21.14	345.34	0.06
Span # 4	4	1.250	-23.49	345.34	0.07
Span # 5	5	5.583	-39.20	345.34	0.11
Span # 6	6	9.750	-41.83	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL*L					
Span # 1	1	5.250	-20.00	408.55	0.05
Span # 2	2	5.250	-22.09	345.34	0.06
Span # 3	3	4.330	-21.02	345.34	0.06
Span # 4	4	1.250	-23.98	345.34	0.07
Span # 5	5	5.583	-48.55	345.34	0.14
Span # 6	6	9.750	-51.50	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLL*					
Span # 1	1	5.250	-19.94	408.55	0.05
Span # 2	2	5.250	-22.04	345.34	0.06
Span # 3	3	4.330	-21.24	345.34	0.06
Span # 4	4	1.250	-23.07	345.34	0.07
Span # 5	5	5.583	-39.91	345.34	0.12
Span # 6	6	9.750	-42.89	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLLL					
Span # 1	1	5.250	-19.97	408.55	0.05
Span # 2	2	5.250	-22.07	345.34	0.06
Span # 3	3	4.330	-21.12	345.34	0.06
Span # 4	4	1.250	-23.56	345.34	0.07
Span # 5	5	5.583	-49.26	345.34	0.14
Span # 6	6	9.750	-52.56	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*****					
Span # 1	1	5.250	19.77	395.01	0.05
Span # 2	2	5.250	-22.39	345.34	0.06
Span # 3	3	4.330	-14.75	345.34	0.04
Span # 4	4	1.250	-21.44	345.34	0.06
Span # 5	5	5.583	-39.18	345.34	0.11
Span # 6	6	9.750	-41.81	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L****L					
Span # 1	1	5.250	19.76	395.01	0.05
Span # 2	2	5.250	-22.42	345.34	0.06
Span # 3	3	4.330	-15.23	345.34	0.04
Span # 4	4	1.250	-21.94	345.34	0.06
Span # 5	5	5.583	-48.54	345.34	0.14
Span # 6	6	9.750	-51.48	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***L*					
Span # 1	1	5.250	19.78	395.01	0.05
Span # 2	2	5.250	-22.37	345.34	0.06
Span # 3	3	4.330	-14.34	345.34	0.04
Span # 4	4	1.250	-21.03	345.34	0.06
Span # 5	5	5.583	-39.89	345.34	0.12

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	9.750	-42.88	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***LL					
Span # 1	1	5.250	19.77	395.01	0.05
Span # 2	2	5.250	-22.40	345.34	0.06
Span # 3	3	4.330	-14.82	345.34	0.04
Span # 4	4	1.250	-21.52	345.34	0.06
Span # 5	5	5.583	-49.25	345.34	0.14
Span # 6	6	9.750	-52.55	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L**					
Span # 1	1	5.250	19.77	395.01	0.05
Span # 2	2	5.250	-22.40	345.34	0.06
Span # 3	3	4.330	-14.87	345.34	0.04
Span # 4	4	1.250	-21.57	345.34	0.06
Span # 5	5	5.583	-39.17	345.34	0.11
Span # 6	6	9.750	-41.79	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L*L					
Span # 1	1	5.250	19.76	395.01	0.05
Span # 2	2	5.250	-22.43	345.34	0.06
Span # 3	3	4.330	-15.35	345.34	0.04
Span # 4	4	1.250	-22.06	345.34	0.06
Span # 5	5	5.583	-48.53	345.34	0.14
Span # 6	6	9.750	-51.46	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LL*					
Span # 1	1	5.250	19.78	395.01	0.05
Span # 2	2	5.250	-22.37	345.34	0.06
Span # 3	3	4.330	-14.47	345.34	0.04
Span # 4	4	1.250	-21.15	345.34	0.06
Span # 5	5	5.583	-39.88	345.34	0.12
Span # 6	6	9.750	-42.86	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LLL					
Span # 1	1	5.250	19.77	395.01	0.05
Span # 2	2	5.250	-22.40	345.34	0.06
Span # 3	3	4.330	-14.95	345.34	0.04
Span # 4	4	1.250	-21.65	345.34	0.06
Span # 5	5	5.583	-49.23	345.34	0.14
Span # 6	6	9.750	-52.53	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L***					
Span # 1	1	5.250	19.98	395.01	0.05
Span # 2	2	5.250	-21.84	345.34	0.06
Span # 3	3	4.330	-18.51	345.34	0.05
Span # 4	4	1.250	-25.85	345.34	0.07
Span # 5	5	5.583	-39.25	345.34	0.11
Span # 6	6	9.750	-41.89	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L**L					
Span # 1	1	5.250	19.97	395.01	0.05
Span # 2	2	5.250	-21.87	345.34	0.06
Span # 3	3	4.330	-18.99	345.34	0.06
Span # 4	4	1.250	-26.35	345.34	0.08
Span # 5	5	5.583	-48.61	345.34	0.14
Span # 6	6	9.750	-51.56	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*L*					
Span # 1	1	5.250	19.99	395.01	0.05
Span # 2	2	5.250	-21.82	345.34	0.06
Span # 3	3	4.330	-18.11	345.34	0.05
Span # 4	4	1.250	-25.44	345.34	0.07
Span # 5	5	5.583	-39.96	345.34	0.12
Span # 6	6	9.750	-42.96	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*LL					
Span # 1	1	5.250	19.98	395.01	0.05
Span # 2	2	5.250	-21.85	345.34	0.06
Span # 3	3	4.330	-18.59	345.34	0.05
Span # 4	4	1.250	-25.93	345.34	0.08
Span # 5	5	5.583	-49.32	345.34	0.14
Span # 6	6	9.750	-52.63	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL**					
Span # 1	1	5.250	19.98	395.01	0.05
Span # 2	2	5.250	-21.85	345.34	0.06
Span # 3	3	4.330	-18.64	345.34	0.05
Span # 4	4	1.250	-25.98	345.34	0.08

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.87	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL*L					
Span # 1	1	5.250	19.97	395.01	0.05
Span # 2	2	5.250	-21.88	345.34	0.06
Span # 3	3	4.330	-19.12	345.34	0.06
Span # 4	4	1.250	-26.47	345.34	0.08
Span # 5	5	5.583	-48.59	345.34	0.14
Span # 6	6	9.750	-51.54	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLL*					
Span # 1	1	5.250	19.99	395.01	0.05
Span # 2	2	5.250	-21.83	345.34	0.06
Span # 3	3	4.330	-18.23	345.34	0.05
Span # 4	4	1.250	-25.56	345.34	0.07
Span # 5	5	5.583	-39.94	345.34	0.12
Span # 6	6	9.750	-42.94	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLLL					
Span # 1	1	5.250	19.98	395.01	0.05
Span # 2	2	5.250	-21.86	345.34	0.06
Span # 3	3	4.330	-18.71	345.34	0.05
Span # 4	4	1.250	-26.06	345.34	0.08
Span # 5	5	5.583	-49.30	345.34	0.14
Span # 6	6	9.750	-52.61	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL****					
Span # 1	1	5.250	-24.00	408.55	0.06
Span # 2	2	5.250	-26.75	345.34	0.08
Span # 3	3	4.330	-17.74	345.34	0.05
Span # 4	4	1.250	-19.44	345.34	0.06
Span # 5	5	5.583	-39.15	345.34	0.11
Span # 6	6	9.750	-41.78	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL***L					
Span # 1	1	5.250	-24.02	408.55	0.06
Span # 2	2	5.250	-26.78	345.34	0.08
Span # 3	3	4.330	-17.62	345.34	0.05
Span # 4	4	1.250	-19.93	345.34	0.06
Span # 5	5	5.583	-48.51	345.34	0.14
Span # 6	6	9.750	-51.45	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**L*					
Span # 1	1	5.250	-23.97	408.55	0.06
Span # 2	2	5.250	-26.72	345.34	0.08
Span # 3	3	4.330	-17.84	345.34	0.05
Span # 4	4	1.250	-19.02	345.34	0.06
Span # 5	5	5.583	-39.86	345.34	0.12
Span # 6	6	9.750	-42.84	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**LL					
Span # 1	1	5.250	-24.00	408.55	0.06
Span # 2	2	5.250	-26.75	345.34	0.08
Span # 3	3	4.330	-17.72	345.34	0.05
Span # 4	4	1.250	-19.51	345.34	0.06
Span # 5	5	5.583	-49.22	345.34	0.14
Span # 6	6	9.750	-52.51	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L**					
Span # 1	1	5.250	-24.00	408.55	0.06
Span # 2	2	5.250	-26.76	345.34	0.08
Span # 3	3	4.330	-17.71	345.34	0.05
Span # 4	4	1.250	-19.56	345.34	0.06
Span # 5	5	5.583	-39.14	345.34	0.11
Span # 6	6	9.750	-41.76	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L*L					
Span # 1	1	5.250	-24.03	408.55	0.06
Span # 2	2	5.250	-26.79	345.34	0.08
Span # 3	3	4.330	-17.59	345.34	0.05
Span # 4	4	1.250	-20.06	345.34	0.06
Span # 5	5	5.583	-48.49	345.34	0.14
Span # 6	6	9.750	-51.43	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LL*					
Span # 1	1	5.250	-23.98	408.55	0.06
Span # 2	2	5.250	-26.73	345.34	0.08
Span # 3	3	4.330	-17.81	345.34	0.05

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	1.250	-19.15	345.34	0.06
Span # 5	5	5.583	-39.84	345.34	0.12
Span # 6	6	9.750	-42.82	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LLL					
Span # 1	1	5.250	-24.01	408.55	0.06
Span # 2	2	5.250	-26.76	345.34	0.08
Span # 3	3	4.330	-17.69	345.34	0.05
Span # 4	4	1.250	-19.64	345.34	0.06
Span # 5	5	5.583	-49.20	345.34	0.14
Span # 6	6	9.750	-52.49	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL***					
Span # 1	1	5.250	-23.46	408.55	0.06
Span # 2	2	5.250	-26.20	345.34	0.08
Span # 3	3	4.330	-19.93	345.34	0.06
Span # 4	4	1.250	-23.85	345.34	0.07
Span # 5	5	5.583	-39.22	345.34	0.11
Span # 6	6	9.750	-41.86	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL**L					
Span # 1	1	5.250	-23.49	408.55	0.06
Span # 2	2	5.250	-26.23	345.34	0.08
Span # 3	3	4.330	-19.81	345.34	0.06
Span # 4	4	1.250	-24.34	345.34	0.07
Span # 5	5	5.583	-48.58	345.34	0.14
Span # 6	6	9.750	-51.52	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*L*					
Span # 1	1	5.250	-23.44	408.55	0.06
Span # 2	2	5.250	-26.17	345.34	0.08
Span # 3	3	4.330	-20.03	345.34	0.06
Span # 4	4	1.250	-23.43	345.34	0.07
Span # 5	5	5.583	-39.93	345.34	0.12
Span # 6	6	9.750	-42.92	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*LL					
Span # 1	1	5.250	-23.47	408.55	0.06
Span # 2	2	5.250	-26.20	345.34	0.08
Span # 3	3	4.330	-19.91	345.34	0.06
Span # 4	4	1.250	-23.92	345.34	0.07
Span # 5	5	5.583	-49.29	345.34	0.14
Span # 6	6	9.750	-52.59	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL**					
Span # 1	1	5.250	-23.47	408.55	0.06
Span # 2	2	5.250	-26.21	345.34	0.08
Span # 3	3	4.330	-19.89	345.34	0.06
Span # 4	4	1.250	-23.97	345.34	0.07
Span # 5	5	5.583	-39.20	345.34	0.11
Span # 6	6	9.750	-41.84	408.55	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL*L					
Span # 1	1	5.250	-23.50	408.55	0.06
Span # 2	2	5.250	-26.24	345.34	0.08
Span # 3	3	4.330	-19.77	345.34	0.06
Span # 4	4	1.250	-24.47	345.34	0.07
Span # 5	5	5.583	-48.56	345.34	0.14
Span # 6	6	9.750	-51.51	408.55	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLL*					
Span # 1	1	5.250	-23.44	408.55	0.06
Span # 2	2	5.250	-26.18	345.34	0.08
Span # 3	3	4.330	-20.00	345.34	0.06
Span # 4	4	1.250	-23.56	345.34	0.07
Span # 5	5	5.583	-39.91	345.34	0.12
Span # 6	6	9.750	-42.90	408.55	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLLL					
Span # 1	1	5.250	-23.47	408.55	0.06
Span # 2	2	5.250	-26.21	345.34	0.08
Span # 3	3	4.330	-19.88	345.34	0.06
Span # 4	4	1.250	-24.05	345.34	0.07
Span # 5	5	5.583	-49.27	345.34	0.14
Span # 6	6	9.750	-52.57	408.55	0.13
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	-14.44	408.55	0.04
Span # 2	2	5.250	-16.32	345.34	0.05

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	4.330	-11.14	345.34	0.03
Span # 4	4	1.250	-9.39	345.34	0.03
Span # 5	5	5.583	-41.93	345.34	0.12
Span # 6	6	9.750	-44.62	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.42	408.55	0.04
Span # 2	2	5.250	-16.30	345.34	0.05
Span # 3	3	4.330	-11.21	345.34	0.03
Span # 4	4	1.250	-9.10	345.34	0.03
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.94	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.17	345.34	0.03
Span # 4	4	1.250	-9.26	345.34	0.03
Span # 5	5	5.583	-42.15	345.34	0.12
Span # 6	6	9.750	-44.96	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.17	345.34	0.03
Span # 4	4	1.250	-9.27	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.44	408.55	0.04
Span # 2	2	5.250	-16.32	345.34	0.05
Span # 3	3	4.330	-11.13	345.34	0.03
Span # 4	4	1.250	-9.43	345.34	0.03
Span # 5	5	5.583	-41.92	345.34	0.12
Span # 6	6	9.750	-44.62	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.42	408.55	0.04
Span # 2	2	5.250	-16.30	345.34	0.05
Span # 3	3	4.330	-11.20	345.34	0.03
Span # 4	4	1.250	-9.14	345.34	0.03
Span # 5	5	5.583	-39.22	345.34	0.11
Span # 6	6	9.750	-41.93	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.16	345.34	0.03
Span # 4	4	1.250	-9.30	345.34	0.03
Span # 5	5	5.583	-42.15	345.34	0.12
Span # 6	6	9.750	-44.95	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	-14.26	408.55	0.03
Span # 2	2	5.250	-16.14	345.34	0.05
Span # 3	3	4.330	-11.86	345.34	0.03
Span # 4	4	1.250	-10.61	345.34	0.03
Span # 5	5	5.583	-39.03	345.34	0.11
Span # 6	6	9.750	-41.63	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	-14.27	408.55	0.03
Span # 2	2	5.250	-16.15	345.34	0.05
Span # 3	3	4.330	-11.82	345.34	0.03
Span # 4	4	1.250	-10.77	345.34	0.03
Span # 5	5	5.583	-41.95	345.34	0.12
Span # 6	6	9.750	-44.65	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-14.25	408.55	0.03
Span # 2	2	5.250	-16.13	345.34	0.05
Span # 3	3	4.330	-11.89	345.34	0.03
Span # 4	4	1.250	-10.48	345.34	0.03
Span # 5	5	5.583	-39.25	345.34	0.11
Span # 6	6	9.750	-41.96	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-14.26	408.55	0.03

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-16.14	345.34	0.05
Span # 3	3	4.330	-11.85	345.34	0.03
Span # 4	4	1.250	-10.63	345.34	0.03
Span # 5	5	5.583	-42.17	345.34	0.12
Span # 6	6	9.750	-44.98	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-14.26	408.55	0.03
Span # 2	2	5.250	-16.14	345.34	0.05
Span # 3	3	4.330	-11.85	345.34	0.03
Span # 4	4	1.250	-10.65	345.34	0.03
Span # 5	5	5.583	-39.02	345.34	0.11
Span # 6	6	9.750	-41.62	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-14.27	408.55	0.03
Span # 2	2	5.250	-16.15	345.34	0.05
Span # 3	3	4.330	-11.81	345.34	0.03
Span # 4	4	1.250	-10.80	345.34	0.03
Span # 5	5	5.583	-41.95	345.34	0.12
Span # 6	6	9.750	-44.64	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-14.26	408.55	0.03
Span # 2	2	5.250	-16.13	345.34	0.05
Span # 3	3	4.330	-11.88	345.34	0.03
Span # 4	4	1.250	-10.52	345.34	0.03
Span # 5	5	5.583	-39.24	345.34	0.11
Span # 6	6	9.750	-41.96	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-14.27	408.55	0.03
Span # 2	2	5.250	-16.14	345.34	0.05
Span # 3	3	4.330	-11.85	345.34	0.03
Span # 4	4	1.250	-10.67	345.34	0.03
Span # 5	5	5.583	-42.17	345.34	0.12
Span # 6	6	9.750	-44.98	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-15.76	408.55	0.04
Span # 2	2	5.250	-17.67	345.34	0.05
Span # 3	3	4.330	-12.77	345.34	0.04
Span # 4	4	1.250	-8.61	345.34	0.02
Span # 5	5	5.583	-38.99	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-15.77	408.55	0.04
Span # 2	2	5.250	-17.68	345.34	0.05
Span # 3	3	4.330	-12.74	345.34	0.04
Span # 4	4	1.250	-8.76	345.34	0.03
Span # 5	5	5.583	-41.92	345.34	0.12
Span # 6	6	9.750	-44.61	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-15.75	408.55	0.04
Span # 2	2	5.250	-17.66	345.34	0.05
Span # 3	3	4.330	-12.81	345.34	0.04
Span # 4	4	1.250	-8.48	345.34	0.02
Span # 5	5	5.583	-39.22	345.34	0.11
Span # 6	6	9.750	-41.92	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-15.76	408.55	0.04
Span # 2	2	5.250	-17.67	345.34	0.05
Span # 3	3	4.330	-12.77	345.34	0.04
Span # 4	4	1.250	-8.63	345.34	0.02
Span # 5	5	5.583	-42.14	345.34	0.12
Span # 6	6	9.750	-44.95	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-15.76	408.55	0.04
Span # 2	2	5.250	-17.67	345.34	0.05
Span # 3	3	4.330	-12.76	345.34	0.04
Span # 4	4	1.250	-8.65	345.34	0.03
Span # 5	5	5.583	-38.99	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	-15.77	408.55	0.04
Span # 2	2	5.250	-17.68	345.34	0.05
Span # 3	3	4.330	-12.73	345.34	0.04
Span # 4	4	1.250	-8.80	345.34	0.03
Span # 5	5	5.583	-41.91	345.34	0.12
Span # 6	6	9.750	-44.61	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-15.75	408.55	0.04
Span # 2	2	5.250	-17.66	345.34	0.05
Span # 3	3	4.330	-12.80	345.34	0.04
Span # 4	4	1.250	-8.51	345.34	0.02
Span # 5	5	5.583	-39.21	345.34	0.11
Span # 6	6	9.750	-41.92	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-15.76	408.55	0.04
Span # 2	2	5.250	-17.67	345.34	0.05
Span # 3	3	4.330	-12.76	345.34	0.04
Span # 4	4	1.250	-8.67	345.34	0.03
Span # 5	5	5.583	-42.14	345.34	0.12
Span # 6	6	9.750	-44.94	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-15.59	408.55	0.04
Span # 2	2	5.250	-17.50	345.34	0.05
Span # 3	3	4.330	-13.46	345.34	0.04
Span # 4	4	1.250	-9.98	345.34	0.03
Span # 5	5	5.583	-39.02	345.34	0.11
Span # 6	6	9.750	-41.62	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-15.60	408.55	0.04
Span # 2	2	5.250	-17.51	345.34	0.05
Span # 3	3	4.330	-13.42	345.34	0.04
Span # 4	4	1.250	-10.14	345.34	0.03
Span # 5	5	5.583	-41.94	345.34	0.12
Span # 6	6	9.750	-44.64	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	-15.58	408.55	0.04
Span # 2	2	5.250	-17.49	345.34	0.05
Span # 3	3	4.330	-13.49	345.34	0.04
Span # 4	4	1.250	-9.85	345.34	0.03
Span # 5	5	5.583	-39.24	345.34	0.11
Span # 6	6	9.750	-41.95	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	-15.59	408.55	0.04
Span # 2	2	5.250	-17.50	345.34	0.05
Span # 3	3	4.330	-13.45	345.34	0.04
Span # 4	4	1.250	-10.01	345.34	0.03
Span # 5	5	5.583	-42.16	345.34	0.12
Span # 6	6	9.750	-44.97	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-15.59	408.55	0.04
Span # 2	2	5.250	-17.50	345.34	0.05
Span # 3	3	4.330	-13.45	345.34	0.04
Span # 4	4	1.250	-10.02	345.34	0.03
Span # 5	5	5.583	-39.01	345.34	0.11
Span # 6	6	9.750	-41.61	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-15.60	408.55	0.04
Span # 2	2	5.250	-17.51	345.34	0.05
Span # 3	3	4.330	-13.41	345.34	0.04
Span # 4	4	1.250	-10.18	345.34	0.03
Span # 5	5	5.583	-41.94	345.34	0.12
Span # 6	6	9.750	-44.63	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-15.59	408.55	0.04
Span # 2	2	5.250	-17.49	345.34	0.05
Span # 3	3	4.330	-13.48	345.34	0.04
Span # 4	4	1.250	-9.89	345.34	0.03
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.94	408.55	0.10

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-15.60	408.55	0.04
Span # 2	2	5.250	-17.50	345.34	0.05
Span # 3	3	4.330	-13.44	345.34	0.04
Span # 4	4	1.250	-10.05	345.34	0.03
Span # 5	5	5.583	-42.16	345.34	0.12
Span # 6	6	9.750	-44.97	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	-15.52	408.55	0.04
Span # 2	2	5.250	-17.60	345.34	0.05
Span # 3	3	4.330	-10.79	345.34	0.03
Span # 4	4	1.250	-9.39	345.34	0.03
Span # 5	5	5.583	-39.01	345.34	0.11
Span # 6	6	9.750	-41.61	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	-15.53	408.55	0.04
Span # 2	2	5.250	-17.61	345.34	0.05
Span # 3	3	4.330	-10.75	345.34	0.03
Span # 4	4	1.250	-9.54	345.34	0.03
Span # 5	5	5.583	-41.93	345.34	0.12
Span # 6	6	9.750	-44.63	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	-15.51	408.55	0.04
Span # 2	2	5.250	-17.60	345.34	0.05
Span # 3	3	4.330	-10.82	345.34	0.03
Span # 4	4	1.250	-9.25	345.34	0.03
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.94	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	-15.52	408.55	0.04
Span # 2	2	5.250	-17.61	345.34	0.05
Span # 3	3	4.330	-10.78	345.34	0.03
Span # 4	4	1.250	-9.41	345.34	0.03
Span # 5	5	5.583	-42.15	345.34	0.12
Span # 6	6	9.750	-44.96	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	-15.52	408.55	0.04
Span # 2	2	5.250	-17.61	345.34	0.05
Span # 3	3	4.330	-10.78	345.34	0.03
Span # 4	4	1.250	-9.42	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	-15.53	408.55	0.04
Span # 2	2	5.250	-17.62	345.34	0.05
Span # 3	3	4.330	-10.74	345.34	0.03
Span # 4	4	1.250	-9.58	345.34	0.03
Span # 5	5	5.583	-41.93	345.34	0.12
Span # 6	6	9.750	-44.62	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	-15.52	408.55	0.04
Span # 2	2	5.250	-17.60	345.34	0.05
Span # 3	3	4.330	-10.81	345.34	0.03
Span # 4	4	1.250	-9.29	345.34	0.03
Span # 5	5	5.583	-39.22	345.34	0.11
Span # 6	6	9.750	-41.93	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	-15.53	408.55	0.04
Span # 2	2	5.250	-17.61	345.34	0.05
Span # 3	3	4.330	-10.77	345.34	0.03
Span # 4	4	1.250	-9.45	345.34	0.03
Span # 5	5	5.583	-42.15	345.34	0.12
Span # 6	6	9.750	-44.95	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	-15.36	408.55	0.04
Span # 2	2	5.250	-17.43	345.34	0.05
Span # 3	3	4.330	-11.47	345.34	0.03
Span # 4	4	1.250	-10.76	345.34	0.03
Span # 5	5	5.583	-39.03	345.34	0.11

Concrete Beam

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Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	9.750	-41.63	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	-15.36	408.55	0.04
Span # 2	2	5.250	-17.44	345.34	0.05
Span # 3	3	4.330	-11.43	345.34	0.03
Span # 4	4	1.250	-10.92	345.34	0.03
Span # 5	5	5.583	-41.95	345.34	0.12
Span # 6	6	9.750	-44.65	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	-15.35	408.55	0.04
Span # 2	2	5.250	-17.43	345.34	0.05
Span # 3	3	4.330	-11.50	345.34	0.03
Span # 4	4	1.250	-10.63	345.34	0.03
Span # 5	5	5.583	-39.25	345.34	0.11
Span # 6	6	9.750	-41.96	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	-15.36	408.55	0.04
Span # 2	2	5.250	-17.43	345.34	0.05
Span # 3	3	4.330	-11.47	345.34	0.03
Span # 4	4	1.250	-10.79	345.34	0.03
Span # 5	5	5.583	-42.17	345.34	0.12
Span # 6	6	9.750	-44.99	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	-15.36	408.55	0.04
Span # 2	2	5.250	-17.44	345.34	0.05
Span # 3	3	4.330	-11.46	345.34	0.03
Span # 4	4	1.250	-10.80	345.34	0.03
Span # 5	5	5.583	-39.02	345.34	0.11
Span # 6	6	9.750	-41.63	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	-15.37	408.55	0.04
Span # 2	2	5.250	-17.44	345.34	0.05
Span # 3	3	4.330	-11.42	345.34	0.03
Span # 4	4	1.250	-10.96	345.34	0.03
Span # 5	5	5.583	-41.95	345.34	0.12
Span # 6	6	9.750	-44.65	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	-15.35	408.55	0.04
Span # 2	2	5.250	-17.43	345.34	0.05
Span # 3	3	4.330	-11.49	345.34	0.03
Span # 4	4	1.250	-10.67	345.34	0.03
Span # 5	5	5.583	-39.24	345.34	0.11
Span # 6	6	9.750	-41.96	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	-15.36	408.55	0.04
Span # 2	2	5.250	-17.44	345.34	0.05
Span # 3	3	4.330	-11.46	345.34	0.03
Span # 4	4	1.250	-10.83	345.34	0.03
Span # 5	5	5.583	-42.17	345.34	0.12
Span # 6	6	9.750	-44.98	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	-16.85	408.55	0.04
Span # 2	2	5.250	-18.97	345.34	0.05
Span # 3	3	4.330	-12.38	345.34	0.04
Span # 4	4	1.250	-8.76	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	-16.86	408.55	0.04
Span # 2	2	5.250	-18.97	345.34	0.05
Span # 3	3	4.330	-12.35	345.34	0.04
Span # 4	4	1.250	-8.91	345.34	0.03
Span # 5	5	5.583	-41.92	345.34	0.12
Span # 6	6	9.750	-44.62	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	-16.85	408.55	0.04
Span # 2	2	5.250	-18.96	345.34	0.05
Span # 3	3	4.330	-12.42	345.34	0.04
Span # 4	4	1.250	-8.63	345.34	0.02

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.583	-39.22	345.34	0.11
Span # 6	6	9.750	-41.93	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	-16.85	408.55	0.04
Span # 2	2	5.250	-18.97	345.34	0.05
Span # 3	3	4.330	-12.38	345.34	0.04
Span # 4	4	1.250	-8.78	345.34	0.03
Span # 5	5	5.583	-42.14	345.34	0.12
Span # 6	6	9.750	-44.95	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	-16.86	408.55	0.04
Span # 2	2	5.250	-18.97	345.34	0.05
Span # 3	3	4.330	-12.37	345.34	0.04
Span # 4	4	1.250	-8.80	345.34	0.03
Span # 5	5	5.583	-38.99	345.34	0.11
Span # 6	6	9.750	-41.59	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	-16.86	408.55	0.04
Span # 2	2	5.250	-18.98	345.34	0.05
Span # 3	3	4.330	-12.34	345.34	0.04
Span # 4	4	1.250	-8.95	345.34	0.03
Span # 5	5	5.583	-41.92	345.34	0.12
Span # 6	6	9.750	-44.61	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	-16.85	408.55	0.04
Span # 2	2	5.250	-18.96	345.34	0.05
Span # 3	3	4.330	-12.41	345.34	0.04
Span # 4	4	1.250	-8.67	345.34	0.03
Span # 5	5	5.583	-39.21	345.34	0.11
Span # 6	6	9.750	-41.92	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	-16.86	408.55	0.04
Span # 2	2	5.250	-18.97	345.34	0.05
Span # 3	3	4.330	-12.37	345.34	0.04
Span # 4	4	1.250	-8.82	345.34	0.03
Span # 5	5	5.583	-42.14	345.34	0.12
Span # 6	6	9.750	-44.94	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	-16.69	408.55	0.04
Span # 2	2	5.250	-18.79	345.34	0.05
Span # 3	3	4.330	-13.07	345.34	0.04
Span # 4	4	1.250	-10.14	345.34	0.03
Span # 5	5	5.583	-39.02	345.34	0.11
Span # 6	6	9.750	-41.62	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	-16.69	408.55	0.04
Span # 2	2	5.250	-18.80	345.34	0.05
Span # 3	3	4.330	-13.03	345.34	0.04
Span # 4	4	1.250	-10.29	345.34	0.03
Span # 5	5	5.583	-41.94	345.34	0.12
Span # 6	6	9.750	-44.64	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	-16.68	408.55	0.04
Span # 2	2	5.250	-18.79	345.34	0.05
Span # 3	3	4.330	-13.10	345.34	0.04
Span # 4	4	1.250	-10.01	345.34	0.03
Span # 5	5	5.583	-39.24	345.34	0.11
Span # 6	6	9.750	-41.95	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	-16.69	408.55	0.04
Span # 2	2	5.250	-18.80	345.34	0.05
Span # 3	3	4.330	-13.06	345.34	0.04
Span # 4	4	1.250	-10.16	345.34	0.03
Span # 5	5	5.583	-42.16	345.34	0.12
Span # 6	6	9.750	-44.97	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	-16.69	408.55	0.04
Span # 2	2	5.250	-18.80	345.34	0.05
Span # 3	3	4.330	-13.06	345.34	0.04

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	1.250	-10.18	345.34	0.03
Span # 5	5	5.583	-39.01	345.34	0.11
Span # 6	6	9.750	-41.61	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	-16.70	408.55	0.04
Span # 2	2	5.250	-18.81	345.34	0.05
Span # 3	3	4.330	-13.02	345.34	0.04
Span # 4	4	1.250	-10.33	345.34	0.03
Span # 5	5	5.583	-41.94	345.34	0.12
Span # 6	6	9.750	-44.64	408.55	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	-16.68	408.55	0.04
Span # 2	2	5.250	-18.79	345.34	0.05
Span # 3	3	4.330	-13.09	345.34	0.04
Span # 4	4	1.250	-10.05	345.34	0.03
Span # 5	5	5.583	-39.23	345.34	0.11
Span # 6	6	9.750	-41.95	408.55	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	-16.69	408.55	0.04
Span # 2	2	5.250	-18.80	345.34	0.05
Span # 3	3	4.330	-13.05	345.34	0.04
Span # 4	4	1.250	-10.20	345.34	0.03
Span # 5	5	5.583	-42.16	345.34	0.12
Span # 6	6	9.750	-44.97	408.55	0.11
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-14.43	408.55	0.04

Concrete Beam

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Description : GB-D-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	-14.43	408.55	0.04
Span # 2	2	5.250	-16.31	345.34	0.05
Span # 3	3	4.330	-11.18	345.34	0.03
Span # 4	4	1.250	-9.23	345.34	0.03
Span # 5	5	5.583	-39.00	345.34	0.11
Span # 6	6	9.750	-41.60	408.55	0.10

Concrete Beam

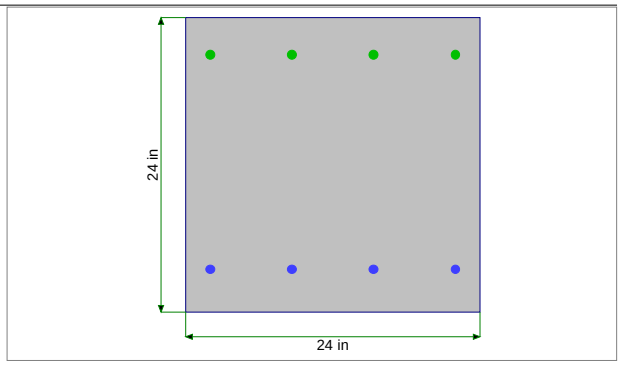
Description : GB-E-62R

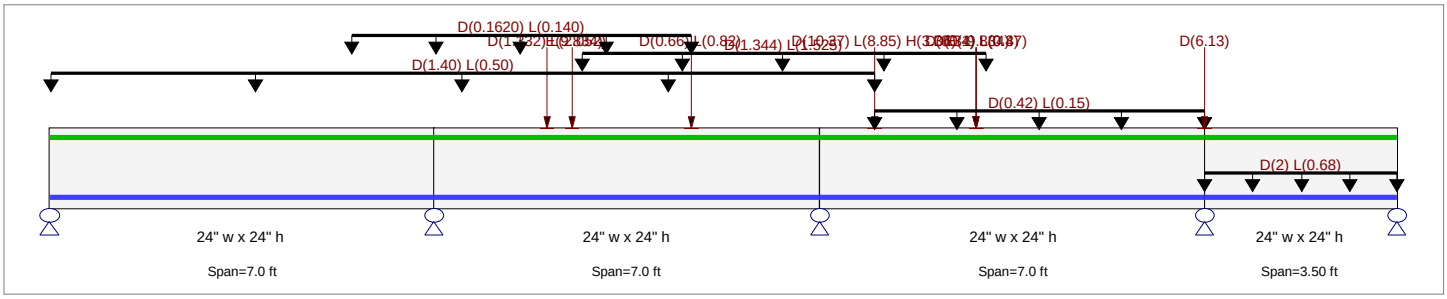
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 7.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 7.0 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 3.50 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 3.50 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 0.0 -->> 15.0 ft, Tributary Width = 12.50 ft
- Partial Length Uniform Load : D = 1.344, L = 1.525 k/ft, Extent = 9.667 -->> 17.0 ft
- Partial Length Uniform Load : D = 0.1620, L = 0.140 k/ft, Extent = 5.50 -->> 11.667 ft

Load for Span Number 2
- Point Load : D = 1.332, L = 2.052 k @ 2.067 ft, (P13)
- Point Load : D = 0.660, L = 0.820 k @ 4.667 ft, (WALL N)
- Point Load : E = 9.834 k @ 2.50 ft, (MOT)

Load for Span Number 3
- Point Load : D = 0.40, L = 0.40 k @ 2.833 ft, (WALL M)
- Point Load : D = 0.310, L = 0.370 k @ 2.833 ft, (P14)
- Point Load : E = -9.834 k @ 2.833 ft, (MOT)
- Point Load : D = 10.370, L = 8.850, H = 3.360 k @ 1.0 ft, (GB-K-62R)
- Uniform Load : D = 0.1120, L = 0.040 ksf, Extent = 1.0 -->> 7.0 ft, Tributary Width = 3.750 ft

Load for Span Number 4
- Uniform Load : D = 2.0, L = 0.680 k/ft, Tributary Width = 1.0 ft, (WALL H)
- Point Load : D = 6.130 k @ 0.0 ft, (GB-F-62R)

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 24 JUL 2017, 11:25AM

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-E-62R

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.235** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in Ratio = 0 <360
Mu : Applied	-39.891 k-ft	Max Upward Transient Deflection	0.000 in Ratio = 0 <360
Mn * Phi : Allowable	169.996 k-ft	Max Downward Total Deflection	0.001 in Ratio = 62776 >=24
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in Ratio = 999 <240
Span # where maximum occurs	Span # 3		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	6.969	29.783	56.693	17.290	4.913
Overall MINimum	-0.004	0.022	-0.087	0.133	-0.044
+D+H	5.227	18.598	33.906	11.722	2.563
+D+L+H, LL Comb Run (***L)	5.223	18.620	33.819	13.090	3.645
+D+L+H, LL Comb Run (**L*)	5.441	17.311	47.719	15.789	1.351
+D+L+H, LL Comb Run (**LL)	5.437	17.333	47.632	17.157	2.432
+D+L+H, LL Comb Run (*L**)	4.518	25.109	42.880	10.008	3.135
+D+L+H, LL Comb Run (*L*L)	4.514	25.131	42.793	11.376	4.216
+D+L+H, LL Comb Run (*LL*)	4.732	23.822	56.693	14.075	1.923
+D+L+H, LL Comb Run (*LLL)	4.729	23.844	56.606	15.443	3.004
+D+L+H, LL Comb Run (L***)	6.755	21.091	33.506	11.856	2.519
+D+L+H, LL Comb Run (L**L)	6.751	21.113	33.419	13.224	3.600
+D+L+H, LL Comb Run (L*L*)	6.969	19.804	47.319	15.922	1.307
+D+L+H, LL Comb Run (L*LL)	6.966	19.826	47.232	17.290	2.388
+D+L+H, LL Comb Run (LL**)	6.046	27.602	42.480	10.142	3.090
+D+L+H, LL Comb Run (LL*L)	6.042	27.624	42.393	11.510	4.172
+D+L+H, LL Comb Run (LLL*)	6.260	26.315	56.293	14.208	1.878
+D+L+H, LL Comb Run (LLLL)	6.257	26.337	56.206	15.576	2.959
+D+Lr+H, LL Comb Run (***L)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (**L*)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (**LL)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (*L**)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (*L*L)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (*LL*)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (*LLL)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (L***)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (L**L)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (L*L*)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (L*LL)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (LL**)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (LL*L)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (LLL*)	5.227	18.598	33.906	11.722	2.563
+D+Lr+H, LL Comb Run (LLLL)	5.227	18.598	33.906	11.722	2.563
+D+S+H	5.227	18.598	33.906	11.722	2.563
+D+0.750Lr+0.750L+H, LL Comb Run (	5.224	18.615	33.840	12.748	3.374
+D+0.750Lr+0.750L+H, LL Comb Run (	5.387	17.633	44.266	14.772	1.654
+D+0.750Lr+0.750L+H, LL Comb Run (	5.385	17.649	44.201	15.798	2.465
+D+0.750Lr+0.750L+H, LL Comb Run (	4.695	23.482	40.636	10.437	2.992
+D+0.750Lr+0.750L+H, LL Comb Run (	4.692	23.498	40.571	11.463	3.803
+D+0.750Lr+0.750L+H, LL Comb Run (	4.856	22.516	50.996	13.487	2.083
+D+0.750Lr+0.750L+H, LL Comb Run (	4.853	22.532	50.931	14.513	2.894
+D+0.750Lr+0.750L+H, LL Comb Run (	6.373	20.468	33.606	11.822	2.530
+D+0.750Lr+0.750L+H, LL Comb Run (	6.370	20.484	33.541	12.848	3.341
+D+0.750Lr+0.750L+H, LL Comb Run (	6.534	19.503	43.966	14.872	1.621
+D+0.750Lr+0.750L+H, LL Comb Run (	6.531	19.519	43.901	15.898	2.432
+D+0.750Lr+0.750L+H, LL Comb Run (	5.841	25.351	40.336	10.537	2.959
+D+0.750Lr+0.750L+H, LL Comb Run (	5.838	25.368	40.271	11.563	3.769
+D+0.750Lr+0.750L+H, LL Comb Run (	6.002	24.386	50.697	13.587	2.049
+D+0.750Lr+0.750L+H, LL Comb Run (	5.999	24.402	50.631	14.613	2.860
+D+0.750L+0.750S+H, LL Comb Run (*	5.224	18.615	33.840	12.748	3.374

Concrete Beam

Description : GB-E-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+H, LL Comb Run (*	5.387	17.633	44.266	14.772	1.654
+D+0.750L+0.750S+H, LL Comb Run (*	5.385	17.649	44.201	15.798	2.465
+D+0.750L+0.750S+H, LL Comb Run (*	4.695	23.482	40.636	10.437	2.992
+D+0.750L+0.750S+H, LL Comb Run (*	4.692	23.498	40.571	11.463	3.803
+D+0.750L+0.750S+H, LL Comb Run (*	4.856	22.516	50.996	13.487	2.083
+D+0.750L+0.750S+H, LL Comb Run (*	4.853	22.532	50.931	14.513	2.894
+D+0.750L+0.750S+H, LL Comb Run (L	6.373	20.468	33.606	11.822	2.530
+D+0.750L+0.750S+H, LL Comb Run (L	6.370	20.484	33.541	12.848	3.341
+D+0.750L+0.750S+H, LL Comb Run (L	6.534	19.503	43.966	14.872	1.621
+D+0.750L+0.750S+H, LL Comb Run (L	6.531	19.519	43.901	15.898	2.432
+D+0.750L+0.750S+H, LL Comb Run (L	5.841	25.351	40.336	10.537	2.959
+D+0.750L+0.750S+H, LL Comb Run (L	5.838	25.368	40.271	11.563	3.769
+D+0.750L+0.750S+H, LL Comb Run (L	6.002	24.386	50.697	13.587	2.049
+D+0.750L+0.750S+H, LL Comb Run (L	5.999	24.402	50.631	14.613	2.860
+D+0.60W+H	5.227	18.598	33.906	11.722	2.563
+D+0.70E+H	4.550	24.486	32.112	6.825	4.044
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.224	18.615	33.840	12.748	3.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.387	17.633	44.266	14.772	1.654
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.385	17.649	44.201	15.798	2.465
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.695	23.482	40.636	10.437	2.992
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.692	23.498	40.571	11.463	3.803
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.856	22.516	50.996	13.487	2.083
+D+0.750Lr+0.750L+0.450W+H, LL Com	4.853	22.532	50.931	14.513	2.894
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.373	20.468	33.606	11.822	2.530
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.370	20.484	33.541	12.848	3.341
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.534	19.503	43.966	14.872	1.621
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.531	19.519	43.901	15.898	2.432
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.841	25.351	40.336	10.537	2.959
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.838	25.368	40.271	11.563	3.769
+D+0.750Lr+0.750L+0.450W+H, LL Com	6.002	24.386	50.697	13.587	2.049
+D+0.750Lr+0.750L+0.450W+H, LL Com	5.999	24.402	50.631	14.613	2.860
+D+0.750L+0.750S+0.450W+H, LL Comb	5.224	18.615	33.840	12.748	3.374
+D+0.750L+0.750S+0.450W+H, LL Comb	5.387	17.633	44.266	14.772	1.654
+D+0.750L+0.750S+0.450W+H, LL Comb	5.385	17.649	44.201	15.798	2.465
+D+0.750L+0.750S+0.450W+H, LL Comb	4.695	23.482	40.636	10.437	2.992
+D+0.750L+0.750S+0.450W+H, LL Comb	4.692	23.498	40.571	11.463	3.803
+D+0.750L+0.750S+0.450W+H, LL Comb	4.856	22.516	50.996	13.487	2.083
+D+0.750L+0.750S+0.450W+H, LL Comb	4.853	22.532	50.931	14.513	2.894
+D+0.750L+0.750S+0.450W+H, LL Comb	6.373	20.468	33.606	11.822	2.530
+D+0.750L+0.750S+0.450W+H, LL Comb	6.370	20.484	33.541	12.848	3.341
+D+0.750L+0.750S+0.450W+H, LL Comb	6.534	19.503	43.966	14.872	1.621
+D+0.750L+0.750S+0.450W+H, LL Comb	6.531	19.519	43.901	15.898	2.432
+D+0.750L+0.750S+0.450W+H, LL Comb	5.841	25.351	40.336	10.537	2.959
+D+0.750L+0.750S+0.450W+H, LL Comb	5.838	25.368	40.271	11.563	3.769
+D+0.750L+0.750S+0.450W+H, LL Comb	6.002	24.386	50.697	13.587	2.049
+D+0.750L+0.750S+0.450W+H, LL Comb	5.999	24.402	50.631	14.613	2.860
+D+0.750L+0.750S+0.5250E+H, LL Com	4.716	23.030	32.495	9.076	4.484
+D+0.750L+0.750S+0.5250E+H, LL Com	4.880	22.048	42.920	11.100	2.764
+D+0.750L+0.750S+0.5250E+H, LL Com	4.877	22.065	42.855	12.125	3.575
+D+0.750L+0.750S+0.5250E+H, LL Com	4.188	27.897	39.291	6.764	4.102
+D+0.750L+0.750S+0.5250E+H, LL Com	4.185	27.913	39.225	7.790	4.913
+D+0.750L+0.750S+0.5250E+H, LL Com	4.348	26.932	49.651	9.814	3.193
+D+0.750L+0.750S+0.5250E+H, LL Com	4.346	26.948	49.585	10.840	4.004
+D+0.750L+0.750S+0.5250E+H, LL Com	5.865	24.884	32.260	8.150	3.640
+D+0.750L+0.750S+0.5250E+H, LL Com	5.863	24.900	32.195	9.175	4.451
+D+0.750L+0.750S+0.5250E+H, LL Com	6.026	23.918	42.620	11.199	2.731
+D+0.750L+0.750S+0.5250E+H, LL Com	6.023	23.934	42.555	12.225	3.542
+D+0.750L+0.750S+0.5250E+H, LL Com	5.334	29.767	38.991	6.864	4.069
+D+0.750L+0.750S+0.5250E+H, LL Com	5.331	29.783	38.925	7.890	4.880

Concrete Beam

Description : GB-E-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+0.5250E+H, LL Com	5.495	28.801	49.351	9.914	3.160
+D+0.750L+0.750S+0.5250E+H, LL Com	5.492	28.818	49.286	10.940	3.970
+0.60D+0.60W+0.60H	3.136	11.159	20.343	7.033	1.538
+0.60D+0.70E+0.60H	2.459	17.046	18.549	2.136	3.018
D Only	5.182	18.865	30.723	11.128	2.758
Lr Only, LL Comb Run (***L)					
Lr Only, LL Comb Run (**L*)					
Lr Only, LL Comb Run (**LL)					
Lr Only, LL Comb Run (*L**)					
Lr Only, LL Comb Run (*L*L)					
Lr Only, LL Comb Run (*LL*)					
Lr Only, LL Comb Run (*LLL)					
Lr Only, LL Comb Run (L***)					
Lr Only, LL Comb Run (L**L)					
Lr Only, LL Comb Run (L*L*)					
Lr Only, LL Comb Run (L*LL)					
Lr Only, LL Comb Run (LL**)					
Lr Only, LL Comb Run (LL*L)					
Lr Only, LL Comb Run (LLL*)					
Lr Only, LL Comb Run (LLLL)					
L Only, LL Comb Run (***L)	-0.004	0.022	-0.087	1.368	1.081
L Only, LL Comb Run (**L*)	0.215	-1.287	13.814	4.066	-1.212
L Only, LL Comb Run (**LL)	0.211	-1.266	13.727	5.434	-0.131
L Only, LL Comb Run (*L**)	-0.709	6.511	8.974	-1.714	0.571
L Only, LL Comb Run (*L*L)	-0.713	6.533	8.887	-0.346	1.653
L Only, LL Comb Run (*LL*)	-0.494	5.224	22.788	2.352	-0.641
L Only, LL Comb Run (*LLL)	-0.498	5.245	22.700	3.720	0.440
L Only, LL Comb Run (L***)	1.528	2.493	-0.400	0.133	-0.044
L Only, LL Comb Run (L**L)	1.524	2.515	-0.487	1.501	1.037
L Only, LL Comb Run (L*L*)	1.743	1.206	13.414	4.200	-1.257
L Only, LL Comb Run (L*LL)	1.739	1.227	13.327	5.568	-0.176
L Only, LL Comb Run (LL**)	0.819	9.004	8.574	-1.581	0.527
L Only, LL Comb Run (LL*L)	0.816	9.026	8.487	-0.213	1.608
L Only, LL Comb Run (LLL*)	1.034	7.716	22.388	2.486	-0.685
L Only, LL Comb Run (LLLL)	1.030	7.738	22.301	3.853	0.396
S Only					
W Only					
E Only	-0.966	8.411	-2.563	-6.996	2.115
H Only	0.044	-0.267	3.182	0.595	-0.195

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H, I	1	0.00	20.50	9.08	9.08	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.07	20.50	8.84	8.84	0.66	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.15	20.50	8.61	8.61	1.30	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.22	20.50	8.38	8.38	1.93	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.29	20.50	8.14	8.14	2.54	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.37	20.50	7.91	7.91	3.13	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.44	20.50	7.67	7.67	3.70	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.52	20.50	7.44	7.44	4.26	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.59	20.50	7.21	7.21	4.80	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.66	20.50	6.97	6.97	5.32	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.74	20.50	6.74	6.74	5.83	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.81	20.50	6.50	6.50	6.31	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.88	20.50	6.27	6.27	6.79	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	0.96	20.50	6.04	6.04	7.24	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	1	1.03	20.50	5.80	5.80	7.67	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-E-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	1.11	20.50	5.57	5.57	8.09	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.18	20.50	5.33	5.33	8.50	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.25	20.50	5.10	5.10	8.88	0.98	47.58	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.33	20.50	4.87	4.87	9.25	0.90	47.31	Vu < PhiVc/2	Not Reqd	1 47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.40	20.50	4.63	4.63	9.60	0.82	47.06	Vu < PhiVc/2	Not Reqd	1 47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.47	20.50	4.40	4.40	9.93	0.76	46.84	Vu < PhiVc/2	Not Reqd	1 46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.55	20.50	4.16	4.16	10.24	0.69	46.63	Vu < PhiVc/2	Not Reqd	1 46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.62	20.50	3.93	3.93	10.54	0.64	46.44	Vu < PhiVc/2	Not Reqd	1 46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.69	20.50	3.70	3.70	10.82	0.58	46.27	Vu < PhiVc/2	Not Reqd	1 46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.77	20.50	3.48	3.48	10.27	0.58	46.25	Vu < PhiVc/2	Not Reqd	1 46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.84	20.50	3.29	3.29	10.52	0.53	46.11	Vu < PhiVc/2	Not Reqd	1 46.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.92	20.50	3.10	3.10	10.75	0.49	45.97	Vu < PhiVc/2	Not Reqd	1 46.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	1.99	20.50	2.90	2.90	10.97	0.45	45.83	Vu < PhiVc/2	Not Reqd	1 45.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.06	20.50	2.71	2.71	11.18	0.41	45.71	Vu < PhiVc/2	Not Reqd	1 45.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.14	20.50	2.52	2.52	11.37	0.38	45.59	Vu < PhiVc/2	Not Reqd	1 45.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.21	20.50	2.32	2.32	11.55	0.34	45.48	Vu < PhiVc/2	Not Reqd	1 45.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.28	20.50	2.13	2.13	11.71	0.31	45.37	Vu < PhiVc/2	Not Reqd	1 45.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.36	20.50	1.94	1.94	11.86	0.28	45.26	Vu < PhiVc/2	Not Reqd	1 45.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.43	20.50	1.74	1.74	12.00	0.25	45.16	Vu < PhiVc/2	Not Reqd	1 45.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.51	20.50	1.55	1.55	12.12	0.22	45.06	Vu < PhiVc/2	Not Reqd	1 45.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	1	2.58	20.50	1.35	1.35	12.23	0.19	44.97	Vu < PhiVc/2	Not Reqd	1 45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	2.65	20.50	-1.34	1.34	4.82	0.47	45.90	Vu < PhiVc/2	Not Reqd	1 45.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	2.73	20.50	-1.51	1.51	4.71	0.55	46.15	Vu < PhiVc/2	Not Reqd	1 46.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	2.80	20.50	-1.69	1.69	4.59	0.63	46.41	Vu < PhiVc/2	Not Reqd	1 46.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	2.87	20.50	-1.86	1.86	4.46	0.71	46.69	Vu < PhiVc/2	Not Reqd	1 46.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	2.95	20.50	-2.04	2.04	4.32	0.81	47.00	Vu < PhiVc/2	Not Reqd	1 47.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.02	20.50	-2.21	2.21	4.16	0.91	47.34	Vu < PhiVc/2	Not Reqd	1 47.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.09	20.50	-2.40	2.40	5.16	0.79	46.96	Vu < PhiVc/2	Not Reqd	1 47.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.17	20.50	-2.59	2.59	4.98	0.89	47.27	Vu < PhiVc/2	Not Reqd	1 47.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.24	20.50	-2.78	2.78	4.78	0.99	47.62	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	1	3.32	20.50	-2.98	2.98	4.57	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.39	20.50	-3.17	3.17	7.50	0.72	46.73	Vu < PhiVc/2	Not Reqd	1 46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.46	20.50	-3.40	3.40	7.26	0.80	46.99	Vu < PhiVc/2	Not Reqd	1 47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.54	20.50	-3.64	3.64	7.00	0.89	47.27	Vu < PhiVc/2	Not Reqd	1 47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.61	20.50	-3.87	3.87	6.72	0.98	47.59	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.68	20.50	-4.11	4.11	6.43	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.76	20.50	-4.34	4.34	6.11	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.83	20.50	-4.57	4.57	5.79	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.91	20.50	-4.81	4.81	5.44	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.98	20.50	-5.04	5.04	5.08	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.05	20.50	-5.28	5.28	4.70	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.13	20.50	-5.51	5.51	4.30	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.20	20.50	-5.74	5.74	3.88	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.27	20.50	-5.98	5.98	3.45	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.35	20.50	-6.21	6.21	3.00	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.42	20.50	-6.45	6.45	2.54	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.49	20.50	-6.68	6.68	2.05	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.57	20.50	-6.91	6.91	1.55	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.64	20.50	-7.15	7.15	1.03	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.72	20.50	-7.38	7.38	0.50	1.00	47.64	Vu < PhiVc/2	Not Reqd	1 47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.79	21.00	-7.62	7.62	0.05	1.00	48.72	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.86	21.00	-7.85	7.85	0.62	1.00	48.72	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.94	21.00	-8.08	8.08	1.21	1.00	48.72	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.01	21.00	-8.32	8.32	1.81	1.00	48.72	Vu < PhiVc/2	Not Reqd	1 48.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	5.08	21.00	-8.55	8.55	2.44	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.16	21.00	-8.79	8.79	3.08	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.23	21.00	-9.02	9.02	3.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.31	21.00	-9.26	9.26	4.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.38	21.00	-9.49	9.49	5.10	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.45	21.00	-9.72	9.72	5.80	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.53	21.00	-9.97	9.97	6.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.60	21.00	-10.23	10.23	7.27	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.67	21.00	-10.50	10.50	8.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.75	21.00	-10.76	10.76	8.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.82	21.00	-11.03	11.03	9.62	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.89	21.00	-11.29	11.29	10.44	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.97	21.00	-11.56	11.56	11.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.04	21.00	-11.82	11.82	12.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.12	21.00	-12.09	12.09	13.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.19	21.00	-12.35	12.35	13.93	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.26	21.00	-12.62	12.62	14.85	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.34	21.00	-12.88	12.88	15.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.41	21.00	-13.15	13.15	16.75	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.48	21.00	-13.41	13.41	17.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.56	21.00	-13.68	13.68	18.72	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.63	21.00	-13.94	13.94	19.74	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.71	21.00	-14.21	14.21	20.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.78	21.00	-14.47	14.47	21.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.85	21.00	-14.74	14.74	22.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	6.93	21.00	-15.00	15.00	24.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.00	21.00	22.09	22.09	24.52	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.07	21.00	21.87	21.87	22.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.15	21.00	21.66	21.66	21.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.22	21.00	21.45	21.45	19.71	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.29	21.00	21.24	21.24	18.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.37	21.00	21.02	21.02	16.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.44	21.00	20.81	20.81	15.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.52	21.00	20.60	20.60	13.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.59	21.00	20.38	20.38	12.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.66	21.00	20.17	20.17	10.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.74	21.00	19.96	19.96	9.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.81	21.00	19.74	19.74	7.56	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.88	21.00	19.53	19.53	6.12	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	7.96	21.00	19.32	19.32	4.69	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.03	21.00	19.11	19.11	3.27	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.11	21.00	18.89	18.89	1.87	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.18	21.00	18.68	18.68	0.49	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.25	20.50	18.47	18.47	0.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.33	20.50	18.25	18.25	2.24	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.40	20.50	18.04	18.04	3.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.47	20.50	17.83	17.83	4.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.55	20.50	17.61	17.61	6.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.62	20.50	17.40	17.40	7.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.69	20.50	17.19	17.19	8.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.77	20.50	16.98	16.98	10.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.84	20.50	16.76	16.76	11.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.92	20.50	16.55	16.55	12.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	2	8.99	20.50	16.34	16.34	13.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+0.70S+E+1.60H	2	9.06	20.50	16.12	16.12	14.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.14	20.50	13.29	13.29	15.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.21	20.50	13.07	13.07	16.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.28	20.50	12.86	12.86	17.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.36	20.50	12.65	12.65	18.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	9.43	20.50	12.43	12.43	19.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.51	20.50	7.50	7.50	15.04	0.85	47.15	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.58	20.50	7.24	7.24	15.58	0.79	46.96	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.65	20.50	6.97	6.97	16.11	0.74	46.78	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	9.73	20.50	6.47	6.47	16.60	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	9.80	21.00	6.00	6.00	1.16	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	9.87	21.00	5.61	5.61	0.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	9.95	21.00	5.22	5.22	0.33	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.02	20.50	4.84	4.84	0.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.09	20.50	4.45	4.45	0.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.17	20.50	4.06	4.06	0.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.24	20.50	3.67	3.67	0.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.32	20.50	3.28	3.28	1.24	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	2	10.39	20.50	2.90	2.90	1.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.46	20.50	-3.13	3.13	15.97	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.54	20.50	-3.44	3.44	15.73	0.37	45.57	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.61	20.50	-3.75	3.75	15.47	0.41	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.68	20.50	-4.14	4.14	19.16	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.76	20.50	-4.53	4.53	18.84	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.83	20.50	-4.91	4.91	18.49	0.45	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.91	20.50	-5.30	5.30	18.12	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	10.98	20.50	-5.69	5.69	17.71	0.55	46.15	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	2	11.05	20.50	-6.08	6.08	17.28	0.60	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.13	20.50	-6.48	6.48	14.09	0.79	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.20	20.50	-7.05	7.05	13.59	0.89	47.27	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.27	20.50	-7.61	7.61	13.05	1.00	47.63	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.35	20.50	-8.17	8.17	12.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.42	20.50	-8.74	8.74	11.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.49	20.50	-9.30	9.30	11.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.57	20.50	-9.86	9.86	10.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.64	20.50	-10.43	10.43	9.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.72	20.50	-13.07	13.07	8.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.79	20.50	-13.61	13.61	7.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.86	20.50	-14.14	14.14	6.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	11.94	20.50	-14.67	14.67	5.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.01	20.50	-15.21	15.21	4.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.08	20.50	-15.74	15.74	3.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.16	20.50	-16.27	16.27	2.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.23	20.50	-16.80	16.80	1.13	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.31	21.00	-17.34	17.34	0.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.38	21.00	-17.87	17.87	1.43	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.45	21.00	-18.40	18.40	2.76	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.53	21.00	-18.93	18.93	4.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.60	21.00	-19.47	19.47	5.55	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.67	21.00	-20.00	20.00	7.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.75	21.00	-20.53	20.53	8.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.82	21.00	-21.06	21.06	10.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.89	21.00	-21.60	21.60	11.60	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	2	12.97	21.00	-22.13	22.13	13.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	13.04	21.00	-22.66	22.66	14.87	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.12	21.00	-23.20	23.20	16.56	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.19	21.00	-23.73	23.73	18.28	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.26	21.00	-24.26	24.26	20.05	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	13.34	21.00	-24.79	24.79	21.86	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.41	21.00	-25.33	25.33	23.71	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.48	21.00	-25.86	25.86	25.59	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.56	21.00	-26.39	26.39	27.52	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.63	21.00	-26.92	26.92	29.48	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.71	21.00	-27.46	27.46	31.48	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.78	21.00	-27.99	27.99	33.53	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.85	21.00	-28.52	28.52	35.61	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	13.93	21.00	-29.05	29.05	37.73	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.00	21.00	48.83	48.83	39.89	1.00	48.72	PhiVc < Vu	0.1101	68.5	7.7	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.07	21.00	48.30	48.30	36.31	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.15	21.00	47.77	47.77	32.77	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.22	21.00	47.24	47.24	29.27	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.29	21.00	46.70	46.70	25.81	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.37	21.00	46.17	46.17	22.39	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.44	21.00	45.64	45.64	19.01	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.52	21.00	45.10	45.10	15.66	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.59	21.00	44.57	44.57	12.36	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.66	21.00	44.04	44.04	9.10	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.74	21.00	43.51	43.51	5.87	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.81	21.00	42.97	42.97	2.68	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.88	20.50	42.44	42.44	0.46	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	3	14.96	20.50	41.91	41.91	3.57	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.03	20.50	11.15	11.15	8.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.11	20.50	10.88	10.88	9.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.18	20.50	10.61	10.61	10.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.25	20.50	10.35	10.35	10.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.33	20.50	10.08	10.08	11.72	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.40	20.50	9.81	9.81	12.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.47	20.50	9.54	9.54	13.17	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.55	20.50	9.27	9.27	13.86	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.62	20.50	9.00	9.00	14.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.69	20.50	8.73	8.73	15.18	0.98	47.58	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.77	20.50	8.46	8.46	15.82	0.91	47.36	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.84	20.50	8.19	8.19	16.43	0.85	47.15	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.92	20.50	7.92	7.92	17.03	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	15.99	20.50	7.66	7.66	17.60	0.74	46.79	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.06	20.50	7.39	7.39	18.15	0.70	46.64	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.14	20.50	7.14	7.14	15.31	0.80	46.97	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.21	20.50	6.93	6.93	15.83	0.75	46.81	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.28	20.50	6.72	6.72	16.33	0.70	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.36	20.50	6.52	6.52	16.82	0.66	46.53	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.43	20.50	6.31	6.31	17.29	0.62	46.40	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.51	20.50	6.10	6.10	17.75	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.58	20.50	5.89	5.89	18.19	0.55	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.65	20.50	5.69	5.69	18.62	0.52	46.06	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	16.73	21.00	-5.59	5.59	1.06	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	3	16.80	21.00	-5.86	5.86	1.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.87	20.50	-7.29	7.29	23.91	0.52	46.06	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	16.95	20.50	-7.56	7.56	23.36	0.55	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S-E+1.60H	3	17.02	20.50	-7.78	7.78	22.79	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.09	20.50	-7.87	7.87	22.22	0.61	46.34	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.17	20.50	-7.97	7.97	21.63	0.63	46.42	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.24	20.50	-8.06	8.06	21.04	0.65	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.32	20.50	-8.16	8.16	20.44	0.68	46.59	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.39	20.50	-8.25	8.25	19.84	0.71	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.46	20.50	-8.34	8.34	19.23	0.74	46.79	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.54	20.50	-8.44	8.44	18.61	0.77	46.90	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.61	20.50	-8.53	8.53	17.98	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.68	20.50	-8.63	8.63	17.35	0.85	47.14	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.76	20.50	-8.72	8.72	16.71	0.89	47.28	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.83	20.50	-8.81	8.81	16.07	0.94	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.91	20.50	-8.91	8.91	15.41	0.99	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	17.98	20.50	-9.00	9.00	14.75	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.05	20.50	-9.10	9.10	14.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.13	20.50	-9.19	9.19	13.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.20	20.50	-9.28	9.28	12.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.27	20.50	-9.38	9.38	12.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.35	20.50	-9.47	9.47	11.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.42	20.50	-9.57	9.57	10.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.49	20.50	-9.66	9.66	9.94	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.57	20.50	-9.75	9.75	9.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.64	20.50	-9.85	9.85	8.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.72	20.50	-9.94	9.94	7.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.79	20.50	-10.04	10.04	7.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.86	20.50	-10.13	10.13	6.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	18.94	20.50	-10.22	10.22	5.55	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.01	20.50	-10.32	10.32	4.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.08	20.50	-10.41	10.41	4.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.16	20.50	-10.51	10.51	3.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.23	20.50	-10.60	10.60	2.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.31	20.50	-10.69	10.69	1.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.38	20.50	-10.79	10.79	0.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.45	20.50	-10.88	10.88	0.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.53	21.00	-10.98	10.98	0.70	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.60	21.00	-11.07	11.07	1.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.67	21.00	-11.16	11.16	2.33	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.75	21.00	-11.26	11.26	3.16	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.82	21.00	-11.35	11.35	3.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.89	21.00	-11.44	11.44	4.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	19.97	21.00	-11.54	11.54	5.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.04	21.00	-11.63	11.63	6.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.12	21.00	-11.73	11.73	7.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.19	21.00	-11.82	11.82	8.26	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.26	21.00	-11.91	11.91	9.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.34	21.00	-12.01	12.01	10.02	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.41	21.00	-12.10	12.10	10.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.48	21.00	-12.20	12.20	11.80	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.56	21.00	-12.29	12.29	12.70	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.63	21.00	-12.38	12.38	13.61	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.71	21.00	-12.48	12.48	14.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.78	21.00	-12.57	12.57	15.45	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.85	21.00	-12.67	12.67	16.38	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	3	20.93	21.00	-12.76	12.76	17.32	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H,	4	21.00	21.00	11.93	11.93	16.12	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.04	21.00	11.77	11.77	15.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.07	21.00	11.62	11.62	15.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.11	21.00	11.46	11.46	14.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.15	21.00	11.31	11.31	14.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.18	21.00	11.16	11.16	13.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.22	21.00	11.00	11.00	13.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.26	21.00	10.85	10.85	13.18	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.29	21.00	10.69	10.69	12.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.33	21.00	10.54	10.54	12.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.37	21.00	10.39	10.39	12.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.41	21.00	10.23	10.23	11.63	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.44	21.00	10.08	10.08	11.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.48	21.00	9.92	9.92	10.88	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.52	21.00	9.77	9.77	10.52	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.55	21.00	9.61	9.61	10.16	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.59	21.00	9.46	9.46	9.81	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.63	21.00	9.31	9.31	9.47	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.66	21.00	9.15	9.15	9.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.70	21.00	9.00	9.00	8.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.74	21.00	8.84	8.84	8.46	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.77	21.00	8.69	8.69	8.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.81	21.00	8.54	8.54	7.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.85	21.00	8.38	8.38	7.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.88	21.00	8.23	8.23	7.21	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.92	21.00	8.07	8.07	6.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	21.96	21.00	7.94	7.94	9.08	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	21.99	21.00	7.81	7.81	8.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.03	21.00	7.69	7.69	8.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.07	21.00	7.56	7.56	8.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.11	21.00	7.43	7.43	7.95	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.14	21.00	7.31	7.31	7.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.18	21.00	7.18	7.18	7.41	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.22	21.00	7.05	7.05	7.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.25	21.00	6.93	6.93	6.89	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.29	21.00	6.80	6.80	6.64	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.33	21.00	6.67	6.67	6.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.36	21.00	6.55	6.55	6.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.40	21.00	6.42	6.42	5.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.44	21.00	6.29	6.29	5.67	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.47	21.00	6.17	6.17	5.44	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.51	21.00	6.04	6.04	5.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.55	21.00	5.91	5.91	5.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.58	21.00	5.79	5.79	4.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.62	21.00	5.66	5.66	4.57	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.66	21.00	5.53	5.53	4.36	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.69	21.00	5.41	5.41	4.16	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.73	21.00	5.28	5.28	3.97	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.77	21.00	5.15	5.15	3.77	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.81	21.00	5.03	5.03	3.59	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.84	21.00	4.90	4.90	3.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.88	21.00	4.77	4.77	3.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.92	21.00	4.65	4.65	3.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	22.95	21.00	4.54	4.54	3.31	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-E-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+0.70S-E+1.60H	4	22.99	21.00	4.42	4.42	3.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.03	21.00	4.31	4.31	2.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.06	21.00	4.19	4.19	2.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.10	21.00	4.08	4.08	2.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.14	21.00	3.97	3.97	2.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.17	21.00	3.85	3.85	2.38	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.21	21.00	3.74	3.74	2.24	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.25	21.00	3.62	3.62	2.11	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.28	21.00	3.51	3.51	1.98	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.32	21.00	3.39	3.39	1.85	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.36	21.00	3.28	3.28	1.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.39	21.00	3.17	3.17	1.61	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.43	21.00	3.05	3.05	1.49	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.47	21.00	2.94	2.94	1.38	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.51	21.00	2.82	2.82	1.28	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	4	23.54	21.00	2.71	2.71	1.18	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.58	20.50	-2.77	2.77	4.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.62	20.50	-2.90	2.90	3.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.65	20.50	-3.03	3.03	3.80	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.69	20.50	-3.15	3.15	3.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.73	20.50	-3.28	3.28	3.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.76	20.50	-3.41	3.41	3.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.80	20.50	-3.53	3.53	3.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.84	20.50	-3.66	3.66	3.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.87	20.50	-3.79	3.79	3.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.91	20.50	-3.91	3.91	2.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.95	20.50	-4.04	4.04	2.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	23.98	20.50	-4.17	4.17	2.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.02	20.50	-4.29	4.29	2.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.06	20.50	-4.42	4.42	2.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.09	20.50	-4.55	4.55	2.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.13	20.50	-4.67	4.67	1.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.17	20.50	-4.80	4.80	1.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.21	20.50	-4.93	4.93	1.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.24	20.50	-5.05	5.05	1.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.28	20.50	-5.18	5.18	1.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.32	20.50	-5.31	5.31	1.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.35	20.50	-5.43	5.43	0.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.39	20.50	-5.56	5.56	0.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.43	20.50	-5.69	5.69	0.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.46	20.50	-5.81	5.81	0.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60H	4	24.50	20.50	-5.94	5.94	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	7.000	-24.01	170.00	0.14
Span # 2	2	7.000	-37.73	170.00	0.22
Span # 3	3	7.000	-39.89	170.00	0.23
Span # 4	4	3.500	-18.26	170.00	0.11
+1.40D+1.60H					
Span # 1	1	7.000	-15.98	170.00	0.09
Span # 2	2	7.000	-22.49	170.00	0.13
Span # 3	3	7.000	-23.79	170.00	0.14
Span # 4	4	3.500	-9.70	170.00	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L)					

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-19.40	170.00	0.11
Span # 3	3	7.000	-20.52	170.00	0.12
Span # 4	4	3.500	-9.08	170.00	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.000	-11.25	170.00	0.07
Span # 2	2	7.000	-29.05	170.00	0.17
Span # 3	3	7.000	-30.29	170.00	0.18
Span # 4	4	3.500	-15.26	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.000	-11.29	170.00	0.07
Span # 2	2	7.000	-28.89	170.00	0.17
Span # 3	3	7.000	-30.13	170.00	0.18
Span # 4	4	3.500	-15.87	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.000	-21.48	170.00	0.13
Span # 2	2	7.000	-28.24	170.00	0.17
Span # 3	3	7.000	-30.28	170.00	0.18
Span # 4	4	3.500	-5.27	170.00	0.03
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.000	-21.52	170.00	0.13
Span # 2	2	7.000	-28.08	170.00	0.17
Span # 3	3	7.000	-30.12	170.00	0.18
Span # 4	4	3.500	-5.88	170.00	0.03
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.000	-19.11	170.00	0.11
Span # 2	2	7.000	-37.73	170.00	0.22
Span # 3	3	7.000	-39.89	170.00	0.23
Span # 4	4	3.500	-12.06	170.00	0.07
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.000	-19.15	170.00	0.11
Span # 2	2	7.000	-37.57	170.00	0.22
Span # 3	3	7.000	-39.73	170.00	0.23
Span # 4	4	3.500	-12.67	170.00	0.07
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***)					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-18.85	170.00	0.11
Span # 3	3	7.000	-19.93	170.00	0.12
Span # 4	4	3.500	-8.72	170.00	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.000	-16.15	170.00	0.09
Span # 2	2	7.000	-18.69	170.00	0.11
Span # 3	3	7.000	-19.77	170.00	0.12
Span # 4	4	3.500	-9.33	170.00	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.000	-13.73	170.00	0.08
Span # 2	2	7.000	-28.34	170.00	0.17
Span # 3	3	7.000	-29.55	170.00	0.17
Span # 4	4	3.500	-15.51	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.000	-13.77	170.00	0.08
Span # 2	2	7.000	-28.18	170.00	0.17
Span # 3	3	7.000	-29.38	170.00	0.17
Span # 4	4	3.500	-16.12	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.000	-23.97	170.00	0.14
Span # 2	2	7.000	-27.53	170.00	0.16
Span # 3	3	7.000	-29.53	170.00	0.17
Span # 4	4	3.500	-5.52	170.00	0.03
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.000	-24.01	170.00	0.14
Span # 2	2	7.000	-27.37	170.00	0.16
Span # 3	3	7.000	-29.37	170.00	0.17
Span # 4	4	3.500	-6.13	170.00	0.04
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.000	-21.59	170.00	0.13
Span # 2	2	7.000	-37.02	170.00	0.22
Span # 3	3	7.000	-39.14	170.00	0.23
Span # 4	4	3.500	-12.31	170.00	0.07

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.000	-21.63	170.00	0.13
Span # 2	2	7.000	-36.86	170.00	0.22
Span # 3	3	7.000	-38.98	170.00	0.23
Span # 4	4	3.500	-12.92	170.00	0.08
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L)					
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-19.40	170.00	0.11
Span # 3	3	7.000	-20.52	170.00	0.12
Span # 4	4	3.500	-9.08	170.00	0.05
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.000	-11.25	170.00	0.07
Span # 2	2	7.000	-29.05	170.00	0.17
Span # 3	3	7.000	-30.29	170.00	0.18
Span # 4	4	3.500	-15.26	170.00	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.000	-11.29	170.00	0.07
Span # 2	2	7.000	-28.89	170.00	0.17
Span # 3	3	7.000	-30.13	170.00	0.18
Span # 4	4	3.500	-15.87	170.00	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.000	-21.48	170.00	0.13
Span # 2	2	7.000	-28.24	170.00	0.17
Span # 3	3	7.000	-30.28	170.00	0.18
Span # 4	4	3.500	-5.27	170.00	0.03
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.000	-21.52	170.00	0.13
Span # 2	2	7.000	-28.08	170.00	0.17
Span # 3	3	7.000	-30.12	170.00	0.18
Span # 4	4	3.500	-5.88	170.00	0.03
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.000	-19.11	170.00	0.11
Span # 2	2	7.000	-37.73	170.00	0.22
Span # 3	3	7.000	-39.89	170.00	0.23
Span # 4	4	3.500	-12.06	170.00	0.07
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.000	-19.15	170.00	0.11
Span # 2	2	7.000	-37.57	170.00	0.22
Span # 3	3	7.000	-39.73	170.00	0.23
Span # 4	4	3.500	-12.67	170.00	0.07
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***)					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-18.85	170.00	0.11
Span # 3	3	7.000	-19.93	170.00	0.12
Span # 4	4	3.500	-8.72	170.00	0.05
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.000	-16.15	170.00	0.09
Span # 2	2	7.000	-18.69	170.00	0.11
Span # 3	3	7.000	-19.77	170.00	0.12
Span # 4	4	3.500	-9.33	170.00	0.05
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.000	-13.73	170.00	0.08
Span # 2	2	7.000	-28.34	170.00	0.17
Span # 3	3	7.000	-29.55	170.00	0.17
Span # 4	4	3.500	-15.51	170.00	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.000	-13.77	170.00	0.08
Span # 2	2	7.000	-28.18	170.00	0.17
Span # 3	3	7.000	-29.38	170.00	0.17
Span # 4	4	3.500	-16.12	170.00	0.09
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.000	-23.97	170.00	0.14
Span # 2	2	7.000	-27.53	170.00	0.16
Span # 3	3	7.000	-29.53	170.00	0.17
Span # 4	4	3.500	-5.52	170.00	0.03
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.000	-24.01	170.00	0.14
Span # 2	2	7.000	-27.37	170.00	0.16
Span # 3	3	7.000	-29.37	170.00	0.17

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	3.500	-6.13	170.00	0.04
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.000	-21.59	170.00	0.13
Span # 2	2	7.000	-37.02	170.00	0.22
Span # 3	3	7.000	-39.14	170.00	0.23
Span # 4	4	3.500	-12.31	170.00	0.07
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.000	-21.63	170.00	0.13
Span # 2	2	7.000	-36.86	170.00	0.22
Span # 3	3	7.000	-38.98	170.00	0.23
Span # 4	4	3.500	-12.92	170.00	0.08
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L)					
Span # 1	1	7.000	-13.64	170.00	0.08
Span # 2	2	7.000	-19.51	170.00	0.11
Span # 3	3	7.000	-20.63	170.00	0.12
Span # 4	4	3.500	-8.66	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.000	-12.88	170.00	0.08
Span # 2	2	7.000	-22.52	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-10.59	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.000	-12.90	170.00	0.08
Span # 2	2	7.000	-22.47	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-10.78	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.000	-16.08	170.00	0.09
Span # 2	2	7.000	-22.27	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-7.47	170.00	0.04
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.000	-16.09	170.00	0.09
Span # 2	2	7.000	-22.22	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-7.66	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.000	-15.34	170.00	0.09
Span # 2	2	7.000	-25.24	170.00	0.15
Span # 3	3	7.000	-26.68	170.00	0.16
Span # 4	4	3.500	-9.59	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.000	-15.35	170.00	0.09
Span # 2	2	7.000	-25.19	170.00	0.15
Span # 3	3	7.000	-26.63	170.00	0.16
Span # 4	4	3.500	-9.78	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***)					
Span # 1	1	7.000	-14.40	170.00	0.08
Span # 2	2	7.000	-19.34	170.00	0.11
Span # 3	3	7.000	-20.45	170.00	0.12
Span # 4	4	3.500	-8.55	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.000	-14.42	170.00	0.08
Span # 2	2	7.000	-19.29	170.00	0.11
Span # 3	3	7.000	-20.40	170.00	0.12
Span # 4	4	3.500	-8.74	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.000	-13.66	170.00	0.08
Span # 2	2	7.000	-22.30	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-10.67	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-22.25	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-10.86	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.000	-16.86	170.00	0.10
Span # 2	2	7.000	-22.05	170.00	0.13

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-7.55	170.00	0.04
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.000	-16.87	170.00	0.10
Span # 2	2	7.000	-22.00	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-7.74	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-25.02	170.00	0.15
Span # 3	3	7.000	-26.45	170.00	0.16
Span # 4	4	3.500	-9.67	170.00	0.06
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.000	-16.13	170.00	0.09
Span # 2	2	7.000	-24.97	170.00	0.15
Span # 3	3	7.000	-26.40	170.00	0.16
Span # 4	4	3.500	-9.86	170.00	0.06
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L*)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.000	-13.63	170.00	0.08

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (***L)					
Span # 1	1	7.000	-13.64	170.00	0.08
Span # 2	2	7.000	-19.51	170.00	0.11
Span # 3	3	7.000	-20.63	170.00	0.12
Span # 4	4	3.500	-8.66	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L*)					
Span # 1	1	7.000	-12.88	170.00	0.08
Span # 2	2	7.000	-22.52	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-10.59	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**LL)					
Span # 1	1	7.000	-12.90	170.00	0.08
Span # 2	2	7.000	-22.47	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-10.78	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L**)					
Span # 1	1	7.000	-16.08	170.00	0.09
Span # 2	2	7.000	-22.27	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-7.47	170.00	0.04
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	7.000	-16.09	170.00	0.09
Span # 2	2	7.000	-22.22	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-7.66	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	7.000	-15.34	170.00	0.09
Span # 2	2	7.000	-25.24	170.00	0.15
Span # 3	3	7.000	-26.68	170.00	0.16
Span # 4	4	3.500	-9.59	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	7.000	-15.35	170.00	0.09
Span # 2	2	7.000	-25.19	170.00	0.15
Span # 3	3	7.000	-26.63	170.00	0.16
Span # 4	4	3.500	-9.78	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L***)					
Span # 1	1	7.000	-14.40	170.00	0.08
Span # 2	2	7.000	-19.34	170.00	0.11
Span # 3	3	7.000	-20.45	170.00	0.12
Span # 4	4	3.500	-8.55	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**L)					
Span # 1	1	7.000	-14.42	170.00	0.08
Span # 2	2	7.000	-19.29	170.00	0.11
Span # 3	3	7.000	-20.40	170.00	0.12
Span # 4	4	3.500	-8.74	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L*)					

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.000	-13.66	170.00	0.08
Span # 2	2	7.000	-22.30	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-10.67	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-22.25	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-10.86	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL**)					
Span # 1	1	7.000	-16.86	170.00	0.10
Span # 2	2	7.000	-22.05	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-7.55	170.00	0.04
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	7.000	-16.87	170.00	0.10
Span # 2	2	7.000	-22.00	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-7.74	170.00	0.05
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-25.02	170.00	0.15
Span # 3	3	7.000	-26.45	170.00	0.16
Span # 4	4	3.500	-9.67	170.00	0.06
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	7.000	-16.13	170.00	0.09
Span # 2	2	7.000	-24.97	170.00	0.15
Span # 3	3	7.000	-26.40	170.00	0.16
Span # 4	4	3.500	-9.86	170.00	0.06
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	7.000	-13.63	170.00	0.08
Span # 2	2	7.000	-19.56	170.00	0.12
Span # 3	3	7.000	-20.68	170.00	0.12
Span # 4	4	3.500	-8.47	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (***					
Span # 1	1	7.000	-13.64	170.00	0.08
Span # 2	2	7.000	-19.51	170.00	0.11
Span # 3	3	7.000	-20.63	170.00	0.12
Span # 4	4	3.500	-8.66	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.000	-12.88	170.00	0.08
Span # 2	2	7.000	-22.52	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-10.59	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	7.000	-12.90	170.00	0.08
Span # 2	2	7.000	-22.47	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-10.78	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.000	-16.08	170.00	0.09
Span # 2	2	7.000	-22.27	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-7.47	170.00	0.04
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	7.000	-16.09	170.00	0.09
Span # 2	2	7.000	-22.22	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-7.66	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.000	-15.34	170.00	0.09
Span # 2	2	7.000	-25.24	170.00	0.15
Span # 3	3	7.000	-26.68	170.00	0.16
Span # 4	4	3.500	-9.59	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	7.000	-15.35	170.00	0.09
Span # 2	2	7.000	-25.19	170.00	0.15
Span # 3	3	7.000	-26.63	170.00	0.16
Span # 4	4	3.500	-9.78	170.00	0.06

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.000	-14.40	170.00	0.08
Span # 2	2	7.000	-19.34	170.00	0.11
Span # 3	3	7.000	-20.45	170.00	0.12
Span # 4	4	3.500	-8.55	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	7.000	-14.42	170.00	0.08
Span # 2	2	7.000	-19.29	170.00	0.11
Span # 3	3	7.000	-20.40	170.00	0.12
Span # 4	4	3.500	-8.74	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.000	-13.66	170.00	0.08
Span # 2	2	7.000	-22.30	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-10.67	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-22.25	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-10.86	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.000	-16.86	170.00	0.10
Span # 2	2	7.000	-22.05	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-7.55	170.00	0.04
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	7.000	-16.87	170.00	0.10
Span # 2	2	7.000	-22.00	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-7.74	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-25.02	170.00	0.15
Span # 3	3	7.000	-26.45	170.00	0.16
Span # 4	4	3.500	-9.67	170.00	0.06
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	7.000	-16.13	170.00	0.09
Span # 2	2	7.000	-24.97	170.00	0.15
Span # 3	3	7.000	-26.40	170.00	0.16
Span # 4	4	3.500	-9.86	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (***L					
Span # 1	1	7.000	-13.64	170.00	0.08
Span # 2	2	7.000	-19.51	170.00	0.11
Span # 3	3	7.000	-20.63	170.00	0.12
Span # 4	4	3.500	-8.66	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L*					
Span # 1	1	7.000	-12.88	170.00	0.08
Span # 2	2	7.000	-22.52	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-10.59	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**LL					
Span # 1	1	7.000	-12.90	170.00	0.08
Span # 2	2	7.000	-22.47	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-10.78	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L**					
Span # 1	1	7.000	-16.08	170.00	0.09
Span # 2	2	7.000	-22.27	170.00	0.13
Span # 3	3	7.000	-23.68	170.00	0.14
Span # 4	4	3.500	-7.47	170.00	0.04
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.000	-16.09	170.00	0.09
Span # 2	2	7.000	-22.22	170.00	0.13
Span # 3	3	7.000	-23.63	170.00	0.14
Span # 4	4	3.500	-7.66	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.000	-15.34	170.00	0.09
Span # 2	2	7.000	-25.24	170.00	0.15
Span # 3	3	7.000	-26.68	170.00	0.16

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	3.500	-9.59	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.000	-15.35	170.00	0.09
Span # 2	2	7.000	-25.19	170.00	0.15
Span # 3	3	7.000	-26.63	170.00	0.16
Span # 4	4	3.500	-9.78	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L***					
Span # 1	1	7.000	-14.40	170.00	0.08
Span # 2	2	7.000	-19.34	170.00	0.11
Span # 3	3	7.000	-20.45	170.00	0.12
Span # 4	4	3.500	-8.55	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**L					
Span # 1	1	7.000	-14.42	170.00	0.08
Span # 2	2	7.000	-19.29	170.00	0.11
Span # 3	3	7.000	-20.40	170.00	0.12
Span # 4	4	3.500	-8.74	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.000	-13.66	170.00	0.08
Span # 2	2	7.000	-22.30	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-10.67	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.000	-13.67	170.00	0.08
Span # 2	2	7.000	-22.25	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-10.86	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL**					
Span # 1	1	7.000	-16.86	170.00	0.10
Span # 2	2	7.000	-22.05	170.00	0.13
Span # 3	3	7.000	-23.45	170.00	0.14
Span # 4	4	3.500	-7.55	170.00	0.04
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.000	-16.87	170.00	0.10
Span # 2	2	7.000	-22.00	170.00	0.13
Span # 3	3	7.000	-23.40	170.00	0.14
Span # 4	4	3.500	-7.74	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.000	-16.11	170.00	0.09
Span # 2	2	7.000	-25.02	170.00	0.15
Span # 3	3	7.000	-26.45	170.00	0.16
Span # 4	4	3.500	-9.67	170.00	0.06
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.000	-16.13	170.00	0.09
Span # 2	2	7.000	-24.97	170.00	0.15
Span # 3	3	7.000	-26.40	170.00	0.16
Span # 4	4	3.500	-9.86	170.00	0.06
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (***L					
Span # 1	1	7.000	-20.33	170.00	0.12
Span # 2	2	7.000	-21.18	170.00	0.12
Span # 3	3	7.000	-19.54	170.00	0.11
Span # 4	4	3.500	4.65	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L*					
Span # 1	1	7.000	-19.58	170.00	0.12
Span # 2	2	7.000	-21.26	170.00	0.13
Span # 3	3	7.000	-22.59	170.00	0.13
Span # 4	4	3.500	3.28	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**LL					
Span # 1	1	7.000	-19.59	170.00	0.12
Span # 2	2	7.000	-21.21	170.00	0.12
Span # 3	3	7.000	-22.54	170.00	0.13
Span # 4	4	3.500	3.71	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L**					
Span # 1	1	7.000	-22.78	170.00	0.13
Span # 2	2	7.000	-23.65	170.00	0.14
Span # 3	3	7.000	-22.59	170.00	0.13
Span # 4	4	3.500	4.71	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.000	-22.79	170.00	0.13
Span # 2	2	7.000	-23.66	170.00	0.14

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	7.000	-22.54	170.00	0.13
Span # 4	4	3.500	5.13	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.000	-22.03	170.00	0.13
Span # 2	2	7.000	-23.97	170.00	0.14
Span # 3	3	7.000	-25.59	170.00	0.15
Span # 4	4	3.500	3.71	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.000	-22.04	170.00	0.13
Span # 2	2	7.000	-23.92	170.00	0.14
Span # 3	3	7.000	-25.54	170.00	0.15
Span # 4	4	3.500	4.14	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L***					
Span # 1	1	7.000	-21.10	170.00	0.12
Span # 2	2	7.000	-22.02	170.00	0.13
Span # 3	3	7.000	-19.35	170.00	0.11
Span # 4	4	3.500	4.18	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**L					
Span # 1	1	7.000	-21.11	170.00	0.12
Span # 2	2	7.000	-22.04	170.00	0.13
Span # 3	3	7.000	-19.30	170.00	0.11
Span # 4	4	3.500	4.61	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.000	-20.35	170.00	0.12
Span # 2	2	7.000	-21.27	170.00	0.13
Span # 3	3	7.000	-22.36	170.00	0.13
Span # 4	4	3.500	3.25	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.000	-20.37	170.00	0.12
Span # 2	2	7.000	-21.28	170.00	0.13
Span # 3	3	7.000	-22.31	170.00	0.13
Span # 4	4	3.500	3.67	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL**					
Span # 1	1	7.000	-23.55	170.00	0.14
Span # 2	2	7.000	-24.50	170.00	0.14
Span # 3	3	7.000	-22.35	170.00	0.13
Span # 4	4	3.500	4.67	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.000	-23.56	170.00	0.14
Span # 2	2	7.000	-24.52	170.00	0.14
Span # 3	3	7.000	-22.30	170.00	0.13
Span # 4	4	3.500	5.09	162.54	0.03
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.000	-22.81	170.00	0.13
Span # 2	2	7.000	-23.75	170.00	0.14
Span # 3	3	7.000	-25.36	170.00	0.15
Span # 4	4	3.500	3.67	162.54	0.02
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.000	-22.82	170.00	0.13
Span # 2	2	7.000	-23.77	170.00	0.14
Span # 3	3	7.000	-25.31	170.00	0.15
Span # 4	4	3.500	4.10	162.54	0.03
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (***L					
Span # 1	1	7.000	11.07	162.54	0.07
Span # 2	2	7.000	-20.78	170.00	0.12
Span # 3	3	7.000	20.78	162.54	0.13
Span # 4	4	3.500	-16.06	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L*					
Span # 1	1	7.000	11.41	162.54	0.07
Span # 2	2	7.000	-23.79	170.00	0.14
Span # 3	3	7.000	24.01	162.54	0.15
Span # 4	4	3.500	-17.99	170.00	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**LL					
Span # 1	1	7.000	11.40	162.54	0.07
Span # 2	2	7.000	-23.74	170.00	0.14
Span # 3	3	7.000	23.96	162.54	0.15
Span # 4	4	3.500	-18.18	170.00	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L**					
Span # 1	1	7.000	10.02	162.54	0.06

Concrete Beam

Description : GB-E-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	7.000	-23.54	170.00	0.14
Span # 3	3	7.000	-24.77	170.00	0.15
Span # 4	4	3.500	-14.87	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*L					
Span # 1	1	7.000	10.02	162.54	0.06
Span # 2	2	7.000	-23.49	170.00	0.14
Span # 3	3	7.000	-24.72	170.00	0.15
Span # 4	4	3.500	-15.06	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL*					
Span # 1	1	7.000	10.34	162.54	0.06
Span # 2	2	7.000	-26.51	170.00	0.16
Span # 3	3	7.000	-27.78	170.00	0.16
Span # 4	4	3.500	-16.99	170.00	0.10
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LLL					
Span # 1	1	7.000	10.33	162.54	0.06
Span # 2	2	7.000	-26.46	170.00	0.16
Span # 3	3	7.000	-27.73	170.00	0.16
Span # 4	4	3.500	-17.18	170.00	0.10
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L***					
Span # 1	1	7.000	12.25	162.54	0.08
Span # 2	2	7.000	-20.61	170.00	0.12
Span # 3	3	7.000	20.93	162.54	0.13
Span # 4	4	3.500	-15.95	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**L					
Span # 1	1	7.000	12.24	162.54	0.08
Span # 2	2	7.000	-20.56	170.00	0.12
Span # 3	3	7.000	20.89	162.54	0.13
Span # 4	4	3.500	-16.14	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L*					
Span # 1	1	7.000	12.58	162.54	0.08
Span # 2	2	7.000	-23.57	170.00	0.14
Span # 3	3	7.000	24.11	162.54	0.15
Span # 4	4	3.500	-18.07	170.00	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*LL					
Span # 1	1	7.000	12.57	162.54	0.08
Span # 2	2	7.000	-23.52	170.00	0.14
Span # 3	3	7.000	24.07	162.54	0.15
Span # 4	4	3.500	-18.26	170.00	0.11
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL**					
Span # 1	1	7.000	11.19	162.54	0.07
Span # 2	2	7.000	-23.32	170.00	0.14
Span # 3	3	7.000	-24.54	170.00	0.14
Span # 4	4	3.500	-14.95	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*L					
Span # 1	1	7.000	11.18	162.54	0.07
Span # 2	2	7.000	-23.27	170.00	0.14
Span # 3	3	7.000	-24.49	170.00	0.14
Span # 4	4	3.500	-15.14	170.00	0.09
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL*					
Span # 1	1	7.000	11.50	162.54	0.07
Span # 2	2	7.000	-26.29	170.00	0.15
Span # 3	3	7.000	-27.54	170.00	0.16
Span # 4	4	3.500	-17.07	170.00	0.10
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLLL					
Span # 1	1	7.000	11.50	162.54	0.07
Span # 2	2	7.000	-26.24	170.00	0.15
Span # 3	3	7.000	-27.49	170.00	0.16
Span # 4	4	3.500	-17.26	170.00	0.10
+0.90D+W+0.90H					
Span # 1	1	7.000	-10.31	170.00	0.06
Span # 2	2	7.000	-14.30	170.00	0.08
Span # 3	3	7.000	-15.14	170.00	0.09
Span # 4	4	3.500	-6.15	170.00	0.04
+0.90D+E+0.90H					
Span # 1	1	7.000	-17.01	170.00	0.10
Span # 2	2	7.000	-17.66	170.00	0.10
Span # 3	3	7.000	-14.04	170.00	0.08
Span # 4	4	3.500	4.21	162.54	0.03
+0.90D-E+0.90H					

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-E-62R

Load Combination Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	7.000	9.02	162.54	0.06
Span # 2	2	7.000	-15.57	170.00	0.09
Span # 3	3	7.000	18.51	162.54	0.11
Span # 4	4	3.500	-13.55	170.00	0.08

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L*L*)	1	0.0008	3.132	E Only	-0.0002	6.079
+D+0.750L+0.750S+0.5250E+H, LL C	2	0.0013	3.500		0.0000	6.079
+D+L+H, LL Comb Run (L*L*)	3	0.0010	3.132		0.0000	6.079
E Only	4	0.0001	1.566		0.0000	6.079

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

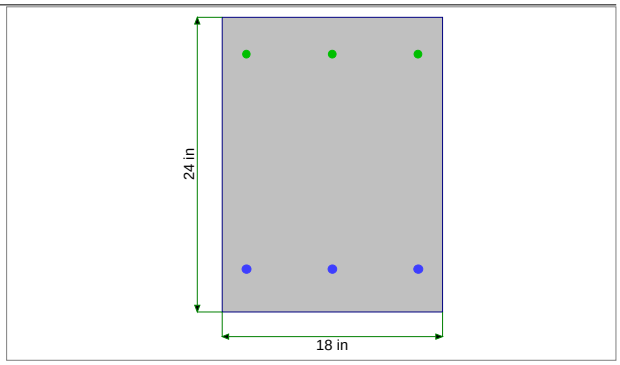
Description : GB-F-62R

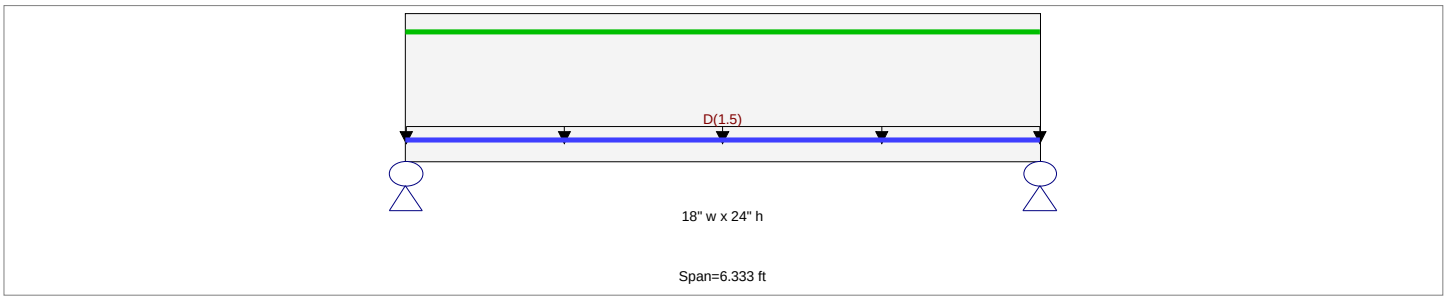
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 24.0 in
Span #1 Reinforcing....
3-#6 at 3.50 in from Bottom, from 0.0 to 6.333 ft in this span
3-#5 at 3.0 in from Top, from 0.0 to 6.333 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Uniform Load : D = 1.50 k/ft, Tributary Width = 1.0 ft, (WALL G)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.112** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied		13.581 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable		121.421 k-ft	Max Downward Total Deflection	0.001 in	Ratio =	70272 >=24
Location of maximum on span		3.161 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 1				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall MAXimum	6.127	6.127
Overall MINimum	3.676	3.676
+D+H	6.127	6.127
+D+L+H	6.127	6.127
+D+Lr+H	6.127	6.127
+D+S+H	6.127	6.127
+D+0.750Lr+0.750L+H	6.127	6.127
+D+0.750L+0.750S+H	6.127	6.127
+D+0.60W+H	6.127	6.127
+D+0.70E+H	6.127	6.127
+D+0.750Lr+0.750L+0.450W+H	6.127	6.127
+D+0.750L+0.750S+0.450W+H	6.127	6.127
+D+0.750L+0.750S+0.5250E+H	6.127	6.127

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
+0.60D+0.60W+0.60H	3.676	3.676
+0.60D+0.70E+0.60H	3.676	3.676
D Only	6.127	6.127
Lr Only		
L Only		
S Only		
W Only		
E Only		
H Only		

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	0.00	20.50	8.58	8.58	0.00	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.01	20.50	8.55	8.55	0.10	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.02	20.50	8.52	8.52	0.20	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.03	20.50	8.48	8.48	0.30	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.05	20.50	8.45	8.45	0.39	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.06	20.50	8.42	8.42	0.49	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.07	20.50	8.39	8.39	0.59	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.08	20.50	8.36	8.36	0.68	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.09	20.50	8.33	8.33	0.78	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.10	20.50	8.30	8.30	0.88	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.12	20.50	8.27	8.27	0.97	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.13	20.50	8.23	8.23	1.07	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.14	20.50	8.20	8.20	1.16	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.15	20.50	8.17	8.17	1.26	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.16	20.50	8.14	8.14	1.35	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.17	20.50	8.11	8.11	1.44	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.18	20.50	8.08	8.08	1.54	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.20	20.50	8.05	8.05	1.63	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.21	20.50	8.02	8.02	1.72	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.22	20.50	7.98	7.98	1.82	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.23	20.50	7.95	7.95	1.91	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.24	20.50	7.92	7.92	2.00	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.25	20.50	7.89	7.89	2.09	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.27	20.50	7.86	7.86	2.18	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.28	20.50	7.83	7.83	2.27	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.29	20.50	7.80	7.80	2.36	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.30	20.50	7.77	7.77	2.45	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.31	20.50	7.73	7.73	2.54	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.32	20.50	7.70	7.70	2.63	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.33	20.50	7.67	7.67	2.72	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.35	20.50	7.64	7.64	2.81	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.36	20.50	7.61	7.61	2.89	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.37	20.50	7.58	7.58	2.98	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.38	20.50	7.55	7.55	3.07	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.39	20.50	7.52	7.52	3.16	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.40	20.50	7.48	7.48	3.24	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.42	20.50	7.45	7.45	3.33	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.43	20.50	7.42	7.42	3.41	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.44	20.50	7.39	7.39	3.50	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.45	20.50	7.36	7.36	3.58	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.46	20.50	7.33	7.33	3.67	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.47	20.50	7.30	7.30	3.75	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0
+1.40D+1.60H	1	0.48	20.50	7.27	7.27	3.84	1.00	35.73	Vu < PhiVc/2	Not Reqd	1 35.7	0.0	0.0

Concrete Beam

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Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	0.50	20.50	7.23	7.23	3.92	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.51	20.50	7.20	7.20	4.00	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.52	20.50	7.17	7.17	4.09	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.53	20.50	7.14	7.14	4.17	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.54	20.50	7.11	7.11	4.25	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.55	20.50	7.08	7.08	4.33	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.57	20.50	7.05	7.05	4.42	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.58	20.50	7.02	7.02	4.50	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.59	20.50	6.98	6.98	4.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.60	20.50	6.95	6.95	4.66	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.61	20.50	6.92	6.92	4.74	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.62	20.50	6.89	6.89	4.82	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.63	20.50	6.86	6.86	4.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.65	20.50	6.83	6.83	4.98	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.66	20.50	6.80	6.80	5.05	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.67	20.50	6.77	6.77	5.13	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.68	20.50	6.73	6.73	5.21	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.69	20.50	6.70	6.70	5.29	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.70	20.50	6.67	6.67	5.37	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.72	20.50	6.64	6.64	5.44	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.73	20.50	6.61	6.61	5.52	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.74	20.50	6.58	6.58	5.59	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.75	20.50	6.55	6.55	5.67	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.76	20.50	6.52	6.52	5.75	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.77	20.50	6.48	6.48	5.82	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.78	20.50	6.45	6.45	5.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.80	20.50	6.42	6.42	5.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.81	20.50	6.39	6.39	6.04	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.82	20.50	6.36	6.36	6.12	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.83	20.50	6.33	6.33	6.19	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.84	20.50	6.30	6.30	6.26	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.85	20.50	6.27	6.27	6.34	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.87	20.50	6.23	6.23	6.41	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.88	20.50	6.20	6.20	6.48	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.89	20.50	6.17	6.17	6.55	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.90	20.50	6.14	6.14	6.62	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.91	20.50	6.11	6.11	6.69	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.92	20.50	6.08	6.08	6.76	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.93	20.50	6.05	6.05	6.83	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.95	20.50	6.02	6.02	6.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.96	20.50	5.98	5.98	6.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.97	20.50	5.95	5.95	7.04	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.98	20.50	5.92	5.92	7.11	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	0.99	20.50	5.89	5.89	7.18	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.00	20.50	5.86	5.86	7.24	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.02	20.50	5.83	5.83	7.31	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.03	20.50	5.80	5.80	7.38	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.04	20.50	5.77	5.77	7.45	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.05	20.50	5.73	5.73	7.51	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.06	20.50	5.70	5.70	7.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.07	20.50	5.67	5.67	7.64	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.08	20.50	5.64	5.64	7.71	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.10	20.50	5.61	5.61	7.77	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.11	20.50	5.58	5.58	7.84	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.12	20.50	5.55	5.55	7.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.13	20.50	5.52	5.52	7.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.14	20.50	5.48	5.48	8.03	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.15	20.50	5.45	5.45	8.09	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.17	20.50	5.42	5.42	8.16	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.18	20.50	5.39	5.39	8.22	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.19	20.50	5.36	5.36	8.28	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.20	20.50	5.33	5.33	8.34	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.21	20.50	5.30	5.30	8.40	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.22	20.50	5.27	5.27	8.46	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.23	20.50	5.23	5.23	8.52	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.25	20.50	5.20	5.20	8.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.26	20.50	5.17	5.17	8.64	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.27	20.50	5.14	5.14	8.70	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.28	20.50	5.11	5.11	8.76	1.00	35.72	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.29	20.50	5.08	5.08	8.82	0.98	35.69	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.30	20.50	5.05	5.05	8.88	0.97	35.66	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	1.32	20.50	5.02	5.02	8.94	0.96	35.63	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	1.33	20.50	4.98	4.98	9.00	0.95	35.60	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	1.34	20.50	4.95	4.95	9.05	0.93	35.57	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	1.35	20.50	4.92	4.92	9.11	0.92	35.54	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	1.36	20.50	4.89	4.89	9.17	0.91	35.51	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	1.37	20.50	4.86	4.86	9.22	0.90	35.48	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	1.38	20.50	4.83	4.83	9.28	0.89	35.46	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	1.40	20.50	4.80	4.80	9.33	0.88	35.43	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	1.41	20.50	4.77	4.77	9.39	0.87	35.40	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	1.42	20.50	4.73	4.73	9.44	0.86	35.38	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	1.43	20.50	4.70	4.70	9.50	0.85	35.35	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	1.44	20.50	4.67	4.67	9.55	0.84	35.32	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	1.45	20.50	4.64	4.64	9.61	0.83	35.30	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	1.47	20.50	4.61	4.61	9.66	0.82	35.27	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	1.48	20.50	4.58	4.58	9.71	0.81	35.25	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	1.49	20.50	4.55	4.55	9.77	0.80	35.22	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	1.50	20.50	4.52	4.52	9.82	0.79	35.20	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	1.51	20.50	4.48	4.48	9.87	0.78	35.18	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	1.52	20.50	4.45	4.45	9.92	0.77	35.15	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	1.53	20.50	4.42	4.42	9.97	0.76	35.13	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	1.55	20.50	4.39	4.39	10.02	0.75	35.11	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	1.56	20.50	4.36	4.36	10.07	0.74	35.09	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	1.57	20.50	4.33	4.33	10.12	0.73	35.06	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	1.58	20.50	4.30	4.30	10.17	0.72	35.04	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	1.59	20.50	4.27	4.27	10.22	0.71	35.02	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	1.60	20.50	4.23	4.23	10.27	0.70	35.00	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	1.61	20.50	4.20	4.20	10.32	0.70	34.98	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	1.63	20.50	4.17	4.17	10.37	0.69	34.96	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	1.64	20.50	4.14	4.14	10.42	0.68	34.94	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	1.65	20.50	4.11	4.11	10.46	0.67	34.92	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	1.66	20.50	4.08	4.08	10.51	0.66	34.90	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	1.67	20.50	4.05	4.05	10.56	0.65	34.88	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	1.68	20.50	4.02	4.02	10.61	0.65	34.86	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	1.70	20.50	3.98	3.98	10.65	0.64	34.84	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	1.71	20.50	3.95	3.95	10.70	0.63	34.82	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	1.72	20.50	3.92	3.92	10.74	0.62	34.80	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	1.73	20.50	3.89	3.89	10.79	0.62	34.78	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	1.74	20.50	3.86	3.86	10.83	0.61	34.76	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	1.75	20.50	3.83	3.83	10.88	0.60	34.74	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.76	20.50	3.80	3.80	10.92	0.59	34.73	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.78	20.50	3.77	3.77	10.96	0.59	34.71	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.79	20.50	3.73	3.73	11.01	0.58	34.69	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.80	20.50	3.70	3.70	11.05	0.57	34.67	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.81	20.50	3.67	3.67	11.09	0.57	34.66	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	1.82	20.50	3.64	3.64	11.13	0.56	34.64	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.83	20.50	3.61	3.61	11.18	0.55	34.62	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.85	20.50	3.58	3.58	11.22	0.54	34.60	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.86	20.50	3.55	3.55	11.26	0.54	34.59	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.87	20.50	3.52	3.52	11.30	0.53	34.57	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.88	20.50	3.48	3.48	11.34	0.52	34.56	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	1.89	20.50	3.45	3.45	11.38	0.52	34.54	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.90	20.50	3.42	3.42	11.42	0.51	34.52	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.91	20.50	3.39	3.39	11.46	0.51	34.51	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.93	20.50	3.36	3.36	11.50	0.50	34.49	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.94	20.50	3.33	3.33	11.54	0.49	34.48	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.95	20.50	3.30	3.30	11.58	0.49	34.46	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	1.96	20.50	3.27	3.27	11.61	0.48	34.45	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	1.97	20.50	3.23	3.23	11.65	0.47	34.43	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	1.98	20.50	3.20	3.20	11.69	0.47	34.41	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	2.00	20.50	3.17	3.17	11.72	0.46	34.40	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	2.01	20.50	3.14	3.14	11.76	0.46	34.39	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	2.02	20.50	3.11	3.11	11.80	0.45	34.37	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	2.03	20.50	3.08	3.08	11.83	0.44	34.36	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	2.04	20.50	3.05	3.05	11.87	0.44	34.34	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.05	20.50	3.02	3.02	11.90	0.43	34.33	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.06	20.50	2.98	2.98	11.94	0.43	34.31	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.08	20.50	2.95	2.95	11.97	0.42	34.30	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.09	20.50	2.92	2.92	12.01	0.42	34.29	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.10	20.50	2.89	2.89	12.04	0.41	34.27	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.11	20.50	2.86	2.86	12.07	0.40	34.26	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	2.12	20.50	2.83	2.83	12.10	0.40	34.24	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.13	20.50	2.80	2.80	12.14	0.39	34.23	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.15	20.50	2.77	2.77	12.17	0.39	34.22	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.16	20.50	2.73	2.73	12.20	0.38	34.20	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.17	20.50	2.70	2.70	12.23	0.38	34.19	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.18	20.50	2.67	2.67	12.26	0.37	34.18	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.19	20.50	2.64	2.64	12.29	0.37	34.16	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.20	20.50	2.61	2.61	12.32	0.36	34.15	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	2.21	20.50	2.58	2.58	12.35	0.36	34.14	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.23	20.50	2.55	2.55	12.38	0.35	34.13	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.24	20.50	2.52	2.52	12.41	0.35	34.11	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.25	20.50	2.48	2.48	12.44	0.34	34.10	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.26	20.50	2.45	2.45	12.47	0.34	34.09	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.27	20.50	2.42	2.42	12.50	0.33	34.08	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.28	20.50	2.39	2.39	12.53	0.33	34.06	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.30	20.50	2.36	2.36	12.55	0.32	34.05	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	2.31	20.50	2.33	2.33	12.58	0.32	34.04	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.32	20.50	2.30	2.30	12.61	0.31	34.03	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.33	20.50	2.27	2.27	12.63	0.31	34.01	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.34	20.50	2.23	2.23	12.66	0.30	34.00	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.35	20.50	2.20	2.20	12.69	0.30	33.99	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	2.36	20.50	2.17	2.17	12.71	0.29	33.98	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.38	20.50	2.14	2.14	12.74	0.29	33.97	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.39	20.50	2.11	2.11	12.76	0.28	33.96	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	2.40	20.50	2.08	2.08	12.78	0.28	33.94	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.41	20.50	2.05	2.05	12.81	0.27	33.93	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.42	20.50	2.02	2.02	12.83	0.27	33.92	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.43	20.50	1.98	1.98	12.85	0.26	33.91	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.45	20.50	1.95	1.95	12.88	0.26	33.90	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.46	20.50	1.92	1.92	12.90	0.25	33.89	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.47	20.50	1.89	1.89	12.92	0.25	33.87	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.48	20.50	1.86	1.86	12.94	0.25	33.86	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.49	20.50	1.83	1.83	12.96	0.24	33.85	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	2.50	20.50	1.80	1.80	12.99	0.24	33.84	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.51	20.50	1.77	1.77	13.01	0.23	33.83	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.53	20.50	1.73	1.73	13.03	0.23	33.82	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.54	20.50	1.70	1.70	13.05	0.22	33.81	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.55	20.50	1.67	1.67	13.07	0.22	33.80	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.56	20.50	1.64	1.64	13.08	0.21	33.79	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.57	20.50	1.61	1.61	13.10	0.21	33.78	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.58	20.50	1.58	1.58	13.12	0.21	33.76	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.60	20.50	1.55	1.55	13.14	0.20	33.75	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	2.61	20.50	1.52	1.52	13.16	0.20	33.74	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.62	20.50	1.48	1.48	13.17	0.19	33.73	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.63	20.50	1.45	1.45	13.19	0.19	33.72	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.64	20.50	1.42	1.42	13.21	0.18	33.71	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.65	20.50	1.39	1.39	13.22	0.18	33.70	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.66	20.50	1.36	1.36	13.24	0.18	33.69	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.68	20.50	1.33	1.33	13.26	0.17	33.68	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.69	20.50	1.30	1.30	13.27	0.17	33.67	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.70	20.50	1.27	1.27	13.29	0.16	33.66	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	2.71	20.50	1.23	1.23	13.30	0.16	33.65	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.72	20.50	1.20	1.20	13.31	0.15	33.64	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.73	20.50	1.17	1.17	13.33	0.15	33.63	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.75	20.50	1.14	1.14	13.34	0.15	33.62	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.76	20.50	1.11	1.11	13.35	0.14	33.61	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.77	20.50	1.08	1.08	13.37	0.14	33.60	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.78	20.50	1.05	1.05	13.38	0.13	33.59	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.79	20.50	1.02	1.02	13.39	0.13	33.58	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.80	20.50	0.98	0.98	13.40	0.13	33.57	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.81	20.50	0.95	0.95	13.41	0.12	33.56	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	2.83	20.50	0.92	0.92	13.42	0.12	33.55	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.84	20.50	0.89	0.89	13.43	0.11	33.54	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.85	20.50	0.86	0.86	13.44	0.11	33.53	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.86	20.50	0.83	0.83	13.45	0.11	33.52	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.87	20.50	0.80	0.80	13.46	0.10	33.51	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.88	20.50	0.77	0.77	13.47	0.10	33.50	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.90	20.50	0.73	0.73	13.48	0.09	33.49	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.91	20.50	0.70	0.70	13.49	0.09	33.48	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.92	20.50	0.67	0.67	13.50	0.09	33.47	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.93	20.50	0.64	0.64	13.51	0.08	33.46	Vu < PhiVc/2	Not Reqd 1	33.5	0.0	0.0
+1.40D+1.60H	1	2.94	20.50	0.61	0.61	13.51	0.08	33.45	Vu < PhiVc/2	Not Reqd 1	33.4	0.0	0.0
+1.40D+1.60H	1	2.95	20.50	0.58	0.58	13.52	0.07	33.44	Vu < PhiVc/2	Not Reqd 1	33.4	0.0	0.0
+1.40D+1.60H	1	2.96	20.50	0.55	0.55	13.53	0.07	33.43	Vu < PhiVc/2	Not Reqd 1	33.4	0.0	0.0
+1.40D+1.60H	1	2.98	20.50	0.52	0.52	13.53	0.07	33.42	Vu < PhiVc/2	Not Reqd 1	33.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	2.99	20.50	0.48	0.48	13.54	0.06	33.41	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.00	20.50	0.45	0.45	13.54	0.06	33.40	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.01	20.50	0.42	0.42	13.55	0.05	33.39	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.02	20.50	0.39	0.39	13.55	0.05	33.38	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.03	20.50	0.36	0.36	13.56	0.05	33.37	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.05	20.50	0.33	0.33	13.56	0.04	33.36	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.06	20.50	0.30	0.30	13.56	0.04	33.35	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.07	20.50	0.27	0.27	13.57	0.03	33.34	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.08	20.50	0.23	0.23	13.57	0.03	33.33	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.09	20.50	0.20	0.20	13.57	0.03	33.32	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.10	20.50	0.17	0.17	13.58	0.02	33.31	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.11	20.50	0.14	0.14	13.58	0.02	33.30	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.13	20.50	0.11	0.11	13.58	0.01	33.29	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.14	20.50	0.08	0.08	13.58	0.01	33.28	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.15	20.50	0.05	0.05	13.58	0.01	33.27	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.16	20.50	0.02	0.02	13.58	0.00	33.26	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.17	20.50	-0.02	0.02	13.58	0.00	33.26	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.18	20.50	-0.05	0.05	13.58	0.01	33.27	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.20	20.50	-0.08	0.08	13.58	0.01	33.28	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.21	20.50	-0.11	0.11	13.58	0.01	33.29	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.22	20.50	-0.14	0.14	13.58	0.02	33.30	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.23	20.50	-0.17	0.17	13.58	0.02	33.31	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.24	20.50	-0.20	0.20	13.57	0.03	33.32	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.25	20.50	-0.23	0.23	13.57	0.03	33.33	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.26	20.50	-0.27	0.27	13.57	0.03	33.34	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.28	20.50	-0.30	0.30	13.56	0.04	33.35	Vu < PhiVc/2	Not Reqd	1 33.3	0.0	0.0
+1.40D+1.60H	1	3.29	20.50	-0.33	0.33	13.56	0.04	33.36	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.30	20.50	-0.36	0.36	13.56	0.05	33.37	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.31	20.50	-0.39	0.39	13.55	0.05	33.38	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.32	20.50	-0.42	0.42	13.55	0.05	33.39	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.33	20.50	-0.45	0.45	13.54	0.06	33.40	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.35	20.50	-0.48	0.48	13.54	0.06	33.41	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.36	20.50	-0.52	0.52	13.53	0.07	33.42	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.37	20.50	-0.55	0.55	13.53	0.07	33.43	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.38	20.50	-0.58	0.58	13.52	0.07	33.44	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.39	20.50	-0.61	0.61	13.51	0.08	33.45	Vu < PhiVc/2	Not Reqd	1 33.4	0.0	0.0
+1.40D+1.60H	1	3.40	20.50	-0.64	0.64	13.51	0.08	33.46	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.41	20.50	-0.67	0.67	13.50	0.09	33.47	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.43	20.50	-0.70	0.70	13.49	0.09	33.48	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.44	20.50	-0.73	0.73	13.48	0.09	33.49	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.45	20.50	-0.77	0.77	13.47	0.10	33.50	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.46	20.50	-0.80	0.80	13.46	0.10	33.51	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.47	20.50	-0.83	0.83	13.45	0.11	33.52	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.48	20.50	-0.86	0.86	13.44	0.11	33.53	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.50	20.50	-0.89	0.89	13.43	0.11	33.54	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.51	20.50	-0.92	0.92	13.42	0.12	33.55	Vu < PhiVc/2	Not Reqd	1 33.5	0.0	0.0
+1.40D+1.60H	1	3.52	20.50	-0.95	0.95	13.41	0.12	33.56	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.53	20.50	-0.98	0.98	13.40	0.13	33.57	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.54	20.50	-1.02	1.02	13.39	0.13	33.58	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.55	20.50	-1.05	1.05	13.38	0.13	33.59	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.56	20.50	-1.08	1.08	13.37	0.14	33.60	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.58	20.50	-1.11	1.11	13.35	0.14	33.61	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.59	20.50	-1.14	1.14	13.34	0.15	33.62	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0
+1.40D+1.60H	1	3.60	20.50	-1.17	1.17	13.33	0.15	33.63	Vu < PhiVc/2	Not Reqd	1 33.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	3.61	20.50	-1.20	1.20	13.31	0.15	33.64	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	3.62	20.50	-1.23	1.23	13.30	0.16	33.65	Vu < PhiVc/2	Not Reqd 1	33.6	0.0	0.0
+1.40D+1.60H	1	3.63	20.50	-1.27	1.27	13.29	0.16	33.66	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.65	20.50	-1.30	1.30	13.27	0.17	33.67	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.66	20.50	-1.33	1.33	13.26	0.17	33.68	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.67	20.50	-1.36	1.36	13.24	0.18	33.69	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.68	20.50	-1.39	1.39	13.22	0.18	33.70	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.69	20.50	-1.42	1.42	13.21	0.18	33.71	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.70	20.50	-1.45	1.45	13.19	0.19	33.72	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.71	20.50	-1.48	1.48	13.17	0.19	33.73	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.73	20.50	-1.52	1.52	13.16	0.20	33.74	Vu < PhiVc/2	Not Reqd 1	33.7	0.0	0.0
+1.40D+1.60H	1	3.74	20.50	-1.55	1.55	13.14	0.20	33.75	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.75	20.50	-1.58	1.58	13.12	0.21	33.76	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.76	20.50	-1.61	1.61	13.10	0.21	33.78	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.77	20.50	-1.64	1.64	13.08	0.21	33.79	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.78	20.50	-1.67	1.67	13.07	0.22	33.80	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.80	20.50	-1.70	1.70	13.05	0.22	33.81	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.81	20.50	-1.73	1.73	13.03	0.23	33.82	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.82	20.50	-1.77	1.77	13.01	0.23	33.83	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.83	20.50	-1.80	1.80	12.99	0.24	33.84	Vu < PhiVc/2	Not Reqd 1	33.8	0.0	0.0
+1.40D+1.60H	1	3.84	20.50	-1.83	1.83	12.96	0.24	33.85	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.85	20.50	-1.86	1.86	12.94	0.25	33.86	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.86	20.50	-1.89	1.89	12.92	0.25	33.87	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.88	20.50	-1.92	1.92	12.90	0.25	33.89	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.89	20.50	-1.95	1.95	12.88	0.26	33.90	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.90	20.50	-1.98	1.98	12.85	0.26	33.91	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.91	20.50	-2.02	2.02	12.83	0.27	33.92	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.92	20.50	-2.05	2.05	12.81	0.27	33.93	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.93	20.50	-2.08	2.08	12.78	0.28	33.94	Vu < PhiVc/2	Not Reqd 1	33.9	0.0	0.0
+1.40D+1.60H	1	3.95	20.50	-2.11	2.11	12.76	0.28	33.96	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	3.96	20.50	-2.14	2.14	12.74	0.29	33.97	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	3.97	20.50	-2.17	2.17	12.71	0.29	33.98	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	3.98	20.50	-2.20	2.20	12.69	0.30	33.99	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	3.99	20.50	-2.23	2.23	12.66	0.30	34.00	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	4.00	20.50	-2.27	2.27	12.63	0.31	34.01	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	4.01	20.50	-2.30	2.30	12.61	0.31	34.03	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	4.03	20.50	-2.33	2.33	12.58	0.32	34.04	Vu < PhiVc/2	Not Reqd 1	34.0	0.0	0.0
+1.40D+1.60H	1	4.04	20.50	-2.36	2.36	12.55	0.32	34.05	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.05	20.50	-2.39	2.39	12.53	0.33	34.06	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.06	20.50	-2.42	2.42	12.50	0.33	34.08	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.07	20.50	-2.45	2.45	12.47	0.34	34.09	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.08	20.50	-2.48	2.48	12.44	0.34	34.10	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.10	20.50	-2.52	2.52	12.41	0.35	34.11	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.11	20.50	-2.55	2.55	12.38	0.35	34.13	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.12	20.50	-2.58	2.58	12.35	0.36	34.14	Vu < PhiVc/2	Not Reqd 1	34.1	0.0	0.0
+1.40D+1.60H	1	4.13	20.50	-2.61	2.61	12.32	0.36	34.15	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.14	20.50	-2.64	2.64	12.29	0.37	34.16	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.15	20.50	-2.67	2.67	12.26	0.37	34.18	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.16	20.50	-2.70	2.70	12.23	0.38	34.19	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.18	20.50	-2.73	2.73	12.20	0.38	34.20	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.19	20.50	-2.77	2.77	12.17	0.39	34.22	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.20	20.50	-2.80	2.80	12.14	0.39	34.23	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.21	20.50	-2.83	2.83	12.10	0.40	34.24	Vu < PhiVc/2	Not Reqd 1	34.2	0.0	0.0
+1.40D+1.60H	1	4.22	20.50	-2.86	2.86	12.07	0.40	34.26	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	1	4.23	20.50	-2.89	2.89	12.04	0.41	34.27	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.25	20.50	-2.92	2.92	12.01	0.42	34.29	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.26	20.50	-2.95	2.95	11.97	0.42	34.30	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.27	20.50	-2.98	2.98	11.94	0.43	34.31	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.28	20.50	-3.02	3.02	11.90	0.43	34.33	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.29	20.50	-3.05	3.05	11.87	0.44	34.34	Vu < PhiVc/2	Not Reqd 1	34.3	0.0	0.0
+1.40D+1.60H	1	4.30	20.50	-3.08	3.08	11.83	0.44	34.36	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.31	20.50	-3.11	3.11	11.80	0.45	34.37	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.33	20.50	-3.14	3.14	11.76	0.46	34.39	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.34	20.50	-3.17	3.17	11.72	0.46	34.40	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.35	20.50	-3.20	3.20	11.69	0.47	34.41	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.36	20.50	-3.23	3.23	11.65	0.47	34.43	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.37	20.50	-3.27	3.27	11.61	0.48	34.45	Vu < PhiVc/2	Not Reqd 1	34.4	0.0	0.0
+1.40D+1.60H	1	4.38	20.50	-3.30	3.30	11.58	0.49	34.46	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.40	20.50	-3.33	3.33	11.54	0.49	34.48	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.41	20.50	-3.36	3.36	11.50	0.50	34.49	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.42	20.50	-3.39	3.39	11.46	0.51	34.51	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.43	20.50	-3.42	3.42	11.42	0.51	34.52	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.44	20.50	-3.45	3.45	11.38	0.52	34.54	Vu < PhiVc/2	Not Reqd 1	34.5	0.0	0.0
+1.40D+1.60H	1	4.45	20.50	-3.48	3.48	11.34	0.52	34.56	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.46	20.50	-3.52	3.52	11.30	0.53	34.57	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.48	20.50	-3.55	3.55	11.26	0.54	34.59	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.49	20.50	-3.58	3.58	11.22	0.54	34.60	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.50	20.50	-3.61	3.61	11.18	0.55	34.62	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.51	20.50	-3.64	3.64	11.13	0.56	34.64	Vu < PhiVc/2	Not Reqd 1	34.6	0.0	0.0
+1.40D+1.60H	1	4.52	20.50	-3.67	3.67	11.09	0.57	34.66	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.53	20.50	-3.70	3.70	11.05	0.57	34.67	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.54	20.50	-3.73	3.73	11.01	0.58	34.69	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.56	20.50	-3.77	3.77	10.96	0.59	34.71	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.57	20.50	-3.80	3.80	10.92	0.59	34.73	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.58	20.50	-3.83	3.83	10.88	0.60	34.74	Vu < PhiVc/2	Not Reqd 1	34.7	0.0	0.0
+1.40D+1.60H	1	4.59	20.50	-3.86	3.86	10.83	0.61	34.76	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	4.60	20.50	-3.89	3.89	10.79	0.62	34.78	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	4.61	20.50	-3.92	3.92	10.74	0.62	34.80	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	4.63	20.50	-3.95	3.95	10.70	0.63	34.82	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	4.64	20.50	-3.98	3.98	10.65	0.64	34.84	Vu < PhiVc/2	Not Reqd 1	34.8	0.0	0.0
+1.40D+1.60H	1	4.65	20.50	-4.02	4.02	10.61	0.65	34.86	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	4.66	20.50	-4.05	4.05	10.56	0.65	34.88	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	4.67	20.50	-4.08	4.08	10.51	0.66	34.90	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	4.68	20.50	-4.11	4.11	10.46	0.67	34.92	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	4.69	20.50	-4.14	4.14	10.42	0.68	34.94	Vu < PhiVc/2	Not Reqd 1	34.9	0.0	0.0
+1.40D+1.60H	1	4.71	20.50	-4.17	4.17	10.37	0.69	34.96	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	4.72	20.50	-4.20	4.20	10.32	0.70	34.98	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	4.73	20.50	-4.23	4.23	10.27	0.70	35.00	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	4.74	20.50	-4.27	4.27	10.22	0.71	35.02	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	4.75	20.50	-4.30	4.30	10.17	0.72	35.04	Vu < PhiVc/2	Not Reqd 1	35.0	0.0	0.0
+1.40D+1.60H	1	4.76	20.50	-4.33	4.33	10.12	0.73	35.06	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	4.78	20.50	-4.36	4.36	10.07	0.74	35.09	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	4.79	20.50	-4.39	4.39	10.02	0.75	35.11	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	4.80	20.50	-4.42	4.42	9.97	0.76	35.13	Vu < PhiVc/2	Not Reqd 1	35.1	0.0	0.0
+1.40D+1.60H	1	4.81	20.50	-4.45	4.45	9.92	0.77	35.15	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	4.82	20.50	-4.48	4.48	9.87	0.78	35.18	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	4.83	20.50	-4.52	4.52	9.82	0.79	35.20	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	4.84	20.50	-4.55	4.55	9.77	0.80	35.22	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	4.86	20.50	-4.58	4.58	9.71	0.81	35.25	Vu < PhiVc/2	Not Reqd 1	35.2	0.0	0.0
+1.40D+1.60H	1	4.87	20.50	-4.61	4.61	9.66	0.82	35.27	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	4.88	20.50	-4.64	4.64	9.61	0.83	35.30	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	4.89	20.50	-4.67	4.67	9.55	0.84	35.32	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	4.90	20.50	-4.70	4.70	9.50	0.85	35.35	Vu < PhiVc/2	Not Reqd 1	35.3	0.0	0.0
+1.40D+1.60H	1	4.91	20.50	-4.73	4.73	9.44	0.86	35.38	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	4.93	20.50	-4.77	4.77	9.39	0.87	35.40	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	4.94	20.50	-4.80	4.80	9.33	0.88	35.43	Vu < PhiVc/2	Not Reqd 1	35.4	0.0	0.0
+1.40D+1.60H	1	4.95	20.50	-4.83	4.83	9.28	0.89	35.46	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	4.96	20.50	-4.86	4.86	9.22	0.90	35.48	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	4.97	20.50	-4.89	4.89	9.17	0.91	35.51	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	4.98	20.50	-4.92	4.92	9.11	0.92	35.54	Vu < PhiVc/2	Not Reqd 1	35.5	0.0	0.0
+1.40D+1.60H	1	4.99	20.50	-4.95	4.95	9.05	0.93	35.57	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	5.01	20.50	-4.98	4.98	9.00	0.95	35.60	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	5.02	20.50	-5.02	5.02	8.94	0.96	35.63	Vu < PhiVc/2	Not Reqd 1	35.6	0.0	0.0
+1.40D+1.60H	1	5.03	20.50	-5.05	5.05	8.88	0.97	35.66	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.04	20.50	-5.08	5.08	8.82	0.98	35.69	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.05	20.50	-5.11	5.11	8.76	1.00	35.72	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.06	20.50	-5.14	5.14	8.70	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.08	20.50	-5.17	5.17	8.64	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.09	20.50	-5.20	5.20	8.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.10	20.50	-5.23	5.23	8.52	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.11	20.50	-5.27	5.27	8.46	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.12	20.50	-5.30	5.30	8.40	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.13	20.50	-5.33	5.33	8.34	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.14	20.50	-5.36	5.36	8.28	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.16	20.50	-5.39	5.39	8.22	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.17	20.50	-5.42	5.42	8.16	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.18	20.50	-5.45	5.45	8.09	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.19	20.50	-5.48	5.48	8.03	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.20	20.50	-5.52	5.52	7.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.21	20.50	-5.55	5.55	7.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.23	20.50	-5.58	5.58	7.84	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.24	20.50	-5.61	5.61	7.77	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.25	20.50	-5.64	5.64	7.71	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.26	20.50	-5.67	5.67	7.64	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.27	20.50	-5.70	5.70	7.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.28	20.50	-5.73	5.73	7.51	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.29	20.50	-5.77	5.77	7.45	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.31	20.50	-5.80	5.80	7.38	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.32	20.50	-5.83	5.83	7.31	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.33	20.50	-5.86	5.86	7.24	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.34	20.50	-5.89	5.89	7.18	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.35	20.50	-5.92	5.92	7.11	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.36	20.50	-5.95	5.95	7.04	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.38	20.50	-5.98	5.98	6.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.39	20.50	-6.02	6.02	6.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.40	20.50	-6.05	6.05	6.83	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.41	20.50	-6.08	6.08	6.76	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.42	20.50	-6.11	6.11	6.69	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.43	20.50	-6.14	6.14	6.62	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.44	20.50	-6.17	6.17	6.55	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.46	20.50	-6.20	6.20	6.48	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.47	20.50	-6.23	6.23	6.41	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	5.48	20.50	-6.27	6.27	6.34	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.49	20.50	-6.30	6.30	6.26	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.50	20.50	-6.33	6.33	6.19	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.51	20.50	-6.36	6.36	6.12	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.53	20.50	-6.39	6.39	6.04	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.54	20.50	-6.42	6.42	5.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.55	20.50	-6.45	6.45	5.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.56	20.50	-6.48	6.48	5.82	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.57	20.50	-6.52	6.52	5.75	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.58	20.50	-6.55	6.55	5.67	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.59	20.50	-6.58	6.58	5.59	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.61	20.50	-6.61	6.61	5.52	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.62	20.50	-6.64	6.64	5.44	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.63	20.50	-6.67	6.67	5.37	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.64	20.50	-6.70	6.70	5.29	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.65	20.50	-6.73	6.73	5.21	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.66	20.50	-6.77	6.77	5.13	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.68	20.50	-6.80	6.80	5.05	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.69	20.50	-6.83	6.83	4.98	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.70	20.50	-6.86	6.86	4.90	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.71	20.50	-6.89	6.89	4.82	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.72	20.50	-6.92	6.92	4.74	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.73	20.50	-6.95	6.95	4.66	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.74	20.50	-6.98	6.98	4.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.76	20.50	-7.02	7.02	4.50	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.77	20.50	-7.05	7.05	4.42	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.78	20.50	-7.08	7.08	4.33	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.79	20.50	-7.11	7.11	4.25	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.80	20.50	-7.14	7.14	4.17	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.81	20.50	-7.17	7.17	4.09	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.83	20.50	-7.20	7.20	4.00	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.84	20.50	-7.23	7.23	3.92	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.85	20.50	-7.27	7.27	3.84	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.86	20.50	-7.30	7.30	3.75	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.87	20.50	-7.33	7.33	3.67	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.88	20.50	-7.36	7.36	3.58	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.89	20.50	-7.39	7.39	3.50	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.91	20.50	-7.42	7.42	3.41	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.92	20.50	-7.45	7.45	3.33	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.93	20.50	-7.48	7.48	3.24	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.94	20.50	-7.52	7.52	3.16	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.95	20.50	-7.55	7.55	3.07	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.96	20.50	-7.58	7.58	2.98	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.98	20.50	-7.61	7.61	2.89	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	5.99	20.50	-7.64	7.64	2.81	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.00	20.50	-7.67	7.67	2.72	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.01	20.50	-7.70	7.70	2.63	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.02	20.50	-7.73	7.73	2.54	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.03	20.50	-7.77	7.77	2.45	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.04	20.50	-7.80	7.80	2.36	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.06	20.50	-7.83	7.83	2.27	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.07	20.50	-7.86	7.86	2.18	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.08	20.50	-7.89	7.89	2.09	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.09	20.50	-7.92	7.92	2.00	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-F-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.40D+1.60H	1	6.10	20.50	-7.95	7.95	1.91	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.11	20.50	-7.98	7.98	1.82	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.13	20.50	-8.02	8.02	1.72	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.14	20.50	-8.05	8.05	1.63	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.15	20.50	-8.08	8.08	1.54	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.16	20.50	-8.11	8.11	1.44	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.17	20.50	-8.14	8.14	1.35	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.18	20.50	-8.17	8.17	1.26	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.19	20.50	-8.20	8.20	1.16	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.21	20.50	-8.23	8.23	1.07	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.22	20.50	-8.27	8.27	0.97	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.23	20.50	-8.30	8.30	0.88	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.24	20.50	-8.33	8.33	0.78	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.25	20.50	-8.36	8.36	0.68	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.26	20.50	-8.39	8.39	0.59	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.28	20.50	-8.42	8.42	0.49	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.29	20.50	-8.45	8.45	0.39	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.30	20.50	-8.48	8.48	0.30	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.31	20.50	-8.52	8.52	0.20	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.32	20.50	-8.55	8.55	0.10	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0
+1.40D+1.60H	1	6.33	20.50	-8.58	8.58	0.00	1.00	35.73	Vu < PhiVc/2	Not Reqd 1	35.7	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.333	13.58	121.42	0.11
+1.40D+1.60H					
Span # 1	1	6.333	13.58	121.42	0.11
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+0.50L+1.60S+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	6.333	11.64	121.42	0.10
+0.90D+W+0.90H					
Span # 1	1	6.333	8.73	121.42	0.07
+0.90D+E+0.90H					
Span # 1	1	6.333	8.73	121.42	0.07

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D Only	1	0.0011	3.167		0.0000	0.000

Concrete Beam

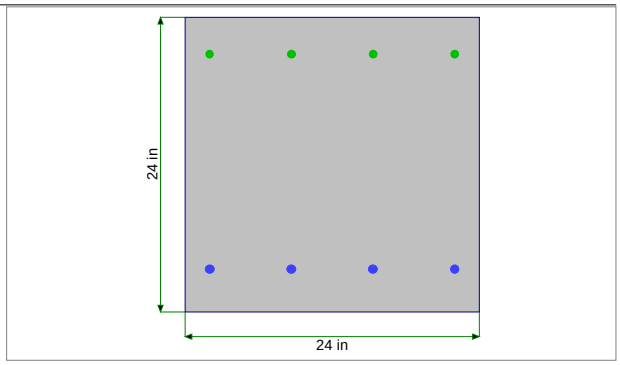
Description : GB-G-62R

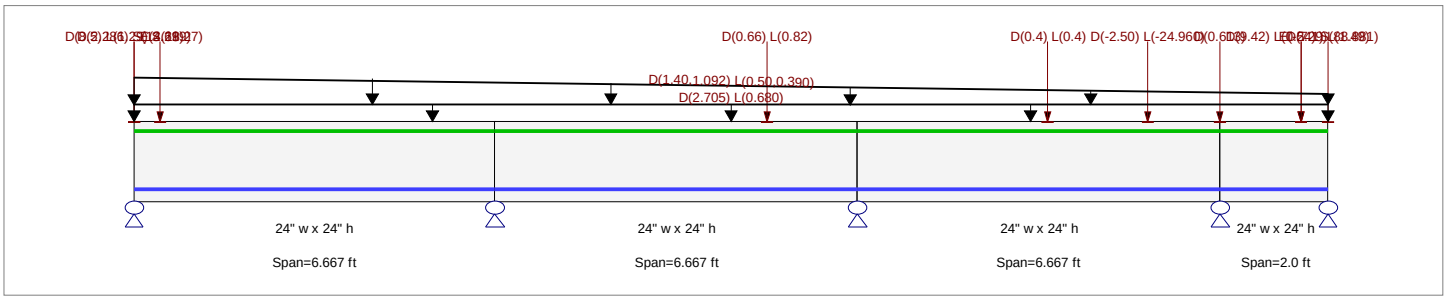
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#5 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 6.667 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 6.667 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 2.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 2.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 2.705, L = 0.680
Uniform Load on ALL spans : D = 2.705, L = 0.680 k/ft
Varying Uniform Load : D(S,E) = 1.40->1.092, Lf(S,E) = 0.50->0.390 k/ft, Extent = 0.0 -->> 22.0 ft
Point Load : D = -2.50, L = -24.960 k, Starting at : 18.667 ft and placed every 0.0 ft thereafter
Load for Span Number 1
Point Load : D = 2.286, S = 14.619 k @ 0.0 ft, (C5)
Point Load : D = 8.50, L = 1.290, S = 18.270 k @ 0.0 ft, (GB-C-62R)
Point Load : E = 2.290 k @ 0.50 ft, (MOT)
Load for Span Number 2
Point Load : D = 0.660, L = 0.820 k @ 5.0 ft, (WALL N)
Load for Span Number 3
Point Load : D = 0.40, L = 0.40 k @ 3.50 ft, (WALL M)
Load for Span Number 4
Point Load : D = 7.10, L = 1.490 k @ 2.0 ft, (GB-A-62R)
Point Load : D = 9.420, L = 0.540, S = 88.881 k @ 1.50 ft, (C7)
Point Load : E = -2.290 k @ 1.50 ft, (MOT)
Point Load : D = 0.6130 k @ 0.0 ft, (GB-F-62R)

Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.342** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	55.514	k-ft
Mn * Phi : Allowable	162.542	k-ft
Location of maximum on span	1.495	ft
Span # where maximum occurs	Span # 4	

Maximum Deflection

Max Downward Transient Deflection	0.000	in	Ratio =	0 <360
Max Upward Transient Deflection	0.000	in	Ratio =	0 <360
Max Downward Total Deflection	0.002	in	Ratio =	49778 >=24
Max Upward Total Deflection	0.000	in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	55.874	44.562	35.324	51.222	76.377
Overall MINimum	-0.002	0.010	-0.041	0.038	-0.185
+D+H	23.044	34.843	29.964	25.305	12.395
+D+L+H, LL Comb Run (***L)	23.042	34.853	29.923	26.635	15.277
+D+L+H, LL Comb Run (**L*)	22.984	35.205	30.203	1.142	18.768
+D+L+H, LL Comb Run (**LL)	22.982	35.216	30.162	2.472	21.650
+D+L+H, LL Comb Run (*L**)	22.646	39.145	35.085	24.012	13.017
+D+L+H, LL Comb Run (*L*L)	22.644	39.155	35.044	25.342	15.898
+D+L+H, LL Comb Run (*LL*)	22.585	39.507	35.324	-0.150	19.390
+D+L+H, LL Comb Run (*LLL)	22.584	39.518	35.283	1.180	22.272
+D+L+H, LL Comb Run (L***)	27.710	39.887	29.101	25.688	12.211
+D+L+H, LL Comb Run (L**L)	27.708	39.898	29.060	27.019	15.092
+D+L+H, LL Comb Run (L*L*)	27.650	40.249	29.340	1.526	18.584
+D+L+H, LL Comb Run (L*LL)	27.648	40.260	29.299	2.856	21.466
+D+L+H, LL Comb Run (LL**)	27.312	44.189	34.222	24.396	12.832
+D+L+H, LL Comb Run (LL*L)	27.310	44.200	34.181	25.726	15.714
+D+L+H, LL Comb Run (LLL*)	27.251	44.552	34.461	0.233	19.205
+D+L+H, LL Comb Run (LLLL)	27.250	44.562	34.420	1.564	22.087
+D+Lr+H, LL Comb Run (***L)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (**L*)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (**LL)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (*L**)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (*L*L)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (*LL*)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (*LLL)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (L***)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (L**L)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (L*L*)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (L*LL)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (LL**)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (LL*L)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (LLL*)	23.044	34.843	29.964	25.305	12.395
+D+Lr+H, LL Comb Run (LLLL)	23.044	34.843	29.964	25.305	12.395
+D+S+H	55.874	35.171	28.677	51.222	76.377
+D+0.750Lr+0.750L+H, LL Comb Run (	23.043	34.851	29.934	26.302	14.556
+D+0.750Lr+0.750L+H, LL Comb Run (	22.999	35.115	30.143	7.183	17.175
+D+0.750Lr+0.750L+H, LL Comb Run (	22.997	35.123	30.113	8.181	19.337
+D+0.750Lr+0.750L+H, LL Comb Run (	22.745	38.070	33.805	24.335	12.861
+D+0.750Lr+0.750L+H, LL Comb Run (	22.744	38.077	33.774	25.333	15.023
+D+0.750Lr+0.750L+H, LL Comb Run (	22.700	38.341	33.984	6.213	17.641
+D+0.750Lr+0.750L+H, LL Comb Run (	22.699	38.349	33.953	7.211	19.803
+D+0.750Lr+0.750L+H, LL Comb Run (	26.543	38.626	29.317	25.592	12.257
+D+0.750Lr+0.750L+H, LL Comb Run (	26.542	38.634	29.286	26.590	14.418
+D+0.750Lr+0.750L+H, LL Comb Run (	26.498	38.898	29.496	7.471	17.037
+D+0.750Lr+0.750L+H, LL Comb Run (	26.497	38.906	29.465	8.468	19.198
+D+0.750Lr+0.750L+H, LL Comb Run (	26.245	41.853	33.158	24.623	12.723
+D+0.750Lr+0.750L+H, LL Comb Run (	26.244	41.860	33.127	25.621	14.884
+D+0.750Lr+0.750L+H, LL Comb Run (	26.200	42.124	33.337	6.501	17.503
+D+0.750Lr+0.750L+H, LL Comb Run (	26.198	42.132	33.306	7.499	19.664
+D+0.750L+0.750S+H, LL Comb Run (*	47.665	35.097	28.968	45.740	62.543

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+H, LL Comb Run (*	47.621	35.361	29.178	26.621	65.162
+D+0.750L+0.750S+H, LL Comb Run (*	47.620	35.369	29.147	27.618	67.323
+D+0.750L+0.750S+H, LL Comb Run (*	47.368	38.316	32.840	43.773	60.848
+D+0.750L+0.750S+H, LL Comb Run (*	47.367	38.323	32.809	44.771	63.009
+D+0.750L+0.750S+H, LL Comb Run (*	47.323	38.587	33.019	25.651	65.628
+D+0.750L+0.750S+H, LL Comb Run (*	47.321	38.595	32.988	26.649	67.789
+D+0.750L+0.750S+H, LL Comb Run (L	51.166	38.872	28.351	45.030	60.243
+D+0.750L+0.750S+H, LL Comb Run (L	51.165	38.880	28.321	46.028	62.405
+D+0.750L+0.750S+H, LL Comb Run (L	51.121	39.144	28.530	26.908	65.023
+D+0.750L+0.750S+H, LL Comb Run (L	51.120	39.152	28.500	27.906	67.185
+D+0.750L+0.750S+H, LL Comb Run (L	50.868	42.099	32.192	44.061	60.709
+D+0.750L+0.750S+H, LL Comb Run (L	50.866	42.106	32.161	45.058	62.871
+D+0.750L+0.750S+H, LL Comb Run (L	50.822	42.370	32.371	25.939	65.489
+D+0.750L+0.750S+H, LL Comb Run (L	50.821	42.378	32.340	26.937	67.651
+D+0.60W+H	23.044	34.843	29.964	25.305	12.395
+D+0.70E+H	24.496	35.031	29.934	24.861	11.230
+D+0.750Lr+0.750L+0.450W+H, LL Com	23.043	34.851	29.934	26.302	14.556
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.999	35.115	30.143	7.183	17.175
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.997	35.123	30.113	8.181	19.337
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.745	38.070	33.805	24.335	12.861
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.744	38.077	33.774	25.333	15.023
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.700	38.341	33.984	6.213	17.641
+D+0.750Lr+0.750L+0.450W+H, LL Com	22.699	38.349	33.953	7.211	19.803
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.543	38.626	29.317	25.592	12.257
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.542	38.634	29.286	26.590	14.418
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.498	38.898	29.496	7.471	17.037
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.497	38.906	29.465	8.468	19.198
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.245	41.853	33.158	24.623	12.723
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.244	41.860	33.127	25.621	14.884
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.200	42.124	33.337	6.501	17.503
+D+0.750Lr+0.750L+0.450W+H, LL Com	26.198	42.132	33.306	7.499	19.664
+D+0.750L+0.750S+0.450W+H, LL Comb	47.665	35.097	28.968	45.740	62.543
+D+0.750L+0.750S+0.450W+H, LL Comb	47.621	35.361	29.178	26.621	65.162
+D+0.750L+0.750S+0.450W+H, LL Comb	47.620	35.369	29.147	27.618	67.323
+D+0.750L+0.750S+0.450W+H, LL Comb	47.368	38.316	32.840	43.773	60.848
+D+0.750L+0.750S+0.450W+H, LL Comb	47.367	38.323	32.809	44.771	63.009
+D+0.750L+0.750S+0.450W+H, LL Comb	47.323	38.587	33.019	25.651	65.628
+D+0.750L+0.750S+0.450W+H, LL Comb	47.321	38.595	32.988	26.649	67.789
+D+0.750L+0.750S+0.450W+H, LL Comb	51.166	38.872	28.351	45.030	60.243
+D+0.750L+0.750S+0.450W+H, LL Comb	51.165	38.880	28.321	46.028	62.405
+D+0.750L+0.750S+0.450W+H, LL Comb	51.121	39.144	28.530	26.908	65.023
+D+0.750L+0.750S+0.450W+H, LL Comb	51.120	39.152	28.500	27.906	67.185
+D+0.750L+0.750S+0.450W+H, LL Comb	50.868	42.099	32.192	44.061	60.709
+D+0.750L+0.750S+0.450W+H, LL Comb	50.866	42.106	32.161	45.058	62.871
+D+0.750L+0.750S+0.450W+H, LL Comb	50.822	42.370	32.371	25.939	65.489
+D+0.750L+0.750S+0.450W+H, LL Comb	50.821	42.378	32.340	26.937	67.651
+D+0.750L+0.750S+0.5250E+H, LL Com	48.754	35.237	28.946	45.407	61.669
+D+0.750L+0.750S+0.5250E+H, LL Com	48.710	35.501	29.155	26.288	64.288
+D+0.750L+0.750S+0.5250E+H, LL Com	48.709	35.509	29.125	27.285	66.449
+D+0.750L+0.750S+0.5250E+H, LL Com	48.457	38.456	32.817	43.440	59.974
+D+0.750L+0.750S+0.5250E+H, LL Com	48.455	38.464	32.786	44.438	62.135
+D+0.750L+0.750S+0.5250E+H, LL Com	48.411	38.728	32.996	25.318	64.754
+D+0.750L+0.750S+0.5250E+H, LL Com	48.410	38.736	32.965	26.316	66.915
+D+0.750L+0.750S+0.5250E+H, LL Com	52.255	39.013	28.329	44.697	59.369
+D+0.750L+0.750S+0.5250E+H, LL Com	52.254	39.021	28.298	45.695	61.531
+D+0.750L+0.750S+0.5250E+H, LL Com	52.210	39.285	28.508	26.576	64.149
+D+0.750L+0.750S+0.5250E+H, LL Com	52.208	39.292	28.477	27.573	66.311
+D+0.750L+0.750S+0.5250E+H, LL Com	51.956	42.239	32.170	43.728	59.835
+D+0.750L+0.750S+0.5250E+H, LL Com	51.955	42.247	32.139	44.726	61.997

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
+D+0.750L+0.750S+0.5250E+H, LL Com	51.911	42.511	32.348	25.606	64.615
+D+0.750L+0.750S+0.5250E+H, LL Com	51.910	42.519	32.318	26.604	66.777
+0.60D+0.60W+0.60H	13.826	20.906	17.979	15.183	7.437
+0.60D+0.70E+0.60H	15.278	21.093	17.949	14.739	6.272
D Only	23.044	34.843	29.964	25.305	12.395
Lr Only, LL Comb Run (***L)					
Lr Only, LL Comb Run (**L*)					
Lr Only, LL Comb Run (**LL)					
Lr Only, LL Comb Run (*L**)					
Lr Only, LL Comb Run (*L*L)					
Lr Only, LL Comb Run (*LL*)					
Lr Only, LL Comb Run (*LLL)					
Lr Only, LL Comb Run (L***)					
Lr Only, LL Comb Run (L**L)					
Lr Only, LL Comb Run (L*L*)					
Lr Only, LL Comb Run (L*LL)					
Lr Only, LL Comb Run (LL**)					
Lr Only, LL Comb Run (LL*L)					
Lr Only, LL Comb Run (LLL*)					
Lr Only, LL Comb Run (LLLL)					
L Only, LL Comb Run (***L)	-0.002	0.010	-0.041	1.330	2.882
L Only, LL Comb Run (**L*)	-0.060	0.362	0.239	-24.162	6.373
L Only, LL Comb Run (**LL)	-0.062	0.372	0.198	-22.832	9.255
L Only, LL Comb Run (*L**)	-0.398	4.302	5.121	-1.293	0.621
L Only, LL Comb Run (*L*L)	-0.400	4.312	5.080	0.038	3.503
L Only, LL Comb Run (*LL*)	-0.459	4.664	5.360	-25.455	6.995
L Only, LL Comb Run (*LLL)	-0.460	4.675	5.319	-24.125	9.877
L Only, LL Comb Run (L***)	4.666	5.044	-0.863	0.384	-0.185
L Only, LL Comb Run (L**L)	4.664	5.054	-0.905	1.714	2.697
L Only, LL Comb Run (L*L*)	4.606	5.406	-0.625	-23.779	6.189
L Only, LL Comb Run (L*LL)	4.604	5.417	-0.666	-22.448	9.071
L Only, LL Comb Run (LL**)	4.268	9.346	4.258	-0.909	0.437
L Only, LL Comb Run (LL*L)	4.266	9.356	4.216	0.421	3.319
L Only, LL Comb Run (LLL*)	4.207	9.708	4.496	-25.071	6.810
L Only, LL Comb Run (LLLL)	4.206	9.719	4.455	-23.741	9.692
S Only	32.830	0.328	-1.287	25.917	63.982
W Only					
E Only	2.074	0.268	-0.043	-0.634	-1.665
H Only					

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	82.51	82.51	0.00	1.00	47.64	PhiVc < Vu	34.873	92.7	3.9	3.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.07	20.50	19.58	19.58	1.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.14	20.50	19.06	19.06	2.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.21	20.50	18.53	18.53	4.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.28	20.50	18.00	18.00	5.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.35	20.50	17.48	17.48	6.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.42	20.50	16.95	16.95	7.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.49	20.50	16.42	16.42	8.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.56	20.50	15.90	15.90	10.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.63	20.50	15.37	15.37	11.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.70	20.50	14.85	14.85	12.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.77	20.50	14.32	14.32	13.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.84	20.50	13.80	13.80	14.29	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.91	20.50	13.27	13.27	15.24	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	0.98	20.50	12.74	12.74	16.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	1	1.05	20.50	12.22	12.22	17.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.12	20.50	11.69	11.69	17.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.19	20.50	11.17	11.17	18.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.26	20.50	10.64	10.64	19.43	0.94	47.43	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.33	20.50	10.12	10.12	20.16	0.86	47.17	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.40	20.50	9.59	9.59	20.85	0.79	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.47	20.50	9.07	9.07	21.51	0.72	46.72	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.54	20.50	8.55	8.55	22.13	0.66	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.61	20.50	8.02	8.02	22.71	0.60	46.33	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.68	20.50	7.50	7.50	23.25	0.55	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.75	20.50	6.97	6.97	23.76	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.82	20.50	6.45	6.45	24.23	0.45	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.89	20.50	5.93	5.93	24.67	0.41	45.70	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.97	20.50	5.40	5.40	25.06	0.37	45.56	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.04	20.50	4.88	4.88	25.42	0.33	45.42	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.11	20.50	4.35	4.35	25.75	0.29	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.18	20.50	3.83	3.83	26.04	0.25	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.25	20.50	3.31	3.31	26.29	0.22	45.05	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.32	20.50	2.79	2.79	26.50	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	20.50	2.26	2.26	26.68	0.14	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.46	20.50	1.74	1.74	26.82	0.11	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.53	20.50	1.22	1.22	26.92	0.08	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.60	20.50	0.69	0.69	26.99	0.04	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.67	20.50	-0.99	0.99	17.27	0.10	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.74	20.50	-1.38	1.38	17.19	0.14	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.81	20.50	-1.77	1.77	17.08	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.88	20.50	-2.16	2.16	16.94	0.22	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.95	20.50	-2.68	2.68	24.53	0.19	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.02	20.50	-3.20	3.20	24.32	0.23	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.09	20.50	-3.73	3.73	24.08	0.26	45.21	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.16	20.50	-4.25	4.25	23.80	0.30	45.35	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.23	20.50	-4.77	4.77	23.48	0.35	45.49	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.30	20.50	-5.29	5.29	23.13	0.39	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.37	20.50	-5.81	5.81	22.74	0.44	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.44	20.50	-6.33	6.33	22.32	0.48	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.51	20.50	-6.85	6.85	21.85	0.54	46.11	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.58	20.50	-7.38	7.38	21.35	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.65	20.50	-7.90	7.90	20.82	0.65	46.48	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.72	20.50	-8.42	8.42	20.24	0.71	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.79	20.50	-8.94	8.94	19.64	0.78	46.91	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.86	20.50	-9.46	9.46	18.99	0.85	47.15	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	3.93	20.50	-9.98	9.98	18.31	0.93	47.41	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.00	20.50	-10.50	10.50	17.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.07	20.50	-11.02	11.02	16.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.14	20.50	-11.54	11.54	16.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.21	20.50	-12.06	12.06	15.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.28	20.50	-12.58	12.58	14.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.35	20.50	-13.10	13.10	13.45	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.42	20.50	-13.62	13.62	12.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.49	20.50	-14.14	14.14	11.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.56	20.50	-14.65	14.65	10.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.63	20.50	-15.17	15.17	9.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.70	20.50	-15.69	15.69	8.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.77	20.50	-16.21	16.21	7.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	1	4.84	20.50	-16.73	16.73	6.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.91	20.50	-17.25	17.25	4.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	4.98	20.50	-17.77	17.77	3.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.05	20.50	-18.29	18.29	2.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.12	20.50	-18.80	18.80	1.14	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.19	21.00	-19.32	19.32	0.20	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.26	21.00	-19.84	19.84	1.58	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.33	21.00	-20.36	20.36	2.99	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.40	21.00	-20.87	20.87	4.43	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.47	21.00	-21.39	21.39	5.92	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.54	21.00	-21.91	21.91	7.44	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.61	21.00	-22.43	22.43	8.99	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.68	21.00	-22.94	22.94	10.58	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.75	21.00	-23.46	23.46	12.21	1.00	47.75	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	5.82	21.00	-23.98	23.98	13.88	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	5.90	21.00	-24.50	24.50	15.58	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	5.97	21.00	-25.01	25.01	17.31	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.04	21.00	-25.53	25.53	19.09	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.11	21.00	-26.05	26.05	20.90	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.18	21.00	-26.56	26.56	22.74	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.25	21.00	-27.08	27.08	24.63	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.32	21.00	-27.59	27.59	26.54	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.39	21.00	-28.11	28.11	28.50	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.46	21.00	-28.63	28.63	30.49	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.53	21.00	-29.14	29.14	32.52	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	1	6.60	21.00	-29.66	29.66	34.58	1.00	47.75	PhiVc/2 < Vu <=	Min 11.5.6	67.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	6.67	21.00	27.35	27.35	36.68	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	6.74	21.00	26.84	26.84	34.78	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	6.81	21.00	26.32	26.32	32.91	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	6.88	21.00	25.81	25.81	31.08	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	6.95	21.00	25.29	25.29	29.29	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	7.02	21.00	24.78	24.78	27.53	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+1.60L+0.50S+1.60H,	2	7.09	21.00	24.26	24.26	25.81	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.16	21.00	23.75	23.75	24.13	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.23	21.00	23.23	23.23	22.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.30	21.00	22.72	22.72	20.87	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.37	21.00	22.20	22.20	19.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.44	21.00	21.69	21.69	17.75	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.51	21.00	21.18	21.18	16.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.58	21.00	20.66	20.66	14.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.65	21.00	20.15	20.15	13.35	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.72	21.00	19.64	19.64	11.95	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.79	21.00	19.12	19.12	10.59	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.86	21.00	18.61	18.61	9.27	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.93	21.00	18.09	18.09	7.98	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.00	21.00	17.58	17.58	6.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.07	21.00	17.07	17.07	5.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.14	21.00	16.56	16.56	4.33	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.21	21.00	16.04	16.04	3.19	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.28	21.00	15.53	15.53	2.08	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.35	21.00	15.02	15.02	1.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.42	20.50	14.51	14.51	0.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.49	20.50	13.99	13.99	1.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.56	20.50	13.48	13.48	1.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	2	8.63	20.50	12.97	12.97	2.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.70	20.50	12.46	12.46	3.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.77	20.50	11.94	11.94	4.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.84	20.50	11.43	11.43	5.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.91	20.50	10.92	10.92	6.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.98	20.50	10.41	10.41	7.02	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.05	20.50	9.90	9.90	7.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.12	20.50	9.39	9.39	8.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.19	20.50	8.88	8.88	9.05	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.26	20.50	8.37	8.37	9.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.33	20.50	7.85	7.85	10.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.40	20.50	7.34	7.34	10.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.47	20.50	6.83	6.83	11.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.54	20.50	6.32	6.32	11.72	0.92	47.38	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.61	20.50	5.81	5.81	12.15	0.82	47.04	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.68	20.50	5.30	5.30	12.54	0.72	46.73	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.75	20.50	4.79	4.79	12.89	0.64	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.83	20.50	4.28	4.28	13.21	0.55	46.17	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.90	20.50	3.77	3.77	13.49	0.48	45.92	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	9.97	20.50	3.26	3.26	13.74	0.41	45.68	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.04	20.50	2.75	2.75	13.95	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.11	20.50	2.26	2.26	7.69	0.50	46.00	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.18	20.50	1.88	1.88	7.83	0.41	45.69	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.25	20.50	1.49	1.49	7.95	0.32	45.40	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	10.32	20.50	1.11	1.11	8.04	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.39	20.50	-1.49	1.49	14.56	0.17	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.46	20.50	-2.00	2.00	14.44	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.53	20.50	-2.51	2.51	14.28	0.30	45.33	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.60	20.50	-3.01	3.01	14.09	0.37	45.55	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.67	20.50	-3.52	3.52	13.86	0.43	45.77	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.74	20.50	-4.03	4.03	13.59	0.51	46.01	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.81	20.50	-4.54	4.54	13.29	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.88	20.50	-5.05	5.05	12.96	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	10.95	20.50	-5.56	5.56	12.58	0.75	46.83	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.02	20.50	-6.06	6.06	12.18	0.85	47.15	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.09	20.50	-6.57	6.57	11.73	0.96	47.50	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.16	20.50	-7.08	7.08	11.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.23	20.50	-7.59	7.59	10.74	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.30	20.50	-8.09	8.09	10.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.37	20.50	-8.60	8.60	9.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.44	20.50	-9.11	9.11	8.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.51	20.50	-9.62	9.62	8.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.58	20.50	-10.12	10.12	7.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.65	20.50	-10.63	10.63	6.90	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.72	20.50	-13.24	13.24	6.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.79	20.50	-13.75	13.75	5.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.86	20.50	-14.25	14.25	4.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	11.93	20.50	-14.76	14.76	3.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.00	20.50	-15.27	15.27	2.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.07	20.50	-15.77	15.77	0.94	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.14	21.00	-16.28	16.28	0.19	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.21	21.00	-16.78	16.78	1.35	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.28	21.00	-17.29	17.29	2.54	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.35	21.00	-17.79	17.79	3.77	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	2	12.42	21.00	-18.30	18.30	5.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.49	21.00	-18.81	18.81	6.34	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.56	21.00	-19.31	19.31	7.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.63	21.00	-19.82	19.82	9.05	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.70	21.00	-20.32	20.32	10.46	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.77	21.00	-20.83	20.83	11.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.84	21.00	-21.33	21.33	13.38	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.91	21.00	-21.84	21.84	14.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	12.98	21.00	-22.34	22.34	16.45	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	13.05	21.00	-22.84	22.84	18.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	13.12	21.00	-23.35	23.35	19.65	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	13.19	21.00	-23.85	23.85	21.31	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	13.26	21.00	-24.36	24.36	23.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.33	21.00	21.25	21.25	22.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.40	21.00	20.81	20.81	21.34	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.47	21.00	20.37	20.37	19.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.54	21.00	19.93	19.93	18.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.61	21.00	19.49	19.49	17.10	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.68	21.00	19.04	19.04	15.75	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.76	21.00	18.60	18.60	14.43	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.83	21.00	18.16	18.16	13.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.90	21.00	17.72	17.72	11.88	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.97	21.00	17.28	17.28	10.65	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.04	21.00	16.84	16.84	9.45	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.11	21.00	16.40	16.40	8.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.18	21.00	15.96	15.96	7.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.25	21.00	15.52	15.52	6.05	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.32	21.00	15.07	15.07	4.97	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.39	21.00	14.63	14.63	3.93	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.46	21.00	14.19	14.19	2.92	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.53	21.00	13.75	13.75	1.94	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.60	21.00	13.31	13.31	0.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.67	21.00	12.87	12.87	0.07	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	14.74	20.50	12.43	12.43	0.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.81	20.50	11.99	11.99	1.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.88	20.50	11.55	11.55	2.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	14.95	20.50	11.11	11.11	3.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.02	20.50	10.67	10.67	4.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.09	20.50	10.23	10.23	4.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.16	20.50	9.79	9.79	5.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.23	20.50	9.35	9.35	6.17	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.30	20.50	8.92	8.92	6.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.37	20.50	8.48	8.48	7.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.44	20.50	8.04	8.04	8.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	15.51	20.50	7.60	7.60	8.55	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.58	20.50	7.21	7.21	5.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.65	20.50	6.83	6.83	5.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.72	20.50	6.46	6.46	5.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.79	20.50	6.08	6.08	6.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.86	20.50	5.71	5.71	6.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.93	20.50	5.33	5.33	7.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.00	20.50	4.95	4.95	7.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.07	20.50	4.58	4.58	7.91	0.99	47.61	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.14	20.50	4.20	4.20	8.22	0.87	47.23	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50Lr+1.60L+1.60H,	3	16.21	20.50	3.83	3.83	8.50	0.77	46.88	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.28	20.50	3.45	3.45	8.75	0.67	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.35	20.50	-3.35	3.35	7.69	0.74	46.80	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.42	20.50	-3.85	3.85	7.44	0.88	47.26	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.49	20.50	-4.35	4.35	7.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.56	20.50	-4.85	4.85	6.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.63	20.50	-5.34	5.34	6.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.70	20.50	-5.84	5.84	6.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.77	20.50	-6.34	6.34	5.65	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.84	20.50	-7.96	7.96	5.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.91	20.50	-8.46	8.46	4.60	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	16.98	20.50	-8.95	8.95	3.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.05	20.50	-9.45	9.45	3.35	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.12	20.50	-9.95	9.95	2.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.19	20.50	-10.44	10.44	1.95	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.26	20.50	-10.94	10.94	1.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.33	20.50	-11.44	11.44	0.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.40	21.00	-11.94	11.94	0.41	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.47	21.00	-12.43	12.43	1.26	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.54	21.00	-12.93	12.93	2.15	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.61	21.00	-13.43	13.43	3.08	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.69	21.00	-13.92	13.92	4.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.76	21.00	-14.42	14.42	5.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.83	21.00	-14.91	14.91	6.06	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.90	21.00	-15.41	15.41	7.12	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	17.97	21.00	-15.91	15.91	8.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.04	21.00	-16.40	16.40	9.36	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.11	21.00	-16.90	16.90	10.52	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.18	21.00	-17.39	17.39	11.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.25	21.00	-17.89	17.89	12.97	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.32	21.00	-18.38	18.38	14.24	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.39	21.00	-18.88	18.88	15.55	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.46	21.00	-19.37	19.37	16.89	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.53	21.00	-19.87	19.87	18.27	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	18.60	21.00	-20.36	20.36	19.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.67	21.00	24.03	24.03	18.17	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.74	21.00	23.54	23.54	16.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.81	21.00	23.04	23.04	14.87	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.88	21.00	22.55	22.55	13.27	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	18.95	21.00	22.05	22.05	11.70	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.02	21.00	21.56	21.56	10.17	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.09	21.00	21.07	21.07	8.68	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.16	21.00	20.57	20.57	7.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.23	21.00	20.08	20.08	5.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.30	21.00	19.59	19.59	4.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.37	21.00	19.09	19.09	3.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.44	21.00	18.60	18.60	1.72	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.51	21.00	18.11	18.11	0.43	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.58	20.50	17.61	17.61	0.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.65	20.50	17.12	17.12	2.04	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.72	20.50	16.63	16.63	3.23	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	19.79	20.50	16.13	16.13	4.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	19.86	21.00	-16.49	16.49	14.85	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	19.93	21.00	-16.93	16.93	16.02	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	20.00	21.00	56.07	56.07	23.61	1.00	48.72	PhiVc < Vu	7.343	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.02	21.00	55.94	55.94	22.43	1.00	48.72	PhiVc < Vu	7.221	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.04	21.00	55.82	55.82	21.25	1.00	48.72	PhiVc < Vu	7.098	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.06	21.00	55.70	55.70	20.08	1.00	48.72	PhiVc < Vu	6.975	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.09	21.00	55.58	55.58	18.91	1.00	48.72	PhiVc < Vu	6.853	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.11	21.00	55.45	55.45	17.74	1.00	48.72	PhiVc < Vu	6.730	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.13	21.00	55.33	55.33	16.57	1.00	48.72	PhiVc < Vu	6.608	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.15	21.00	55.21	55.21	15.41	1.00	48.72	PhiVc < Vu	6.485	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.17	21.00	55.09	55.09	14.25	1.00	48.72	PhiVc < Vu	6.362	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.19	21.00	54.96	54.96	13.09	1.00	48.72	PhiVc < Vu	6.240	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.21	21.00	54.84	54.84	11.93	1.00	48.72	PhiVc < Vu	6.117	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.23	21.00	54.72	54.72	10.78	1.00	48.72	PhiVc < Vu	5.995	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.25	21.00	54.60	54.60	9.63	1.00	48.72	PhiVc < Vu	5.872	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.27	21.00	54.47	54.47	8.48	1.00	48.72	PhiVc < Vu	5.750	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.30	21.00	54.35	54.35	7.34	1.00	48.72	PhiVc < Vu	5.627	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.32	21.00	54.23	54.23	6.19	1.00	48.72	PhiVc < Vu	5.505	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.34	21.00	54.10	54.10	5.05	1.00	48.72	PhiVc < Vu	5.382	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.36	21.00	53.98	53.98	3.91	1.00	48.72	PhiVc < Vu	5.259	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.38	21.00	53.86	53.86	2.78	1.00	48.72	PhiVc < Vu	5.137	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.40	21.00	53.74	53.74	1.65	1.00	48.72	PhiVc < Vu	5.015	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.42	21.00	53.61	53.61	0.52	1.00	48.72	PhiVc < Vu	4.892	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.44	20.50	53.49	53.49	0.61	1.00	47.64	PhiVc < Vu	5.851	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.46	20.50	53.37	53.37	1.74	1.00	47.64	PhiVc < Vu	5.729	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.49	20.50	53.25	53.25	2.86	1.00	47.64	PhiVc < Vu	5.606	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.51	20.50	53.13	53.13	3.98	1.00	47.64	PhiVc < Vu	5.484	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.53	20.50	53.00	53.00	5.10	1.00	47.64	PhiVc < Vu	5.361	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.55	20.50	52.88	52.88	6.21	1.00	47.64	PhiVc < Vu	5.239	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.57	20.50	52.76	52.76	7.32	1.00	47.64	PhiVc < Vu	5.116	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.59	20.50	52.64	52.64	8.43	1.00	47.64	PhiVc < Vu	4.994	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.61	20.50	52.51	52.51	9.54	1.00	47.64	PhiVc < Vu	4.872	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.63	20.50	52.39	52.39	10.64	1.00	47.64	PhiVc < Vu	4.749	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.65	20.50	52.27	52.27	11.74	1.00	47.64	PhiVc < Vu	4.627	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.67	20.50	52.15	52.15	12.84	1.00	47.64	PhiVc < Vu	4.504	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.70	20.50	52.02	52.02	13.94	1.00	47.64	PhiVc < Vu	4.382	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.72	20.50	51.90	51.90	15.03	1.00	47.64	PhiVc < Vu	4.260	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.74	20.50	51.78	51.78	16.12	1.00	47.64	PhiVc < Vu	4.137	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.76	20.50	51.66	51.66	17.21	1.00	47.64	PhiVc < Vu	4.015	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.78	20.50	51.53	51.53	18.30	1.00	47.64	PhiVc < Vu	3.893	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.80	20.50	51.41	51.41	19.38	1.00	47.64	PhiVc < Vu	3.770	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.82	20.50	51.29	51.29	20.46	1.00	47.64	PhiVc < Vu	3.648	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.84	20.50	51.17	51.17	21.54	1.00	47.64	PhiVc < Vu	3.526	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.86	20.50	51.04	51.04	22.62	1.00	47.64	PhiVc < Vu	3.403	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.89	20.50	50.92	50.92	23.69	1.00	47.64	PhiVc < Vu	3.281	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.91	20.50	50.80	50.80	24.76	1.00	47.64	PhiVc < Vu	3.159	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.93	20.50	50.68	50.68	25.83	1.00	47.64	PhiVc < Vu	3.036	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.95	20.50	50.56	50.56	26.90	1.00	47.64	PhiVc < Vu	2.914	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.97	20.50	50.43	50.43	27.96	1.00	47.64	PhiVc < Vu	2.792	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	20.99	20.50	50.31	50.31	29.02	1.00	47.64	PhiVc < Vu	2.670	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.01	20.50	50.19	50.19	30.08	1.00	47.64	PhiVc < Vu	2.547	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.03	20.50	50.07	50.07	31.13	1.00	47.64	PhiVc < Vu	2.425	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.05	20.50	49.94	49.94	32.19	1.00	47.64	PhiVc < Vu	2.303	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.07	20.50	49.82	49.82	33.24	1.00	47.64	PhiVc < Vu	2.181	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.10	20.50	49.70	49.70	34.28	1.00	47.64	PhiVc < Vu	2.058	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.12	20.50	49.58	49.58	35.33	1.00	47.64	PhiVc < Vu	1.936	67.0	7.7	7.0

Concrete Beam

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	21.14	20.50	49.46	49.46	36.37	1.00	47.64	PhiVc < Vu	1.814	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.16	20.50	49.33	49.33	37.41	1.00	47.64	PhiVc < Vu	1.692	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.18	20.50	49.21	49.21	38.45	1.00	47.64	PhiVc < Vu	1.570	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.20	20.50	49.09	49.09	39.48	1.00	47.64	PhiVc < Vu	1.448	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.22	20.50	48.98	48.98	40.21	1.00	47.64	PhiVc < Vu	1.334	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.24	20.50	48.86	48.86	41.24	1.00	47.64	PhiVc < Vu	1.223	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.26	20.50	48.75	48.75	42.27	1.00	47.64	PhiVc < Vu	1.112	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.29	20.50	48.64	48.64	43.29	1.00	47.64	PhiVc < Vu	1.002	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.31	20.50	48.53	48.53	44.32	1.00	47.64	PhiVc < Vu	0.8907	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.33	20.50	48.42	48.42	45.34	1.00	47.64	PhiVc < Vu	0.7799	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.35	20.50	48.31	48.31	46.36	1.00	47.64	PhiVc < Vu	0.6690	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.37	20.50	48.20	48.20	47.37	1.00	47.64	PhiVc < Vu	0.5582	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.39	20.50	48.09	48.09	48.38	1.00	47.64	PhiVc < Vu	0.4474	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.41	20.50	47.98	47.98	49.40	1.00	47.64	PhiVc < Vu	0.3367	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.43	20.50	47.87	47.87	50.40	1.00	47.64	PhiVc < Vu	0.2259	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.45	20.50	47.76	47.76	51.41	1.00	47.64	PhiVc < Vu	0.1151	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.47	20.50	47.65	47.65	52.42	1.00	47.64	PhiVc < Vu	0.004337	67.0	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.50	20.50	47.54	47.54	53.42	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	21.52	20.50	-110.12	110.12	54.01	1.00	47.64	PhiVc < Vu	62.474	182.9	2.2	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.54	20.50	-110.24	110.24	51.69	1.00	47.64	PhiVc < Vu	62.596	182.9	2.2	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.56	20.50	-110.36	110.36	49.36	1.00	47.64	PhiVc < Vu	62.718	182.9	2.2	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.58	20.50	-110.48	110.48	47.04	1.00	47.64	PhiVc < Vu	62.840	182.9	2.2	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.60	20.50	-110.60	110.60	44.71	1.00	47.64	PhiVc < Vu	62.962	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.62	20.50	-110.73	110.73	42.38	1.00	47.64	PhiVc < Vu	63.084	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.64	20.50	-110.85	110.85	40.05	1.00	47.64	PhiVc < Vu	63.206	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.66	20.50	-110.97	110.97	37.72	1.00	47.64	PhiVc < Vu	63.328	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.69	20.50	-111.09	111.09	35.38	1.00	47.64	PhiVc < Vu	63.450	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.71	20.50	-111.21	111.21	33.04	1.00	47.64	PhiVc < Vu	63.572	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.73	20.50	-111.34	111.34	30.70	1.00	47.64	PhiVc < Vu	63.694	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.75	20.50	-111.46	111.46	28.35	1.00	47.64	PhiVc < Vu	63.816	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.77	20.50	-111.58	111.58	26.00	1.00	47.64	PhiVc < Vu	63.938	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.79	20.50	-111.70	111.70	23.65	1.00	47.64	PhiVc < Vu	64.060	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.81	20.50	-111.82	111.82	21.30	1.00	47.64	PhiVc < Vu	64.182	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.83	20.50	-111.95	111.95	18.94	1.00	47.64	PhiVc < Vu	64.304	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.85	20.50	-112.07	112.07	16.59	1.00	47.64	PhiVc < Vu	64.426	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.87	20.50	-112.19	112.19	14.23	1.00	47.64	PhiVc < Vu	64.548	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.90	20.50	-112.31	112.31	11.86	1.00	47.64	PhiVc < Vu	64.670	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.92	20.50	-112.43	112.43	9.50	1.00	47.64	PhiVc < Vu	64.791	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.94	20.50	-112.55	112.55	7.13	1.00	47.64	PhiVc < Vu	64.913	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.96	20.50	-112.68	112.68	4.76	1.00	47.64	PhiVc < Vu	65.035	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	21.98	20.50	-112.80	112.80	2.38	1.00	47.64	PhiVc < Vu	65.157	182.9	2.1	1.0
+1.20D+0.50L+1.60S+1.60H,	4	22.00	20.50	-122.18	122.18	0.00	1.00	47.64	PhiVc < Vu	74.542	182.9	1.8	1.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.667	-34.58	127.58	0.27
Span # 2	2	6.667	-36.68	170.00	0.22
Span # 3	3	6.667	-24.73	170.00	0.15
Span # 4	4	2.000	55.51	162.54	0.34
+1.40D+1.60H					
Span # 1	1	6.667	-28.56	127.58	0.22
Span # 2	2	6.667	-30.38	170.00	0.18
Span # 3	3	6.667	-22.82	170.00	0.13
Span # 4	4	2.000	-17.23	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L)					

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-24.50	127.58	0.19
Span # 2	2	6.667	-26.05	170.00	0.15
Span # 3	3	6.667	-19.49	170.00	0.11
Span # 4	4	2.000	-15.04	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.667	-25.12	127.58	0.20
Span # 2	2	6.667	-26.68	170.00	0.16
Span # 3	3	6.667	-18.73	170.00	0.11
Span # 4	4	2.000	8.28	162.54	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.667	-25.13	127.58	0.20
Span # 2	2	6.667	-26.70	170.00	0.16
Span # 3	3	6.667	-18.93	170.00	0.11
Span # 4	4	2.000	9.23	162.54	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.667	-28.68	127.58	0.22
Span # 2	2	6.667	-30.28	170.00	0.18
Span # 3	3	6.667	-24.73	170.00	0.15
Span # 4	4	2.000	-12.78	170.00	0.08
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.667	-28.70	127.58	0.22
Span # 2	2	6.667	-30.30	170.00	0.18
Span # 3	3	6.667	-24.66	170.00	0.15
Span # 4	4	2.000	-13.05	170.00	0.08
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.667	-29.32	127.58	0.23
Span # 2	2	6.667	-30.93	170.00	0.18
Span # 3	3	6.667	-22.15	170.00	0.13
Span # 4	4	2.000	9.36	162.54	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.667	-29.34	127.58	0.23
Span # 2	2	6.667	-30.95	170.00	0.18
Span # 3	3	6.667	-22.08	170.00	0.13
Span # 4	4	2.000	10.24	162.54	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***)					
Span # 1	1	6.667	-29.54	127.58	0.23
Span # 2	2	6.667	-31.59	170.00	0.19
Span # 3	3	6.667	-18.02	170.00	0.11
Span # 4	4	2.000	-15.36	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.667	-29.56	127.58	0.23
Span # 2	2	6.667	-31.61	170.00	0.19
Span # 3	3	6.667	-17.95	170.00	0.11
Span # 4	4	2.000	-15.63	170.00	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.667	-30.18	127.58	0.24
Span # 2	2	6.667	-32.23	170.00	0.19
Span # 3	3	6.667	-18.89	170.00	0.11
Span # 4	4	2.000	7.99	162.54	0.05
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.667	-30.20	127.58	0.24
Span # 2	2	6.667	-32.25	170.00	0.19
Span # 3	3	6.667	-19.10	170.00	0.11
Span # 4	4	2.000	8.96	162.54	0.06
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.667	-33.74	127.58	0.26
Span # 2	2	6.667	-35.83	170.00	0.21
Span # 3	3	6.667	-23.19	170.00	0.14
Span # 4	4	2.000	-13.37	170.00	0.08
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.667	-33.76	127.58	0.26
Span # 2	2	6.667	-35.85	170.00	0.21
Span # 3	3	6.667	-23.12	170.00	0.14
Span # 4	4	2.000	-13.64	170.00	0.08
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.667	-34.38	127.58	0.27
Span # 2	2	6.667	-36.48	170.00	0.21
Span # 3	3	6.667	-20.62	170.00	0.12
Span # 4	4	2.000	9.02	162.54	0.06

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.667	-34.40	127.58	0.27
Span # 2	2	6.667	-36.50	170.00	0.21
Span # 3	3	6.667	-20.55	170.00	0.12
Span # 4	4	2.000	9.93	162.54	0.06
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L)					
Span # 1	1	6.667	-24.68	127.58	0.19
Span # 2	2	6.667	-26.24	170.00	0.15
Span # 3	3	6.667	-18.77	170.00	0.11
Span # 4	4	2.000	19.32	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.667	-25.30	127.58	0.20
Span # 2	2	6.667	-26.86	170.00	0.16
Span # 3	3	6.667	-20.73	170.00	0.12
Span # 4	4	2.000	23.57	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.667	-25.31	127.58	0.20
Span # 2	2	6.667	-26.88	170.00	0.16
Span # 3	3	6.667	-20.93	170.00	0.12
Span # 4	4	2.000	24.47	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.667	-28.86	127.58	0.23
Span # 2	2	6.667	-30.47	170.00	0.18
Span # 3	3	6.667	-24.01	170.00	0.14
Span # 4	4	2.000	18.92	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.667	-28.88	127.58	0.23
Span # 2	2	6.667	-30.48	170.00	0.18
Span # 3	3	6.667	-23.94	170.00	0.14
Span # 4	4	2.000	19.82	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.667	-29.50	127.58	0.23
Span # 2	2	6.667	-31.11	170.00	0.18
Span # 3	3	6.667	-21.44	170.00	0.13
Span # 4	4	2.000	24.07	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.667	-29.52	127.58	0.23
Span # 2	2	6.667	-31.13	170.00	0.18
Span # 3	3	6.667	-21.37	170.00	0.13
Span # 4	4	2.000	24.98	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***)					
Span # 1	1	6.667	-29.72	127.58	0.23
Span # 2	2	6.667	-31.77	170.00	0.19
Span # 3	3	6.667	-17.31	170.00	0.10
Span # 4	4	2.000	18.27	162.54	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.667	-29.74	127.58	0.23
Span # 2	2	6.667	-31.79	170.00	0.19
Span # 3	3	6.667	-17.24	170.00	0.10
Span # 4	4	2.000	19.17	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.667	-30.36	127.58	0.24
Span # 2	2	6.667	-32.41	170.00	0.19
Span # 3	3	6.667	-20.89	170.00	0.12
Span # 4	4	2.000	23.42	162.54	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.667	-30.38	127.58	0.24
Span # 2	2	6.667	-32.43	170.00	0.19
Span # 3	3	6.667	-21.10	170.00	0.12
Span # 4	4	2.000	24.33	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.667	-33.92	127.58	0.27
Span # 2	2	6.667	-36.02	170.00	0.21
Span # 3	3	6.667	-22.48	170.00	0.13
Span # 4	4	2.000	18.77	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.667	-33.94	127.58	0.27
Span # 2	2	6.667	-36.03	170.00	0.21
Span # 3	3	6.667	-22.41	170.00	0.13

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	2.000	19.68	162.54	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.667	-34.56	127.58	0.27
Span # 2	2	6.667	-36.66	170.00	0.22
Span # 3	3	6.667	-20.34	170.00	0.12
Span # 4	4	2.000	23.92	162.54	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.667	-34.58	127.58	0.27
Span # 2	2	6.667	-36.68	170.00	0.22
Span # 3	3	6.667	-20.54	170.00	0.12
Span # 4	4	2.000	24.83	162.54	0.15
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.54	170.00	0.11
Span # 4	4	2.000	-14.85	170.00	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.667	-24.68	127.58	0.19
Span # 2	2	6.667	-26.24	170.00	0.15
Span # 3	3	6.667	-18.75	170.00	0.11
Span # 4	4	2.000	-8.39	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.667	-24.68	127.58	0.19
Span # 2	2	6.667	-26.24	170.00	0.15
Span # 3	3	6.667	-18.73	170.00	0.11
Span # 4	4	2.000	-8.48	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.667	-25.79	127.58	0.20
Span # 2	2	6.667	-27.36	170.00	0.16
Span # 3	3	6.667	-21.17	170.00	0.12
Span # 4	4	2.000	-14.14	170.00	0.08
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.667	-25.80	127.58	0.20
Span # 2	2	6.667	-27.37	170.00	0.16
Span # 3	3	6.667	-21.15	170.00	0.12
Span # 4	4	2.000	-14.23	170.00	0.08
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.667	-25.99	127.58	0.20
Span # 2	2	6.667	-27.57	170.00	0.16
Span # 3	3	6.667	-20.37	170.00	0.12
Span # 4	4	2.000	-7.77	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.667	-26.00	127.58	0.20
Span # 2	2	6.667	-27.57	170.00	0.16
Span # 3	3	6.667	-20.35	170.00	0.12
Span # 4	4	2.000	-7.86	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***)					
Span # 1	1	6.667	-26.06	127.58	0.20
Span # 2	2	6.667	-27.77	170.00	0.16
Span # 3	3	6.667	-19.08	170.00	0.11
Span # 4	4	2.000	-14.95	170.00	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.667	-26.07	127.58	0.20
Span # 2	2	6.667	-27.78	170.00	0.16
Span # 3	3	6.667	-19.06	170.00	0.11
Span # 4	4	2.000	-15.04	170.00	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.667	-26.26	127.58	0.21
Span # 2	2	6.667	-27.97	170.00	0.16
Span # 3	3	6.667	-18.27	170.00	0.11
Span # 4	4	2.000	-8.58	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.667	-26.27	127.58	0.21
Span # 2	2	6.667	-27.98	170.00	0.16
Span # 3	3	6.667	-18.25	170.00	0.11
Span # 4	4	2.000	-8.66	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.667	-27.37	127.58	0.21
Span # 2	2	6.667	-29.10	170.00	0.17

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.667	-20.69	170.00	0.12
Span # 4	4	2.000	-14.33	170.00	0.08
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.667	-27.38	127.58	0.21
Span # 2	2	6.667	-29.10	170.00	0.17
Span # 3	3	6.667	-20.67	170.00	0.12
Span # 4	4	2.000	-14.41	170.00	0.08
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.667	-27.57	127.58	0.22
Span # 2	2	6.667	-29.30	170.00	0.17
Span # 3	3	6.667	-19.89	170.00	0.12
Span # 4	4	2.000	-7.95	170.00	0.05
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.667	-27.58	127.58	0.22
Span # 2	2	6.667	-29.31	170.00	0.17
Span # 3	3	6.667	-19.87	170.00	0.12
Span # 4	4	2.000	-8.04	170.00	0.05
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*L*)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.667	-24.48	127.58	0.19

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.56	170.00	0.12
Span # 4	4	2.000	-14.77	170.00	0.09
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (***L)					
Span # 1	1	6.667	-25.06	127.58	0.20
Span # 2	2	6.667	-26.63	170.00	0.16
Span # 3	3	6.667	-22.28	170.00	0.13
Span # 4	4	2.000	53.75	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**L*)					
Span # 1	1	6.667	-25.25	127.58	0.20
Span # 2	2	6.667	-26.82	170.00	0.16
Span # 3	3	6.667	-16.46	170.00	0.10
Span # 4	4	2.000	55.07	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (**LL)					
Span # 1	1	6.667	-25.26	127.58	0.20
Span # 2	2	6.667	-26.83	170.00	0.16
Span # 3	3	6.667	-16.53	170.00	0.10
Span # 4	4	2.000	55.36	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L**)					
Span # 1	1	6.667	-26.37	127.58	0.21
Span # 2	2	6.667	-27.95	170.00	0.16
Span # 3	3	6.667	-21.59	170.00	0.13
Span # 4	4	2.000	53.62	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*L*L)					
Span # 1	1	6.667	-26.37	127.58	0.21
Span # 2	2	6.667	-27.95	170.00	0.16
Span # 3	3	6.667	-21.68	170.00	0.13
Span # 4	4	2.000	53.90	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LL*)					
Span # 1	1	6.667	-26.57	127.58	0.21
Span # 2	2	6.667	-28.15	170.00	0.17
Span # 3	3	6.667	-18.08	170.00	0.11
Span # 4	4	2.000	55.23	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (*LLL)					
Span # 1	1	6.667	-26.57	127.58	0.21
Span # 2	2	6.667	-28.15	170.00	0.17
Span # 3	3	6.667	-18.06	170.00	0.11
Span # 4	4	2.000	55.51	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L***)					
Span # 1	1	6.667	-26.64	127.58	0.21
Span # 2	2	6.667	-28.35	170.00	0.17
Span # 3	3	6.667	-22.37	170.00	0.13
Span # 4	4	2.000	53.42	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L**L)					
Span # 1	1	6.667	-26.64	127.58	0.21
Span # 2	2	6.667	-28.36	170.00	0.17
Span # 3	3	6.667	-22.45	170.00	0.13
Span # 4	4	2.000	53.70	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*L*)					

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-26.84	127.58	0.21
Span # 2	2	6.667	-28.56	170.00	0.17
Span # 3	3	6.667	-16.62	170.00	0.10
Span # 4	4	2.000	55.03	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (L*LL)					
Span # 1	1	6.667	-26.84	127.58	0.21
Span # 2	2	6.667	-28.56	170.00	0.17
Span # 3	3	6.667	-16.71	170.00	0.10
Span # 4	4	2.000	55.31	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL**)					
Span # 1	1	6.667	-27.95	127.58	0.22
Span # 2	2	6.667	-29.68	170.00	0.17
Span # 3	3	6.667	-21.77	170.00	0.13
Span # 4	4	2.000	53.57	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LL*L)					
Span # 1	1	6.667	-27.96	127.58	0.22
Span # 2	2	6.667	-29.69	170.00	0.17
Span # 3	3	6.667	-21.86	170.00	0.13
Span # 4	4	2.000	53.86	162.54	0.33
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLL*)					
Span # 1	1	6.667	-28.15	127.58	0.22
Span # 2	2	6.667	-29.88	170.00	0.18
Span # 3	3	6.667	-17.60	170.00	0.10
Span # 4	4	2.000	55.18	162.54	0.34
+1.20D+0.50L+1.60S+1.60H, LL Comb Run (LLLL)					
Span # 1	1	6.667	-28.16	127.58	0.22
Span # 2	2	6.667	-29.89	170.00	0.18
Span # 3	3	6.667	-17.58	170.00	0.10
Span # 4	4	2.000	55.47	162.54	0.34
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	6.667	-25.05	127.58	0.20
Span # 2	2	6.667	-26.62	170.00	0.16
Span # 3	3	6.667	-22.19	170.00	0.13
Span # 4	4	2.000	53.46	162.54	0.33
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (***					
Span # 1	1	6.667	-24.48	127.58	0.19
Span # 2	2	6.667	-26.04	170.00	0.15
Span # 3	3	6.667	-19.54	170.00	0.11
Span # 4	4	2.000	-14.85	170.00	0.09
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-24.68	127.58	0.19
Span # 2	2	6.667	-26.24	170.00	0.15
Span # 3	3	6.667	-18.75	170.00	0.11
Span # 4	4	2.000	-8.39	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (**L					
Span # 1	1	6.667	-24.68	127.58	0.19
Span # 2	2	6.667	-26.24	170.00	0.15
Span # 3	3	6.667	-18.73	170.00	0.11
Span # 4	4	2.000	-8.48	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-25.79	127.58	0.20
Span # 2	2	6.667	-27.36	170.00	0.16
Span # 3	3	6.667	-21.17	170.00	0.12
Span # 4	4	2.000	-14.14	170.00	0.08
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*L*					
Span # 1	1	6.667	-25.80	127.58	0.20
Span # 2	2	6.667	-27.37	170.00	0.16
Span # 3	3	6.667	-21.15	170.00	0.12
Span # 4	4	2.000	-14.23	170.00	0.08
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-25.99	127.58	0.20
Span # 2	2	6.667	-27.57	170.00	0.16
Span # 3	3	6.667	-20.37	170.00	0.12
Span # 4	4	2.000	-7.77	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (*LL					
Span # 1	1	6.667	-26.00	127.58	0.20
Span # 2	2	6.667	-27.57	170.00	0.16
Span # 3	3	6.667	-20.35	170.00	0.12
Span # 4	4	2.000	-7.86	170.00	0.05

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-26.06	127.58	0.20
Span # 2	2	6.667	-27.77	170.00	0.16
Span # 3	3	6.667	-19.08	170.00	0.11
Span # 4	4	2.000	-14.95	170.00	0.09
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L**					
Span # 1	1	6.667	-26.07	127.58	0.20
Span # 2	2	6.667	-27.78	170.00	0.16
Span # 3	3	6.667	-19.06	170.00	0.11
Span # 4	4	2.000	-15.04	170.00	0.09
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-26.26	127.58	0.21
Span # 2	2	6.667	-27.97	170.00	0.16
Span # 3	3	6.667	-18.27	170.00	0.11
Span # 4	4	2.000	-8.58	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (L*L					
Span # 1	1	6.667	-26.27	127.58	0.21
Span # 2	2	6.667	-27.98	170.00	0.16
Span # 3	3	6.667	-18.25	170.00	0.11
Span # 4	4	2.000	-8.66	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-27.37	127.58	0.21
Span # 2	2	6.667	-29.10	170.00	0.17
Span # 3	3	6.667	-20.69	170.00	0.12
Span # 4	4	2.000	-14.33	170.00	0.08
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LL*					
Span # 1	1	6.667	-27.38	127.58	0.21
Span # 2	2	6.667	-29.10	170.00	0.17
Span # 3	3	6.667	-20.67	170.00	0.12
Span # 4	4	2.000	-14.41	170.00	0.08
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-27.57	127.58	0.22
Span # 2	2	6.667	-29.30	170.00	0.17
Span # 3	3	6.667	-19.89	170.00	0.12
Span # 4	4	2.000	-7.95	170.00	0.05
+1.20D+0.50Lr+0.50L+W+1.60H, LL Comb Run (LLL					
Span # 1	1	6.667	-27.58	127.58	0.22
Span # 2	2	6.667	-29.31	170.00	0.17
Span # 3	3	6.667	-19.87	170.00	0.12
Span # 4	4	2.000	-8.04	170.00	0.05
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (***L					
Span # 1	1	6.667	-24.66	127.58	0.19
Span # 2	2	6.667	-26.22	170.00	0.15
Span # 3	3	6.667	-18.82	170.00	0.11
Span # 4	4	2.000	18.70	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**L*					
Span # 1	1	6.667	-24.86	127.58	0.19
Span # 2	2	6.667	-26.42	170.00	0.16
Span # 3	3	6.667	-18.04	170.00	0.11
Span # 4	4	2.000	20.03	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (**LL					
Span # 1	1	6.667	-24.86	127.58	0.19
Span # 2	2	6.667	-26.43	170.00	0.16
Span # 3	3	6.667	-18.02	170.00	0.11
Span # 4	4	2.000	20.31	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L**					
Span # 1	1	6.667	-25.97	127.58	0.20
Span # 2	2	6.667	-27.55	170.00	0.16
Span # 3	3	6.667	-20.46	170.00	0.12
Span # 4	4	2.000	18.57	162.54	0.11
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.667	-25.98	127.58	0.20
Span # 2	2	6.667	-27.55	170.00	0.16
Span # 3	3	6.667	-20.44	170.00	0.12
Span # 4	4	2.000	18.86	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.667	-26.17	127.58	0.21
Span # 2	2	6.667	-27.75	170.00	0.16
Span # 3	3	6.667	-19.65	170.00	0.12

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	2.000	20.19	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.667	-26.18	127.58	0.21
Span # 2	2	6.667	-27.75	170.00	0.16
Span # 3	3	6.667	-19.63	170.00	0.12
Span # 4	4	2.000	20.47	162.54	0.13
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L***					
Span # 1	1	6.667	-26.24	127.58	0.21
Span # 2	2	6.667	-27.95	170.00	0.16
Span # 3	3	6.667	-18.36	170.00	0.11
Span # 4	4	2.000	18.37	162.54	0.11
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L**L					
Span # 1	1	6.667	-26.25	127.58	0.21
Span # 2	2	6.667	-27.96	170.00	0.16
Span # 3	3	6.667	-18.34	170.00	0.11
Span # 4	4	2.000	18.65	162.54	0.11
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.667	-26.44	127.58	0.21
Span # 2	2	6.667	-28.15	170.00	0.17
Span # 3	3	6.667	-17.56	170.00	0.10
Span # 4	4	2.000	19.98	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.667	-26.45	127.58	0.21
Span # 2	2	6.667	-28.16	170.00	0.17
Span # 3	3	6.667	-17.54	170.00	0.10
Span # 4	4	2.000	20.26	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL**					
Span # 1	1	6.667	-27.55	127.58	0.22
Span # 2	2	6.667	-29.28	170.00	0.17
Span # 3	3	6.667	-19.98	170.00	0.12
Span # 4	4	2.000	18.53	162.54	0.11
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.667	-27.56	127.58	0.22
Span # 2	2	6.667	-29.29	170.00	0.17
Span # 3	3	6.667	-19.96	170.00	0.12
Span # 4	4	2.000	18.81	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.667	-27.75	127.58	0.22
Span # 2	2	6.667	-29.48	170.00	0.17
Span # 3	3	6.667	-19.17	170.00	0.11
Span # 4	4	2.000	20.14	162.54	0.12
+1.20D+0.50L+0.50S+W+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.667	-27.76	127.58	0.22
Span # 2	2	6.667	-29.49	170.00	0.17
Span # 3	3	6.667	-19.15	170.00	0.11
Span # 4	4	2.000	20.42	162.54	0.13
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (***L					
Span # 1	1	6.667	-25.02	127.58	0.20
Span # 2	2	6.667	-26.59	170.00	0.16
Span # 3	3	6.667	-18.49	170.00	0.11
Span # 4	4	2.000	24.24	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**L*					
Span # 1	1	6.667	-25.21	127.58	0.20
Span # 2	2	6.667	-26.79	170.00	0.16
Span # 3	3	6.667	-17.70	170.00	0.10
Span # 4	4	2.000	25.57	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (**LL					
Span # 1	1	6.667	-25.22	127.58	0.20
Span # 2	2	6.667	-26.80	170.00	0.16
Span # 3	3	6.667	-17.68	170.00	0.10
Span # 4	4	2.000	25.85	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L**					
Span # 1	1	6.667	-26.33	127.58	0.21
Span # 2	2	6.667	-27.92	170.00	0.16
Span # 3	3	6.667	-20.13	170.00	0.12
Span # 4	4	2.000	24.12	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.667	-26.33	127.58	0.21
Span # 2	2	6.667	-27.92	170.00	0.16

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.667	-20.10	170.00	0.12
Span # 4	4	2.000	24.40	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.667	-26.52	127.58	0.21
Span # 2	2	6.667	-28.12	170.00	0.17
Span # 3	3	6.667	-19.32	170.00	0.11
Span # 4	4	2.000	25.73	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.667	-26.53	127.58	0.21
Span # 2	2	6.667	-28.12	170.00	0.17
Span # 3	3	6.667	-19.30	170.00	0.11
Span # 4	4	2.000	26.01	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L***					
Span # 1	1	6.667	-26.59	127.58	0.21
Span # 2	2	6.667	-28.32	170.00	0.17
Span # 3	3	6.667	-18.03	170.00	0.11
Span # 4	4	2.000	23.91	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L**L					
Span # 1	1	6.667	-26.60	127.58	0.21
Span # 2	2	6.667	-28.33	170.00	0.17
Span # 3	3	6.667	-18.01	170.00	0.11
Span # 4	4	2.000	24.20	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.667	-26.79	127.58	0.21
Span # 2	2	6.667	-28.52	170.00	0.17
Span # 3	3	6.667	-17.22	170.00	0.10
Span # 4	4	2.000	25.52	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.667	-26.80	127.58	0.21
Span # 2	2	6.667	-28.53	170.00	0.17
Span # 3	3	6.667	-17.20	170.00	0.10
Span # 4	4	2.000	25.81	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL**					
Span # 1	1	6.667	-27.91	127.58	0.22
Span # 2	2	6.667	-29.65	170.00	0.17
Span # 3	3	6.667	-19.65	170.00	0.12
Span # 4	4	2.000	24.07	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.667	-27.91	127.58	0.22
Span # 2	2	6.667	-29.66	170.00	0.17
Span # 3	3	6.667	-19.62	170.00	0.12
Span # 4	4	2.000	24.35	162.54	0.15
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.667	-28.11	127.58	0.22
Span # 2	2	6.667	-29.85	170.00	0.18
Span # 3	3	6.667	-18.84	170.00	0.11
Span # 4	4	2.000	25.68	162.54	0.16
+1.20D+0.50L+0.70S+E+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.667	-28.11	127.58	0.22
Span # 2	2	6.667	-29.86	170.00	0.18
Span # 3	3	6.667	-18.82	170.00	0.11
Span # 4	4	2.000	25.96	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (***L					
Span # 1	1	6.667	-24.45	127.58	0.19
Span # 2	2	6.667	-26.00	170.00	0.15
Span # 3	3	6.667	-18.58	170.00	0.11
Span # 4	4	2.000	25.90	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**L*					
Span # 1	1	6.667	-24.65	127.58	0.19
Span # 2	2	6.667	-26.20	170.00	0.15
Span # 3	3	6.667	-17.80	170.00	0.10
Span # 4	4	2.000	27.23	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (**LL					
Span # 1	1	6.667	-24.65	127.58	0.19
Span # 2	2	6.667	-26.20	170.00	0.15
Span # 3	3	6.667	-17.78	170.00	0.10
Span # 4	4	2.000	27.51	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L**					
Span # 1	1	6.667	-25.76	127.58	0.20

Description : GB-G-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.667	-27.32	170.00	0.16
Span # 3	3	6.667	-20.22	170.00	0.12
Span # 4	4	2.000	25.78	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*L*L					
Span # 1	1	6.667	-25.77	127.58	0.20
Span # 2	2	6.667	-27.33	170.00	0.16
Span # 3	3	6.667	-20.20	170.00	0.12
Span # 4	4	2.000	26.06	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LL*					
Span # 1	1	6.667	-25.96	127.58	0.20
Span # 2	2	6.667	-27.52	170.00	0.16
Span # 3	3	6.667	-19.42	170.00	0.11
Span # 4	4	2.000	27.39	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (*LLL					
Span # 1	1	6.667	-25.97	127.58	0.20
Span # 2	2	6.667	-27.53	170.00	0.16
Span # 3	3	6.667	-19.39	170.00	0.11
Span # 4	4	2.000	27.67	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L***					
Span # 1	1	6.667	-26.03	127.58	0.20
Span # 2	2	6.667	-27.73	170.00	0.16
Span # 3	3	6.667	-18.13	170.00	0.11
Span # 4	4	2.000	25.57	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L**L					
Span # 1	1	6.667	-26.04	127.58	0.20
Span # 2	2	6.667	-27.74	170.00	0.16
Span # 3	3	6.667	-18.10	170.00	0.11
Span # 4	4	2.000	25.86	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*L*					
Span # 1	1	6.667	-26.23	127.58	0.21
Span # 2	2	6.667	-27.93	170.00	0.16
Span # 3	3	6.667	-17.32	170.00	0.10
Span # 4	4	2.000	27.18	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (L*LL					
Span # 1	1	6.667	-26.24	127.58	0.21
Span # 2	2	6.667	-27.94	170.00	0.16
Span # 3	3	6.667	-17.30	170.00	0.10
Span # 4	4	2.000	27.47	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL**					
Span # 1	1	6.667	-27.34	127.58	0.21
Span # 2	2	6.667	-29.06	170.00	0.17
Span # 3	3	6.667	-19.74	170.00	0.12
Span # 4	4	2.000	25.73	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LL*L					
Span # 1	1	6.667	-27.35	127.58	0.21
Span # 2	2	6.667	-29.06	170.00	0.17
Span # 3	3	6.667	-19.72	170.00	0.12
Span # 4	4	2.000	26.01	162.54	0.16
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLL*					
Span # 1	1	6.667	-27.54	127.58	0.22
Span # 2	2	6.667	-29.26	170.00	0.17
Span # 3	3	6.667	-18.94	170.00	0.11
Span # 4	4	2.000	27.34	162.54	0.17
+1.20D+0.50L+0.70S-E+1.60H, LL Comb Run (LLLL					
Span # 1	1	6.667	-27.55	127.58	0.22
Span # 2	2	6.667	-29.26	170.00	0.17
Span # 3	3	6.667	-18.91	170.00	0.11
Span # 4	4	2.000	27.62	162.54	0.17
+0.90D+W+0.90H					
Span # 1	1	6.667	-18.36	127.58	0.14
Span # 2	2	6.667	-19.53	170.00	0.11
Span # 3	3	6.667	-14.67	170.00	0.09
Span # 4	4	2.000	-11.07	170.00	0.07
+0.90D+E+0.90H					
Span # 1	1	6.667	-18.64	127.58	0.15
Span # 2	2	6.667	-19.82	170.00	0.12
Span # 3	3	6.667	-14.62	170.00	0.09
Span # 4	4	2.000	-10.97	170.00	0.06
+0.90D-E+0.90H					

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-G-62R

Load Combination Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.667	-18.08	127.58	0.14
Span # 2	2	6.667	-19.23	170.00	0.11
Span # 3	3	6.667	-14.72	170.00	0.09
Span # 4	4	2.000	-11.18	170.00	0.07

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H, LL Comb Run (L***)	1	0.0016	2.983	+D+L+H, LL Comb Run (L***)	-0.0000	6.842
+D+L+H, LL Comb Run (*LLL)	2	0.0007	3.684	+D+L+H, LL Comb Run (L***)	-0.0001	0.526
+D+L+H, LL Comb Run (L***)	3	0.0006	3.334	L Only, LL Comb Run (*LLL)	-0.0004	4.737
S Only	4	0.0002	1.105		0.0000	4.737

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 24 JUL 2017, 11:36AM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

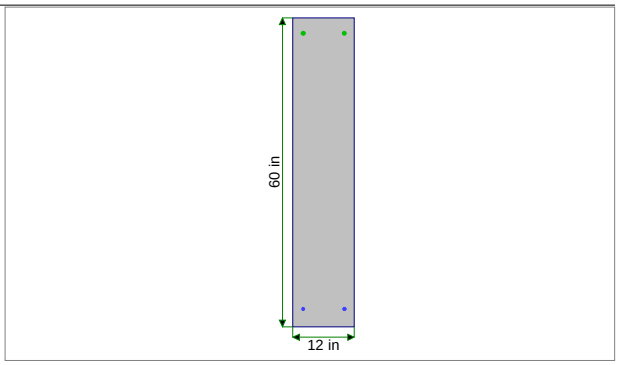
Description : GB-H-62R

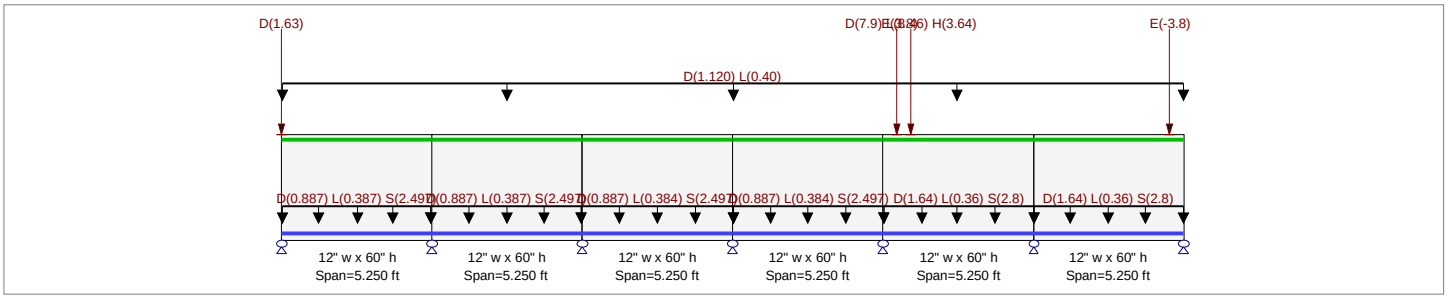
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 12.0 in, Height = 60.0 in

Span #1 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#6 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Span #2 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Span #3 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Span #4 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Span #5 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Span #6 Reinforcing....
2-#5 at 3.50 in from Bottom, from 0.0 to 5.250 ft in this span
2-#5 at 3.0 in from Top, from 0.0 to 5.250 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
D = 0.1120, L = 0.040
Uniform Load on ALL spans : D = 0.1120, L = 0.040 ksf, Tributary Width = 10.0 ft
Load for Span Number 1
Uniform Load : D = 0.8870, L = 0.3870, S = 2.497 k/ft, Tributary Width = 1.0 ft, (WALL L)
Point Load : D = 1.630 k @ 0.0 ft, (GB-B)
Load for Span Number 2
Uniform Load : D = 0.8870, L = 0.3870, S = 2.497 k/ft, Tributary Width = 1.0 ft, (WALL L)
Load for Span Number 3
Uniform Load : D = 0.8870, L = 0.3840, S = 2.497 k/ft, Tributary Width = 1.0 ft, (WALL L)
Load for Span Number 4
Uniform Load : D = 0.8870, L = 0.3840, S = 2.497 k/ft, Tributary Width = 1.0 ft, (WALL L)
Load for Span Number 5
Uniform Load : D = 1.640, L = 0.360, S = 2.80 k/ft, Tributary Width = 1.0 ft, (WALL K)
Point Load : E = 3.80 k @ 0.50 ft, (MOT)
Point Load : D = 7.90, L = 8.460, H = 3.640 k @ 1.0 ft, (GB-K-62R)
Load for Span Number 6

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 24 JUL 2017, 11:36AM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-H-62R

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 1.640, L = 0.360, S = 2.80 k/ft, Tributary Width = 1.0 ft, (WALL K)
Point Load : E = -3.80 k @ 4.750 ft, (MOT)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.183** : 1
Section used for this span **Typical Section**
Mu : Applied -29.891 k-ft
Mn * Phi : Allowable 163.527 k-ft
Location of maximum on span 0.000 ft
Span # where maximum occurs Span # 6

Maximum Deflection

Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Max Upward Total Deflection	0.000 in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Overall MAXimum	12.572	31.105	27.468	26.780	47.886	40.488	12.615
Overall MINimum	-0.001	0.003	-0.013	0.115	-0.032	0.008	-0.001
+D+H	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+L+H, LL Comb Run (*****L)	7.299	16.184	14.152	13.264	25.959	25.702	8.564
+D+L+H, LL Comb Run (****L*)	7.314	16.093	14.518	11.894	36.562	26.811	6.394
+D+L+H, LL Comb Run (****LL)	7.313	16.100	14.487	12.009	36.132	29.412	8.121
+D+L+H, LL Comb Run (***L**)	7.286	16.263	13.835	15.484	28.716	22.776	6.890
+D+L+H, LL Comb Run (***L*L)	7.285	16.271	13.804	15.599	28.286	25.377	8.618
+D+L+H, LL Comb Run (***LL*)	7.300	16.180	14.170	14.229	38.889	26.486	6.448
+D+L+H, LL Comb Run (***LLL)	7.299	16.187	14.139	14.344	38.459	29.087	8.175
+D+L+H, LL Comb Run (**L***)	7.355	15.852	16.510	15.484	26.040	23.188	6.821
+D+L+H, LL Comb Run (**L**L)	7.353	15.859	16.480	15.599	25.611	25.789	8.549
+D+L+H, LL Comb Run (**L*L*)	7.368	15.768	16.845	14.229	36.213	26.898	6.379
+D+L+H, LL Comb Run (**L*LL)	7.367	15.776	16.814	14.344	35.784	29.499	8.107
+D+L+H, LL Comb Run (**LL**)	7.340	15.939	16.162	17.819	28.368	22.863	6.876
+D+L+H, LL Comb Run (**LL*L)	7.339	15.946	16.131	17.934	27.938	25.465	8.603
+D+L+H, LL Comb Run (**LLL*)	7.354	15.855	16.497	16.564	38.541	26.573	6.433
+D+L+H, LL Comb Run (**LLLL)	7.353	15.863	16.466	16.679	38.111	29.174	8.161
+D+L+H, LL Comb Run (*L****)	7.098	18.425	16.551	12.792	26.484	23.077	6.840
+D+L+H, LL Comb Run (*L***L)	7.097	18.433	16.520	12.907	26.054	25.678	8.568
+D+L+H, LL Comb Run (*L**L*)	7.112	18.341	16.886	11.536	36.657	26.787	6.398
+D+L+H, LL Comb Run (*L**LL)	7.111	18.349	16.855	11.651	36.227	29.388	8.125
+D+L+H, LL Comb Run (*L*L**)	7.083	18.512	16.203	15.127	28.811	22.752	6.894
+D+L+H, LL Comb Run (*L*L*L)	7.082	18.520	16.172	15.242	28.382	25.354	8.622
+D+L+H, LL Comb Run (*L*LL*)	7.097	18.428	16.538	13.871	38.984	26.462	6.452
+D+L+H, LL Comb Run (*L*LLL)	7.096	18.436	16.507	13.986	38.555	29.063	8.179
+D+L+H, LL Comb Run (*LL***)	7.152	18.100	18.878	15.127	26.136	23.164	6.825
+D+L+H, LL Comb Run (*LL**L)	7.151	18.108	18.847	15.242	25.706	25.765	8.553
+D+L+H, LL Comb Run (*LL*L*)	7.166	18.017	19.213	13.871	36.309	26.874	6.383
+D+L+H, LL Comb Run (*LL*LL)	7.165	18.024	19.182	13.986	35.879	29.475	8.111
+D+L+H, LL Comb Run (*LLL**)	7.137	18.187	18.530	17.462	28.463	22.840	6.880
+D+L+H, LL Comb Run (*LLL*L)	7.136	18.195	18.499	17.577	28.033	25.441	8.607
+D+L+H, LL Comb Run (*LLLL*)	7.151	18.104	18.865	16.206	38.636	26.549	6.437
+D+L+H, LL Comb Run (*LLLLL)	7.150	18.111	18.834	16.321	38.206	29.151	8.165
+D+L+H, LL Comb Run (L*****)	9.090	18.870	13.738	13.268	26.357	23.109	6.835
+D+L+H, LL Comb Run (L****L)	9.088	18.877	13.708	13.383	25.927	25.710	8.562
+D+L+H, LL Comb Run (L***L*)	9.104	18.786	14.073	12.013	36.530	26.819	6.392
+D+L+H, LL Comb Run (L***LL)	9.102	18.794	14.042	12.128	36.100	29.420	8.120
+D+L+H, LL Comb Run (L**L**)	9.075	18.957	13.390	15.603	28.684	22.784	6.889
+D+L+H, LL Comb Run (L**L*L)	9.074	18.965	13.359	15.718	28.254	25.385	8.616
+D+L+H, LL Comb Run (L**LL*)	9.089	18.873	13.725	14.348	38.857	26.494	6.446
+D+L+H, LL Comb Run (L**LLL)	9.088	18.881	13.694	14.463	38.427	29.095	8.174
+D+L+H, LL Comb Run (L*L***)	9.144	18.545	16.065	15.603	26.009	23.196	6.820
+D+L+H, LL Comb Run (L*L**L)	9.142	18.553	16.035	15.718	25.579	25.797	8.548
+D+L+H, LL Comb Run (L*L*L*)	9.158	18.462	16.400	14.348	36.182	26.906	6.378
+D+L+H, LL Comb Run (L*L*LL)	9.156	18.469	16.369	14.463	35.752	29.507	8.106
+D+L+H, LL Comb Run (L*LL**)	9.129	18.632	15.717	17.938	28.336	22.871	6.874

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+L+H, LL Comb Run (L*LL*L)	9.128	18.640	15.686	18.053	27.906	25.473	8.602
+D+L+H, LL Comb Run (L*LLL*)	9.143	18.549	16.052	16.683	38.509	26.581	6.432
+D+L+H, LL Comb Run (L*LLLL)	9.142	18.556	16.021	16.798	38.079	29.182	8.160
+D+L+H, LL Comb Run (LL****)	8.887	21.118	16.106	12.911	26.452	23.085	6.839
+D+L+H, LL Comb Run (LL***L)	8.886	21.126	16.075	13.026	26.023	25.686	8.566
+D+L+H, LL Comb Run (LL**L*)	8.901	21.035	16.441	11.655	36.625	26.795	6.396
+D+L+H, LL Comb Run (LL**LL)	8.900	21.042	16.410	11.770	36.196	29.396	8.124
+D+L+H, LL Comb Run (LL*L**)	8.872	21.205	15.758	15.246	28.779	22.760	6.893
+D+L+H, LL Comb Run (LL*L*L)	8.871	21.213	15.727	15.361	28.350	25.362	8.620
+D+L+H, LL Comb Run (LL*LL*)	8.886	21.122	16.093	13.990	38.952	26.470	6.450
+D+L+H, LL Comb Run (LL*LLL)	8.885	21.129	16.062	14.105	38.523	29.071	8.178
+D+L+H, LL Comb Run (LLL***)	8.941	20.794	18.433	15.246	26.104	23.172	6.824
+D+L+H, LL Comb Run (LLL**L)	8.940	20.802	18.402	15.361	25.674	25.773	8.552
+D+L+H, LL Comb Run (LLL*L*)	8.955	20.710	18.768	13.990	36.277	26.882	6.382
+D+L+H, LL Comb Run (LLL*LL)	8.954	20.718	18.737	14.105	35.847	29.483	8.110
+D+L+H, LL Comb Run (LLLL**)	8.927	20.881	18.085	17.581	28.431	22.848	6.878
+D+L+H, LL Comb Run (LLLL*L)	8.925	20.889	18.054	17.696	28.001	25.449	8.606
+D+L+H, LL Comb Run (LLLLL*)	8.940	20.797	18.420	16.325	38.604	26.557	6.436
+D+L+H, LL Comb Run (LLLLLL)	8.939	20.805	18.389	16.440	38.174	29.158	8.164
+D+Lr+H, LL Comb Run (*****L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (****L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (****LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (***L**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (***L*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (***LL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (***LLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**L***)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**L**L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**L*L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**L*LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**LL**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**LL*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**LLL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (**LLLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L****)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L***L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L**L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L**LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L*L**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L*L*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L*LL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*L*LLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LL***)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LL**L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LL*L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LL*LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LLL**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LLL*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LLLL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (*LLLLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*****)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L****L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L***L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L***LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L**L**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L**L*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L**LL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L**LLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*L***)	7.300	16.176	14.183	13.149	26.389	23.101	6.836

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+Lr+H, LL Comb Run (L*L**L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*L*L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*L*LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*LL**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*LL*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*LLL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (L*LLLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL****)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL***L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL**L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL**LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL*L**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL*L*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL*LL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LL*LLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLL***)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLL**L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLL*L*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLL*LL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLLL**)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLLL*L)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLLLL*)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+Lr+H, LL Comb Run (LLLLLL)	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+S+H	12.470	31.044	26.813	26.419	39.734	39.878	12.615
+D+0.750Lr+0.750L+H, LL Comb Run (	7.299	16.182	14.160	13.235	26.066	25.052	8.132
+D+0.750Lr+0.750L+H, LL Comb Run (	7.311	16.113	14.434	12.207	34.018	25.883	6.504
+D+0.750Lr+0.750L+H, LL Comb Run (	7.310	16.119	14.411	12.294	33.696	27.834	7.800
+D+0.750Lr+0.750L+H, LL Comb Run (	7.290	16.242	13.922	14.900	28.134	22.857	6.877
+D+0.750Lr+0.750L+H, LL Comb Run (	7.289	16.247	13.899	14.987	27.812	24.808	8.172
+D+0.750Lr+0.750L+H, LL Comb Run (	7.300	16.179	14.173	13.959	35.764	25.640	6.545
+D+0.750Lr+0.750L+H, LL Comb Run (	7.299	16.184	14.150	14.045	35.442	27.591	7.841
+D+0.750Lr+0.750L+H, LL Comb Run (	7.341	15.933	15.929	14.900	26.128	23.166	6.825
+D+0.750Lr+0.750L+H, LL Comb Run (	7.340	15.939	15.905	14.987	25.805	25.117	8.121
+D+0.750Lr+0.750L+H, LL Comb Run (	7.351	15.870	16.180	13.959	33.757	25.949	6.493
+D+0.750Lr+0.750L+H, LL Comb Run (	7.351	15.876	16.157	14.045	33.435	27.899	7.789
+D+0.750Lr+0.750L+H, LL Comb Run (	7.330	15.998	15.667	16.652	27.873	22.923	6.866
+D+0.750Lr+0.750L+H, LL Comb Run (	7.329	16.004	15.644	16.738	27.551	24.874	8.161
+D+0.750Lr+0.750L+H, LL Comb Run (	7.341	15.935	15.918	15.710	35.503	25.705	6.534
+D+0.750Lr+0.750L+H, LL Comb Run (	7.340	15.941	15.895	15.796	35.180	27.656	7.830
+D+0.750Lr+0.750L+H, LL Comb Run (	7.148	17.863	15.959	12.881	26.460	23.083	6.839
+D+0.750Lr+0.750L+H, LL Comb Run (	7.148	17.868	15.936	12.967	26.138	25.034	8.135
+D+0.750Lr+0.750L+H, LL Comb Run (	7.159	17.800	16.210	11.939	34.090	25.865	6.507
+D+0.750Lr+0.750L+H, LL Comb Run (	7.158	17.806	16.187	12.026	33.768	27.816	7.803
+D+0.750Lr+0.750L+H, LL Comb Run (	7.138	17.928	15.698	14.632	28.206	22.840	6.880
+D+0.750Lr+0.750L+H, LL Comb Run (	7.137	17.934	15.675	14.719	27.883	24.790	8.175
+D+0.750Lr+0.750L+H, LL Comb Run (	7.148	17.865	15.949	13.691	35.835	25.622	6.548
+D+0.750Lr+0.750L+H, LL Comb Run (	7.147	17.871	15.926	13.777	35.513	27.573	7.844
+D+0.750Lr+0.750L+H, LL Comb Run (	7.189	17.619	17.704	14.632	26.199	23.148	6.828
+D+0.750Lr+0.750L+H, LL Comb Run (	7.188	17.625	17.681	14.719	25.877	25.099	8.124
+D+0.750Lr+0.750L+H, LL Comb Run (	7.200	17.557	17.955	13.691	33.829	25.931	6.496
+D+0.750Lr+0.750L+H, LL Comb Run (	7.199	17.562	17.932	13.777	33.507	27.882	7.792
+D+0.750Lr+0.750L+H, LL Comb Run (	7.178	17.685	17.443	16.384	27.944	22.905	6.869
+D+0.750Lr+0.750L+H, LL Comb Run (	7.177	17.690	17.420	16.470	27.622	24.856	8.164
+D+0.750Lr+0.750L+H, LL Comb Run (	7.189	17.622	17.694	15.442	35.574	25.687	6.537
+D+0.750Lr+0.750L+H, LL Comb Run (	7.188	17.628	17.671	15.528	35.252	27.638	7.833
+D+0.750Lr+0.750L+H, LL Comb Run (	8.642	18.196	13.849	13.238	26.365	23.107	6.835
+D+0.750Lr+0.750L+H, LL Comb Run (	8.641	18.202	13.826	13.325	26.043	25.058	8.131
+D+0.750Lr+0.750L+H, LL Comb Run (	8.653	18.134	14.101	12.297	33.995	25.889	6.503
+D+0.750Lr+0.750L+H, LL Comb Run (	8.652	18.139	14.078	12.383	33.672	27.840	7.799

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+H, LL Comb Run (	8.631	18.262	13.588	14.990	28.110	22.863	6.876
+D+0.750Lr+0.750L+H, LL Comb Run (	8.630	18.267	13.565	15.076	27.788	24.814	8.171
+D+0.750Lr+0.750L+H, LL Comb Run (	8.642	18.199	13.839	14.048	35.740	25.646	6.544
+D+0.750Lr+0.750L+H, LL Comb Run (	8.641	18.205	13.816	14.134	35.418	27.597	7.840
+D+0.750Lr+0.750L+H, LL Comb Run (	8.683	17.953	15.595	14.990	26.104	23.172	6.824
+D+0.750Lr+0.750L+H, LL Comb Run (	8.682	17.959	15.572	15.076	25.781	25.123	8.120
+D+0.750Lr+0.750L+H, LL Comb Run (	8.693	17.890	15.846	14.048	33.733	25.954	6.492
+D+0.750Lr+0.750L+H, LL Comb Run (	8.692	17.896	15.823	14.134	33.411	27.905	7.788
+D+0.750Lr+0.750L+H, LL Comb Run (	8.672	18.018	15.334	16.741	27.849	22.929	6.865
+D+0.750Lr+0.750L+H, LL Comb Run (	8.671	18.024	15.311	16.827	27.527	24.880	8.160
+D+0.750Lr+0.750L+H, LL Comb Run (	8.682	17.956	15.585	15.799	35.479	25.711	6.533
+D+0.750Lr+0.750L+H, LL Comb Run (	8.681	17.961	15.562	15.886	35.157	27.662	7.829
+D+0.750Lr+0.750L+H, LL Comb Run (	8.490	19.883	15.625	12.970	26.436	23.089	6.838
+D+0.750Lr+0.750L+H, LL Comb Run (	8.489	19.889	15.602	13.057	26.114	25.040	8.134
+D+0.750Lr+0.750L+H, LL Comb Run (	8.501	19.820	15.876	12.029	34.066	25.871	6.506
+D+0.750Lr+0.750L+H, LL Comb Run (	8.500	19.826	15.853	12.115	33.744	27.822	7.802
+D+0.750Lr+0.750L+H, LL Comb Run (	8.479	19.948	15.364	14.722	28.182	22.846	6.879
+D+0.750Lr+0.750L+H, LL Comb Run (	8.478	19.954	15.341	14.808	27.859	24.796	8.174
+D+0.750Lr+0.750L+H, LL Comb Run (	8.490	19.885	15.615	13.780	35.811	25.628	6.547
+D+0.750Lr+0.750L+H, LL Comb Run (	8.489	19.891	15.592	13.866	35.489	27.579	7.843
+D+0.750Lr+0.750L+H, LL Comb Run (	8.531	19.639	17.371	14.722	26.175	23.154	6.827
+D+0.750Lr+0.750L+H, LL Comb Run (	8.530	19.645	17.348	14.808	25.853	25.105	8.123
+D+0.750Lr+0.750L+H, LL Comb Run (	8.541	19.577	17.622	13.780	33.805	25.937	6.495
+D+0.750Lr+0.750L+H, LL Comb Run (	8.540	19.582	17.599	13.866	33.483	27.887	7.791
+D+0.750Lr+0.750L+H, LL Comb Run (	8.520	19.705	17.109	16.473	27.921	22.911	6.868
+D+0.750Lr+0.750L+H, LL Comb Run (	8.519	19.711	17.086	16.559	27.598	24.862	8.163
+D+0.750Lr+0.750L+H, LL Comb Run (	8.530	19.642	17.361	15.531	35.550	25.693	6.536
+D+0.750Lr+0.750L+H, LL Comb Run (	8.530	19.648	17.338	15.618	35.228	27.644	7.832
+D+0.750L+0.750S+H, LL Comb Run (*	11.176	27.333	23.632	23.188	36.075	37.634	12.466
+D+0.750L+0.750S+H, LL Comb Run (*	11.188	27.264	23.906	22.160	44.028	38.466	10.838
+D+0.750L+0.750S+H, LL Comb Run (*	11.187	27.270	23.883	22.246	43.705	40.417	12.134
+D+0.750L+0.750S+H, LL Comb Run (*	11.166	27.392	23.394	24.853	38.143	35.440	11.211
+D+0.750L+0.750S+H, LL Comb Run (*	11.165	27.398	23.371	24.939	37.821	37.391	12.506
+D+0.750L+0.750S+H, LL Comb Run (*	11.177	27.330	23.645	23.911	45.773	38.222	10.879
+D+0.750L+0.750S+H, LL Comb Run (*	11.176	27.335	23.622	23.997	45.451	40.173	12.175
+D+0.750L+0.750S+H, LL Comb Run (*	11.218	27.084	25.401	24.853	36.137	35.749	11.159
+D+0.750L+0.750S+H, LL Comb Run (*	11.217	27.089	25.378	24.939	35.814	37.700	12.455
+D+0.750L+0.750S+H, LL Comb Run (*	11.228	27.021	25.652	23.911	43.766	38.531	10.828
+D+0.750L+0.750S+H, LL Comb Run (*	11.227	27.027	25.629	23.997	43.444	40.482	12.123
+D+0.750L+0.750S+H, LL Comb Run (*	11.207	27.149	25.139	26.604	37.882	35.505	11.200
+D+0.750L+0.750S+H, LL Comb Run (*	11.206	27.155	25.116	26.690	37.560	37.456	12.496
+D+0.750L+0.750S+H, LL Comb Run (*	11.217	27.086	25.391	25.662	45.512	38.288	10.868
+D+0.750L+0.750S+H, LL Comb Run (*	11.216	27.092	25.368	25.749	45.189	40.239	12.164
+D+0.750L+0.750S+H, LL Comb Run (*	11.025	29.014	25.431	22.833	36.469	35.666	11.173
+D+0.750L+0.750S+H, LL Comb Run (*	11.024	29.019	25.408	22.919	36.147	37.616	12.469
+D+0.750L+0.750S+H, LL Comb Run (*	11.036	28.951	25.682	21.891	44.099	38.448	10.841
+D+0.750L+0.750S+H, LL Comb Run (*	11.035	28.957	25.659	21.978	43.777	40.399	12.137
+D+0.750L+0.750S+H, LL Comb Run (*	11.014	29.079	25.170	24.584	38.215	35.422	11.214
+D+0.750L+0.750S+H, LL Comb Run (*	11.013	29.085	25.147	24.671	37.892	37.373	12.509
+D+0.750L+0.750S+H, LL Comb Run (*	11.025	29.016	25.421	23.643	45.844	38.204	10.882
+D+0.750L+0.750S+H, LL Comb Run (*	11.024	29.022	25.398	23.729	45.522	40.155	12.178
+D+0.750L+0.750S+H, LL Comb Run (*	11.066	28.770	27.177	24.584	36.208	35.731	11.162
+D+0.750L+0.750S+H, LL Comb Run (*	11.065	28.776	27.153	24.671	35.886	37.682	12.458
+D+0.750L+0.750S+H, LL Comb Run (*	11.076	28.707	27.428	23.643	43.838	38.513	10.830
+D+0.750L+0.750S+H, LL Comb Run (*	11.075	28.713	27.405	23.729	43.516	40.464	12.126
+D+0.750L+0.750S+H, LL Comb Run (*	11.055	28.835	26.915	26.336	37.953	35.487	11.203
+D+0.750L+0.750S+H, LL Comb Run (*	11.054	28.841	26.892	26.422	37.631	37.438	12.499
+D+0.750L+0.750S+H, LL Comb Run (*	11.065	28.773	27.166	25.394	45.583	38.270	10.871
+D+0.750L+0.750S+H, LL Comb Run (*	11.064	28.778	27.143	25.480	45.261	40.221	12.167

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+H, LL Comb Run (L	12.519	29.347	23.322	23.191	36.374	35.689	11.169
+D+0.750L+0.750S+H, LL Comb Run (L	12.518	29.353	23.299	23.277	36.052	37.640	12.465
+D+0.750L+0.750S+H, LL Comb Run (L	12.530	29.285	23.573	22.249	44.004	38.472	10.837
+D+0.750L+0.750S+H, LL Comb Run (L	12.529	29.290	23.550	22.335	43.681	40.423	12.133
+D+0.750L+0.750S+H, LL Comb Run (L	12.508	29.413	23.060	24.942	38.119	35.446	11.210
+D+0.750L+0.750S+H, LL Comb Run (L	12.507	29.418	23.037	25.028	37.797	37.397	12.505
+D+0.750L+0.750S+H, LL Comb Run (L	12.519	29.350	23.311	24.000	45.749	38.228	10.878
+D+0.750L+0.750S+H, LL Comb Run (L	12.518	29.356	23.288	24.087	45.427	40.179	12.174
+D+0.750L+0.750S+H, LL Comb Run (L	12.560	29.104	25.067	24.942	36.113	35.755	11.158
+D+0.750L+0.750S+H, LL Comb Run (L	12.559	29.110	25.044	25.028	35.790	37.706	12.454
+D+0.750L+0.750S+H, LL Comb Run (L	12.570	29.041	25.318	24.000	43.742	38.537	10.827
+D+0.750L+0.750S+H, LL Comb Run (L	12.569	29.047	25.295	24.087	43.420	40.488	12.122
+D+0.750L+0.750S+H, LL Comb Run (L	12.549	29.169	24.806	26.693	37.858	35.511	11.199
+D+0.750L+0.750S+H, LL Comb Run (L	12.548	29.175	24.783	26.780	37.536	37.462	12.495
+D+0.750L+0.750S+H, LL Comb Run (L	12.559	29.106	25.057	25.752	45.488	38.294	10.867
+D+0.750L+0.750S+H, LL Comb Run (L	12.558	29.112	25.034	25.838	45.166	40.245	12.163
+D+0.750L+0.750S+H, LL Comb Run (L	12.367	31.034	25.097	22.923	36.445	35.671	11.172
+D+0.750L+0.750S+H, LL Comb Run (L	12.366	31.040	25.074	23.009	36.123	37.622	12.468
+D+0.750L+0.750S+H, LL Comb Run (L	12.378	30.971	25.349	21.981	44.075	38.454	10.840
+D+0.750L+0.750S+H, LL Comb Run (L	12.377	30.977	25.326	22.067	43.753	40.405	12.136
+D+0.750L+0.750S+H, LL Comb Run (L	12.356	31.099	24.836	24.674	38.191	35.428	11.213
+D+0.750L+0.750S+H, LL Comb Run (L	12.355	31.105	24.813	24.760	37.868	37.379	12.508
+D+0.750L+0.750S+H, LL Comb Run (L	12.367	31.036	25.087	23.732	45.821	38.210	10.881
+D+0.750L+0.750S+H, LL Comb Run (L	12.366	31.042	25.064	23.818	45.498	40.161	12.177
+D+0.750L+0.750S+H, LL Comb Run (L	12.408	30.790	26.843	24.674	36.184	35.737	11.161
+D+0.750L+0.750S+H, LL Comb Run (L	12.407	30.796	26.820	24.760	35.862	37.688	12.457
+D+0.750L+0.750S+H, LL Comb Run (L	12.418	30.728	27.094	23.732	43.814	38.519	10.829
+D+0.750L+0.750S+H, LL Comb Run (L	12.417	30.733	27.071	23.818	43.492	40.470	12.125
+D+0.750L+0.750S+H, LL Comb Run (L	12.397	30.856	26.582	26.425	37.930	35.493	11.202
+D+0.750L+0.750S+H, LL Comb Run (L	12.396	30.861	26.559	26.511	37.607	37.444	12.498
+D+0.750L+0.750S+H, LL Comb Run (L	12.407	30.793	26.833	25.483	45.559	38.276	10.870
+D+0.750L+0.750S+H, LL Comb Run (L	12.406	30.799	26.810	25.570	45.237	40.227	12.166
+D+0.60W+H	7.300	16.176	14.183	13.149	26.389	23.101	6.836
+D+0.70E+H	7.303	16.163	14.237	12.948	29.111	22.913	4.461
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.299	16.182	14.160	13.235	26.066	25.052	8.132
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.311	16.113	14.434	12.207	34.018	25.883	6.504
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.310	16.119	14.411	12.294	33.696	27.834	7.800
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.290	16.242	13.922	14.900	28.134	22.857	6.877
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.289	16.247	13.899	14.987	27.812	24.808	8.172
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.300	16.179	14.173	13.959	35.764	25.640	6.545
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.299	16.184	14.150	14.045	35.442	27.591	7.841
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.341	15.933	15.929	14.900	26.128	23.166	6.825
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.340	15.939	15.905	14.987	25.805	25.117	8.121
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.351	15.870	16.180	13.959	33.757	25.949	6.493
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.351	15.876	16.157	14.045	33.435	27.899	7.789
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.330	15.998	15.667	16.652	27.873	22.923	6.866
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.329	16.004	15.644	16.738	27.551	24.874	8.161
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.341	15.935	15.918	15.710	35.503	25.705	6.534
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.340	15.941	15.895	15.796	35.180	27.656	7.830
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.148	17.863	15.959	12.881	26.460	23.083	6.839
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.148	17.868	15.936	12.967	26.138	25.034	8.135
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.159	17.800	16.210	11.939	34.090	25.865	6.507
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.158	17.806	16.187	12.026	33.768	27.816	7.803
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.138	17.928	15.698	14.632	28.206	22.840	6.880
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.137	17.934	15.675	14.719	27.883	24.790	8.175
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.148	17.865	15.949	13.691	35.835	25.622	6.548
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.147	17.871	15.926	13.777	35.513	27.573	7.844
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.189	17.619	17.704	14.632	26.199	23.148	6.828
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.188	17.625	17.681	14.719	25.877	25.099	8.124

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.200	17.557	17.955	13.691	33.829	25.931	6.496
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.199	17.562	17.932	13.777	33.507	27.882	7.792
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.178	17.685	17.443	16.384	27.944	22.905	6.869
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.177	17.690	17.420	16.470	27.622	24.856	8.164
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.189	17.622	17.694	15.442	35.574	25.687	6.537
+D+0.750Lr+0.750L+0.450W+H, LL Com	7.188	17.628	17.671	15.528	35.252	27.638	7.833
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.642	18.196	13.849	13.238	26.365	23.107	6.835
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.641	18.202	13.826	13.325	26.043	25.058	8.131
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.653	18.134	14.101	12.297	33.995	25.889	6.503
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.652	18.139	14.078	12.383	33.672	27.840	7.799
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.631	18.262	13.588	14.990	28.110	22.863	6.876
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.630	18.267	13.565	15.076	27.788	24.814	8.171
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.642	18.199	13.839	14.048	35.740	25.646	6.544
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.641	18.205	13.816	14.134	35.418	27.597	7.840
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.683	17.953	15.595	14.990	26.104	23.172	6.824
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.682	17.959	15.572	15.076	25.781	25.123	8.120
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.693	17.890	15.846	14.048	33.733	25.954	6.492
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.692	17.896	15.823	14.134	33.411	27.905	7.788
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.672	18.018	15.334	16.741	27.849	22.929	6.865
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.671	18.024	15.311	16.827	27.527	24.880	8.160
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.682	17.956	15.585	15.799	35.479	25.711	6.533
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.681	17.961	15.562	15.886	35.157	27.662	7.829
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.490	19.883	15.625	12.970	26.436	23.089	6.838
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.489	19.889	15.602	13.057	26.114	25.040	8.134
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.501	19.820	15.876	12.029	34.066	25.871	6.506
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.500	19.826	15.853	12.115	33.744	27.822	7.802
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.479	19.948	15.364	14.722	28.182	22.846	6.879
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.478	19.954	15.341	14.808	27.859	24.796	8.174
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.490	19.885	15.615	13.780	35.811	25.628	6.547
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.489	19.891	15.592	13.866	35.489	27.579	7.843
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.531	19.639	17.371	14.722	26.175	23.154	6.827
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.530	19.645	17.348	14.808	25.853	25.105	8.123
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.541	19.577	17.622	13.780	33.805	25.937	6.495
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.540	19.582	17.599	13.866	33.483	27.887	7.791
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.520	19.705	17.109	16.473	27.921	22.911	6.868
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.519	19.711	17.086	16.559	27.598	24.862	8.163
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.530	19.642	17.361	15.531	35.550	25.693	6.536
+D+0.750Lr+0.750L+0.450W+H, LL Com	8.530	19.648	17.338	15.618	35.228	27.644	7.832
+D+0.750L+0.750S+0.450W+H, LL Comb	11.176	27.333	23.632	23.188	36.075	37.634	12.466
+D+0.750L+0.750S+0.450W+H, LL Comb	11.188	27.264	23.906	22.160	44.028	38.466	10.838
+D+0.750L+0.750S+0.450W+H, LL Comb	11.187	27.270	23.883	22.246	43.705	40.417	12.134
+D+0.750L+0.750S+0.450W+H, LL Comb	11.166	27.392	23.394	24.853	38.143	35.440	11.211
+D+0.750L+0.750S+0.450W+H, LL Comb	11.165	27.398	23.371	24.939	37.821	37.391	12.506
+D+0.750L+0.750S+0.450W+H, LL Comb	11.177	27.330	23.645	23.911	45.773	38.222	10.879
+D+0.750L+0.750S+0.450W+H, LL Comb	11.176	27.335	23.622	23.997	45.451	40.173	12.175
+D+0.750L+0.750S+0.450W+H, LL Comb	11.218	27.084	25.401	24.853	36.137	35.749	11.159
+D+0.750L+0.750S+0.450W+H, LL Comb	11.217	27.089	25.378	24.939	35.814	37.700	12.455
+D+0.750L+0.750S+0.450W+H, LL Comb	11.228	27.021	25.652	23.911	43.766	38.531	10.828
+D+0.750L+0.750S+0.450W+H, LL Comb	11.227	27.027	25.629	23.997	43.444	40.482	12.123
+D+0.750L+0.750S+0.450W+H, LL Comb	11.207	27.149	25.139	26.604	37.882	35.505	11.200
+D+0.750L+0.750S+0.450W+H, LL Comb	11.206	27.155	25.116	26.690	37.560	37.456	12.496
+D+0.750L+0.750S+0.450W+H, LL Comb	11.217	27.086	25.391	25.662	45.512	38.288	10.868
+D+0.750L+0.750S+0.450W+H, LL Comb	11.216	27.092	25.368	25.749	45.189	40.239	12.164
+D+0.750L+0.750S+0.450W+H, LL Comb	11.025	29.014	25.431	22.833	36.469	35.666	11.173
+D+0.750L+0.750S+0.450W+H, LL Comb	11.024	29.019	25.408	22.919	36.147	37.616	12.469
+D+0.750L+0.750S+0.450W+H, LL Comb	11.036	28.951	25.682	21.891	44.099	38.448	10.841
+D+0.750L+0.750S+0.450W+H, LL Comb	11.035	28.957	25.659	21.978	43.777	40.399	12.137
+D+0.750L+0.750S+0.450W+H, LL Comb	11.014	29.079	25.170	24.584	38.215	35.422	11.214
+D+0.750L+0.750S+0.450W+H, LL Comb	11.013	29.085	25.147	24.671	37.892	37.373	12.509

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.450W+H, LL Comb	11.025	29.016	25.421	23.643	45.844	38.204	10.882
+D+0.750L+0.750S+0.450W+H, LL Comb	11.024	29.022	25.398	23.729	45.522	40.155	12.178
+D+0.750L+0.750S+0.450W+H, LL Comb	11.066	28.770	27.177	24.584	36.208	35.731	11.162
+D+0.750L+0.750S+0.450W+H, LL Comb	11.065	28.776	27.153	24.671	35.886	37.682	12.458
+D+0.750L+0.750S+0.450W+H, LL Comb	11.076	28.707	27.428	23.643	43.838	38.513	10.830
+D+0.750L+0.750S+0.450W+H, LL Comb	11.075	28.713	27.405	23.729	43.516	40.464	12.126
+D+0.750L+0.750S+0.450W+H, LL Comb	11.055	28.835	26.915	26.336	37.953	35.487	11.203
+D+0.750L+0.750S+0.450W+H, LL Comb	11.054	28.841	26.892	26.422	37.631	37.438	12.499
+D+0.750L+0.750S+0.450W+H, LL Comb	11.065	28.773	27.166	25.394	45.583	38.270	10.871
+D+0.750L+0.750S+0.450W+H, LL Comb	11.064	28.778	27.143	25.480	45.261	40.221	12.167
+D+0.750L+0.750S+0.450W+H, LL Comb	12.519	29.347	23.322	23.191	36.374	35.689	11.169
+D+0.750L+0.750S+0.450W+H, LL Comb	12.518	29.353	23.299	23.277	36.052	37.640	12.465
+D+0.750L+0.750S+0.450W+H, LL Comb	12.530	29.285	23.573	22.249	44.004	38.472	10.837
+D+0.750L+0.750S+0.450W+H, LL Comb	12.529	29.290	23.550	22.335	43.681	40.423	12.133
+D+0.750L+0.750S+0.450W+H, LL Comb	12.508	29.413	23.060	24.942	38.119	35.446	11.210
+D+0.750L+0.750S+0.450W+H, LL Comb	12.507	29.418	23.037	25.028	37.797	37.397	12.505
+D+0.750L+0.750S+0.450W+H, LL Comb	12.519	29.350	23.311	24.000	45.749	38.228	10.878
+D+0.750L+0.750S+0.450W+H, LL Comb	12.518	29.356	23.288	24.087	45.427	40.179	12.174
+D+0.750L+0.750S+0.450W+H, LL Comb	12.560	29.104	25.067	24.942	36.113	35.755	11.158
+D+0.750L+0.750S+0.450W+H, LL Comb	12.559	29.110	25.044	25.028	35.790	37.706	12.454
+D+0.750L+0.750S+0.450W+H, LL Comb	12.570	29.041	25.318	24.000	43.742	38.537	10.827
+D+0.750L+0.750S+0.450W+H, LL Comb	12.569	29.047	25.295	24.087	43.420	40.488	12.122
+D+0.750L+0.750S+0.450W+H, LL Comb	12.549	29.169	24.806	26.693	37.858	35.511	11.199
+D+0.750L+0.750S+0.450W+H, LL Comb	12.548	29.175	24.783	26.780	37.536	37.462	12.495
+D+0.750L+0.750S+0.450W+H, LL Comb	12.559	29.106	25.057	25.752	45.488	38.294	10.867
+D+0.750L+0.750S+0.450W+H, LL Comb	12.558	29.112	25.034	25.838	45.166	40.245	12.163
+D+0.750L+0.750S+0.450W+H, LL Comb	12.367	31.034	25.097	22.923	36.445	35.671	11.172
+D+0.750L+0.750S+0.450W+H, LL Comb	12.366	31.040	25.074	23.009	36.123	37.622	12.468
+D+0.750L+0.750S+0.450W+H, LL Comb	12.378	30.971	25.349	21.981	44.075	38.454	10.840
+D+0.750L+0.750S+0.450W+H, LL Comb	12.377	30.977	25.326	22.067	43.753	40.405	12.136
+D+0.750L+0.750S+0.450W+H, LL Comb	12.356	31.099	24.836	24.674	38.191	35.428	11.213
+D+0.750L+0.750S+0.450W+H, LL Comb	12.355	31.105	24.813	24.760	37.868	37.379	12.508
+D+0.750L+0.750S+0.450W+H, LL Comb	12.367	31.036	25.087	23.732	45.821	38.210	10.881
+D+0.750L+0.750S+0.450W+H, LL Comb	12.366	31.042	25.064	23.818	45.498	40.161	12.177
+D+0.750L+0.750S+0.450W+H, LL Comb	12.408	30.790	26.843	24.674	36.184	35.737	11.161
+D+0.750L+0.750S+0.450W+H, LL Comb	12.407	30.796	26.820	24.760	35.862	37.688	12.457
+D+0.750L+0.750S+0.450W+H, LL Comb	12.418	30.728	27.094	23.732	43.814	38.519	10.829
+D+0.750L+0.750S+0.450W+H, LL Comb	12.417	30.733	27.071	23.818	43.492	40.470	12.125
+D+0.750L+0.750S+0.450W+H, LL Comb	12.397	30.856	26.582	26.425	37.930	35.493	11.202
+D+0.750L+0.750S+0.450W+H, LL Comb	12.396	30.861	26.559	26.511	37.607	37.444	12.498
+D+0.750L+0.750S+0.450W+H, LL Comb	12.407	30.793	26.833	25.483	45.559	38.276	10.870
+D+0.750L+0.750S+0.450W+H, LL Comb	12.406	30.799	26.810	25.570	45.237	40.227	12.166
+D+0.750L+0.750S+0.5250E+H, LL Com	11.178	27.323	23.673	23.036	38.117	37.493	10.684
+D+0.750L+0.750S+0.5250E+H, LL Com	11.189	27.254	23.947	22.008	46.069	38.325	9.057
+D+0.750L+0.750S+0.5250E+H, LL Com	11.188	27.260	23.924	22.095	45.747	40.276	10.353
+D+0.750L+0.750S+0.5250E+H, LL Com	11.168	27.382	23.434	24.701	40.185	35.299	9.429
+D+0.750L+0.750S+0.5250E+H, LL Com	11.167	27.388	23.411	24.788	39.863	37.250	10.725
+D+0.750L+0.750S+0.5250E+H, LL Com	11.179	27.320	23.686	23.760	47.815	38.081	9.097
+D+0.750L+0.750S+0.5250E+H, LL Com	11.178	27.325	23.662	23.846	47.492	40.032	10.393
+D+0.750L+0.750S+0.5250E+H, LL Com	11.220	27.074	25.441	24.701	38.178	35.608	9.378
+D+0.750L+0.750S+0.5250E+H, LL Com	11.219	27.079	25.418	24.788	37.856	37.559	10.674
+D+0.750L+0.750S+0.5250E+H, LL Com	11.230	27.011	25.692	23.760	45.808	38.390	9.046
+D+0.750L+0.750S+0.5250E+H, LL Com	11.229	27.017	25.669	23.846	45.486	40.341	10.342
+D+0.750L+0.750S+0.5250E+H, LL Com	11.209	27.139	25.180	26.453	39.924	35.364	9.418
+D+0.750L+0.750S+0.5250E+H, LL Com	11.208	27.145	25.157	26.539	39.601	37.315	10.714
+D+0.750L+0.750S+0.5250E+H, LL Com	11.219	27.076	25.431	25.511	47.553	38.147	9.087
+D+0.750L+0.750S+0.5250E+H, LL Com	11.218	27.082	25.408	25.597	47.231	40.097	10.382
+D+0.750L+0.750S+0.5250E+H, LL Com	11.027	29.003	25.471	22.682	38.511	35.524	9.392
+D+0.750L+0.750S+0.5250E+H, LL Com	11.026	29.009	25.448	22.768	38.189	37.475	10.687

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.5250E+H, LL Com	11.037	28.941	25.723	21.740	46.141	38.307	9.060
+D+0.750L+0.750S+0.5250E+H, LL Com	11.036	28.946	25.700	21.827	45.819	40.258	10.356
+D+0.750L+0.750S+0.5250E+H, LL Com	11.016	29.069	25.210	24.433	40.256	35.281	9.432
+D+0.750L+0.750S+0.5250E+H, LL Com	11.015	29.075	25.187	24.520	39.934	37.232	10.728
+D+0.750L+0.750S+0.5250E+H, LL Com	11.027	29.006	25.461	23.492	47.886	38.063	9.100
+D+0.750L+0.750S+0.5250E+H, LL Com	11.026	29.012	25.438	23.578	47.564	40.014	10.396
+D+0.750L+0.750S+0.5250E+H, LL Com	11.068	28.760	27.217	24.433	38.250	35.590	9.381
+D+0.750L+0.750S+0.5250E+H, LL Com	11.067	28.766	27.194	24.520	37.928	37.541	10.677
+D+0.750L+0.750S+0.5250E+H, LL Com	11.078	28.697	27.468	23.492	45.880	38.372	9.049
+D+0.750L+0.750S+0.5250E+H, LL Com	11.077	28.703	27.445	23.578	45.557	40.323	10.345
+D+0.750L+0.750S+0.5250E+H, LL Com	11.057	28.825	26.956	26.185	39.995	35.346	9.421
+D+0.750L+0.750S+0.5250E+H, LL Com	11.056	28.831	26.933	26.271	39.673	37.297	10.717
+D+0.750L+0.750S+0.5250E+H, LL Com	11.067	28.763	27.207	25.243	47.625	38.129	9.090
+D+0.750L+0.750S+0.5250E+H, LL Com	11.066	28.768	27.184	25.329	47.303	40.080	10.385
+D+0.750L+0.750S+0.5250E+H, LL Com	12.521	29.337	23.362	23.040	38.416	35.548	9.388
+D+0.750L+0.750S+0.5250E+H, LL Com	12.520	29.343	23.339	23.126	38.093	37.499	10.683
+D+0.750L+0.750S+0.5250E+H, LL Com	12.531	29.274	23.613	22.098	46.045	38.331	9.056
+D+0.750L+0.750S+0.5250E+H, LL Com	12.530	29.280	23.590	22.184	45.723	40.282	10.352
+D+0.750L+0.750S+0.5250E+H, LL Com	12.510	29.403	23.101	24.791	40.161	35.305	9.428
+D+0.750L+0.750S+0.5250E+H, LL Com	12.509	29.408	23.078	24.877	39.839	37.256	10.724
+D+0.750L+0.750S+0.5250E+H, LL Com	12.520	29.340	23.352	23.849	47.791	38.087	9.096
+D+0.750L+0.750S+0.5250E+H, LL Com	12.519	29.345	23.329	23.935	47.469	40.038	10.392
+D+0.750L+0.750S+0.5250E+H, LL Com	12.561	29.094	25.107	24.791	38.154	35.614	9.377
+D+0.750L+0.750S+0.5250E+H, LL Com	12.560	29.100	25.084	24.877	37.832	37.564	10.673
+D+0.750L+0.750S+0.5250E+H, LL Com	12.572	29.031	25.358	23.849	45.784	38.396	9.045
+D+0.750L+0.750S+0.5250E+H, LL Com	12.571	29.037	25.335	23.935	45.462	40.347	10.341
+D+0.750L+0.750S+0.5250E+H, LL Com	12.550	29.159	24.846	26.542	39.900	35.370	9.417
+D+0.750L+0.750S+0.5250E+H, LL Com	12.550	29.165	24.823	26.628	39.578	37.321	10.713
+D+0.750L+0.750S+0.5250E+H, LL Com	12.561	29.096	25.097	25.600	47.530	38.153	9.086
+D+0.750L+0.750S+0.5250E+H, LL Com	12.560	29.102	25.074	25.687	47.207	40.103	10.381
+D+0.750L+0.750S+0.5250E+H, LL Com	12.369	31.024	25.138	22.771	38.487	35.530	9.391
+D+0.750L+0.750S+0.5250E+H, LL Com	12.368	31.029	25.115	22.858	38.165	37.481	10.686
+D+0.750L+0.750S+0.5250E+H, LL Com	12.379	30.961	25.389	21.830	46.117	38.313	9.059
+D+0.750L+0.750S+0.5250E+H, LL Com	12.378	30.967	25.366	21.916	45.795	40.264	10.355
+D+0.750L+0.750S+0.5250E+H, LL Com	12.358	31.089	24.877	24.523	40.233	35.287	9.431
+D+0.750L+0.750S+0.5250E+H, LL Com	12.357	31.095	24.854	24.609	39.910	37.238	10.727
+D+0.750L+0.750S+0.5250E+H, LL Com	12.368	31.026	25.128	23.581	47.862	38.069	9.099
+D+0.750L+0.750S+0.5250E+H, LL Com	12.367	31.032	25.105	23.667	47.540	40.020	10.395
+D+0.750L+0.750S+0.5250E+H, LL Com	12.409	30.780	26.883	24.523	38.226	35.596	9.380
+D+0.750L+0.750S+0.5250E+H, LL Com	12.408	30.786	26.860	24.609	37.904	37.547	10.676
+D+0.750L+0.750S+0.5250E+H, LL Com	12.420	30.718	27.134	23.581	45.856	38.378	9.048
+D+0.750L+0.750S+0.5250E+H, LL Com	12.419	30.723	27.111	23.667	45.533	40.329	10.344
+D+0.750L+0.750S+0.5250E+H, LL Com	12.398	30.846	26.622	26.274	39.971	35.352	9.420
+D+0.750L+0.750S+0.5250E+H, LL Com	12.398	30.851	26.599	26.360	39.649	37.303	10.716
+D+0.750L+0.750S+0.5250E+H, LL Com	12.409	30.783	26.873	25.332	47.601	38.135	9.089
+D+0.750L+0.750S+0.5250E+H, LL Com	12.408	30.789	26.850	25.419	47.279	40.086	10.384
+0.60D+0.60W+0.60H	4.380	9.706	8.510	7.889	15.833	13.861	4.102
+0.60D+0.70E+0.60H	4.383	9.692	8.564	7.688	18.556	13.672	1.726
D Only	7.296	16.202	14.079	13.541	22.996	22.439	6.942
Lr Only, LL Comb Run (*****L)							
Lr Only, LL Comb Run (****L*)							
Lr Only, LL Comb Run (****LL)							
Lr Only, LL Comb Run (***L**)							
Lr Only, LL Comb Run (***L*L)							
Lr Only, LL Comb Run (***LL*)							
Lr Only, LL Comb Run (***LLL)							
Lr Only, LL Comb Run (**L***)							
Lr Only, LL Comb Run (**L**L)							
Lr Only, LL Comb Run (**L*L*)							

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Lr Only, LL Comb Run (**L*LL)							
Lr Only, LL Comb Run (**LL**)							
Lr Only, LL Comb Run (**LL*L)							
Lr Only, LL Comb Run (**LLL*)							
Lr Only, LL Comb Run (**LLLL)							
Lr Only, LL Comb Run (*L****)							
Lr Only, LL Comb Run (*L***L)							
Lr Only, LL Comb Run (*L**L*)							
Lr Only, LL Comb Run (*L**LL)							
Lr Only, LL Comb Run (*L*L**)							
Lr Only, LL Comb Run (*L*L*L)							
Lr Only, LL Comb Run (*L*LL*)							
Lr Only, LL Comb Run (*L*LLL)							
Lr Only, LL Comb Run (*LL***)							
Lr Only, LL Comb Run (*LL**L)							
Lr Only, LL Comb Run (*LL*L*)							
Lr Only, LL Comb Run (*LL*LL)							
Lr Only, LL Comb Run (*LLL**)							
Lr Only, LL Comb Run (*LLL*L)							
Lr Only, LL Comb Run (*LLLL*)							
Lr Only, LL Comb Run (*LLLLL)							
Lr Only, LL Comb Run (L*****)							
Lr Only, LL Comb Run (L****L)							
Lr Only, LL Comb Run (L***L*)							
Lr Only, LL Comb Run (L***LL)							
Lr Only, LL Comb Run (L**L**)							
Lr Only, LL Comb Run (L**L*L)							
Lr Only, LL Comb Run (L**LL*)							
Lr Only, LL Comb Run (L**LLL)							
Lr Only, LL Comb Run (L*L***)							
Lr Only, LL Comb Run (L*L**L)							
Lr Only, LL Comb Run (L*L*L*)							
Lr Only, LL Comb Run (L*L*LL)							
Lr Only, LL Comb Run (L*LL**)							
Lr Only, LL Comb Run (L*LL*L)							
Lr Only, LL Comb Run (L*LLL*)							
Lr Only, LL Comb Run (L*LLLL)							
Lr Only, LL Comb Run (LL****)							
Lr Only, LL Comb Run (LL***L)							
Lr Only, LL Comb Run (LL**L*)							
Lr Only, LL Comb Run (LL**LL)							
Lr Only, LL Comb Run (LL*L**)							
Lr Only, LL Comb Run (LL*L*L)							
Lr Only, LL Comb Run (LL*LL*)							
Lr Only, LL Comb Run (LL*LLL)							
Lr Only, LL Comb Run (LLL***)							
Lr Only, LL Comb Run (LLL**L)							
Lr Only, LL Comb Run (LLL*L*)							
Lr Only, LL Comb Run (LLL*LL)							
Lr Only, LL Comb Run (LLLL**)							
Lr Only, LL Comb Run (LLLL*L)							
Lr Only, LL Comb Run (LLLLL*)							
Lr Only, LL Comb Run (LLLLLL)							
L Only, LL Comb Run (*****L)	-0.001	0.008	-0.031	0.115	-0.430	2.601	1.728
L Only, LL Comb Run (****L*)	0.014	-0.084	0.335	-1.256	10.173	3.710	-0.442
L Only, LL Comb Run (****LL)	0.013	-0.076	0.304	-1.140	9.743	6.311	1.285
L Only, LL Comb Run (***L**)	-0.015	0.087	-0.348	2.335	2.327	-0.325	0.054
L Only, LL Comb Run (***L*L)	-0.016	0.095	-0.379	2.450	1.897	2.277	1.782
L Only, LL Comb Run (***LL*)	-0.001	0.003	-0.013	1.079	12.500	3.385	-0.388

Concrete Beam

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (***LLL)	-0.002	0.011	-0.044	1.195	12.070	5.986	1.340
L Only, LL Comb Run (**L***)	0.054	-0.325	2.327	2.335	-0.348	0.087	-0.015
L Only, LL Comb Run (**L**L)	0.053	-0.317	2.296	2.450	-0.778	2.688	1.713
L Only, LL Comb Run (**L*L*)	0.068	-0.408	2.662	1.079	9.825	3.797	-0.457
L Only, LL Comb Run (**L*LL)	0.067	-0.401	2.631	1.195	9.395	6.398	1.271
L Only, LL Comb Run (**LL**)	0.040	-0.237	1.979	4.670	1.979	-0.237	0.040
L Only, LL Comb Run (**LL*L)	0.038	-0.230	1.948	4.785	1.549	2.364	1.767
L Only, LL Comb Run (**LLL*)	0.054	-0.321	2.314	3.415	12.152	3.472	-0.403
L Only, LL Comb Run (**LLLL)	0.052	-0.313	2.283	3.530	11.722	6.074	1.325
L Only, LL Comb Run (*L****)	-0.203	2.249	2.368	-0.358	0.095	-0.024	0.004
L Only, LL Comb Run (*L***L)	-0.204	2.256	2.337	-0.242	-0.334	2.577	1.732
L Only, LL Comb Run (*L**L*)	-0.189	2.165	2.703	-1.613	10.268	3.686	-0.438
L Only, LL Comb Run (*L**LL)	-0.190	2.173	2.672	-1.498	9.839	6.287	1.289
L Only, LL Comb Run (*L*L**)	-0.217	2.336	2.020	1.977	2.422	-0.348	0.058
L Only, LL Comb Run (*L*L*L)	-0.218	2.343	1.989	2.093	1.993	2.253	1.786
L Only, LL Comb Run (*L*LL*)	-0.203	2.252	2.354	0.722	12.595	3.361	-0.384
L Only, LL Comb Run (*L*LLL)	-0.204	2.260	2.324	0.837	12.166	5.963	1.343
L Only, LL Comb Run (*LL***)	-0.149	1.924	4.695	1.977	-0.253	0.063	-0.011
L Only, LL Comb Run (*LL**L)	-0.150	1.932	4.664	2.093	-0.683	2.664	1.717
L Only, LL Comb Run (*LL*L*)	-0.135	1.840	5.030	0.722	9.920	3.773	-0.453
L Only, LL Comb Run (*LL*LL)	-0.136	1.848	4.999	0.837	9.490	6.374	1.275
L Only, LL Comb Run (*LLL**)	-0.163	2.011	4.347	4.313	2.074	-0.261	0.044
L Only, LL Comb Run (*LLL*L)	-0.164	2.019	4.316	4.428	1.645	2.340	1.771
L Only, LL Comb Run (*LLLL*)	-0.149	1.927	4.681	3.057	12.247	3.449	-0.399
L Only, LL Comb Run (*LLLLL)	-0.150	1.935	4.651	3.172	11.818	6.050	1.329
L Only, LL Comb Run (L*****)	1.789	2.694	-0.445	0.119	-0.032	0.008	-0.001
L Only, LL Comb Run (L****L)	1.788	2.701	-0.476	0.234	-0.461	2.609	1.726
L Only, LL Comb Run (L***L*)	1.803	2.610	-0.110	-1.136	10.141	3.718	-0.444
L Only, LL Comb Run (L***LL)	1.802	2.618	-0.141	-1.021	9.712	6.319	1.284
L Only, LL Comb Run (L**L**)	1.775	2.781	-0.793	2.454	2.295	-0.317	0.053
L Only, LL Comb Run (L**L*L)	1.773	2.788	-0.824	2.569	1.866	2.285	1.780
L Only, LL Comb Run (L**LL*)	1.789	2.697	-0.458	1.199	12.468	3.393	-0.390
L Only, LL Comb Run (L**LLL)	1.787	2.705	-0.489	1.314	12.039	5.994	1.338
L Only, LL Comb Run (L*L***)	1.843	2.369	1.882	2.454	-0.380	0.095	-0.016
L Only, LL Comb Run (L*L**L)	1.842	2.377	1.851	2.569	-0.810	2.696	1.712
L Only, LL Comb Run (L*L*L*)	1.857	2.285	2.217	1.199	9.793	3.805	-0.458
L Only, LL Comb Run (L*L*LL)	1.856	2.293	2.186	1.314	9.363	6.406	1.270
L Only, LL Comb Run (L*LL**)	1.829	2.456	1.534	4.789	1.947	-0.230	0.038
L Only, LL Comb Run (L*LL*L)	1.827	2.464	1.503	4.904	1.517	2.372	1.766
L Only, LL Comb Run (L*LLL*)	1.843	2.372	1.869	3.534	12.120	3.480	-0.404
L Only, LL Comb Run (L*LLLL)	1.841	2.380	1.838	3.649	11.690	6.081	1.324
L Only, LL Comb Run (LL****)	1.586	4.942	1.923	-0.238	0.064	-0.016	0.003
L Only, LL Comb Run (LL***L)	1.585	4.950	1.892	-0.123	-0.366	2.585	1.730
L Only, LL Comb Run (LL**L*)	1.600	4.859	2.258	-1.494	10.237	3.694	-0.440
L Only, LL Comb Run (LL**LL)	1.599	4.866	2.227	-1.379	9.807	6.295	1.288
L Only, LL Comb Run (LL*L**)	1.572	5.029	1.575	2.097	2.391	-0.340	0.057
L Only, LL Comb Run (LL*L*L)	1.571	5.037	1.544	2.212	1.961	2.261	1.784
L Only, LL Comb Run (LL*LL*)	1.586	4.946	1.909	0.841	12.564	3.369	-0.386
L Only, LL Comb Run (LL*LLL)	1.585	4.953	1.879	0.956	12.134	5.971	1.342
L Only, LL Comb Run (LLL***)	1.641	4.618	4.250	2.097	-0.285	0.071	-0.012
L Only, LL Comb Run (LLL**L)	1.639	4.625	4.219	2.212	-0.714	2.672	1.716
L Only, LL Comb Run (LLL*L*)	1.655	4.534	4.585	0.841	9.888	3.781	-0.454
L Only, LL Comb Run (LLL*LL)	1.653	4.542	4.554	0.956	9.459	6.382	1.274
L Only, LL Comb Run (LLLL**)	1.626	4.705	3.902	4.432	2.042	-0.253	0.042
L Only, LL Comb Run (LLLL*L)	1.625	4.712	3.871	4.547	1.613	2.348	1.770
L Only, LL Comb Run (LLLLL*)	1.640	4.621	4.237	3.176	12.215	3.456	-0.400
L Only, LL Comb Run (LLLLLL)	1.639	4.629	4.206	3.291	11.786	6.058	1.328
S Only	5.169	14.868	12.630	13.270	13.345	16.777	5.779
W Only							

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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-H-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
E Only	0.003	-0.019	0.077	-0.288	3.889	-0.269	-3.393
H Only	0.004	-0.026	0.104	-0.392	3.393	0.662	-0.106

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	56.50	17.96	17.96	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.12	56.50	15.09	15.09	1.86	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.24	56.50	14.18	14.18	3.60	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.36	56.50	13.26	13.26	5.24	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.48	56.50	12.35	12.35	6.77	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.60	56.50	11.43	11.43	8.19	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.72	56.50	10.52	10.52	9.50	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.84	56.50	9.60	9.60	10.70	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.95	56.50	8.69	8.69	11.79	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.07	56.50	7.77	7.77	12.77	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.19	56.50	6.86	6.86	13.64	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.31	56.50	5.94	5.94	14.40	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.43	56.50	5.03	5.03	15.06	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.55	56.50	4.11	4.11	15.60	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.67	56.50	3.20	3.20	16.04	0.94	62.20	Vu < PhiVc/2	Not Reqd	1 62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.79	56.50	2.28	2.28	16.37	0.66	61.87	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.91	56.50	1.37	1.37	16.59	0.39	61.56	Vu < PhiVc/2	Not Reqd	1 61.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.03	56.50	0.63	0.63	13.17	0.22	61.36	Vu < PhiVc/2	Not Reqd	1 61.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.15	56.50	-0.68	0.68	8.98	0.36	61.52	Vu < PhiVc/2	Not Reqd	1 61.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.27	56.50	-1.52	1.52	15.24	0.47	61.65	Vu < PhiVc/2	Not Reqd	1 61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.39	56.50	-2.43	2.43	16.02	0.72	61.94	Vu < PhiVc/2	Not Reqd	1 61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.51	56.50	-3.35	3.35	15.68	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.63	56.50	-4.26	4.26	15.22	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.74	56.50	-5.18	5.18	14.66	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.86	56.50	-6.09	6.09	13.99	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.98	56.50	-7.01	7.01	13.21	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.10	56.50	-7.92	7.92	12.32	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.22	56.50	-8.84	8.84	11.32	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.34	56.50	-9.75	9.75	10.21	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.46	56.50	-10.67	10.67	8.99	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.58	56.50	-11.58	11.58	7.66	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.70	56.50	-12.50	12.50	6.22	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.82	56.50	-13.41	13.41	4.68	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.94	56.50	-14.33	14.33	3.02	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.06	56.50	-15.24	15.24	1.26	1.00	62.27	Vu < PhiVc/2	Not Reqd	1 62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.18	57.00	-16.16	16.16	0.61	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.30	57.00	-17.07	17.07	2.60	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.41	57.00	-17.99	17.99	4.69	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.53	57.00	-18.90	18.90	6.89	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.65	57.00	-19.82	19.82	9.20	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	57.00	-20.73	20.73	11.62	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	57.00	-21.65	21.65	14.14	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.01	57.00	-22.56	22.56	16.78	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	5.13	57.00	-23.48	23.48	19.53	1.00	63.30	Vu < PhiVc/2	Not Reqd	1 63.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.25	57.00	21.32	21.32	22.38	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.37	57.00	20.40	20.40	19.90	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.49	57.00	19.49	19.49	17.52	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.61	57.00	18.57	18.57	15.24	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.73	57.00	17.66	17.66	13.08	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.85	57.00	16.74	16.74	11.03	1.00	62.81	Vu < PhiVc/2	Not Reqd	1 62.8	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	2	5.97	57.00	15.83	15.83	9.09	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.09	57.00	14.91	14.91	7.25	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.20	57.00	14.00	14.00	5.53	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.32	57.00	13.08	13.08	3.91	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.44	57.00	12.17	12.17	2.41	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.56	57.00	11.25	11.25	1.01	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.68	56.50	10.34	10.34	0.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.80	56.50	9.43	9.43	1.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.92	56.50	8.51	8.51	2.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.04	56.50	7.60	7.60	3.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	56.50	6.68	6.68	4.34	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.28	56.50	5.77	5.77	5.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.40	56.50	4.85	4.85	5.72	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.52	56.50	3.94	3.94	6.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.64	56.50	3.02	3.02	6.66	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.76	56.50	2.11	2.11	6.96	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.88	56.50	1.26	1.26	3.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.99	56.50	-0.73	0.73	4.51	0.76	61.99	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.11	56.50	-1.38	1.38	5.56	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.23	56.50	-2.07	2.07	5.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.35	56.50	-2.85	2.85	6.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.47	56.50	-3.77	3.77	6.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.59	56.50	-4.68	4.68	5.71	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.71	56.50	-5.60	5.60	5.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.83	56.50	-6.51	6.51	4.37	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.95	56.50	-7.43	7.43	3.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.07	56.50	-8.34	8.34	2.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.19	56.50	-9.26	9.26	1.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.31	56.50	-10.17	10.17	0.39	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	57.00	-11.09	11.09	0.88	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	57.00	-12.00	12.00	2.25	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	57.00	-12.92	12.92	3.74	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.78	57.00	-13.83	13.83	5.34	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.90	57.00	-14.75	14.75	7.04	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.02	57.00	-15.66	15.66	8.85	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.14	57.00	-16.57	16.57	10.78	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.26	57.00	-17.49	17.49	12.81	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.38	57.00	-18.40	18.40	14.95	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.50	57.00	20.46	20.46	17.20	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.62	57.00	19.55	19.55	14.81	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.74	57.00	18.64	18.64	12.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.86	57.00	17.72	17.72	10.37	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.98	57.00	16.81	16.81	8.31	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.10	57.00	15.89	15.89	6.36	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.22	57.00	14.98	14.98	4.52	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.34	57.00	14.06	14.06	2.78	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.45	57.00	13.15	13.15	1.16	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.57	56.50	12.23	12.23	0.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.69	56.50	11.32	11.32	1.76	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.81	56.50	10.40	10.40	3.05	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.93	56.50	9.49	9.49	4.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.05	56.50	8.57	8.57	5.32	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.17	56.50	7.66	7.66	6.29	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.29	56.50	6.74	6.74	7.15	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-H-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	12.41	56.50	5.83	5.83	7.90	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.53	56.50	4.92	4.92	8.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	12.65	56.50	4.00	4.00	9.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.77	56.50	3.13	3.13	7.74	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.89	56.50	2.44	2.44	8.07	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.01	56.50	1.75	1.75	8.32	0.99	62.26	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	13.13	56.50	1.12	1.12	4.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.24	56.50	-1.14	1.14	7.93	0.67	61.89	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.36	56.50	-1.96	1.96	9.71	0.95	62.21	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.48	56.50	-2.87	2.87	9.42	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.60	56.50	-3.79	3.79	9.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.72	56.50	-4.70	4.70	8.52	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.84	56.50	-5.62	5.62	7.91	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.96	56.50	-6.53	6.53	7.18	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.08	56.50	-7.45	7.45	6.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	56.50	-8.36	8.36	5.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	56.50	-9.27	9.27	4.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.44	56.50	-10.19	10.19	3.19	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.56	56.50	-11.10	11.10	1.92	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.68	56.50	-12.02	12.02	0.54	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.80	57.00	-12.93	12.93	0.95	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.91	57.00	-13.85	13.85	2.55	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.03	57.00	-14.76	14.76	4.25	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.15	57.00	-15.68	15.68	6.07	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.27	57.00	-16.59	16.59	7.99	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.39	57.00	-17.51	17.51	10.03	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.51	57.00	-18.42	18.42	12.17	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.63	57.00	-19.34	19.34	14.42	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.75	57.00	19.06	19.06	16.79	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.87	57.00	18.14	18.14	14.57	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.99	57.00	17.23	17.23	12.46	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.11	57.00	16.31	16.31	10.46	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.23	57.00	15.40	15.40	8.56	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.35	57.00	14.48	14.48	6.78	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.47	57.00	13.57	13.57	5.11	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	57.00	12.65	12.65	3.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	57.00	11.74	11.74	2.09	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	57.00	10.82	10.82	0.74	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.94	56.50	9.91	9.91	0.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.06	56.50	8.99	8.99	1.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.18	56.50	8.08	8.08	2.64	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.30	56.50	7.16	7.16	3.55	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.42	56.50	6.25	6.25	4.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.54	56.50	5.34	5.34	5.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.66	56.50	4.42	4.42	5.62	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.78	56.50	3.51	3.51	6.10	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.90	56.50	2.59	2.59	6.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.02	56.50	-1.88	1.88	0.28	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.14	56.50	-2.27	2.27	0.03	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.26	57.00	-2.66	2.66	0.26	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.38	57.00	-3.06	3.06	0.61	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	18.49	56.50	-3.72	3.72	2.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	18.61	56.50	-4.41	4.41	2.44	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	18.73	56.50	-5.10	5.10	1.87	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Concrete Beam

Description : GB-H-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H,	4	18.85	56.50	-5.79	5.79	1.22	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	18.97	56.50	-6.48	6.48	0.49	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	56.50	-7.28	7.28	3.04	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.21	56.50	-8.20	8.20	2.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.33	56.50	-9.11	9.11	1.08	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.45	57.00	-10.03	10.03	0.06	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.57	57.00	-10.94	10.94	1.31	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.69	57.00	-11.86	11.86	2.67	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.81	57.00	-12.77	12.77	4.14	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.93	57.00	-13.69	13.69	5.72	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.05	57.00	-14.60	14.60	7.41	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.16	57.00	-15.52	15.52	9.20	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.28	57.00	-16.43	16.43	11.11	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.40	57.00	-17.34	17.34	13.12	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.52	57.00	-18.26	18.26	15.25	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.64	57.00	-19.17	19.17	17.48	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.76	57.00	-20.09	20.09	19.82	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.88	57.00	-21.00	21.00	22.27	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	21.00	57.00	41.65	41.65	24.53	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.12	57.00	40.84	40.84	19.61	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.24	57.00	40.02	40.02	14.79	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.36	57.00	39.21	39.21	10.06	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.48	57.00	38.40	38.40	5.43	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.60	57.00	37.59	37.59	0.90	1.00	62.81	PhiVc/2 < Vu <=	Min 11.5.6	89.7	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.72	56.50	36.78	36.78	3.54	1.00	62.27	PhiVc/2 < Vu <=	Min 11.5.6	88.9	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.84	56.50	35.97	35.97	7.88	1.00	62.27	PhiVc/2 < Vu <=	Min 11.5.6	88.9	14.7	14.0
+1.20D+1.60L+0.50S+1.60H,	5	21.95	56.50	35.16	35.16	12.12	1.00	62.27	PhiVc/2 < Vu <=	Min 11.5.6	88.9	14.7	14.0
+1.20D+0.50L+1.60S+1.60H,	5	22.07	56.50	9.56	9.56	7.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.19	56.50	8.53	8.53	8.86	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.31	56.50	7.49	7.49	9.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.43	56.50	6.46	6.46	10.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.55	56.50	5.42	5.42	11.36	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.67	56.50	4.39	4.39	11.94	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.79	56.50	3.36	3.36	12.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.91	56.50	2.32	2.32	12.74	0.86	62.10	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.03	56.50	-2.70	2.70	15.82	0.80	62.04	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.15	56.50	-3.34	3.34	15.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.27	56.50	-3.99	3.99	15.02	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.39	56.50	-4.63	4.63	14.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	23.51	56.50	-5.36	5.36	15.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	23.63	56.50	-6.17	6.17	14.61	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	23.74	56.50	-6.98	6.98	13.83	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	23.86	56.50	-7.79	7.79	12.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	23.98	56.50	-8.60	8.60	11.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	5	24.10	56.50	-9.42	9.42	10.89	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.22	56.50	-10.26	10.26	9.53	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.34	56.50	-11.34	11.34	8.24	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.46	56.50	-12.42	12.42	6.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.58	56.50	-13.50	13.50	5.27	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.70	56.50	-14.58	14.58	3.60	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.82	56.50	-15.66	15.66	1.79	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.94	57.00	-16.74	16.74	0.14	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.06	57.00	-17.81	17.81	2.20	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.18	57.00	-18.89	18.89	4.39	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual (k)	Vu Design (k)	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	5	25.30	57.00	-19.97	19.97	6.71	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.41	57.00	-21.05	21.05	9.16	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.53	57.00	-22.13	22.13	11.73	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.65	57.00	-23.21	23.21	14.44	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.77	57.00	-24.29	24.29	17.27	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.89	57.00	-25.37	25.37	20.23	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.01	57.00	-26.45	26.45	23.32	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.13	57.00	-27.52	27.52	26.54	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.25	57.00	29.43	29.43	29.89	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.37	57.00	28.35	28.35	26.44	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.49	57.00	27.27	27.27	23.13	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.61	57.00	26.19	26.19	19.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.73	57.00	25.11	25.11	16.88	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.85	57.00	24.03	24.03	13.94	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.97	57.00	22.96	22.96	11.14	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.09	57.00	21.88	21.88	8.47	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.20	57.00	20.80	20.80	5.92	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.32	57.00	19.72	19.72	3.50	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.44	57.00	18.64	18.64	1.21	1.00	62.81	Vu < PhiVc/2	Not Reqd 1	62.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.56	56.50	17.56	17.56	0.95	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.68	56.50	16.48	16.48	2.98	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.80	56.50	15.40	15.40	4.88	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.92	56.50	14.32	14.32	6.65	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.04	56.50	13.25	13.25	8.30	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.16	56.50	12.17	12.17	9.81	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.28	56.50	11.09	11.09	11.20	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.40	56.50	10.01	10.01	12.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.52	56.50	8.93	8.93	13.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.64	56.50	7.85	7.85	14.59	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.76	56.50	6.77	6.77	15.46	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.88	56.50	5.69	5.69	16.21	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.99	56.50	4.61	4.61	16.82	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.11	56.50	3.54	3.54	17.31	0.96	62.22	Vu < PhiVc/2	Not Reqd 1	62.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.23	56.50	2.46	2.46	16.68	0.69	61.91	Vu < PhiVc/2	Not Reqd 1	61.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	29.35	56.50	1.67	1.67	9.28	0.85	62.09	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	29.47	56.50	1.06	1.06	6.46	0.77	62.00	Vu < PhiVc/2	Not Reqd 1	62.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	6	29.59	56.50	-1.05	1.05	12.00	0.41	61.59	Vu < PhiVc/2	Not Reqd 1	61.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.71	56.50	-2.12	2.12	18.27	0.55	61.74	Vu < PhiVc/2	Not Reqd 1	61.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.83	56.50	-3.20	3.20	17.95	0.84	62.08	Vu < PhiVc/2	Not Reqd 1	62.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.95	56.50	-4.27	4.27	17.51	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.07	56.50	-5.35	5.35	16.93	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.19	56.50	-6.43	6.43	16.23	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.31	56.50	-7.51	7.51	15.40	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.43	56.50	-8.59	8.59	14.44	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.55	56.50	-9.67	9.67	13.35	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.66	56.50	-10.75	10.75	12.13	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.78	56.50	-11.83	11.83	10.78	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.90	56.50	-12.91	12.91	9.31	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.02	56.50	-13.98	13.98	7.70	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.14	56.50	-15.06	15.06	5.97	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.26	56.50	-16.14	16.14	4.11	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.38	56.50	-17.22	17.22	2.12	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.50	56.50	-18.30	18.30	0.00	1.00	62.27	Vu < PhiVc/2	Not Reqd 1	62.3	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Concrete Beam

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.250	16.69	160.67	0.10
Span # 2	2	5.250	-22.38	163.53	0.14
Span # 3	3	5.250	-17.20	163.53	0.11
Span # 4	4	5.250	-22.40	163.53	0.14
Span # 5	5	5.250	-26.54	163.53	0.16
Span # 6	6	5.250	-29.89	163.53	0.18
+1.40D+1.60H					
Span # 1	1	5.250	8.24	160.67	0.05
Span # 2	2	5.250	-11.03	163.53	0.07
Span # 3	3	5.250	-8.61	163.53	0.05
Span # 4	4	5.250	-13.74	163.53	0.08
Span # 5	5	5.250	-15.18	163.53	0.09
Span # 6	6	5.250	-17.11	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.46	163.53	0.06
Span # 3	3	5.250	-7.36	163.53	0.04
Span # 4	4	5.250	-11.48	163.53	0.07
Span # 5	5	5.250	-15.31	163.53	0.09
Span # 6	6	5.250	-17.03	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.11	160.67	0.04
Span # 2	2	5.250	-9.33	163.53	0.06
Span # 3	3	5.250	-7.87	163.53	0.05
Span # 4	4	5.250	-18.43	163.53	0.11
Span # 5	5	5.250	-19.79	163.53	0.12
Span # 6	6	5.250	-18.50	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.10	160.67	0.04
Span # 2	2	5.250	-9.34	163.53	0.06
Span # 3	3	5.250	-7.82	163.53	0.05
Span # 4	4	5.250	-17.85	163.53	0.11
Span # 5	5	5.250	-19.18	163.53	0.12
Span # 6	6	5.250	-20.75	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.02	160.67	0.04
Span # 2	2	5.250	-9.57	163.53	0.06
Span # 3	3	5.250	-6.94	163.53	0.04
Span # 4	4	5.250	-13.49	163.53	0.08
Span # 5	5	5.250	-15.04	163.53	0.09
Span # 6	6	5.250	-14.34	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.01	160.67	0.04
Span # 2	2	5.250	-9.58	163.53	0.06
Span # 3	3	5.250	-7.10	163.53	0.04
Span # 4	4	5.250	-12.91	163.53	0.08
Span # 5	5	5.250	-14.90	163.53	0.09
Span # 6	6	5.250	-16.58	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.38	163.53	0.05
Span # 4	4	5.250	-19.87	163.53	0.12
Span # 5	5	5.250	-21.60	163.53	0.13
Span # 6	6	5.250	-18.05	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.46	163.53	0.06
Span # 3	3	5.250	-7.34	163.53	0.04
Span # 4	4	5.250	-19.28	163.53	0.12
Span # 5	5	5.250	-21.00	163.53	0.13
Span # 6	6	5.250	-20.30	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.24	160.67	0.05
Span # 2	2	5.250	-8.99	163.53	0.05
Span # 3	3	5.250	-9.22	163.53	0.06
Span # 4	4	5.250	-11.62	163.53	0.07

Concrete Beam

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Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.250	-13.23	163.53	0.08
Span # 6	6	5.250	-14.91	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.24	160.67	0.05
Span # 2	2	5.250	-9.00	163.53	0.06
Span # 3	3	5.250	-9.17	163.53	0.06
Span # 4	4	5.250	-11.04	163.53	0.07
Span # 5	5	5.250	-15.41	163.53	0.09
Span # 6	6	5.250	-17.16	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.29	160.67	0.05
Span # 2	2	5.250	-8.87	163.53	0.05
Span # 3	3	5.250	-9.68	163.53	0.06
Span # 4	4	5.250	-18.00	163.53	0.11
Span # 5	5	5.250	-19.30	163.53	0.12
Span # 6	6	5.250	-18.63	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.29	160.67	0.05
Span # 2	2	5.250	-8.89	163.53	0.05
Span # 3	3	5.250	-9.64	163.53	0.06
Span # 4	4	5.250	-17.41	163.53	0.11
Span # 5	5	5.250	-18.70	163.53	0.11
Span # 6	6	5.250	-20.87	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.19	160.67	0.04
Span # 2	2	5.250	-9.11	163.53	0.06
Span # 3	3	5.250	-8.73	163.53	0.05
Span # 4	4	5.250	-13.06	163.53	0.08
Span # 5	5	5.250	-14.55	163.53	0.09
Span # 6	6	5.250	-14.46	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.19	160.67	0.04
Span # 2	2	5.250	-9.12	163.53	0.06
Span # 3	3	5.250	-8.69	163.53	0.05
Span # 4	4	5.250	-12.47	163.53	0.08
Span # 5	5	5.250	-15.01	163.53	0.09
Span # 6	6	5.250	-16.70	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.24	160.67	0.05
Span # 2	2	5.250	-9.00	163.53	0.06
Span # 3	3	5.250	-9.20	163.53	0.06
Span # 4	4	5.250	-19.43	163.53	0.12
Span # 5	5	5.250	-21.12	163.53	0.13
Span # 6	6	5.250	-18.17	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.24	160.67	0.05
Span # 2	2	5.250	-9.01	163.53	0.06
Span # 3	3	5.250	-9.15	163.53	0.06
Span # 4	4	5.250	-18.85	163.53	0.12
Span # 5	5	5.250	-20.51	163.53	0.13
Span # 6	6	5.250	-20.42	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-9.89	227.02	0.04
Span # 2	2	5.250	-11.15	163.53	0.07
Span # 3	3	5.250	-9.27	163.53	0.06
Span # 4	4	5.250	-12.18	163.53	0.07
Span # 5	5	5.250	-13.36	163.53	0.08
Span # 6	6	5.250	-14.76	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	-9.90	227.02	0.04
Span # 2	2	5.250	-11.16	163.53	0.07
Span # 3	3	5.250	-9.22	163.53	0.06
Span # 4	4	5.250	-11.59	163.53	0.07
Span # 5	5	5.250	-15.28	163.53	0.09
Span # 6	6	5.250	-17.00	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-9.78	227.02	0.04
Span # 2	2	5.250	-11.03	163.53	0.07
Span # 3	3	5.250	-9.74	163.53	0.06

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.250	-18.55	163.53	0.11
Span # 5	5	5.250	-19.92	163.53	0.12
Span # 6	6	5.250	-18.47	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	-9.79	227.02	0.04
Span # 2	2	5.250	-11.04	163.53	0.07
Span # 3	3	5.250	-9.69	163.53	0.06
Span # 4	4	5.250	-17.97	163.53	0.11
Span # 5	5	5.250	-19.32	163.53	0.12
Span # 6	6	5.250	-20.72	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-10.01	227.02	0.04
Span # 2	2	5.250	-11.27	163.53	0.07
Span # 3	3	5.250	-8.78	163.53	0.05
Span # 4	4	5.250	-13.61	163.53	0.08
Span # 5	5	5.250	-15.17	163.53	0.09
Span # 6	6	5.250	-14.30	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	-10.02	227.02	0.04
Span # 2	2	5.250	-11.28	163.53	0.07
Span # 3	3	5.250	-8.74	163.53	0.05
Span # 4	4	5.250	-13.03	163.53	0.08
Span # 5	5	5.250	-14.87	163.53	0.09
Span # 6	6	5.250	-16.55	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-9.90	227.02	0.04
Span # 2	2	5.250	-11.15	163.53	0.07
Span # 3	3	5.250	-9.25	163.53	0.06
Span # 4	4	5.250	-19.99	163.53	0.12
Span # 5	5	5.250	-21.74	163.53	0.13
Span # 6	6	5.250	-18.02	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	-9.91	227.02	0.04
Span # 2	2	5.250	-11.16	163.53	0.07
Span # 3	3	5.250	-9.21	163.53	0.06
Span # 4	4	5.250	-19.40	163.53	0.12
Span # 5	5	5.250	-21.14	163.53	0.13
Span # 6	6	5.250	-20.26	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-9.45	227.02	0.04
Span # 2	2	5.250	-10.69	163.53	0.07
Span # 3	3	5.250	-11.08	163.53	0.07
Span # 4	4	5.250	-11.74	163.53	0.07
Span # 5	5	5.250	-13.20	163.53	0.08
Span # 6	6	5.250	-14.88	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	-9.46	227.02	0.04
Span # 2	2	5.250	-10.70	163.53	0.07
Span # 3	3	5.250	-11.04	163.53	0.07
Span # 4	4	5.250	-11.16	163.53	0.07
Span # 5	5	5.250	-15.38	163.53	0.09
Span # 6	6	5.250	-17.12	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	6.63	160.67	0.04
Span # 2	2	5.250	-10.58	163.53	0.06
Span # 3	3	5.250	-11.55	163.53	0.07
Span # 4	4	5.250	-18.12	163.53	0.11
Span # 5	5	5.250	-19.43	163.53	0.12
Span # 6	6	5.250	-18.59	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	6.62	160.67	0.04
Span # 2	2	5.250	-10.59	163.53	0.06
Span # 3	3	5.250	-11.51	163.53	0.07
Span # 4	4	5.250	-17.53	163.53	0.11
Span # 5	5	5.250	-18.83	163.53	0.12
Span # 6	6	5.250	-20.84	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-9.57	227.02	0.04
Span # 2	2	5.250	-10.82	163.53	0.07

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.250	-10.60	163.53	0.06
Span # 4	4	5.250	-13.18	163.53	0.08
Span # 5	5	5.250	-14.69	163.53	0.09
Span # 6	6	5.250	-14.42	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	-9.58	227.02	0.04
Span # 2	2	5.250	-10.83	163.53	0.07
Span # 3	3	5.250	-10.55	163.53	0.06
Span # 4	4	5.250	-12.59	163.53	0.08
Span # 5	5	5.250	-14.98	163.53	0.09
Span # 6	6	5.250	-16.67	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-9.45	227.02	0.04
Span # 2	2	5.250	-10.70	163.53	0.07
Span # 3	3	5.250	-11.07	163.53	0.07
Span # 4	4	5.250	-19.55	163.53	0.12
Span # 5	5	5.250	-21.25	163.53	0.13
Span # 6	6	5.250	-18.14	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	-9.46	227.02	0.04
Span # 2	2	5.250	-10.71	163.53	0.07
Span # 3	3	5.250	-11.02	163.53	0.07
Span # 4	4	5.250	-18.97	163.53	0.12
Span # 5	5	5.250	-20.65	163.53	0.13
Span # 6	6	5.250	-20.38	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	10.30	160.67	0.06
Span # 2	2	5.250	-11.77	163.53	0.07
Span # 3	3	5.250	-6.78	163.53	0.04
Span # 4	4	5.250	-12.02	163.53	0.07
Span # 5	5	5.250	-13.18	163.53	0.08
Span # 6	6	5.250	-14.80	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	10.30	160.67	0.06
Span # 2	2	5.250	-11.78	163.53	0.07
Span # 3	3	5.250	-6.73	163.53	0.04
Span # 4	4	5.250	-11.44	163.53	0.07
Span # 5	5	5.250	-15.32	163.53	0.09
Span # 6	6	5.250	-17.05	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	10.35	160.67	0.06
Span # 2	2	5.250	-11.65	163.53	0.07
Span # 3	3	5.250	-7.24	163.53	0.04
Span # 4	4	5.250	-18.39	163.53	0.11
Span # 5	5	5.250	-19.74	163.53	0.12
Span # 6	6	5.250	-18.52	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	10.35	160.67	0.06
Span # 2	2	5.250	-11.66	163.53	0.07
Span # 3	3	5.250	-7.20	163.53	0.04
Span # 4	4	5.250	-17.81	163.53	0.11
Span # 5	5	5.250	-19.14	163.53	0.12
Span # 6	6	5.250	-20.76	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	10.25	160.67	0.06
Span # 2	2	5.250	-11.89	163.53	0.07
Span # 3	3	5.250	-7.09	163.53	0.04
Span # 4	4	5.250	-13.45	163.53	0.08
Span # 5	5	5.250	-15.00	163.53	0.09
Span # 6	6	5.250	-14.35	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	10.25	160.67	0.06
Span # 2	2	5.250	-11.90	163.53	0.07
Span # 3	3	5.250	-7.25	163.53	0.04
Span # 4	4	5.250	-12.87	163.53	0.08
Span # 5	5	5.250	-14.91	163.53	0.09
Span # 6	6	5.250	-16.59	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	10.30	160.67	0.06

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-11.78	163.53	0.07
Span # 3	3	5.250	-6.76	163.53	0.04
Span # 4	4	5.250	-19.83	163.53	0.12
Span # 5	5	5.250	-21.56	163.53	0.13
Span # 6	6	5.250	-18.06	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	10.30	160.67	0.06
Span # 2	2	5.250	-11.79	163.53	0.07
Span # 3	3	5.250	-6.71	163.53	0.04
Span # 4	4	5.250	-19.24	163.53	0.12
Span # 5	5	5.250	-20.96	163.53	0.13
Span # 6	6	5.250	-20.31	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	10.49	160.67	0.07
Span # 2	2	5.250	-11.32	163.53	0.07
Span # 3	3	5.250	-8.59	163.53	0.05
Span # 4	4	5.250	-11.58	163.53	0.07
Span # 5	5	5.250	-13.24	163.53	0.08
Span # 6	6	5.250	-14.92	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	10.48	160.67	0.07
Span # 2	2	5.250	-11.33	163.53	0.07
Span # 3	3	5.250	-8.55	163.53	0.05
Span # 4	4	5.250	-11.00	163.53	0.07
Span # 5	5	5.250	-15.42	163.53	0.09
Span # 6	6	5.250	-17.17	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	10.54	160.67	0.07
Span # 2	2	5.250	-11.20	163.53	0.07
Span # 3	3	5.250	-9.06	163.53	0.06
Span # 4	4	5.250	-17.96	163.53	0.11
Span # 5	5	5.250	-19.25	163.53	0.12
Span # 6	6	5.250	-18.64	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	10.53	160.67	0.07
Span # 2	2	5.250	-11.21	163.53	0.07
Span # 3	3	5.250	-9.02	163.53	0.06
Span # 4	4	5.250	-17.37	163.53	0.11
Span # 5	5	5.250	-18.65	163.53	0.11
Span # 6	6	5.250	-20.88	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	10.44	160.67	0.06
Span # 2	2	5.250	-11.44	163.53	0.07
Span # 3	3	5.250	-8.53	163.53	0.05
Span # 4	4	5.250	-13.02	163.53	0.08
Span # 5	5	5.250	-14.51	163.53	0.09
Span # 6	6	5.250	-14.47	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	10.43	160.67	0.06
Span # 2	2	5.250	-11.45	163.53	0.07
Span # 3	3	5.250	-8.69	163.53	0.05
Span # 4	4	5.250	-12.43	163.53	0.08
Span # 5	5	5.250	-15.02	163.53	0.09
Span # 6	6	5.250	-16.71	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	10.49	160.67	0.07
Span # 2	2	5.250	-11.32	163.53	0.07
Span # 3	3	5.250	-8.57	163.53	0.05
Span # 4	4	5.250	-19.39	163.53	0.12
Span # 5	5	5.250	-21.07	163.53	0.13
Span # 6	6	5.250	-18.18	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	10.48	160.67	0.07
Span # 2	2	5.250	-11.33	163.53	0.07
Span # 3	3	5.250	-8.53	163.53	0.05
Span # 4	4	5.250	-18.81	163.53	0.12
Span # 5	5	5.250	-20.47	163.53	0.13
Span # 6	6	5.250	-20.43	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	9.62	160.67	0.06
Span # 2	2	5.250	-13.47	163.53	0.08
Span # 3	3	5.250	-8.64	163.53	0.05
Span # 4	4	5.250	-12.14	163.53	0.07
Span # 5	5	5.250	-13.31	163.53	0.08
Span # 6	6	5.250	-14.77	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	9.62	160.67	0.06
Span # 2	2	5.250	-13.48	163.53	0.08
Span # 3	3	5.250	-8.60	163.53	0.05
Span # 4	4	5.250	-11.55	163.53	0.07
Span # 5	5	5.250	-15.29	163.53	0.09
Span # 6	6	5.250	-17.01	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	9.67	160.67	0.06
Span # 2	2	5.250	-13.36	163.53	0.08
Span # 3	3	5.250	-9.11	163.53	0.06
Span # 4	4	5.250	-18.51	163.53	0.11
Span # 5	5	5.250	-19.88	163.53	0.12
Span # 6	6	5.250	-18.48	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	9.66	160.67	0.06
Span # 2	2	5.250	-13.37	163.53	0.08
Span # 3	3	5.250	-9.07	163.53	0.06
Span # 4	4	5.250	-17.93	163.53	0.11
Span # 5	5	5.250	-19.27	163.53	0.12
Span # 6	6	5.250	-20.73	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	9.57	160.67	0.06
Span # 2	2	5.250	-13.59	163.53	0.08
Span # 3	3	5.250	-8.16	163.53	0.05
Span # 4	4	5.250	-13.57	163.53	0.08
Span # 5	5	5.250	-15.13	163.53	0.09
Span # 6	6	5.250	-14.31	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	9.57	160.67	0.06
Span # 2	2	5.250	-13.61	163.53	0.08
Span # 3	3	5.250	-8.11	163.53	0.05
Span # 4	4	5.250	-12.99	163.53	0.08
Span # 5	5	5.250	-14.88	163.53	0.09
Span # 6	6	5.250	-16.56	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	9.62	160.67	0.06
Span # 2	2	5.250	-13.48	163.53	0.08
Span # 3	3	5.250	-8.63	163.53	0.05
Span # 4	4	5.250	-19.95	163.53	0.12
Span # 5	5	5.250	-21.69	163.53	0.13
Span # 6	6	5.250	-18.03	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	9.62	160.67	0.06
Span # 2	2	5.250	-13.49	163.53	0.08
Span # 3	3	5.250	-8.58	163.53	0.05
Span # 4	4	5.250	-19.36	163.53	0.12
Span # 5	5	5.250	-21.09	163.53	0.13
Span # 6	6	5.250	-20.27	163.53	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	9.80	160.67	0.06
Span # 2	2	5.250	-13.02	163.53	0.08
Span # 3	3	5.250	-10.46	163.53	0.06
Span # 4	4	5.250	-11.70	163.53	0.07
Span # 5	5	5.250	-13.21	163.53	0.08
Span # 6	6	5.250	-14.89	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	9.79	160.67	0.06
Span # 2	2	5.250	-13.03	163.53	0.08
Span # 3	3	5.250	-10.42	163.53	0.06
Span # 4	4	5.250	-11.12	163.53	0.07
Span # 5	5	5.250	-15.39	163.53	0.09
Span # 6	6	5.250	-17.13	163.53	0.10

Concrete Beam

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	9.84	160.67	0.06
Span # 2	2	5.250	-12.90	163.53	0.08
Span # 3	3	5.250	-10.93	163.53	0.07
Span # 4	4	5.250	-18.08	163.53	0.11
Span # 5	5	5.250	-19.39	163.53	0.12
Span # 6	6	5.250	-18.60	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	9.84	160.67	0.06
Span # 2	2	5.250	-12.91	163.53	0.08
Span # 3	3	5.250	-10.89	163.53	0.07
Span # 4	4	5.250	-17.49	163.53	0.11
Span # 5	5	5.250	-18.79	163.53	0.11
Span # 6	6	5.250	-20.85	163.53	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	9.75	160.67	0.06
Span # 2	2	5.250	-13.14	163.53	0.08
Span # 3	3	5.250	-9.97	163.53	0.06
Span # 4	4	5.250	-13.14	163.53	0.08
Span # 5	5	5.250	-14.64	163.53	0.09
Span # 6	6	5.250	-14.43	163.53	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	9.75	160.67	0.06
Span # 2	2	5.250	-13.15	163.53	0.08
Span # 3	3	5.250	-9.93	163.53	0.06
Span # 4	4	5.250	-12.55	163.53	0.08
Span # 5	5	5.250	-14.99	163.53	0.09
Span # 6	6	5.250	-16.68	163.53	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	9.80	160.67	0.06
Span # 2	2	5.250	-13.02	163.53	0.08
Span # 3	3	5.250	-10.44	163.53	0.06
Span # 4	4	5.250	-19.51	163.53	0.12
Span # 5	5	5.250	-21.21	163.53	0.13
Span # 6	6	5.250	-18.15	163.53	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	9.79	160.67	0.06
Span # 2	2	5.250	-13.03	163.53	0.08
Span # 3	3	5.250	-10.40	163.53	0.06
Span # 4	4	5.250	-18.93	163.53	0.12
Span # 5	5	5.250	-20.60	163.53	0.13
Span # 6	6	5.250	-20.40	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.250	9.73	160.67	0.06
Span # 2	2	5.250	-13.09	163.53	0.08
Span # 3	3	5.250	-10.01	163.53	0.06
Span # 4	4	5.250	-13.89	163.53	0.08
Span # 5	5	5.250	-18.97	163.53	0.12
Span # 6	6	5.250	-21.16	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.250	9.78	160.67	0.06
Span # 2	2	5.250	-12.97	163.53	0.08
Span # 3	3	5.250	-10.53	163.53	0.06
Span # 4	4	5.250	-20.85	163.53	0.13
Span # 5	5	5.250	-22.58	163.53	0.14
Span # 6	6	5.250	-22.63	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	5.250	9.78	160.67	0.06
Span # 2	2	5.250	-12.98	163.53	0.08
Span # 3	3	5.250	-10.48	163.53	0.06
Span # 4	4	5.250	-20.27	163.53	0.12
Span # 5	5	5.250	-22.07	163.53	0.13
Span # 6	6	5.250	-24.87	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.250	9.69	160.67	0.06
Span # 2	2	5.250	-13.20	163.53	0.08
Span # 3	3	5.250	-9.57	163.53	0.06
Span # 4	4	5.250	-15.91	163.53	0.10
Span # 5	5	5.250	-17.84	163.53	0.11

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	5.250	-18.46	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.250	9.69	160.67	0.06
Span # 2	2	5.250	-13.22	163.53	0.08
Span # 3	3	5.250	-9.65	163.53	0.06
Span # 4	4	5.250	-15.33	163.53	0.09
Span # 5	5	5.250	-18.57	163.53	0.11
Span # 6	6	5.250	-20.70	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.250	9.74	160.67	0.06
Span # 2	2	5.250	-13.09	163.53	0.08
Span # 3	3	5.250	-10.04	163.53	0.06
Span # 4	4	5.250	-22.28	163.53	0.14
Span # 5	5	5.250	-24.40	163.53	0.15
Span # 6	6	5.250	-22.17	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	5.250	9.73	160.67	0.06
Span # 2	2	5.250	-13.10	163.53	0.08
Span # 3	3	5.250	-9.99	163.53	0.06
Span # 4	4	5.250	-21.70	163.53	0.13
Span # 5	5	5.250	-23.80	163.53	0.15
Span # 6	6	5.250	-24.42	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L***					
Span # 1	1	5.250	9.92	160.67	0.06
Span # 2	2	5.250	-12.63	163.53	0.08
Span # 3	3	5.250	-11.87	163.53	0.07
Span # 4	4	5.250	-14.04	163.53	0.09
Span # 5	5	5.250	-16.90	163.53	0.10
Span # 6	6	5.250	-19.04	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L**L					
Span # 1	1	5.250	9.91	160.67	0.06
Span # 2	2	5.250	-12.64	163.53	0.08
Span # 3	3	5.250	-11.83	163.53	0.07
Span # 4	4	5.250	-13.46	163.53	0.08
Span # 5	5	5.250	-19.08	163.53	0.12
Span # 6	6	5.250	-21.28	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*L*					
Span # 1	1	5.250	9.96	160.67	0.06
Span # 2	2	5.250	-12.51	163.53	0.08
Span # 3	3	5.250	-12.34	163.53	0.08
Span # 4	4	5.250	-20.42	163.53	0.12
Span # 5	5	5.250	-22.10	163.53	0.14
Span # 6	6	5.250	-22.75	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*LL					
Span # 1	1	5.250	9.96	160.67	0.06
Span # 2	2	5.250	-12.52	163.53	0.08
Span # 3	3	5.250	-12.30	163.53	0.08
Span # 4	4	5.250	-19.83	163.53	0.12
Span # 5	5	5.250	-22.18	163.53	0.14
Span # 6	6	5.250	-25.00	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL**					
Span # 1	1	5.250	9.87	160.67	0.06
Span # 2	2	5.250	-12.75	163.53	0.08
Span # 3	3	5.250	-11.39	163.53	0.07
Span # 4	4	5.250	-15.48	163.53	0.09
Span # 5	5	5.250	-17.35	163.53	0.11
Span # 6	6	5.250	-18.58	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL*L					
Span # 1	1	5.250	9.86	160.67	0.06
Span # 2	2	5.250	-12.76	163.53	0.08
Span # 3	3	5.250	-11.34	163.53	0.07
Span # 4	4	5.250	-14.89	163.53	0.09
Span # 5	5	5.250	-18.68	163.53	0.11
Span # 6	6	5.250	-20.83	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLL*					
Span # 1	1	5.250	9.91	160.67	0.06
Span # 2	2	5.250	-12.63	163.53	0.08
Span # 3	3	5.250	-11.86	163.53	0.07
Span # 4	4	5.250	-21.85	163.53	0.13

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.250	-23.91	163.53	0.15
Span # 6	6	5.250	-22.30	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLLL					
Span # 1	1	5.250	9.91	160.67	0.06
Span # 2	2	5.250	-12.64	163.53	0.08
Span # 3	3	5.250	-11.81	163.53	0.07
Span # 4	4	5.250	-21.27	163.53	0.13
Span # 5	5	5.250	-23.31	163.53	0.14
Span # 6	6	5.250	-24.54	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L****					
Span # 1	1	5.250	-13.06	227.02	0.06
Span # 2	2	5.250	-14.78	163.53	0.09
Span # 3	3	5.250	-11.93	163.53	0.07
Span # 4	4	5.250	-14.60	163.53	0.09
Span # 5	5	5.250	-16.76	163.53	0.10
Span # 6	6	5.250	-18.88	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L***L					
Span # 1	1	5.250	-13.07	227.02	0.06
Span # 2	2	5.250	-14.80	163.53	0.09
Span # 3	3	5.250	-11.88	163.53	0.07
Span # 4	4	5.250	-14.01	163.53	0.09
Span # 5	5	5.250	-18.94	163.53	0.12
Span # 6	6	5.250	-21.13	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**L*					
Span # 1	1	5.250	-12.95	227.02	0.06
Span # 2	2	5.250	-14.67	163.53	0.09
Span # 3	3	5.250	-12.39	163.53	0.08
Span # 4	4	5.250	-20.97	163.53	0.13
Span # 5	5	5.250	-22.72	163.53	0.14
Span # 6	6	5.250	-22.60	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**LL					
Span # 1	1	5.250	-12.96	227.02	0.06
Span # 2	2	5.250	-14.68	163.53	0.09
Span # 3	3	5.250	-12.35	163.53	0.08
Span # 4	4	5.250	-20.39	163.53	0.12
Span # 5	5	5.250	-22.12	163.53	0.14
Span # 6	6	5.250	-24.84	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L**					
Span # 1	1	5.250	-13.18	227.02	0.06
Span # 2	2	5.250	-14.91	163.53	0.09
Span # 3	3	5.250	-11.44	163.53	0.07
Span # 4	4	5.250	-16.03	163.53	0.10
Span # 5	5	5.250	-17.97	163.53	0.11
Span # 6	6	5.250	-18.43	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L*L					
Span # 1	1	5.250	-13.19	227.02	0.06
Span # 2	2	5.250	-14.92	163.53	0.09
Span # 3	3	5.250	-11.39	163.53	0.07
Span # 4	4	5.250	-15.45	163.53	0.09
Span # 5	5	5.250	-18.54	163.53	0.11
Span # 6	6	5.250	-20.67	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LL*					
Span # 1	1	5.250	-13.07	227.02	0.06
Span # 2	2	5.250	-14.79	163.53	0.09
Span # 3	3	5.250	-11.91	163.53	0.07
Span # 4	4	5.250	-22.40	163.53	0.14
Span # 5	5	5.250	-24.53	163.53	0.15
Span # 6	6	5.250	-22.14	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LLL					
Span # 1	1	5.250	-13.08	227.02	0.06
Span # 2	2	5.250	-14.80	163.53	0.09
Span # 3	3	5.250	-11.86	163.53	0.07
Span # 4	4	5.250	-21.82	163.53	0.13
Span # 5	5	5.250	-23.93	163.53	0.15
Span # 6	6	5.250	-24.39	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL***					
Span # 1	1	5.250	9.26	160.67	0.06
Span # 2	2	5.250	-14.33	163.53	0.09
Span # 3	3	5.250	-13.74	163.53	0.08

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.250	-14.16	163.53	0.09
Span # 5	5	5.250	-16.87	163.53	0.10
Span # 6	6	5.250	-19.00	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL**L					
Span # 1	1	5.250	9.25	160.67	0.06
Span # 2	2	5.250	-14.34	163.53	0.09
Span # 3	3	5.250	-13.70	163.53	0.08
Span # 4	4	5.250	-13.58	163.53	0.08
Span # 5	5	5.250	-19.05	163.53	0.12
Span # 6	6	5.250	-21.25	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*L*					
Span # 1	1	5.250	9.30	160.67	0.06
Span # 2	2	5.250	-14.21	163.53	0.09
Span # 3	3	5.250	-14.21	163.53	0.09
Span # 4	4	5.250	-20.53	163.53	0.13
Span # 5	5	5.250	-22.23	163.53	0.14
Span # 6	6	5.250	-22.72	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*LL					
Span # 1	1	5.250	9.30	160.67	0.06
Span # 2	2	5.250	-14.22	163.53	0.09
Span # 3	3	5.250	-14.17	163.53	0.09
Span # 4	4	5.250	-19.95	163.53	0.12
Span # 5	5	5.250	-22.15	163.53	0.14
Span # 6	6	5.250	-24.96	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL**					
Span # 1	1	5.250	9.21	160.67	0.06
Span # 2	2	5.250	-14.45	163.53	0.09
Span # 3	3	5.250	-13.26	163.53	0.08
Span # 4	4	5.250	-15.60	163.53	0.10
Span # 5	5	5.250	-17.48	163.53	0.11
Span # 6	6	5.250	-18.55	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL*L					
Span # 1	1	5.250	9.20	160.67	0.06
Span # 2	2	5.250	-14.46	163.53	0.09
Span # 3	3	5.250	-13.21	163.53	0.08
Span # 4	4	5.250	-15.01	163.53	0.09
Span # 5	5	5.250	-18.65	163.53	0.11
Span # 6	6	5.250	-20.79	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLL*					
Span # 1	1	5.250	9.25	160.67	0.06
Span # 2	2	5.250	-14.34	163.53	0.09
Span # 3	3	5.250	-13.72	163.53	0.08
Span # 4	4	5.250	-21.97	163.53	0.13
Span # 5	5	5.250	-24.05	163.53	0.15
Span # 6	6	5.250	-22.26	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLLL					
Span # 1	1	5.250	9.25	160.67	0.06
Span # 2	2	5.250	-14.35	163.53	0.09
Span # 3	3	5.250	-13.68	163.53	0.08
Span # 4	4	5.250	-21.38	163.53	0.13
Span # 5	5	5.250	-23.45	163.53	0.14
Span # 6	6	5.250	-24.51	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*****					
Span # 1	1	5.250	12.97	160.67	0.08
Span # 2	2	5.250	-15.41	163.53	0.09
Span # 3	3	5.250	-9.43	163.53	0.06
Span # 4	4	5.250	-14.44	163.53	0.09
Span # 5	5	5.250	-16.80	163.53	0.10
Span # 6	6	5.250	-18.92	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L****L					
Span # 1	1	5.250	12.97	160.67	0.08
Span # 2	2	5.250	-15.42	163.53	0.09
Span # 3	3	5.250	-9.39	163.53	0.06
Span # 4	4	5.250	-13.85	163.53	0.08
Span # 5	5	5.250	-18.98	163.53	0.12
Span # 6	6	5.250	-21.17	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***L*					
Span # 1	1	5.250	13.02	160.67	0.08
Span # 2	2	5.250	-15.29	163.53	0.09

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.250	-9.90	163.53	0.06
Span # 4	4	5.250	-20.81	163.53	0.13
Span # 5	5	5.250	-22.54	163.53	0.14
Span # 6	6	5.250	-22.64	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***LL					
Span # 1	1	5.250	13.02	160.67	0.08
Span # 2	2	5.250	-15.30	163.53	0.09
Span # 3	3	5.250	-9.86	163.53	0.06
Span # 4	4	5.250	-20.23	163.53	0.12
Span # 5	5	5.250	-22.08	163.53	0.14
Span # 6	6	5.250	-24.89	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L**					
Span # 1	1	5.250	12.92	160.67	0.08
Span # 2	2	5.250	-15.53	163.53	0.09
Span # 3	3	5.250	-9.64	163.53	0.06
Span # 4	4	5.250	-15.87	163.53	0.10
Span # 5	5	5.250	-17.79	163.53	0.11
Span # 6	6	5.250	-18.47	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L*L					
Span # 1	1	5.250	12.92	160.67	0.08
Span # 2	2	5.250	-15.54	163.53	0.10
Span # 3	3	5.250	-9.80	163.53	0.06
Span # 4	4	5.250	-15.29	163.53	0.09
Span # 5	5	5.250	-18.58	163.53	0.11
Span # 6	6	5.250	-20.72	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LL*					
Span # 1	1	5.250	12.97	160.67	0.08
Span # 2	2	5.250	-15.41	163.53	0.09
Span # 3	3	5.250	-9.41	163.53	0.06
Span # 4	4	5.250	-22.24	163.53	0.14
Span # 5	5	5.250	-24.36	163.53	0.15
Span # 6	6	5.250	-22.19	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LLL					
Span # 1	1	5.250	12.97	160.67	0.08
Span # 2	2	5.250	-15.42	163.53	0.09
Span # 3	3	5.250	-9.37	163.53	0.06
Span # 4	4	5.250	-21.66	163.53	0.13
Span # 5	5	5.250	-23.75	163.53	0.15
Span # 6	6	5.250	-24.43	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L***					
Span # 1	1	5.250	13.16	160.67	0.08
Span # 2	2	5.250	-14.95	163.53	0.09
Span # 3	3	5.250	-11.25	163.53	0.07
Span # 4	4	5.250	-14.00	163.53	0.09
Span # 5	5	5.250	-16.91	163.53	0.10
Span # 6	6	5.250	-19.05	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L**L					
Span # 1	1	5.250	13.16	160.67	0.08
Span # 2	2	5.250	-14.96	163.53	0.09
Span # 3	3	5.250	-11.21	163.53	0.07
Span # 4	4	5.250	-13.42	163.53	0.08
Span # 5	5	5.250	-19.09	163.53	0.12
Span # 6	6	5.250	-21.29	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*L*					
Span # 1	1	5.250	13.21	160.67	0.08
Span # 2	2	5.250	-14.84	163.53	0.09
Span # 3	3	5.250	-11.72	163.53	0.07
Span # 4	4	5.250	-20.38	163.53	0.12
Span # 5	5	5.250	-22.05	163.53	0.13
Span # 6	6	5.250	-22.76	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*LL					
Span # 1	1	5.250	13.20	160.67	0.08
Span # 2	2	5.250	-14.85	163.53	0.09
Span # 3	3	5.250	-11.68	163.53	0.07
Span # 4	4	5.250	-19.79	163.53	0.12
Span # 5	5	5.250	-22.19	163.53	0.14
Span # 6	6	5.250	-25.01	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL**					
Span # 1	1	5.250	13.11	160.67	0.08

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-15.08	163.53	0.09
Span # 3	3	5.250	-11.08	163.53	0.07
Span # 4	4	5.250	-15.44	163.53	0.09
Span # 5	5	5.250	-17.31	163.53	0.11
Span # 6	6	5.250	-18.59	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL*L					
Span # 1	1	5.250	13.11	160.67	0.08
Span # 2	2	5.250	-15.09	163.53	0.09
Span # 3	3	5.250	-11.24	163.53	0.07
Span # 4	4	5.250	-14.85	163.53	0.09
Span # 5	5	5.250	-18.69	163.53	0.11
Span # 6	6	5.250	-20.84	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLL*					
Span # 1	1	5.250	13.16	160.67	0.08
Span # 2	2	5.250	-14.96	163.53	0.09
Span # 3	3	5.250	-11.23	163.53	0.07
Span # 4	4	5.250	-21.81	163.53	0.13
Span # 5	5	5.250	-23.87	163.53	0.15
Span # 6	6	5.250	-22.31	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLLL					
Span # 1	1	5.250	13.15	160.67	0.08
Span # 2	2	5.250	-14.97	163.53	0.09
Span # 3	3	5.250	-11.19	163.53	0.07
Span # 4	4	5.250	-21.23	163.53	0.13
Span # 5	5	5.250	-23.27	163.53	0.14
Span # 6	6	5.250	-24.55	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL****					
Span # 1	1	5.250	12.30	160.67	0.08
Span # 2	2	5.250	-17.11	163.53	0.10
Span # 3	3	5.250	-11.30	163.53	0.07
Span # 4	4	5.250	-14.56	163.53	0.09
Span # 5	5	5.250	-16.77	163.53	0.10
Span # 6	6	5.250	-18.89	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL***L					
Span # 1	1	5.250	12.29	160.67	0.08
Span # 2	2	5.250	-17.12	163.53	0.10
Span # 3	3	5.250	-11.26	163.53	0.07
Span # 4	4	5.250	-13.97	163.53	0.09
Span # 5	5	5.250	-18.95	163.53	0.12
Span # 6	6	5.250	-21.14	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**L*					
Span # 1	1	5.250	12.34	160.67	0.08
Span # 2	2	5.250	-16.99	163.53	0.10
Span # 3	3	5.250	-11.77	163.53	0.07
Span # 4	4	5.250	-20.93	163.53	0.13
Span # 5	5	5.250	-22.67	163.53	0.14
Span # 6	6	5.250	-22.61	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**LL					
Span # 1	1	5.250	12.34	160.67	0.08
Span # 2	2	5.250	-17.00	163.53	0.10
Span # 3	3	5.250	-11.73	163.53	0.07
Span # 4	4	5.250	-20.35	163.53	0.12
Span # 5	5	5.250	-22.07	163.53	0.13
Span # 6	6	5.250	-24.85	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L**					
Span # 1	1	5.250	12.25	160.67	0.08
Span # 2	2	5.250	-17.23	163.53	0.11
Span # 3	3	5.250	-10.81	163.53	0.07
Span # 4	4	5.250	-15.99	163.53	0.10
Span # 5	5	5.250	-17.93	163.53	0.11
Span # 6	6	5.250	-18.44	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L*L					
Span # 1	1	5.250	12.24	160.67	0.08
Span # 2	2	5.250	-17.24	163.53	0.11
Span # 3	3	5.250	-10.77	163.53	0.07
Span # 4	4	5.250	-15.41	163.53	0.09
Span # 5	5	5.250	-18.55	163.53	0.11
Span # 6	6	5.250	-20.68	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LL*					

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	12.29	160.67	0.08
Span # 2	2	5.250	-17.11	163.53	0.10
Span # 3	3	5.250	-11.28	163.53	0.07
Span # 4	4	5.250	-22.36	163.53	0.14
Span # 5	5	5.250	-24.49	163.53	0.15
Span # 6	6	5.250	-22.15	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LLL					
Span # 1	1	5.250	12.29	160.67	0.08
Span # 2	2	5.250	-17.13	163.53	0.10
Span # 3	3	5.250	-11.24	163.53	0.07
Span # 4	4	5.250	-21.78	163.53	0.13
Span # 5	5	5.250	-23.89	163.53	0.15
Span # 6	6	5.250	-24.40	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL***					
Span # 1	1	5.250	12.47	160.67	0.08
Span # 2	2	5.250	-16.66	163.53	0.10
Span # 3	3	5.250	-13.12	163.53	0.08
Span # 4	4	5.250	-14.12	163.53	0.09
Span # 5	5	5.250	-16.88	163.53	0.10
Span # 6	6	5.250	-19.01	163.53	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL**L					
Span # 1	1	5.250	12.47	160.67	0.08
Span # 2	2	5.250	-16.67	163.53	0.10
Span # 3	3	5.250	-13.08	163.53	0.08
Span # 4	4	5.250	-13.54	163.53	0.08
Span # 5	5	5.250	-19.06	163.53	0.12
Span # 6	6	5.250	-21.26	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*L*					
Span # 1	1	5.250	12.52	160.67	0.08
Span # 2	2	5.250	-16.54	163.53	0.10
Span # 3	3	5.250	-13.59	163.53	0.08
Span # 4	4	5.250	-20.50	163.53	0.13
Span # 5	5	5.250	-22.18	163.53	0.14
Span # 6	6	5.250	-22.73	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*LL					
Span # 1	1	5.250	12.51	160.67	0.08
Span # 2	2	5.250	-16.55	163.53	0.10
Span # 3	3	5.250	-13.55	163.53	0.08
Span # 4	4	5.250	-19.91	163.53	0.12
Span # 5	5	5.250	-22.16	163.53	0.14
Span # 6	6	5.250	-24.97	163.53	0.15
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL**					
Span # 1	1	5.250	12.42	160.67	0.08
Span # 2	2	5.250	-16.78	163.53	0.10
Span # 3	3	5.250	-12.63	163.53	0.08
Span # 4	4	5.250	-15.56	163.53	0.10
Span # 5	5	5.250	-17.44	163.53	0.11
Span # 6	6	5.250	-18.56	163.53	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL*L					
Span # 1	1	5.250	12.42	160.67	0.08
Span # 2	2	5.250	-16.79	163.53	0.10
Span # 3	3	5.250	-12.59	163.53	0.08
Span # 4	4	5.250	-14.97	163.53	0.09
Span # 5	5	5.250	-18.66	163.53	0.11
Span # 6	6	5.250	-20.80	163.53	0.13
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLL*					
Span # 1	1	5.250	12.47	160.67	0.08
Span # 2	2	5.250	-16.66	163.53	0.10
Span # 3	3	5.250	-13.10	163.53	0.08
Span # 4	4	5.250	-21.93	163.53	0.13
Span # 5	5	5.250	-24.00	163.53	0.15
Span # 6	6	5.250	-22.27	163.53	0.14
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLLL					
Span # 1	1	5.250	12.47	160.67	0.08
Span # 2	2	5.250	-16.67	163.53	0.10
Span # 3	3	5.250	-13.06	163.53	0.08
Span # 4	4	5.250	-21.34	163.53	0.13
Span # 5	5	5.250	-23.40	163.53	0.14
Span # 6	6	5.250	-24.52	163.53	0.15

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.39	163.53	0.05
Span # 4	4	5.250	-11.88	163.53	0.07
Span # 5	5	5.250	-13.81	163.53	0.08
Span # 6	6	5.250	-15.49	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.08	160.67	0.04
Span # 2	2	5.250	-9.41	163.53	0.06
Span # 3	3	5.250	-7.55	163.53	0.05
Span # 4	4	5.250	-14.05	163.53	0.09
Span # 5	5	5.250	-15.27	163.53	0.09
Span # 6	6	5.250	-15.95	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.08	160.67	0.04
Span # 2	2	5.250	-9.41	163.53	0.06
Span # 3	3	5.250	-7.53	163.53	0.05
Span # 4	4	5.250	-13.87	163.53	0.08
Span # 5	5	5.250	-15.09	163.53	0.09
Span # 6	6	5.250	-16.65	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.05	160.67	0.04
Span # 2	2	5.250	-9.48	163.53	0.06
Span # 3	3	5.250	-7.25	163.53	0.04
Span # 4	4	5.250	-12.51	163.53	0.08
Span # 5	5	5.250	-13.79	163.53	0.08
Span # 6	6	5.250	-14.65	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.05	160.67	0.04
Span # 2	2	5.250	-9.49	163.53	0.06
Span # 3	3	5.250	-7.23	163.53	0.04
Span # 4	4	5.250	-12.32	163.53	0.08
Span # 5	5	5.250	-13.68	163.53	0.08
Span # 6	6	5.250	-15.35	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.39	163.53	0.05
Span # 4	4	5.250	-14.50	163.53	0.09
Span # 5	5	5.250	-15.84	163.53	0.10
Span # 6	6	5.250	-15.81	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.38	163.53	0.05
Span # 4	4	5.250	-14.32	163.53	0.09
Span # 5	5	5.250	-15.65	163.53	0.10
Span # 6	6	5.250	-16.51	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.12	160.67	0.04
Span # 2	2	5.250	-9.30	163.53	0.06
Span # 3	3	5.250	-7.97	163.53	0.05
Span # 4	4	5.250	-11.92	163.53	0.07
Span # 5	5	5.250	-13.16	163.53	0.08
Span # 6	6	5.250	-14.83	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.12	160.67	0.04
Span # 2	2	5.250	-9.31	163.53	0.06
Span # 3	3	5.250	-7.95	163.53	0.05
Span # 4	4	5.250	-11.74	163.53	0.07
Span # 5	5	5.250	-13.84	163.53	0.08
Span # 6	6	5.250	-15.53	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.13	160.67	0.04
Span # 2	2	5.250	-9.27	163.53	0.06
Span # 3	3	5.250	-8.11	163.53	0.05
Span # 4	4	5.250	-13.92	163.53	0.09
Span # 5	5	5.250	-15.12	163.53	0.09

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	5.250	-15.99	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.13	160.67	0.04
Span # 2	2	5.250	-9.27	163.53	0.06
Span # 3	3	5.250	-8.10	163.53	0.05
Span # 4	4	5.250	-13.73	163.53	0.08
Span # 5	5	5.250	-14.93	163.53	0.09
Span # 6	6	5.250	-16.69	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.10	160.67	0.04
Span # 2	2	5.250	-9.34	163.53	0.06
Span # 3	3	5.250	-7.81	163.53	0.05
Span # 4	4	5.250	-12.37	163.53	0.08
Span # 5	5	5.250	-13.64	163.53	0.08
Span # 6	6	5.250	-14.69	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.10	160.67	0.04
Span # 2	2	5.250	-9.35	163.53	0.06
Span # 3	3	5.250	-7.80	163.53	0.05
Span # 4	4	5.250	-12.19	163.53	0.07
Span # 5	5	5.250	-13.72	163.53	0.08
Span # 6	6	5.250	-15.39	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.12	160.67	0.04
Span # 2	2	5.250	-9.31	163.53	0.06
Span # 3	3	5.250	-7.96	163.53	0.05
Span # 4	4	5.250	-14.36	163.53	0.09
Span # 5	5	5.250	-15.69	163.53	0.10
Span # 6	6	5.250	-15.85	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.12	160.67	0.04
Span # 2	2	5.250	-9.31	163.53	0.06
Span # 3	3	5.250	-7.95	163.53	0.05
Span # 4	4	5.250	-14.18	163.53	0.09
Span # 5	5	5.250	-15.50	163.53	0.09
Span # 6	6	5.250	-16.55	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	6.86	160.67	0.04
Span # 2	2	5.250	-9.98	163.53	0.06
Span # 3	3	5.250	-7.98	163.53	0.05
Span # 4	4	5.250	-12.10	163.53	0.07
Span # 5	5	5.250	-13.27	163.53	0.08
Span # 6	6	5.250	-14.78	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	6.86	160.67	0.04
Span # 2	2	5.250	-9.98	163.53	0.06
Span # 3	3	5.250	-7.97	163.53	0.05
Span # 4	4	5.250	-11.91	163.53	0.07
Span # 5	5	5.250	-13.80	163.53	0.08
Span # 6	6	5.250	-15.48	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	6.87	160.67	0.04
Span # 2	2	5.250	-9.94	163.53	0.06
Span # 3	3	5.250	-8.13	163.53	0.05
Span # 4	4	5.250	-14.09	163.53	0.09
Span # 5	5	5.250	-15.32	163.53	0.09
Span # 6	6	5.250	-15.94	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	6.87	160.67	0.04
Span # 2	2	5.250	-9.94	163.53	0.06
Span # 3	3	5.250	-8.12	163.53	0.05
Span # 4	4	5.250	-13.91	163.53	0.09
Span # 5	5	5.250	-15.13	163.53	0.09
Span # 6	6	5.250	-16.64	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	6.84	160.67	0.04
Span # 2	2	5.250	-10.02	163.53	0.06
Span # 3	3	5.250	-7.83	163.53	0.05
Span # 4	4	5.250	-12.54	163.53	0.08

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.250	-13.83	163.53	0.08
Span # 6	6	5.250	-14.64	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	6.84	160.67	0.04
Span # 2	2	5.250	-10.02	163.53	0.06
Span # 3	3	5.250	-7.82	163.53	0.05
Span # 4	4	5.250	-12.36	163.53	0.08
Span # 5	5	5.250	-13.67	163.53	0.08
Span # 6	6	5.250	-15.34	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	6.86	160.67	0.04
Span # 2	2	5.250	-9.98	163.53	0.06
Span # 3	3	5.250	-7.98	163.53	0.05
Span # 4	4	5.250	-14.54	163.53	0.09
Span # 5	5	5.250	-15.88	163.53	0.10
Span # 6	6	5.250	-15.80	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	6.86	160.67	0.04
Span # 2	2	5.250	-9.98	163.53	0.06
Span # 3	3	5.250	-7.96	163.53	0.05
Span # 4	4	5.250	-14.35	163.53	0.09
Span # 5	5	5.250	-15.70	163.53	0.10
Span # 6	6	5.250	-16.50	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	6.91	160.67	0.04
Span # 2	2	5.250	-9.84	163.53	0.06
Span # 3	3	5.250	-8.55	163.53	0.05
Span # 4	4	5.250	-11.96	163.53	0.07
Span # 5	5	5.250	-13.15	163.53	0.08
Span # 6	6	5.250	-14.82	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	6.91	160.67	0.04
Span # 2	2	5.250	-9.84	163.53	0.06
Span # 3	3	5.250	-8.54	163.53	0.05
Span # 4	4	5.250	-11.78	163.53	0.07
Span # 5	5	5.250	-13.83	163.53	0.08
Span # 6	6	5.250	-15.52	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	6.93	160.67	0.04
Span # 2	2	5.250	-9.80	163.53	0.06
Span # 3	3	5.250	-8.70	163.53	0.05
Span # 4	4	5.250	-13.95	163.53	0.09
Span # 5	5	5.250	-15.16	163.53	0.09
Span # 6	6	5.250	-15.98	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	6.93	160.67	0.04
Span # 2	2	5.250	-9.80	163.53	0.06
Span # 3	3	5.250	-8.68	163.53	0.05
Span # 4	4	5.250	-13.77	163.53	0.08
Span # 5	5	5.250	-14.98	163.53	0.09
Span # 6	6	5.250	-16.68	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	6.90	160.67	0.04
Span # 2	2	5.250	-9.87	163.53	0.06
Span # 3	3	5.250	-8.40	163.53	0.05
Span # 4	4	5.250	-12.41	163.53	0.08
Span # 5	5	5.250	-13.68	163.53	0.08
Span # 6	6	5.250	-14.68	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	6.90	160.67	0.04
Span # 2	2	5.250	-9.88	163.53	0.06
Span # 3	3	5.250	-8.38	163.53	0.05
Span # 4	4	5.250	-12.23	163.53	0.07
Span # 5	5	5.250	-13.71	163.53	0.08
Span # 6	6	5.250	-15.38	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	6.91	160.67	0.04
Span # 2	2	5.250	-9.84	163.53	0.06
Span # 3	3	5.250	-8.54	163.53	0.05

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.250	-14.40	163.53	0.09
Span # 5	5	5.250	-15.73	163.53	0.10
Span # 6	6	5.250	-15.84	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	6.91	160.67	0.04
Span # 2	2	5.250	-9.84	163.53	0.06
Span # 3	3	5.250	-8.53	163.53	0.05
Span # 4	4	5.250	-14.22	163.53	0.09
Span # 5	5	5.250	-15.54	163.53	0.10
Span # 6	6	5.250	-16.54	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	8.07	160.67	0.05
Span # 2	2	5.250	-10.17	163.53	0.06
Span # 3	3	5.250	-7.20	163.53	0.04
Span # 4	4	5.250	-12.05	163.53	0.07
Span # 5	5	5.250	-13.21	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	8.07	160.67	0.05
Span # 2	2	5.250	-10.18	163.53	0.06
Span # 3	3	5.250	-7.19	163.53	0.04
Span # 4	4	5.250	-11.86	163.53	0.07
Span # 5	5	5.250	-13.81	163.53	0.08
Span # 6	6	5.250	-15.49	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	8.09	160.67	0.05
Span # 2	2	5.250	-10.14	163.53	0.06
Span # 3	3	5.250	-7.35	163.53	0.04
Span # 4	4	5.250	-14.04	163.53	0.09
Span # 5	5	5.250	-15.26	163.53	0.09
Span # 6	6	5.250	-15.95	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	8.09	160.67	0.05
Span # 2	2	5.250	-10.14	163.53	0.06
Span # 3	3	5.250	-7.34	163.53	0.04
Span # 4	4	5.250	-13.86	163.53	0.08
Span # 5	5	5.250	-15.07	163.53	0.09
Span # 6	6	5.250	-16.66	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	8.06	160.67	0.05
Span # 2	2	5.250	-10.21	163.53	0.06
Span # 3	3	5.250	-7.05	163.53	0.04
Span # 4	4	5.250	-12.50	163.53	0.08
Span # 5	5	5.250	-13.78	163.53	0.08
Span # 6	6	5.250	-14.65	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	8.06	160.67	0.05
Span # 2	2	5.250	-10.21	163.53	0.06
Span # 3	3	5.250	-7.04	163.53	0.04
Span # 4	4	5.250	-12.31	163.53	0.08
Span # 5	5	5.250	-13.68	163.53	0.08
Span # 6	6	5.250	-15.35	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	8.07	160.67	0.05
Span # 2	2	5.250	-10.17	163.53	0.06
Span # 3	3	5.250	-7.20	163.53	0.04
Span # 4	4	5.250	-14.49	163.53	0.09
Span # 5	5	5.250	-15.83	163.53	0.10
Span # 6	6	5.250	-15.81	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.250	8.07	160.67	0.05
Span # 2	2	5.250	-10.18	163.53	0.06
Span # 3	3	5.250	-7.18	163.53	0.04
Span # 4	4	5.250	-14.30	163.53	0.09
Span # 5	5	5.250	-15.64	163.53	0.10
Span # 6	6	5.250	-16.51	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	8.13	160.67	0.05
Span # 2	2	5.250	-10.03	163.53	0.06

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.250	-7.77	163.53	0.05
Span # 4	4	5.250	-11.91	163.53	0.07
Span # 5	5	5.250	-13.16	163.53	0.08
Span # 6	6	5.250	-14.83	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.250	8.13	160.67	0.05
Span # 2	2	5.250	-10.03	163.53	0.06
Span # 3	3	5.250	-7.76	163.53	0.05
Span # 4	4	5.250	-11.73	163.53	0.07
Span # 5	5	5.250	-13.84	163.53	0.08
Span # 6	6	5.250	-15.53	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	8.15	160.67	0.05
Span # 2	2	5.250	-9.99	163.53	0.06
Span # 3	3	5.250	-7.92	163.53	0.05
Span # 4	4	5.250	-13.90	163.53	0.09
Span # 5	5	5.250	-15.11	163.53	0.09
Span # 6	6	5.250	-15.99	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.250	8.14	160.67	0.05
Span # 2	2	5.250	-10.00	163.53	0.06
Span # 3	3	5.250	-7.91	163.53	0.05
Span # 4	4	5.250	-13.72	163.53	0.08
Span # 5	5	5.250	-14.92	163.53	0.09
Span # 6	6	5.250	-16.69	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	8.11	160.67	0.05
Span # 2	2	5.250	-10.07	163.53	0.06
Span # 3	3	5.250	-7.62	163.53	0.05
Span # 4	4	5.250	-12.36	163.53	0.08
Span # 5	5	5.250	-13.63	163.53	0.08
Span # 6	6	5.250	-14.69	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.250	8.11	160.67	0.05
Span # 2	2	5.250	-10.07	163.53	0.06
Span # 3	3	5.250	-7.61	163.53	0.05
Span # 4	4	5.250	-12.18	163.53	0.07
Span # 5	5	5.250	-13.72	163.53	0.08
Span # 6	6	5.250	-15.39	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	8.13	160.67	0.05
Span # 2	2	5.250	-10.03	163.53	0.06
Span # 3	3	5.250	-7.77	163.53	0.05
Span # 4	4	5.250	-14.35	163.53	0.09
Span # 5	5	5.250	-15.68	163.53	0.10
Span # 6	6	5.250	-15.85	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.250	8.13	160.67	0.05
Span # 2	2	5.250	-10.04	163.53	0.06
Span # 3	3	5.250	-7.75	163.53	0.05
Span # 4	4	5.250	-14.17	163.53	0.09
Span # 5	5	5.250	-15.49	163.53	0.09
Span # 6	6	5.250	-16.55	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	7.86	160.67	0.05
Span # 2	2	5.250	-10.70	163.53	0.07
Span # 3	3	5.250	-7.79	163.53	0.05
Span # 4	4	5.250	-12.08	163.53	0.07
Span # 5	5	5.250	-13.25	163.53	0.08
Span # 6	6	5.250	-14.78	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.250	7.86	160.67	0.05
Span # 2	2	5.250	-10.71	163.53	0.07
Span # 3	3	5.250	-7.77	163.53	0.05
Span # 4	4	5.250	-11.90	163.53	0.07
Span # 5	5	5.250	-13.80	163.53	0.08
Span # 6	6	5.250	-15.48	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	7.88	160.67	0.05

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.250	-10.67	163.53	0.07
Span # 3	3	5.250	-7.93	163.53	0.05
Span # 4	4	5.250	-14.08	163.53	0.09
Span # 5	5	5.250	-15.30	163.53	0.09
Span # 6	6	5.250	-15.94	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.250	7.88	160.67	0.05
Span # 2	2	5.250	-10.67	163.53	0.07
Span # 3	3	5.250	-7.92	163.53	0.05
Span # 4	4	5.250	-13.89	163.53	0.08
Span # 5	5	5.250	-15.11	163.53	0.09
Span # 6	6	5.250	-16.65	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	7.85	160.67	0.05
Span # 2	2	5.250	-10.74	163.53	0.07
Span # 3	3	5.250	-7.64	163.53	0.05
Span # 4	4	5.250	-12.53	163.53	0.08
Span # 5	5	5.250	-13.82	163.53	0.08
Span # 6	6	5.250	-14.64	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.250	7.85	160.67	0.05
Span # 2	2	5.250	-10.75	163.53	0.07
Span # 3	3	5.250	-7.62	163.53	0.05
Span # 4	4	5.250	-12.35	163.53	0.08
Span # 5	5	5.250	-13.68	163.53	0.08
Span # 6	6	5.250	-15.34	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	7.86	160.67	0.05
Span # 2	2	5.250	-10.71	163.53	0.07
Span # 3	3	5.250	-7.78	163.53	0.05
Span # 4	4	5.250	-14.52	163.53	0.09
Span # 5	5	5.250	-15.87	163.53	0.10
Span # 6	6	5.250	-15.80	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.250	7.86	160.67	0.05
Span # 2	2	5.250	-10.71	163.53	0.07
Span # 3	3	5.250	-7.77	163.53	0.05
Span # 4	4	5.250	-14.34	163.53	0.09
Span # 5	5	5.250	-15.68	163.53	0.10
Span # 6	6	5.250	-16.50	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	7.92	160.67	0.05
Span # 2	2	5.250	-10.56	163.53	0.06
Span # 3	3	5.250	-8.36	163.53	0.05
Span # 4	4	5.250	-11.95	163.53	0.07
Span # 5	5	5.250	-13.15	163.53	0.08
Span # 6	6	5.250	-14.82	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.250	7.92	160.67	0.05
Span # 2	2	5.250	-10.57	163.53	0.06
Span # 3	3	5.250	-8.34	163.53	0.05
Span # 4	4	5.250	-11.77	163.53	0.07
Span # 5	5	5.250	-13.83	163.53	0.08
Span # 6	6	5.250	-15.52	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	7.93	160.67	0.05
Span # 2	2	5.250	-10.53	163.53	0.06
Span # 3	3	5.250	-8.50	163.53	0.05
Span # 4	4	5.250	-13.94	163.53	0.09
Span # 5	5	5.250	-15.15	163.53	0.09
Span # 6	6	5.250	-15.98	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.250	7.93	160.67	0.05
Span # 2	2	5.250	-10.53	163.53	0.06
Span # 3	3	5.250	-8.49	163.53	0.05
Span # 4	4	5.250	-13.76	163.53	0.08
Span # 5	5	5.250	-14.96	163.53	0.09
Span # 6	6	5.250	-16.68	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.250	7.90	160.67	0.05
Span # 2	2	5.250	-10.60	163.53	0.06
Span # 3	3	5.250	-8.20	163.53	0.05
Span # 4	4	5.250	-12.40	163.53	0.08
Span # 5	5	5.250	-13.67	163.53	0.08
Span # 6	6	5.250	-14.68	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.250	7.90	160.67	0.05
Span # 2	2	5.250	-10.60	163.53	0.06
Span # 3	3	5.250	-8.19	163.53	0.05
Span # 4	4	5.250	-12.21	163.53	0.07
Span # 5	5	5.250	-13.71	163.53	0.08
Span # 6	6	5.250	-15.38	163.53	0.09
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	7.92	160.67	0.05
Span # 2	2	5.250	-10.56	163.53	0.06
Span # 3	3	5.250	-8.35	163.53	0.05
Span # 4	4	5.250	-14.39	163.53	0.09
Span # 5	5	5.250	-15.72	163.53	0.10
Span # 6	6	5.250	-15.84	163.53	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.250	7.92	160.67	0.05
Span # 2	2	5.250	-10.57	163.53	0.06
Span # 3	3	5.250	-8.34	163.53	0.05
Span # 4	4	5.250	-14.21	163.53	0.09
Span # 5	5	5.250	-15.53	163.53	0.09
Span # 6	6	5.250	-16.54	163.53	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*****					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08

Concrete Beam

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Description : GB-H-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05
Span # 4	4	5.250	-12.06	163.53	0.07
Span # 5	5	5.250	-13.22	163.53	0.08
Span # 6	6	5.250	-14.79	163.53	0.09
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.250	7.06	160.67	0.04
Span # 2	2	5.250	-9.45	163.53	0.06
Span # 3	3	5.250	-7.40	163.53	0.05

Concrete Beam

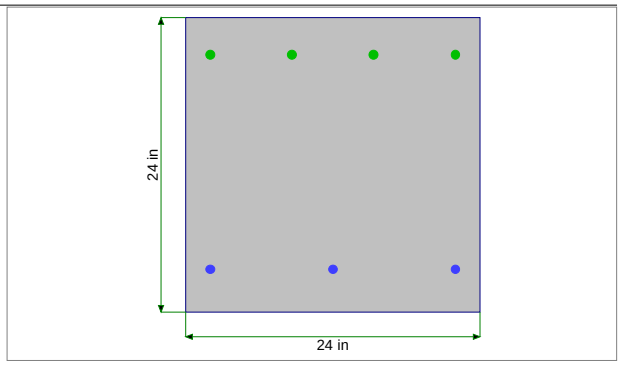
Description : GB-I-62R

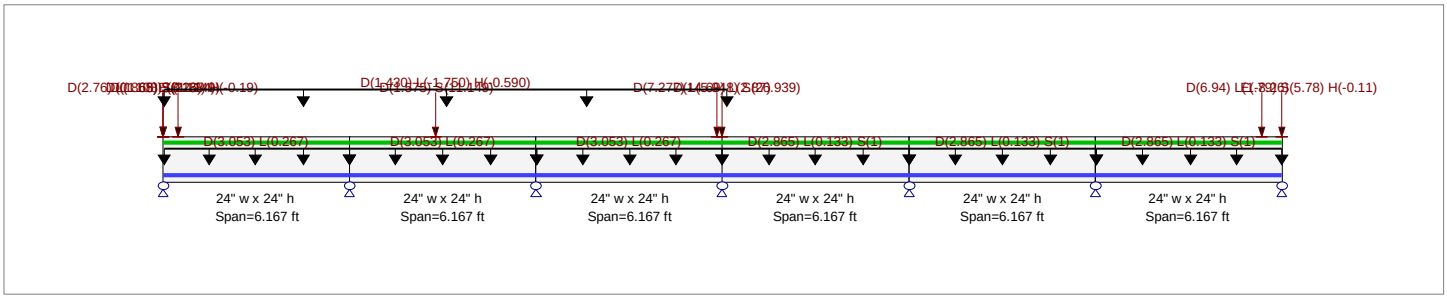
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
3-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Span #2 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Span #3 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Span #4 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Span #5 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Span #6 Reinforcing....
4-#6 at 3.50 in from Bottom, from 0.0 to 6.167 ft in this span
4-#6 at 3.0 in from Top, from 0.0 to 6.167 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
Partial Length Uniform Load : D = 1.430, L = -1.750, H = -0.590 k/ft, Extent = 0.0 -->> 18.667 ft
Load for Span Number 1
Uniform Load : D = 3.053, L = 0.2670 k/ft, Tributary Width = 1.0 ft, (WALL J1)
Point Load : D = 2.760, L = 1.650, S = 2.110, H = -0.190 k @ 0.0 ft, (GB-E-62R)
Point Load : D = 1.108, L = 1.384 k @ 0.0 ft, (P11)
Point Load : D = 0.8680, S = 11.149 k @ 0.0 ft, (P8)
Point Load : E = 8.260 k @ 0.50 ft, (OTM)
Load for Span Number 2
Uniform Load : D = 3.053, L = 0.2670 k/ft, Tributary Width = 1.0 ft, (WALL J1)
Point Load : D = 1.575, S = 11.149 k @ 2.833 ft, (P9)
Load for Span Number 3
Uniform Load : D = 3.053, L = 0.2670 k/ft, Tributary Width = 1.0 ft, (WALL J1)
Point Load : D = 7.277, L = 5.948, S = 26.939 k @ 6.0 ft, (C10)
Load for Span Number 4
Uniform Load : D = 2.865, L = 0.1330, S = 1.0 k/ft, Tributary Width = 1.0 ft, (WALL J2)
Point Load : D = 14.690, L = 2.870 k @ 0.0 ft, (GB-D-62R)

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

Printed: 24 JUL 2017, 12:37PM

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-I-62R

Load for Span Number 5
Uniform Load : D = 2.865, L = 0.1330, S = 1.0 k/ft, Tributary Width = 1.0 ft, (WALL J2)
Load for Span Number 6
Uniform Load : D = 2.865, L = 0.1330, S = 1.0 k/ft, Tributary Width = 1.0 ft, (WALL J2)
Point Load : D = 6.940, L = 1.790, S = 5.780, H = -0.110 k @ 6.167 ft, (GB-H-62R)
Point Load : E = -8.260 k @ 5.50 ft, (OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.177** : 1	Maximum Deflection			
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.000 in	Ratio =	0 <360
Mu : Applied	-30.083 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	169.996 k-ft	Max Downward Total Deflection	0.000 in	Ratio =	999 <240
Location of maximum on span	0.000 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 2				

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Overall MAXimum	28.862	38.957	34.391	60.762	26.058	31.180	23.402
Overall MINimum	-0.000	0.002	-0.006	0.024	-0.018	-0.011	0.000
+D+H	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+L+H, LL Comb Run (*****L)	15.324	32.122	27.996	32.119	19.803	24.776	17.327
+D+L+H, LL Comb Run (****L*)	15.325	32.116	28.022	32.025	20.362	24.687	15.142
+D+L+H, LL Comb Run (****LL)	15.325	32.117	28.015	32.048	20.273	25.222	17.287
+D+L+H, LL Comb Run (***L**)	15.322	32.137	27.936	32.271	20.352	24.177	15.193
+D+L+H, LL Comb Run (***L*L)	15.322	32.139	27.930	32.294	20.264	24.712	17.338
+D+L+H, LL Comb Run (***LL*)	15.323	32.132	27.955	32.200	20.822	24.623	15.152
+D+L+H, LL Comb Run (***LLL)	15.322	32.134	27.949	32.223	20.734	25.158	17.297
+D+L+H, LL Comb Run (**L***)	15.210	32.808	22.967	32.846	20.543	24.078	15.209
+D+L+H, LL Comb Run (**L**L)	15.210	32.810	22.960	32.870	20.454	24.613	17.354
+D+L+H, LL Comb Run (**L*L*)	15.211	32.803	22.986	32.775	21.013	24.524	15.169
+D+L+H, LL Comb Run (**L*LL)	15.211	32.805	22.979	32.799	20.924	25.059	17.314
+D+L+H, LL Comb Run (**LL**)	15.207	32.825	22.900	33.021	21.003	24.014	15.220
+D+L+H, LL Comb Run (**LL*L)	15.207	32.826	22.894	33.045	20.915	24.549	17.365
+D+L+H, LL Comb Run (**LLL*)	15.208	32.820	22.919	32.950	21.473	24.461	15.180
+D+L+H, LL Comb Run (**LLLL)	15.208	32.821	22.913	32.974	21.385	24.996	17.324
+D+L+H, LL Comb Run (*L****)	15.773	27.143	22.762	32.887	19.681	24.294	15.173
+D+L+H, LL Comb Run (*L***L)	15.773	27.145	22.755	32.911	19.592	24.829	17.318
+D+L+H, LL Comb Run (*L**L*)	15.774	27.139	22.781	32.816	20.151	24.740	15.133
+D+L+H, LL Comb Run (*L**LL)	15.774	27.140	22.774	32.840	20.062	25.275	17.278
+D+L+H, LL Comb Run (*L*L**)	15.770	27.160	22.695	33.062	20.141	24.230	15.184
+D+L+H, LL Comb Run (*L*L*L)	15.770	27.161	22.689	33.086	20.053	24.765	17.329
+D+L+H, LL Comb Run (*L*LL*)	15.771	27.155	22.714	32.991	20.611	24.676	15.144
+D+L+H, LL Comb Run (*L*LLL)	15.771	27.157	22.708	33.015	20.523	25.211	17.289
+D+L+H, LL Comb Run (*LL***)	15.659	27.831	17.726	33.637	20.332	24.131	15.200
+D+L+H, LL Comb Run (*LL**L)	15.658	27.832	17.719	33.661	20.243	24.666	17.345
+D+L+H, LL Comb Run (*LL*L*)	15.659	27.826	17.744	33.566	20.802	24.577	15.160
+D+L+H, LL Comb Run (*LL*LL)	15.659	27.828	17.738	33.590	20.713	25.112	17.305
+D+L+H, LL Comb Run (*LLL**)	15.656	27.847	17.659	33.812	20.792	24.067	15.211
+D+L+H, LL Comb Run (*LLL*L)	15.656	27.849	17.653	33.836	20.704	24.602	17.356
+D+L+H, LL Comb Run (*LLLL*)	15.657	27.843	17.678	33.741	21.262	24.513	15.171
+D+L+H, LL Comb Run (*LLLLL)	15.656	27.844	17.672	33.765	21.174	25.048	17.316
+D+L+H, LL Comb Run (L*****)	14.398	26.159	28.987	31.832	19.962	24.223	15.185
+D+L+H, LL Comb Run (L****L)	14.398	26.161	28.981	31.856	19.874	24.758	17.330
+D+L+H, LL Comb Run (L***L*)	14.399	26.154	29.006	31.761	20.432	24.670	15.145
+D+L+H, LL Comb Run (L***LL)	14.398	26.156	29.000	31.785	20.344	25.205	17.290
+D+L+H, LL Comb Run (L**L**)	14.395	26.176	28.921	32.007	20.423	24.159	15.196
+D+L+H, LL Comb Run (L**L*L)	14.395	26.177	28.915	32.031	20.334	24.694	17.340
+D+L+H, LL Comb Run (L**LL*)	14.396	26.171	28.940	31.936	20.893	24.606	15.155
+D+L+H, LL Comb Run (L**LLL)	14.396	26.172	28.934	31.960	20.804	25.141	17.300
+D+L+H, LL Comb Run (L*L***)	14.283	26.846	23.951	32.582	20.613	24.060	15.212
+D+L+H, LL Comb Run (L*L**L)	14.283	26.848	23.945	32.606	20.525	24.596	17.357
+D+L+H, LL Comb Run (L*L*L*)	14.284	26.842	23.970	32.511	21.083	24.507	15.172

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+L+H, LL Comb Run (L*L*LL)	14.284	26.843	23.964	32.535	20.995	25.042	17.317
+D+L+H, LL Comb Run (L*LL**)	14.281	26.863	23.885	32.757	21.074	23.997	15.223
+D+L+H, LL Comb Run (L*LL*L)	14.280	26.865	23.879	32.781	20.985	24.532	17.368
+D+L+H, LL Comb Run (L*LLL*)	14.281	26.858	23.904	32.686	21.544	24.443	15.183
+D+L+H, LL Comb Run (L*LLLL)	14.281	26.860	23.898	32.710	21.455	24.978	17.327
+D+L+H, LL Comb Run (LL****)	14.846	21.182	23.746	32.623	19.751	24.276	15.176
+D+L+H, LL Comb Run (LL***L)	14.846	21.183	23.740	32.647	19.663	24.811	17.321
+D+L+H, LL Comb Run (LL**L*)	14.847	21.177	23.765	32.552	20.221	24.722	15.136
+D+L+H, LL Comb Run (LL**LL)	14.847	21.178	23.759	32.576	20.133	25.257	17.281
+D+L+H, LL Comb Run (LL*L**)	14.844	21.198	23.680	32.798	20.212	24.212	15.187
+D+L+H, LL Comb Run (LL*L*L)	14.843	21.200	23.674	32.822	20.123	24.747	17.332
+D+L+H, LL Comb Run (LL*LL*)	14.844	21.193	23.699	32.727	20.682	24.658	15.147
+D+L+H, LL Comb Run (LL*LLL)	14.844	21.195	23.693	32.751	20.593	25.194	17.291
+D+L+H, LL Comb Run (LLL***)	14.732	21.869	18.710	33.374	20.402	24.113	15.203
+D+L+H, LL Comb Run (LLL**L)	14.732	21.871	18.704	33.397	20.314	24.648	17.348
+D+L+H, LL Comb Run (LLL*L*)	14.733	21.864	18.729	33.303	20.872	24.560	15.163
+D+L+H, LL Comb Run (LLL*LL)	14.732	21.866	18.723	33.326	20.784	25.095	17.308
+D+L+H, LL Comb Run (LLLL**)	14.729	21.886	18.644	33.549	20.863	24.049	15.214
+D+L+H, LL Comb Run (LLLL*L)	14.729	21.887	18.638	33.572	20.774	24.584	17.359
+D+L+H, LL Comb Run (LLLLL*)	14.730	21.881	18.663	33.478	21.333	24.496	15.174
+D+L+H, LL Comb Run (LLLLLL)	14.730	21.883	18.656	33.501	21.244	25.031	17.319
+D+Lr+H, LL Comb Run (*****L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (****L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (****LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (***L**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (***L*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (***LL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (***LLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**L***)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**L**L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**L*L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**L*LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**LL**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**LL*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**LLL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (**LLLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L****)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L***L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L**L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L**LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L*L**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L*L*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L*LL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*L*LLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LL***)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LL**L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LL*L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LL*LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LLL**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LLL*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LLLL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (*LLLLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*****)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L****L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L***L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L***LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L**L**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L**L*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L**LL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+Lr+H, LL Comb Run (L**LLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*L***)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*L**L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*L*L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*L*LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*LL**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*LL*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*LLL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (L*LLLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL****)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL***L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL**L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL**LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL*L**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL*L*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL*LL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LL*LLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLL***)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLL**L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLL*L*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLL*LL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLLL**)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLLL*L)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLLLL*)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+Lr+H, LL Comb Run (LLLLLL)	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+S+H	27.736	38.957	34.391	60.762	26.058	31.180	23.402
+D+0.750Lr+0.750L+H, LL Comb Run (	15.324	32.122	27.998	32.114	19.825	24.642	16.791
+D+0.750Lr+0.750L+H, LL Comb Run (	15.325	32.117	28.017	32.043	20.244	24.576	15.152
+D+0.750Lr+0.750L+H, LL Comb Run (	15.325	32.118	28.012	32.060	20.178	24.977	16.761
+D+0.750Lr+0.750L+H, LL Comb Run (	15.323	32.133	27.953	32.227	20.237	24.193	15.190
+D+0.750Lr+0.750L+H, LL Comb Run (	15.322	32.134	27.948	32.245	20.171	24.594	16.799
+D+0.750Lr+0.750L+H, LL Comb Run (	15.323	32.129	27.967	32.174	20.590	24.528	15.160
+D+0.750Lr+0.750L+H, LL Comb Run (	15.323	32.131	27.962	32.192	20.523	24.929	16.769
+D+0.750Lr+0.750L+H, LL Comb Run (	15.239	32.636	24.226	32.658	20.380	24.119	15.202
+D+0.750Lr+0.750L+H, LL Comb Run (	15.239	32.637	24.221	32.676	20.314	24.520	16.811
+D+0.750Lr+0.750L+H, LL Comb Run (	15.239	32.633	24.240	32.605	20.733	24.453	15.172
+D+0.750Lr+0.750L+H, LL Comb Run (	15.239	32.634	24.235	32.623	20.666	24.855	16.781
+D+0.750Lr+0.750L+H, LL Comb Run (	15.237	32.649	24.176	32.790	20.725	24.071	15.210
+D+0.750Lr+0.750L+H, LL Comb Run (	15.236	32.650	24.171	32.807	20.659	24.472	16.819
+D+0.750Lr+0.750L+H, LL Comb Run (	15.237	32.645	24.190	32.736	21.078	24.406	15.180
+D+0.750Lr+0.750L+H, LL Comb Run (	15.237	32.646	24.185	32.754	21.012	24.807	16.789
+D+0.750Lr+0.750L+H, LL Comb Run (	15.661	28.388	24.072	32.689	19.734	24.280	15.175
+D+0.750Lr+0.750L+H, LL Comb Run (	15.661	28.389	24.067	32.707	19.667	24.682	16.784
+D+0.750Lr+0.750L+H, LL Comb Run (	15.662	28.384	24.086	32.636	20.086	24.615	15.145
+D+0.750Lr+0.750L+H, LL Comb Run (	15.661	28.385	24.081	32.654	20.020	25.016	16.754
+D+0.750Lr+0.750L+H, LL Comb Run (	15.659	28.400	24.022	32.821	20.079	24.232	15.183
+D+0.750Lr+0.750L+H, LL Comb Run (	15.659	28.401	24.017	32.838	20.013	24.634	16.792
+D+0.750Lr+0.750L+H, LL Comb Run (	15.660	28.396	24.036	32.767	20.431	24.567	15.153
+D+0.750Lr+0.750L+H, LL Comb Run (	15.659	28.398	24.032	32.785	20.365	24.969	16.762
+D+0.750Lr+0.750L+H, LL Comb Run (	15.575	28.903	20.295	33.252	20.222	24.158	15.196
+D+0.750Lr+0.750L+H, LL Comb Run (	15.575	28.904	20.290	33.270	20.155	24.560	16.804
+D+0.750Lr+0.750L+H, LL Comb Run (	15.576	28.900	20.309	33.199	20.574	24.493	15.166
+D+0.750Lr+0.750L+H, LL Comb Run (	15.576	28.901	20.304	33.217	20.508	24.894	16.774
+D+0.750Lr+0.750L+H, LL Comb Run (	15.573	28.916	20.245	33.383	20.567	24.110	15.204
+D+0.750Lr+0.750L+H, LL Comb Run (	15.573	28.917	20.240	33.401	20.501	24.512	16.812
+D+0.750Lr+0.750L+H, LL Comb Run (	15.574	28.912	20.259	33.330	20.920	24.445	15.174
+D+0.750Lr+0.750L+H, LL Comb Run (	15.573	28.913	20.255	33.348	20.853	24.846	16.782
+D+0.750Lr+0.750L+H, LL Comb Run (	14.630	27.649	28.741	31.898	19.945	24.228	15.184
+D+0.750Lr+0.750L+H, LL Comb Run (	14.629	27.651	28.737	31.916	19.878	24.629	16.793

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+H, LL Comb Run (	14.630	27.646	28.755	31.845	20.297	24.562	15.154
+D+0.750Lr+0.750L+H, LL Comb Run (	14.630	27.647	28.751	31.862	20.231	24.964	16.763
+D+0.750Lr+0.750L+H, LL Comb Run (	14.628	27.662	28.692	32.029	20.290	24.180	15.192
+D+0.750Lr+0.750L+H, LL Comb Run (	14.627	27.663	28.687	32.047	20.224	24.581	16.801
+D+0.750Lr+0.750L+H, LL Comb Run (	14.628	27.658	28.706	31.976	20.642	24.514	15.162
+D+0.750Lr+0.750L+H, LL Comb Run (	14.628	27.659	28.701	31.994	20.576	24.916	16.771
+D+0.750Lr+0.750L+H, LL Comb Run (	14.544	28.165	24.964	32.461	20.433	24.105	15.205
+D+0.750Lr+0.750L+H, LL Comb Run (	14.544	28.166	24.960	32.478	20.366	24.507	16.813
+D+0.750Lr+0.750L+H, LL Comb Run (	14.544	28.161	24.978	32.407	20.785	24.440	15.174
+D+0.750Lr+0.750L+H, LL Comb Run (	14.544	28.163	24.974	32.425	20.719	24.842	16.783
+D+0.750Lr+0.750L+H, LL Comb Run (	14.542	28.177	24.914	32.592	20.778	24.058	15.213
+D+0.750Lr+0.750L+H, LL Comb Run (	14.541	28.179	24.910	32.610	20.712	24.459	16.821
+D+0.750Lr+0.750L+H, LL Comb Run (	14.542	28.174	24.929	32.539	21.131	24.392	15.182
+D+0.750Lr+0.750L+H, LL Comb Run (	14.542	28.175	24.924	32.556	21.064	24.794	16.791
+D+0.750Lr+0.750L+H, LL Comb Run (	14.966	23.916	24.810	32.492	19.786	24.267	15.178
+D+0.750Lr+0.750L+H, LL Comb Run (	14.966	23.918	24.806	32.509	19.720	24.668	16.786
+D+0.750Lr+0.750L+H, LL Comb Run (	14.967	23.913	24.825	32.438	20.139	24.602	15.147
+D+0.750Lr+0.750L+H, LL Comb Run (	14.966	23.914	24.820	32.456	20.072	25.003	16.756
+D+0.750Lr+0.750L+H, LL Comb Run (	14.964	23.929	24.761	32.623	20.132	24.219	15.186
+D+0.750Lr+0.750L+H, LL Comb Run (	14.964	23.930	24.756	32.641	20.065	24.621	16.794
+D+0.750Lr+0.750L+H, LL Comb Run (	14.965	23.925	24.775	32.570	20.484	24.554	15.155
+D+0.750Lr+0.750L+H, LL Comb Run (	14.964	23.926	24.770	32.587	20.418	24.955	16.764
+D+0.750Lr+0.750L+H, LL Comb Run (	14.880	24.432	21.033	33.054	20.274	24.145	15.198
+D+0.750Lr+0.750L+H, LL Comb Run (	14.880	24.433	21.029	33.072	20.208	24.546	16.807
+D+0.750Lr+0.750L+H, LL Comb Run (	14.881	24.428	21.048	33.001	20.627	24.480	15.168
+D+0.750Lr+0.750L+H, LL Comb Run (	14.880	24.430	21.043	33.019	20.561	24.881	16.776
+D+0.750Lr+0.750L+H, LL Comb Run (	14.878	24.444	20.984	33.185	20.620	24.097	15.206
+D+0.750Lr+0.750L+H, LL Comb Run (	14.878	24.446	20.979	33.203	20.554	24.498	16.815
+D+0.750Lr+0.750L+H, LL Comb Run (	14.879	24.441	20.998	33.132	20.972	24.432	15.176
+D+0.750Lr+0.750L+H, LL Comb Run (	14.878	24.442	20.993	33.150	20.906	24.833	16.784
+D+0.750L+0.750S+H, LL Comb Run (*	24.633	37.249	32.789	53.614	24.450	29.847	22.956
+D+0.750L+0.750S+H, LL Comb Run (*	24.634	37.244	32.808	53.543	24.869	29.780	21.317
+D+0.750L+0.750S+H, LL Comb Run (*	24.634	37.245	32.804	53.560	24.802	30.181	22.926
+D+0.750L+0.750S+H, LL Comb Run (*	24.631	37.260	32.744	53.727	24.862	29.397	21.355
+D+0.750L+0.750S+H, LL Comb Run (*	24.631	37.261	32.740	53.745	24.795	29.799	22.964
+D+0.750L+0.750S+H, LL Comb Run (*	24.632	37.257	32.759	53.674	25.214	29.732	21.325
+D+0.750L+0.750S+H, LL Comb Run (*	24.632	37.258	32.754	53.691	25.148	30.133	22.934
+D+0.750L+0.750S+H, LL Comb Run (*	24.547	37.763	29.017	54.158	25.004	29.323	21.367
+D+0.750L+0.750S+H, LL Comb Run (*	24.547	37.764	29.012	54.176	24.938	29.725	22.976
+D+0.750L+0.750S+H, LL Comb Run (*	24.548	37.760	29.031	54.105	25.357	29.658	21.337
+D+0.750L+0.750S+H, LL Comb Run (*	24.548	37.761	29.027	54.123	25.291	30.059	22.946
+D+0.750L+0.750S+H, LL Comb Run (*	24.545	37.776	28.967	54.290	25.350	29.275	21.375
+D+0.750L+0.750S+H, LL Comb Run (*	24.545	37.777	28.963	54.307	25.283	29.677	22.984
+D+0.750L+0.750S+H, LL Comb Run (*	24.546	37.772	28.981	54.236	25.702	29.610	21.345
+D+0.750L+0.750S+H, LL Comb Run (*	24.546	37.773	28.977	54.254	25.636	30.011	22.954
+D+0.750L+0.750S+H, LL Comb Run (*	24.970	33.515	28.863	54.189	24.358	29.485	21.341
+D+0.750L+0.750S+H, LL Comb Run (*	24.969	33.516	28.858	54.207	24.292	29.886	22.949
+D+0.750L+0.750S+H, LL Comb Run (*	24.970	33.511	28.877	54.136	24.710	29.820	21.310
+D+0.750L+0.750S+H, LL Comb Run (*	24.970	33.512	28.873	54.154	24.644	30.221	22.919
+D+0.750L+0.750S+H, LL Comb Run (*	24.968	33.527	28.813	54.321	24.703	29.437	21.349
+D+0.750L+0.750S+H, LL Comb Run (*	24.967	33.528	28.809	54.338	24.637	29.838	22.957
+D+0.750L+0.750S+H, LL Comb Run (*	24.968	33.524	28.828	54.267	25.056	29.772	21.318
+D+0.750L+0.750S+H, LL Comb Run (*	24.968	33.525	28.823	54.285	24.990	30.173	22.927
+D+0.750L+0.750S+H, LL Comb Run (*	24.884	34.030	25.086	54.752	24.846	29.363	21.361
+D+0.750L+0.750S+H, LL Comb Run (*	24.884	34.031	25.081	54.770	24.780	29.764	22.970
+D+0.750L+0.750S+H, LL Comb Run (*	24.884	34.027	25.100	54.699	25.199	29.698	21.331
+D+0.750L+0.750S+H, LL Comb Run (*	24.884	34.028	25.096	54.716	25.132	30.099	22.939
+D+0.750L+0.750S+H, LL Comb Run (*	24.882	34.043	25.036	54.883	25.192	29.315	21.369
+D+0.750L+0.750S+H, LL Comb Run (*	24.881	34.044	25.032	54.901	25.125	29.716	22.977

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+H, LL Comb Run (*	24.882	34.039	25.051	54.830	25.544	29.650	21.339
+D+0.750L+0.750S+H, LL Comb Run (*	24.882	34.040	25.046	54.848	25.478	30.051	22.947
+D+0.750L+0.750S+H, LL Comb Run (L	23.938	32.776	33.533	53.398	24.569	29.432	21.349
+D+0.750L+0.750S+H, LL Comb Run (L	23.938	32.778	33.528	53.416	24.503	29.833	22.958
+D+0.750L+0.750S+H, LL Comb Run (L	23.939	32.773	33.547	53.345	24.921	29.767	21.319
+D+0.750L+0.750S+H, LL Comb Run (L	23.939	32.774	33.542	53.362	24.855	30.168	22.928
+D+0.750L+0.750S+H, LL Comb Run (L	23.936	32.789	33.483	53.529	24.914	29.384	21.357
+D+0.750L+0.750S+H, LL Comb Run (L	23.936	32.790	33.478	53.547	24.848	29.785	22.966
+D+0.750L+0.750S+H, LL Comb Run (L	23.937	32.785	33.497	53.476	25.267	29.719	21.327
+D+0.750L+0.750S+H, LL Comb Run (L	23.937	32.787	33.492	53.494	25.201	30.120	22.936
+D+0.750L+0.750S+H, LL Comb Run (L	23.852	33.292	29.756	53.961	25.057	29.310	21.370
+D+0.750L+0.750S+H, LL Comb Run (L	23.852	33.293	29.751	53.978	24.991	29.711	22.978
+D+0.750L+0.750S+H, LL Comb Run (L	23.853	33.289	29.770	53.907	25.410	29.645	21.339
+D+0.750L+0.750S+H, LL Comb Run (L	23.853	33.290	29.765	53.925	25.343	30.046	22.948
+D+0.750L+0.750S+H, LL Comb Run (L	23.850	33.305	29.706	54.092	25.403	29.262	21.378
+D+0.750L+0.750S+H, LL Comb Run (L	23.850	33.306	29.701	54.110	25.336	29.663	22.986
+D+0.750L+0.750S+H, LL Comb Run (L	23.851	33.301	29.720	54.039	25.755	29.597	21.347
+D+0.750L+0.750S+H, LL Comb Run (L	23.851	33.302	29.715	54.056	25.689	29.998	22.956
+D+0.750L+0.750S+H, LL Comb Run (L	24.275	29.043	29.602	53.991	24.411	29.472	21.343
+D+0.750L+0.750S+H, LL Comb Run (L	24.274	29.045	29.597	54.009	24.344	29.873	22.951
+D+0.750L+0.750S+H, LL Comb Run (L	24.275	29.040	29.616	53.938	24.763	29.806	21.313
+D+0.750L+0.750S+H, LL Comb Run (L	24.275	29.041	29.611	53.956	24.697	30.208	22.921
+D+0.750L+0.750S+H, LL Comb Run (L	24.273	29.056	29.552	54.123	24.756	29.424	21.351
+D+0.750L+0.750S+H, LL Comb Run (L	24.272	29.057	29.547	54.140	24.690	29.825	22.959
+D+0.750L+0.750S+H, LL Comb Run (L	24.273	29.052	29.566	54.069	25.109	29.759	21.321
+D+0.750L+0.750S+H, LL Comb Run (L	24.273	29.054	29.561	54.087	25.042	30.160	22.929
+D+0.750L+0.750S+H, LL Comb Run (L	24.189	29.559	25.825	54.554	24.899	29.350	21.363
+D+0.750L+0.750S+H, LL Comb Run (L	24.188	29.560	25.820	54.572	24.833	29.751	22.972
+D+0.750L+0.750S+H, LL Comb Run (L	24.189	29.556	25.839	54.501	25.251	29.684	21.333
+D+0.750L+0.750S+H, LL Comb Run (L	24.189	29.557	25.834	54.519	25.185	30.086	22.942
+D+0.750L+0.750S+H, LL Comb Run (L	24.187	29.572	25.775	54.685	25.244	29.302	21.371
+D+0.750L+0.750S+H, LL Comb Run (L	24.186	29.573	25.770	54.703	25.178	29.703	22.980
+D+0.750L+0.750S+H, LL Comb Run (L	24.187	29.568	25.789	54.632	25.597	29.636	21.341
+D+0.750L+0.750S+H, LL Comb Run (L	24.187	29.569	25.784	54.650	25.530	30.038	22.950
+D+0.60W+H	15.325	32.121	28.003	32.096	19.892	24.241	15.182
+D+0.70E+H	20.514	32.868	27.821	32.078	20.144	23.243	10.190
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.324	32.122	27.998	32.114	19.825	24.642	16.791
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.325	32.117	28.017	32.043	20.244	24.576	15.152
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.325	32.118	28.012	32.060	20.178	24.977	16.761
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.323	32.133	27.953	32.227	20.237	24.193	15.190
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.322	32.134	27.948	32.245	20.171	24.594	16.799
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.323	32.129	27.967	32.174	20.590	24.528	15.160
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.323	32.131	27.962	32.192	20.523	24.929	16.769
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.239	32.636	24.226	32.658	20.380	24.119	15.202
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.239	32.637	24.221	32.676	20.314	24.520	16.811
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.239	32.633	24.240	32.605	20.733	24.453	15.172
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.239	32.634	24.235	32.623	20.666	24.855	16.781
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.237	32.649	24.176	32.790	20.725	24.071	15.210
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.236	32.650	24.171	32.807	20.659	24.472	16.819
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.237	32.645	24.190	32.736	21.078	24.406	15.180
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.237	32.646	24.185	32.754	21.012	24.807	16.789
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.661	28.388	24.072	32.689	19.734	24.280	15.175
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.661	28.389	24.067	32.707	19.667	24.682	16.784
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.662	28.384	24.086	32.636	20.086	24.615	15.145
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.661	28.385	24.081	32.654	20.020	25.016	16.754
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.659	28.400	24.022	32.821	20.079	24.232	15.183
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.659	28.401	24.017	32.838	20.013	24.634	16.792
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.660	28.396	24.036	32.767	20.431	24.567	15.153
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.659	28.398	24.032	32.785	20.365	24.969	16.762

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.575	28.903	20.295	33.252	20.222	24.158	15.196
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.575	28.904	20.290	33.270	20.155	24.560	16.804
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.576	28.900	20.309	33.199	20.574	24.493	15.166
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.576	28.901	20.304	33.217	20.508	24.894	16.774
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.573	28.916	20.245	33.383	20.567	24.110	15.204
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.573	28.917	20.240	33.401	20.501	24.512	16.812
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.574	28.912	20.259	33.330	20.920	24.445	15.174
+D+0.750Lr+0.750L+0.450W+H, LL Com	15.573	28.913	20.255	33.348	20.853	24.846	16.782
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.630	27.649	28.741	31.898	19.945	24.228	15.184
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.629	27.651	28.737	31.916	19.878	24.629	16.793
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.630	27.646	28.755	31.845	20.297	24.562	15.154
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.630	27.647	28.751	31.862	20.231	24.964	16.763
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.628	27.662	28.692	32.029	20.290	24.180	15.192
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.627	27.663	28.687	32.047	20.224	24.581	16.801
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.628	27.658	28.706	31.976	20.642	24.514	15.162
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.628	27.659	28.701	31.994	20.576	24.916	16.771
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.544	28.165	24.964	32.461	20.433	24.105	15.205
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.544	28.166	24.960	32.478	20.366	24.507	16.813
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.544	28.161	24.978	32.407	20.785	24.440	15.174
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.544	28.163	24.974	32.425	20.719	24.842	16.783
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.542	28.177	24.914	32.592	20.778	24.058	15.213
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.541	28.179	24.910	32.610	20.712	24.459	16.821
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.542	28.174	24.929	32.539	21.131	24.392	15.182
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.542	28.175	24.924	32.556	21.064	24.794	16.791
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.966	23.916	24.810	32.492	19.786	24.267	15.178
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.966	23.918	24.806	32.509	19.720	24.668	16.786
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.967	23.913	24.825	32.438	20.139	24.602	15.147
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.966	23.914	24.820	32.456	20.072	25.003	16.756
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.964	23.929	24.761	32.623	20.132	24.219	15.186
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.964	23.930	24.756	32.641	20.065	24.621	16.794
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.965	23.925	24.775	32.570	20.484	24.554	15.155
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.964	23.926	24.770	32.587	20.418	24.955	16.764
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.880	24.432	21.033	33.054	20.274	24.145	15.198
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.880	24.433	21.029	33.072	20.208	24.546	16.807
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.881	24.428	21.048	33.001	20.627	24.480	15.168
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.880	24.430	21.043	33.019	20.561	24.881	16.776
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.878	24.444	20.984	33.185	20.620	24.097	15.206
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.878	24.446	20.979	33.203	20.554	24.498	16.815
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.879	24.441	20.998	33.132	20.972	24.432	15.176
+D+0.750Lr+0.750L+0.450W+H, LL Com	14.878	24.442	20.993	33.150	20.906	24.833	16.784
+D+0.750L+0.750S+0.450W+H, LL Comb	24.633	37.249	32.789	53.614	24.450	29.847	22.956
+D+0.750L+0.750S+0.450W+H, LL Comb	24.634	37.244	32.808	53.543	24.869	29.780	21.317
+D+0.750L+0.750S+0.450W+H, LL Comb	24.634	37.245	32.804	53.560	24.802	30.181	22.926
+D+0.750L+0.750S+0.450W+H, LL Comb	24.631	37.260	32.744	53.727	24.862	29.397	21.355
+D+0.750L+0.750S+0.450W+H, LL Comb	24.631	37.261	32.740	53.745	24.795	29.799	22.964
+D+0.750L+0.750S+0.450W+H, LL Comb	24.632	37.257	32.759	53.674	25.214	29.732	21.325
+D+0.750L+0.750S+0.450W+H, LL Comb	24.632	37.258	32.754	53.691	25.148	30.133	22.934
+D+0.750L+0.750S+0.450W+H, LL Comb	24.547	37.763	29.017	54.158	25.004	29.323	21.367
+D+0.750L+0.750S+0.450W+H, LL Comb	24.547	37.764	29.012	54.176	24.938	29.725	22.976
+D+0.750L+0.750S+0.450W+H, LL Comb	24.548	37.760	29.031	54.105	25.357	29.658	21.337
+D+0.750L+0.750S+0.450W+H, LL Comb	24.548	37.761	29.027	54.123	25.291	30.059	22.946
+D+0.750L+0.750S+0.450W+H, LL Comb	24.545	37.776	28.967	54.290	25.350	29.275	21.375
+D+0.750L+0.750S+0.450W+H, LL Comb	24.545	37.777	28.963	54.307	25.283	29.677	22.984
+D+0.750L+0.750S+0.450W+H, LL Comb	24.546	37.772	28.981	54.236	25.702	29.610	21.345
+D+0.750L+0.750S+0.450W+H, LL Comb	24.546	37.773	28.977	54.254	25.636	30.011	22.954
+D+0.750L+0.750S+0.450W+H, LL Comb	24.970	33.515	28.863	54.189	24.358	29.485	21.341
+D+0.750L+0.750S+0.450W+H, LL Comb	24.969	33.516	28.858	54.207	24.292	29.886	22.949
+D+0.750L+0.750S+0.450W+H, LL Comb	24.970	33.511	28.877	54.136	24.710	29.820	21.310
+D+0.750L+0.750S+0.450W+H, LL Comb	24.970	33.512	28.873	54.154	24.644	30.221	22.919

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.450W+H, LL Comb	24.968	33.527	28.813	54.321	24.703	29.437	21.349
+D+0.750L+0.750S+0.450W+H, LL Comb	24.967	33.528	28.809	54.338	24.637	29.838	22.957
+D+0.750L+0.750S+0.450W+H, LL Comb	24.968	33.524	28.828	54.267	25.056	29.772	21.318
+D+0.750L+0.750S+0.450W+H, LL Comb	24.968	33.525	28.823	54.285	24.990	30.173	22.927
+D+0.750L+0.750S+0.450W+H, LL Comb	24.884	34.030	25.086	54.752	24.846	29.363	21.361
+D+0.750L+0.750S+0.450W+H, LL Comb	24.884	34.031	25.081	54.770	24.780	29.764	22.970
+D+0.750L+0.750S+0.450W+H, LL Comb	24.884	34.027	25.100	54.699	25.199	29.698	21.331
+D+0.750L+0.750S+0.450W+H, LL Comb	24.884	34.028	25.096	54.716	25.132	30.099	22.939
+D+0.750L+0.750S+0.450W+H, LL Comb	24.882	34.043	25.036	54.883	25.192	29.315	21.369
+D+0.750L+0.750S+0.450W+H, LL Comb	24.881	34.044	25.032	54.901	25.125	29.716	22.977
+D+0.750L+0.750S+0.450W+H, LL Comb	24.882	34.039	25.051	54.830	25.544	29.650	21.339
+D+0.750L+0.750S+0.450W+H, LL Comb	24.882	34.040	25.046	54.848	25.478	30.051	22.947
+D+0.750L+0.750S+0.450W+H, LL Comb	23.938	32.776	33.533	53.398	24.569	29.432	21.349
+D+0.750L+0.750S+0.450W+H, LL Comb	23.938	32.778	33.528	53.416	24.503	29.833	22.958
+D+0.750L+0.750S+0.450W+H, LL Comb	23.939	32.773	33.547	53.345	24.921	29.767	21.319
+D+0.750L+0.750S+0.450W+H, LL Comb	23.939	32.774	33.542	53.362	24.855	30.168	22.928
+D+0.750L+0.750S+0.450W+H, LL Comb	23.936	32.789	33.483	53.529	24.914	29.384	21.357
+D+0.750L+0.750S+0.450W+H, LL Comb	23.936	32.790	33.478	53.547	24.848	29.785	22.966
+D+0.750L+0.750S+0.450W+H, LL Comb	23.937	32.785	33.497	53.476	25.267	29.719	21.327
+D+0.750L+0.750S+0.450W+H, LL Comb	23.937	32.787	33.492	53.494	25.201	30.120	22.936
+D+0.750L+0.750S+0.450W+H, LL Comb	23.852	33.292	29.756	53.961	25.057	29.310	21.370
+D+0.750L+0.750S+0.450W+H, LL Comb	23.852	33.293	29.751	53.978	24.991	29.711	22.978
+D+0.750L+0.750S+0.450W+H, LL Comb	23.853	33.289	29.770	53.907	25.410	29.645	21.339
+D+0.750L+0.750S+0.450W+H, LL Comb	23.853	33.290	29.765	53.925	25.343	30.046	22.948
+D+0.750L+0.750S+0.450W+H, LL Comb	23.850	33.305	29.706	54.092	25.403	29.262	21.378
+D+0.750L+0.750S+0.450W+H, LL Comb	23.850	33.306	29.701	54.110	25.336	29.663	22.986
+D+0.750L+0.750S+0.450W+H, LL Comb	23.851	33.301	29.720	54.039	25.755	29.597	21.347
+D+0.750L+0.750S+0.450W+H, LL Comb	23.851	33.302	29.715	54.056	25.689	29.998	22.956
+D+0.750L+0.750S+0.450W+H, LL Comb	24.275	29.043	29.602	53.991	24.411	29.472	21.343
+D+0.750L+0.750S+0.450W+H, LL Comb	24.274	29.045	29.597	54.009	24.344	29.873	22.951
+D+0.750L+0.750S+0.450W+H, LL Comb	24.275	29.040	29.616	53.938	24.763	29.806	21.313
+D+0.750L+0.750S+0.450W+H, LL Comb	24.275	29.041	29.611	53.956	24.697	30.208	22.921
+D+0.750L+0.750S+0.450W+H, LL Comb	24.273	29.056	29.552	54.123	24.756	29.424	21.351
+D+0.750L+0.750S+0.450W+H, LL Comb	24.272	29.057	29.547	54.140	24.690	29.825	22.959
+D+0.750L+0.750S+0.450W+H, LL Comb	24.273	29.052	29.566	54.069	25.109	29.759	21.321
+D+0.750L+0.750S+0.450W+H, LL Comb	24.273	29.054	29.561	54.087	25.042	30.160	22.929
+D+0.750L+0.750S+0.450W+H, LL Comb	24.189	29.559	25.825	54.554	24.899	29.350	21.363
+D+0.750L+0.750S+0.450W+H, LL Comb	24.188	29.560	25.820	54.572	24.833	29.751	22.972
+D+0.750L+0.750S+0.450W+H, LL Comb	24.189	29.556	25.839	54.501	25.251	29.684	21.333
+D+0.750L+0.750S+0.450W+H, LL Comb	24.189	29.557	25.834	54.519	25.185	30.086	22.942
+D+0.750L+0.750S+0.450W+H, LL Comb	24.187	29.572	25.775	54.685	25.244	29.302	21.371
+D+0.750L+0.750S+0.450W+H, LL Comb	24.186	29.573	25.770	54.703	25.178	29.703	22.980
+D+0.750L+0.750S+0.450W+H, LL Comb	24.187	29.568	25.789	54.632	25.597	29.636	21.341
+D+0.750L+0.750S+0.450W+H, LL Comb	24.187	29.569	25.784	54.650	25.530	30.038	22.950
+D+0.750L+0.750S+0.5250E+H, LL Com	28.525	37.809	32.653	53.600	24.639	29.099	19.212
+D+0.750L+0.750S+0.5250E+H, LL Com	28.526	37.804	32.672	53.529	25.058	29.032	17.573
+D+0.750L+0.750S+0.5250E+H, LL Com	28.526	37.806	32.667	53.547	24.991	29.433	19.182
+D+0.750L+0.750S+0.5250E+H, LL Com	28.523	37.820	32.608	53.714	25.051	28.649	17.611
+D+0.750L+0.750S+0.5250E+H, LL Com	28.523	37.822	32.603	53.732	24.984	29.051	19.220
+D+0.750L+0.750S+0.5250E+H, LL Com	28.524	37.817	32.622	53.661	25.403	28.984	17.581
+D+0.750L+0.750S+0.5250E+H, LL Com	28.524	37.818	32.618	53.678	25.337	29.385	19.190
+D+0.750L+0.750S+0.5250E+H, LL Com	28.439	38.324	28.881	54.145	25.193	28.575	17.624
+D+0.750L+0.750S+0.5250E+H, LL Com	28.439	38.325	28.876	54.163	25.127	28.976	19.232
+D+0.750L+0.750S+0.5250E+H, LL Com	28.440	38.320	28.895	54.092	25.546	28.910	17.594
+D+0.750L+0.750S+0.5250E+H, LL Com	28.440	38.321	28.890	54.110	25.480	29.311	19.202
+D+0.750L+0.750S+0.5250E+H, LL Com	28.437	38.336	28.831	54.276	25.539	28.527	17.632
+D+0.750L+0.750S+0.5250E+H, LL Com	28.437	38.337	28.826	54.294	25.472	28.929	19.240
+D+0.750L+0.750S+0.5250E+H, LL Com	28.438	38.332	28.845	54.223	25.891	28.862	17.602
+D+0.750L+0.750S+0.5250E+H, LL Com	28.438	38.334	28.841	54.241	25.825	29.263	19.210

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.5250E+H, LL Com	28.862	34.075	28.727	54.176	24.547	28.737	17.597
+D+0.750L+0.750S+0.5250E+H, LL Com	28.861	34.076	28.722	54.194	24.481	29.138	19.205
+D+0.750L+0.750S+0.5250E+H, LL Com	28.862	34.071	28.741	54.123	24.899	29.072	17.567
+D+0.750L+0.750S+0.5250E+H, LL Com	28.862	34.073	28.736	54.141	24.833	29.473	19.175
+D+0.750L+0.750S+0.5250E+H, LL Com	28.859	34.087	28.677	54.307	24.892	28.689	17.605
+D+0.750L+0.750S+0.5250E+H, LL Com	28.859	34.089	28.673	54.325	24.826	29.090	19.213
+D+0.750L+0.750S+0.5250E+H, LL Com	28.860	34.084	28.691	54.254	25.245	29.024	17.575
+D+0.750L+0.750S+0.5250E+H, LL Com	28.860	34.085	28.687	54.272	25.178	29.425	19.183
+D+0.750L+0.750S+0.5250E+H, LL Com	28.776	34.591	24.950	54.739	25.035	28.615	17.617
+D+0.750L+0.750S+0.5250E+H, LL Com	28.775	34.592	24.945	54.757	24.969	29.016	19.226
+D+0.750L+0.750S+0.5250E+H, LL Com	28.776	34.587	24.964	54.686	25.388	28.950	17.587
+D+0.750L+0.750S+0.5250E+H, LL Com	28.776	34.588	24.959	54.703	25.321	29.351	19.196
+D+0.750L+0.750S+0.5250E+H, LL Com	28.774	34.603	24.900	54.870	25.380	28.567	17.625
+D+0.750L+0.750S+0.5250E+H, LL Com	28.773	34.604	24.895	54.888	25.314	28.968	19.234
+D+0.750L+0.750S+0.5250E+H, LL Com	28.774	34.599	24.914	54.817	25.733	28.902	17.595
+D+0.750L+0.750S+0.5250E+H, LL Com	28.774	34.601	24.910	54.835	25.667	29.303	19.204
+D+0.750L+0.750S+0.5250E+H, LL Com	27.830	33.337	33.396	53.385	24.758	28.684	17.606
+D+0.750L+0.750S+0.5250E+H, LL Com	27.830	33.338	33.392	53.402	24.692	29.085	19.214
+D+0.750L+0.750S+0.5250E+H, LL Com	27.831	33.333	33.411	53.331	25.110	29.019	17.575
+D+0.750L+0.750S+0.5250E+H, LL Com	27.831	33.334	33.406	53.349	25.044	29.420	19.184
+D+0.750L+0.750S+0.5250E+H, LL Com	27.828	33.349	33.347	53.516	25.103	28.636	17.614
+D+0.750L+0.750S+0.5250E+H, LL Com	27.828	33.350	33.342	53.534	25.037	29.037	19.222
+D+0.750L+0.750S+0.5250E+H, LL Com	27.829	33.346	33.361	53.463	25.456	28.971	17.583
+D+0.750L+0.750S+0.5250E+H, LL Com	27.828	33.347	33.356	53.480	25.389	29.372	19.192
+D+0.750L+0.750S+0.5250E+H, LL Com	27.744	33.852	29.619	53.947	25.246	28.562	17.626
+D+0.750L+0.750S+0.5250E+H, LL Com	27.744	33.854	29.615	53.965	25.180	28.963	19.235
+D+0.750L+0.750S+0.5250E+H, LL Com	27.745	33.849	29.634	53.894	25.599	28.897	17.596
+D+0.750L+0.750S+0.5250E+H, LL Com	27.745	33.850	29.629	53.912	25.532	29.298	19.204
+D+0.750L+0.750S+0.5250E+H, LL Com	27.742	33.865	29.570	54.079	25.592	28.514	17.634
+D+0.750L+0.750S+0.5250E+H, LL Com	27.742	33.866	29.565	54.096	25.525	28.915	19.243
+D+0.750L+0.750S+0.5250E+H, LL Com	27.743	33.861	29.584	54.025	25.944	28.849	17.604
+D+0.750L+0.750S+0.5250E+H, LL Com	27.743	33.862	29.579	54.043	25.878	29.250	19.212
+D+0.750L+0.750S+0.5250E+H, LL Com	28.167	29.604	29.466	53.978	24.600	28.724	17.599
+D+0.750L+0.750S+0.5250E+H, LL Com	28.166	29.605	29.461	53.996	24.533	29.125	19.208
+D+0.750L+0.750S+0.5250E+H, LL Com	28.167	29.600	29.480	53.925	24.952	29.058	17.569
+D+0.750L+0.750S+0.5250E+H, LL Com	28.167	29.601	29.475	53.943	24.886	29.460	19.177
+D+0.750L+0.750S+0.5250E+H, LL Com	28.164	29.616	29.416	54.110	24.945	28.676	17.607
+D+0.750L+0.750S+0.5250E+H, LL Com	28.164	29.617	29.411	54.127	24.879	29.077	19.216
+D+0.750L+0.750S+0.5250E+H, LL Com	28.165	29.613	29.430	54.056	25.298	29.010	17.577
+D+0.750L+0.750S+0.5250E+H, LL Com	28.165	29.614	29.425	54.074	25.231	29.412	19.185
+D+0.750L+0.750S+0.5250E+H, LL Com	28.081	30.119	25.689	54.541	25.088	28.602	17.619
+D+0.750L+0.750S+0.5250E+H, LL Com	28.080	30.121	25.684	54.559	25.022	29.003	19.228
+D+0.750L+0.750S+0.5250E+H, LL Com	28.081	30.116	25.703	54.488	25.440	28.936	17.589
+D+0.750L+0.750S+0.5250E+H, LL Com	28.081	30.117	25.698	54.505	25.374	29.338	19.198
+D+0.750L+0.750S+0.5250E+H, LL Com	28.079	30.132	25.639	54.672	25.433	28.554	17.627
+D+0.750L+0.750S+0.5250E+H, LL Com	28.078	30.133	25.634	54.690	25.367	28.955	19.236
+D+0.750L+0.750S+0.5250E+H, LL Com	28.079	30.128	25.653	54.619	25.786	28.888	17.597
+D+0.750L+0.750S+0.5250E+H, LL Com	28.079	30.129	25.648	54.637	25.719	29.290	19.206
+0.60D+0.60W+0.60H	9.195	19.272	16.802	19.257	11.935	14.544	9.109
+0.60D+0.70E+0.60H	14.384	20.019	16.620	19.240	12.187	13.547	4.118
D Only	16.960	36.186	31.752	34.048	19.641	24.303	15.282
Lr Only, LL Comb Run (*****L)							
Lr Only, LL Comb Run (****L*)							
Lr Only, LL Comb Run (****LL)							
Lr Only, LL Comb Run (***L**)							
Lr Only, LL Comb Run (***L*L)							
Lr Only, LL Comb Run (***LL*)							
Lr Only, LL Comb Run (***LLL)							
Lr Only, LL Comb Run (**L***)							

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Lr Only, LL Comb Run (**L**L)							
Lr Only, LL Comb Run (**L*L*)							
Lr Only, LL Comb Run (**L*LL)							
Lr Only, LL Comb Run (**LL**)							
Lr Only, LL Comb Run (**LL*L)							
Lr Only, LL Comb Run (**LLL*)							
Lr Only, LL Comb Run (**LLLL)							
Lr Only, LL Comb Run (*L****)							
Lr Only, LL Comb Run (*L***L)							
Lr Only, LL Comb Run (*L**L*)							
Lr Only, LL Comb Run (*L**LL)							
Lr Only, LL Comb Run (*L*L**)							
Lr Only, LL Comb Run (*L*L*L)							
Lr Only, LL Comb Run (*L*LL*)							
Lr Only, LL Comb Run (*L*LLL)							
Lr Only, LL Comb Run (*LL***)							
Lr Only, LL Comb Run (*LL**L)							
Lr Only, LL Comb Run (*LL*L*)							
Lr Only, LL Comb Run (*LL*LL)							
Lr Only, LL Comb Run (*LLL**)							
Lr Only, LL Comb Run (*LLL*L)							
Lr Only, LL Comb Run (*LLLL*)							
Lr Only, LL Comb Run (*LLLLL)							
Lr Only, LL Comb Run (L*****)							
Lr Only, LL Comb Run (L****L)							
Lr Only, LL Comb Run (L***L*)							
Lr Only, LL Comb Run (L***LL)							
Lr Only, LL Comb Run (L**L**)							
Lr Only, LL Comb Run (L**L*L)							
Lr Only, LL Comb Run (L**LL*)							
Lr Only, LL Comb Run (L**LLL)							
Lr Only, LL Comb Run (L*L***)							
Lr Only, LL Comb Run (L*L**L)							
Lr Only, LL Comb Run (L*L*L*)							
Lr Only, LL Comb Run (L*L*LL)							
Lr Only, LL Comb Run (L*LL**)							
Lr Only, LL Comb Run (L*LL*L)							
Lr Only, LL Comb Run (L*LLL*)							
Lr Only, LL Comb Run (L*LLLL)							
Lr Only, LL Comb Run (LL****)							
Lr Only, LL Comb Run (LL***L)							
Lr Only, LL Comb Run (LL**L*)							
Lr Only, LL Comb Run (LL**LL)							
Lr Only, LL Comb Run (LL*L**)							
Lr Only, LL Comb Run (LL*L*L)							
Lr Only, LL Comb Run (LL*LL*)							
Lr Only, LL Comb Run (LL*LLL)							
Lr Only, LL Comb Run (LLL***)							
Lr Only, LL Comb Run (LLL**L)							
Lr Only, LL Comb Run (LLL*L*)							
Lr Only, LL Comb Run (LLL*LL)							
Lr Only, LL Comb Run (LLLL**)							
Lr Only, LL Comb Run (LLLL*L)							
Lr Only, LL Comb Run (LLLLL*)							
Lr Only, LL Comb Run (LLLLLL)							
L Only, LL Comb Run (*****L)	-0.000	0.002	-0.006	0.024	-0.088	0.535	2.145
L Only, LL Comb Run (****L*)	0.001	-0.005	0.019	-0.071	0.470	0.446	-0.040
L Only, LL Comb Run (****LL)	0.001	-0.003	0.013	-0.047	0.382	0.981	2.105
L Only, LL Comb Run (***L**)	-0.003	0.017	-0.066	0.175	0.461	-0.064	0.011

Concrete Beam

Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (***L*L)	-0.003	0.018	-0.073	0.199	0.372	0.471	2.155
L Only, LL Comb Run (***LL*)	-0.002	0.012	-0.047	0.104	0.931	0.383	-0.030
L Only, LL Comb Run (***LLL)	-0.002	0.013	-0.054	0.128	0.842	0.918	2.115
L Only, LL Comb Run (**L***)	-0.115	0.687	-5.036	0.750	0.651	-0.163	0.027
L Only, LL Comb Run (**L**L)	-0.115	0.689	-5.042	0.774	0.563	0.372	2.172
L Only, LL Comb Run (**L*L*)	-0.114	0.683	-5.017	0.679	1.121	0.284	-0.013
L Only, LL Comb Run (**L*LL)	-0.114	0.684	-5.023	0.703	1.033	0.819	2.132
L Only, LL Comb Run (**LL**)	-0.117	0.704	-5.102	0.925	1.111	-0.227	0.038
L Only, LL Comb Run (**LL*L)	-0.118	0.706	-5.109	0.949	1.023	0.308	2.183
L Only, LL Comb Run (**LLL*)	-0.117	0.699	-5.084	0.854	1.582	0.220	-0.002
L Only, LL Comb Run (**LLLL)	-0.117	0.701	-5.090	0.878	1.493	0.755	2.142
L Only, LL Comb Run (*L****)	0.448	-4.977	-5.241	0.791	-0.211	0.053	-0.009
L Only, LL Comb Run (*L***L)	0.448	-4.976	-5.247	0.815	-0.299	0.588	2.136
L Only, LL Comb Run (*L**L*)	0.449	-4.982	-5.222	0.720	0.259	0.499	-0.049
L Only, LL Comb Run (*L**LL)	0.449	-4.981	-5.229	0.744	0.171	1.034	2.096
L Only, LL Comb Run (*L*L**)	0.446	-4.961	-5.308	0.966	0.249	-0.011	0.002
L Only, LL Comb Run (*L*L*L)	0.445	-4.959	-5.314	0.990	0.161	0.524	2.147
L Only, LL Comb Run (*L*LL*)	0.447	-4.965	-5.289	0.895	0.720	0.435	-0.038
L Only, LL Comb Run (*L*LLL)	0.446	-4.964	-5.295	0.919	0.631	0.970	2.106
L Only, LL Comb Run (*LL***)	0.334	-4.290	-10.277	1.542	0.440	-0.110	0.018
L Only, LL Comb Run (*LL**L)	0.334	-4.288	-10.284	1.565	0.351	0.425	2.163
L Only, LL Comb Run (*LL*L*)	0.335	-4.295	-10.258	1.471	0.910	0.336	-0.022
L Only, LL Comb Run (*LL*LL)	0.334	-4.293	-10.265	1.494	0.822	0.872	2.123
L Only, LL Comb Run (*LLL**)	0.331	-4.273	-10.344	1.717	0.900	-0.174	0.029
L Only, LL Comb Run (*LLL*L)	0.331	-4.272	-10.350	1.740	0.812	0.361	2.174
L Only, LL Comb Run (*LLLL*)	0.332	-4.278	-10.325	1.646	1.370	0.273	-0.011
L Only, LL Comb Run (*LLLLL)	0.332	-4.276	-10.331	1.669	1.282	0.808	2.134
L Only, LL Comb Run (L*****)	-0.927	-5.962	0.985	-0.264	0.070	-0.018	0.003
L Only, LL Comb Run (L****L)	-0.927	-5.960	0.978	-0.240	-0.018	0.518	2.148
L Only, LL Comb Run (L***L*)	-0.926	-5.966	1.004	-0.335	0.540	0.429	-0.037
L Only, LL Comb Run (L***LL)	-0.926	-5.965	0.997	-0.311	0.452	0.964	2.108
L Only, LL Comb Run (L**L**)	-0.929	-5.945	0.918	-0.089	0.531	-0.081	0.014
L Only, LL Comb Run (L**L*L)	-0.930	-5.943	0.912	-0.065	0.442	0.454	2.158
L Only, LL Comb Run (L**LL*)	-0.929	-5.950	0.937	-0.160	1.001	0.365	-0.027
L Only, LL Comb Run (L**LLL)	-0.929	-5.948	0.931	-0.136	0.912	0.900	2.118
L Only, LL Comb Run (L*L***)	-1.041	-5.274	-4.051	0.486	0.721	-0.180	0.030
L Only, LL Comb Run (L*L**L)	-1.042	-5.273	-4.058	0.510	0.633	0.355	2.175
L Only, LL Comb Run (L*L*L*)	-1.040	-5.279	-4.032	0.415	1.191	0.266	-0.010
L Only, LL Comb Run (L*L*LL)	-1.041	-5.277	-4.039	0.439	1.103	0.801	2.135
L Only, LL Comb Run (L*LL**)	-1.044	-5.258	-4.118	0.661	1.182	-0.244	0.041
L Only, LL Comb Run (L*LL*L)	-1.044	-5.256	-4.124	0.685	1.093	0.291	2.186
L Only, LL Comb Run (L*LLL*)	-1.043	-5.262	-4.099	0.590	1.652	0.202	0.000
L Only, LL Comb Run (L*LLLL)	-1.044	-5.261	-4.105	0.614	1.563	0.737	2.145
L Only, LL Comb Run (LL****)	-0.478	-10.939	-4.256	0.528	-0.141	0.035	-0.006
L Only, LL Comb Run (LL***L)	-0.478	-10.937	-4.263	0.551	-0.229	0.570	2.139
L Only, LL Comb Run (LL**L*)	-0.477	-10.944	-4.237	0.457	0.329	0.482	-0.046
L Only, LL Comb Run (LL**LL)	-0.478	-10.942	-4.244	0.480	0.241	1.017	2.099
L Only, LL Comb Run (LL*L**)	-0.481	-10.922	-4.323	0.703	0.320	-0.029	0.005
L Only, LL Comb Run (LL*L*L)	-0.481	-10.921	-4.329	0.726	0.231	0.506	2.150
L Only, LL Comb Run (LL*LL*)	-0.480	-10.927	-4.304	0.632	0.790	0.418	-0.035
L Only, LL Comb Run (LL*LLL)	-0.480	-10.926	-4.310	0.655	0.701	0.953	2.109
L Only, LL Comb Run (LLL***)	-0.593	-10.252	-9.292	1.278	0.510	-0.128	0.021
L Only, LL Comb Run (LLL**L)	-0.593	-10.250	-9.299	1.302	0.422	0.408	2.166
L Only, LL Comb Run (LLL*L*)	-0.592	-10.256	-9.274	1.207	0.980	0.319	-0.019
L Only, LL Comb Run (LLL*LL)	-0.592	-10.255	-9.280	1.231	0.892	0.854	2.126
L Only, LL Comb Run (LLLL**)	-0.596	-10.235	-9.359	1.453	0.971	-0.191	0.032
L Only, LL Comb Run (LLLL*L)	-0.596	-10.233	-9.365	1.477	0.882	0.344	2.177
L Only, LL Comb Run (LLLLL*)	-0.595	-10.240	-9.340	1.382	1.441	0.255	-0.008
L Only, LL Comb Run (LLLLLL)	-0.595	-10.238	-9.346	1.406	1.352	0.790	2.137

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Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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Description : GB-I-62R

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
S Only	12.411	6.836	6.388	28.667	6.166	6.939	8.220
W Only							
E Only	7.413	1.067	-0.259	-0.025	0.360	-1.425	-7.131
H Only	-1.635	-4.066	-3.749	-1.952	0.251	-0.063	-0.100

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	37.82	37.82	0.00	1.00	46.82	PhiVc/2 < Vu <=	Min 11.5.6	66.1	7.3	7.0
+1.20D+0.50L+0.70S+E+1.60	1	0.14	20.50	18.68	18.68	2.68	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.28	20.50	17.96	17.96	5.25	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	0.42	20.50	17.24	17.24	7.72	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	0.56	20.50	11.36	11.36	7.34	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	0.70	20.50	10.50	10.50	8.87	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	0.84	20.50	9.63	9.63	10.28	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	0.98	20.50	8.77	8.77	11.57	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	1.12	20.50	7.91	7.91	12.74	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	1.26	20.50	7.05	7.05	13.79	0.87	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.40D+1.60H	1	1.40	20.50	6.19	6.19	14.72	0.72	46.12	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.40D+1.60H	1	1.54	20.50	5.33	5.33	15.52	0.59	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.40D+1.60H	1	1.68	20.50	4.47	4.47	16.21	0.47	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.82	20.50	3.73	3.73	15.31	0.42	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.96	20.50	3.01	3.01	15.78	0.33	45.15	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.10	20.50	2.29	2.29	16.15	0.24	44.94	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.24	20.50	1.57	1.57	16.42	0.16	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	2.38	20.50	-1.58	1.58	12.83	0.21	44.86	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	2.52	20.50	-2.20	2.20	12.57	0.30	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	2.66	20.50	-2.81	2.81	12.22	0.39	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	2.80	20.50	-3.53	3.53	14.42	0.42	45.38	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	2.94	20.50	-4.25	4.25	13.87	0.52	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.08	20.50	-4.97	4.97	13.23	0.64	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.22	20.50	-5.68	5.68	12.48	0.78	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.36	20.50	-6.40	6.40	11.63	0.94	46.67	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.50	20.50	-7.12	7.12	10.68	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.64	20.50	-7.84	7.84	9.64	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	1	3.78	20.50	-8.56	8.56	8.49	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	3.92	20.50	-9.31	9.31	10.78	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.06	20.50	-10.17	10.17	9.41	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.20	20.50	-11.03	11.03	7.93	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.34	20.50	-11.89	11.89	6.32	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.49	20.50	-12.76	12.76	4.59	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.63	20.50	-13.62	13.62	2.74	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.77	20.50	-14.48	14.48	0.77	1.00	46.82	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.40D+1.60H	1	4.91	21.00	-15.34	15.34	1.32	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.05	21.00	-16.20	16.20	3.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.19	21.00	-17.06	17.06	5.86	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.33	21.00	-17.92	17.92	8.31	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.47	21.00	-18.78	18.78	10.88	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.61	21.00	-19.65	19.65	13.57	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.75	21.00	-20.51	20.51	16.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	5.89	21.00	-21.37	21.37	19.32	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	1	6.03	21.00	-22.23	22.23	22.38	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.17	21.00	27.50	27.50	30.08	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.31	21.00	26.78	26.78	26.28	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.45	21.00	26.07	26.07	22.57	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	21.00	25.35	25.35	18.97	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	6.73	21.00	24.63	24.63	15.47	1.00	48.72	PhiVc/2 < Vu <=	Min 11.5.6	68.5	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.87	21.00	23.91	23.91	12.07	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.01	21.00	23.19	23.19	8.77	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.15	21.00	22.47	22.47	5.57	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.29	21.00	21.75	21.75	2.47	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.43	20.50	21.03	21.03	0.53	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.57	20.50	20.31	20.31	3.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.71	20.50	19.59	19.59	6.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.85	20.50	18.87	18.87	8.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.99	20.50	18.15	18.15	11.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.13	20.50	17.43	17.43	14.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.27	20.50	16.72	16.72	16.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	20.50	16.00	16.00	18.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.55	20.50	15.28	15.28	20.88	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.69	20.50	14.56	14.56	22.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.83	20.50	13.84	13.84	24.96	0.95	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.97	20.50	13.12	13.12	26.85	0.83	47.10	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.11	20.50	-8.09	8.09	24.64	0.56	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.25	20.50	-8.73	8.73	25.53	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.39	20.50	-9.45	9.45	24.26	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.53	20.50	-10.17	10.17	22.88	0.76	46.85	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.67	20.50	-10.89	10.89	21.41	0.87	47.21	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.81	20.50	-11.61	11.61	19.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.95	20.50	-12.33	12.33	18.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.09	20.50	-13.05	13.05	16.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.23	20.50	-13.77	13.77	14.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.37	20.50	-14.49	14.49	12.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.51	20.50	-15.21	15.21	10.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.65	20.50	-15.92	15.92	8.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.79	20.50	-16.64	16.64	5.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	10.93	20.50	-17.36	17.36	3.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.07	20.50	-18.08	18.08	1.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.21	21.00	-18.80	18.80	1.48	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.35	21.00	-19.52	19.52	4.17	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.49	21.00	-20.24	20.24	6.95	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.63	21.00	-20.96	20.96	9.84	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.77	21.00	-21.68	21.68	12.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	11.91	21.00	-22.40	22.40	15.92	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.05	21.00	-23.12	23.12	19.11	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	12.19	21.00	-23.84	23.84	22.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	12.33	21.00	19.42	19.42	19.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	12.47	21.00	18.56	18.56	17.17	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	12.61	21.00	17.70	17.70	14.63	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	12.75	21.00	16.84	16.84	12.21	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	12.89	21.00	15.98	15.98	9.91	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.03	21.00	15.12	15.12	7.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.17	21.00	14.26	14.26	5.67	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.32	21.00	13.40	13.40	3.73	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	13.46	21.00	12.53	12.53	1.92	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.60	21.00	11.80	11.80	6.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.74	21.00	11.08	11.08	5.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.88	21.00	10.36	10.36	3.72	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.02	21.00	9.64	9.64	2.32	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.16	21.00	8.92	8.92	1.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	14.30	20.50	8.20	8.20	0.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.44	20.50	7.48	7.48	1.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.58	20.50	6.76	6.76	2.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.72	20.50	6.04	6.04	3.18	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.86	20.50	5.33	5.33	3.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.00	20.50	4.61	4.61	4.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.14	20.50	3.89	3.89	5.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.28	20.50	3.17	3.17	5.76	0.94	47.44	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.42	20.50	2.50	2.50	4.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	15.56	20.50	1.89	1.89	4.52	0.71	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.70	20.50	-2.16	2.16	10.21	0.36	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.84	20.50	-2.88	2.88	9.86	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	15.98	20.50	-3.60	3.60	9.40	0.65	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.12	20.50	-4.32	4.32	8.85	0.83	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.26	20.50	-5.03	5.03	8.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.40	20.50	-5.75	5.75	7.44	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	16.54	20.50	-6.47	6.47	6.58	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.68	20.50	-7.27	7.27	6.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.82	20.50	-8.13	8.13	5.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	16.96	20.50	-9.00	9.00	4.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	17.10	20.50	-9.86	9.86	2.96	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	17.24	20.50	-10.72	10.72	1.52	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.40D+1.60H	3	17.38	21.00	-11.58	11.58	0.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	17.52	21.00	-12.44	12.44	1.72	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	17.66	21.00	-13.30	13.30	3.53	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	17.80	21.00	-14.16	14.16	5.45	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	17.94	21.00	-15.02	15.02	7.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	18.08	21.00	-15.88	15.88	9.66	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.40D+1.60H	3	18.22	21.00	-16.75	16.75	11.95	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	18.36	21.00	-65.68	65.68	9.56	1.00	48.72	PhiVc < Vu	16.957	68.5	7.7	7.0
+1.20D+0.50L+1.60S+1.60H,	4	18.50	21.00	18.43	18.43	20.06	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	21.00	17.64	17.64	17.54	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.78	21.00	16.82	16.82	15.12	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.92	21.00	16.01	16.01	12.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.06	21.00	15.20	15.20	10.63	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	21.00	14.39	14.39	8.56	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.34	21.00	13.57	13.57	6.60	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.48	21.00	12.76	12.76	4.76	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.62	21.00	11.95	11.95	3.02	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.76	21.00	11.13	11.13	1.41	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.90	20.50	10.32	10.32	0.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.04	20.50	9.51	9.51	1.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.18	20.50	8.69	8.69	2.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.32	20.50	7.88	7.88	3.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.46	20.50	7.07	7.07	4.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.60	20.50	6.26	6.26	5.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.74	20.50	5.44	5.44	6.73	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	20.88	20.50	4.63	4.63	7.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	21.02	20.50	3.82	3.82	8.02	0.81	47.02	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	21.16	20.50	3.00	3.00	8.50	0.60	46.33	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.30	20.50	2.27	2.27	6.73	0.58	46.24	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.44	20.50	1.59	1.59	7.00	0.39	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	21.58	20.50	0.98	0.98	6.19	0.27	45.23	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	21.72	20.50	-1.07	1.07	8.97	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H,	4	21.86	20.50	-1.75	1.75	8.78	0.34	45.46	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	22.00	20.50	-2.43	2.43	8.48	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	22.15	20.50	-3.10	3.10	8.10	0.66	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.29	20.50	-3.91	3.91	8.53	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.43	20.50	-4.72	4.72	7.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.57	20.50	-5.53	5.53	7.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.71	20.50	-6.35	6.35	6.38	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.85	20.50	-7.16	7.16	5.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	22.99	20.50	-7.97	7.97	4.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.13	20.50	-8.78	8.78	3.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.27	20.50	-9.60	9.60	1.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.41	20.50	-10.41	10.41	0.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.55	21.00	-11.22	11.22	1.01	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.69	21.00	-12.04	12.04	2.64	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.83	21.00	-12.85	12.85	4.39	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	23.97	21.00	-13.66	13.66	6.24	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	24.11	21.00	-14.48	14.48	8.22	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	24.25	21.00	-15.29	15.29	10.30	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	24.39	21.00	-16.10	16.10	12.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	24.53	21.00	-16.91	16.91	14.82	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.67	21.00	16.93	16.93	17.24	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.81	21.00	16.12	16.12	14.93	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.95	21.00	15.31	15.31	12.72	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.09	21.00	14.50	14.50	10.64	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.23	21.00	13.68	13.68	8.66	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.37	21.00	12.87	12.87	6.80	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.51	21.00	12.06	12.06	5.05	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.65	21.00	11.24	11.24	3.42	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.79	21.00	10.43	10.43	1.90	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	25.93	21.00	9.62	9.62	0.50	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.07	20.50	8.80	8.80	0.79	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.21	20.50	7.99	7.99	1.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.35	20.50	7.18	7.18	3.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.49	20.50	6.37	6.37	3.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.63	20.50	5.55	5.55	4.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.77	20.50	4.74	4.74	5.54	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	26.91	20.50	3.93	3.93	6.15	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	27.05	20.50	3.11	3.11	6.64	0.80	46.98	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	27.19	20.50	2.30	2.30	7.02	0.56	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	27.33	20.50	1.52	1.52	6.67	0.39	45.63	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	27.47	20.50	0.83	0.83	6.83	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60	5	27.61	20.50	-0.61	0.61	5.90	0.18	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60	5	27.75	20.50	-1.29	1.29	5.77	0.38	45.60	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60	5	27.89	20.50	-1.98	1.98	5.73	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.03	20.50	-2.74	2.74	7.03	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.17	20.50	-3.55	3.55	6.59	0.92	47.38	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.31	20.50	-4.36	4.36	6.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.45	20.50	-5.17	5.17	5.36	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.59	20.50	-5.99	5.99	4.58	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.73	20.50	-6.80	6.80	3.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	28.87	20.50	-7.61	7.61	2.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.01	20.50	-8.43	8.43	1.55	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.15	20.50	-9.24	9.24	0.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.29	21.00	-10.05	10.05	1.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0

Concrete Beam

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	5	29.43	21.00	-10.87	10.87	2.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.57	21.00	-11.68	11.68	4.09	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.71	21.00	-12.49	12.49	5.78	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.85	21.00	-13.30	13.30	7.59	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	29.99	21.00	-14.12	14.12	9.51	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	30.13	21.00	-14.93	14.93	11.54	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	30.27	21.00	-15.74	15.74	13.69	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	30.41	21.00	-16.56	16.56	15.96	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	30.55	21.00	-17.37	17.37	18.34	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	30.69	21.00	-18.18	18.18	20.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.84	21.00	21.69	21.69	23.43	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.98	21.00	20.87	20.87	20.45	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.12	21.00	20.06	20.06	17.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.26	21.00	19.25	19.25	14.83	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.40	21.00	18.44	18.44	12.19	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.54	21.00	17.62	17.62	9.66	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.68	21.00	16.81	16.81	7.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.82	21.00	16.00	16.00	4.95	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.96	21.00	15.18	15.18	2.76	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.10	21.00	14.37	14.37	0.69	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.24	20.50	13.56	13.56	1.27	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.38	20.50	12.75	12.75	3.11	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.52	20.50	11.93	11.93	4.84	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.66	20.50	11.12	11.12	6.46	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.80	20.50	10.31	10.31	7.96	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.94	20.50	9.49	9.49	9.34	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.08	20.50	8.68	8.68	10.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.22	20.50	7.87	7.87	11.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	33.36	20.50	7.10	7.10	12.19	1.00	47.63	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	33.50	20.50	6.41	6.41	13.13	0.83	47.09	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	33.64	20.50	5.73	5.73	13.98	0.70	46.65	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	33.78	20.50	5.04	5.04	14.74	0.58	46.27	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	33.92	20.50	4.35	4.35	15.40	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	34.06	20.50	3.67	3.67	15.96	0.39	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	34.20	20.50	2.98	2.98	16.42	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	34.34	20.50	2.29	2.29	16.56	0.24	45.12	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	34.48	20.50	1.61	1.61	16.83	0.16	44.88	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	34.62	20.50	-1.39	1.39	11.71	0.20	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	34.76	20.50	-2.07	2.07	11.47	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	34.90	20.50	-2.76	2.76	11.13	0.42	45.74	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.04	20.50	-3.45	3.45	10.70	0.55	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.18	20.50	-4.13	4.13	10.17	0.69	46.63	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.32	20.50	-4.82	4.82	9.54	0.86	47.19	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.46	20.50	-5.51	5.51	8.81	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.60	20.50	-6.19	6.19	8.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60I	6	35.74	20.50	-6.88	6.88	7.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.88	20.50	-7.62	7.62	12.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.02	20.50	-8.44	8.44	11.09	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.16	20.50	-9.25	9.25	9.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.30	20.50	-10.06	10.06	8.49	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	36.44	20.50	-16.32	16.32	9.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	36.58	20.50	-17.00	17.00	7.59	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	36.72	20.50	-17.69	17.69	5.16	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S-E+1.60H	6	36.86	20.50	-18.38	18.38	2.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Description : GB-I-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	6	37.00	20.50	-32.42	32.42	0.00	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	6.167	-27.23	169.11	0.16
Span # 2	2	6.167	-30.08	170.00	0.18
Span # 3	3	6.167	-25.79	170.00	0.15
Span # 4	4	6.167	-20.06	170.00	0.12
Span # 5	5	6.167	-20.83	170.00	0.12
Span # 6	6	6.167	-23.43	170.00	0.14
+1.40D+1.60H					
Span # 1	1	6.167	17.83	126.94	0.14
Span # 2	2	6.167	-25.55	170.00	0.15
Span # 3	3	6.167	-19.83	170.00	0.12
Span # 4	4	6.167	-18.59	170.00	0.11
Span # 5	5	6.167	-17.41	170.00	0.10
Span # 6	6	6.167	-19.58	170.00	0.12
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.53	170.00	0.10
Span # 4	4	6.167	-15.75	170.00	0.09
Span # 5	5	6.167	-15.43	170.00	0.09
Span # 6	6	6.167	-17.31	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.37	170.00	0.13
Span # 3	3	6.167	-16.58	170.00	0.10
Span # 4	4	6.167	-15.59	170.00	0.09
Span # 5	5	6.167	-15.21	170.00	0.09
Span # 6	6	6.167	-17.17	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.37	170.00	0.13
Span # 3	3	6.167	-16.57	170.00	0.10
Span # 4	4	6.167	-15.63	170.00	0.09
Span # 5	5	6.167	-15.74	170.00	0.09
Span # 6	6	6.167	-17.71	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.87	126.94	0.12
Span # 2	2	6.167	-21.40	170.00	0.13
Span # 3	3	6.167	-16.44	170.00	0.10
Span # 4	4	6.167	-16.12	170.00	0.09
Span # 5	5	6.167	-14.81	170.00	0.09
Span # 6	6	6.167	-16.67	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.87	126.94	0.12
Span # 2	2	6.167	-21.41	170.00	0.13
Span # 3	3	6.167	-16.43	170.00	0.10
Span # 4	4	6.167	-16.16	170.00	0.10
Span # 5	5	6.167	-15.34	170.00	0.09
Span # 6	6	6.167	-17.21	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	6.167	14.87	126.94	0.12
Span # 2	2	6.167	-21.39	170.00	0.13
Span # 3	3	6.167	-16.47	170.00	0.10
Span # 4	4	6.167	-16.00	170.00	0.09
Span # 5	5	6.167	-15.12	170.00	0.09
Span # 6	6	6.167	-17.06	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	6.167	14.87	126.94	0.12
Span # 2	2	6.167	-21.40	170.00	0.13
Span # 3	3	6.167	-16.46	170.00	0.10
Span # 4	4	6.167	-16.04	170.00	0.09
Span # 5	5	6.167	-15.65	170.00	0.09

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	6.167	-17.61	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	-19.83	169.11	0.12
Span # 2	2	6.167	-22.51	170.00	0.13
Span # 3	3	6.167	-12.02	170.00	0.07
Span # 4	4	6.167	-11.69	170.00	0.07
Span # 5	5	6.167	-14.67	170.00	0.09
Span # 6	6	6.167	-16.50	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	-19.83	169.11	0.12
Span # 2	2	6.167	-22.51	170.00	0.13
Span # 3	3	6.167	-12.01	170.00	0.07
Span # 4	4	6.167	-11.73	170.00	0.07
Span # 5	5	6.167	-15.20	170.00	0.09
Span # 6	6	6.167	-17.05	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	-19.82	169.11	0.12
Span # 2	2	6.167	-22.50	170.00	0.13
Span # 3	3	6.167	-12.05	170.00	0.07
Span # 4	4	6.167	-11.58	170.00	0.07
Span # 5	5	6.167	-14.98	170.00	0.09
Span # 6	6	6.167	-16.90	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	-19.82	169.11	0.12
Span # 2	2	6.167	-22.50	170.00	0.13
Span # 3	3	6.167	-12.04	170.00	0.07
Span # 4	4	6.167	-11.62	170.00	0.07
Span # 5	5	6.167	-15.50	170.00	0.09
Span # 6	6	6.167	-17.44	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	-19.85	169.11	0.12
Span # 2	2	6.167	-22.53	170.00	0.13
Span # 3	3	6.167	-11.91	170.00	0.07
Span # 4	4	6.167	-12.10	170.00	0.07
Span # 5	5	6.167	-14.58	170.00	0.09
Span # 6	6	6.167	-16.40	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	-19.86	169.11	0.12
Span # 2	2	6.167	-22.54	170.00	0.13
Span # 3	3	6.167	-11.90	170.00	0.07
Span # 4	4	6.167	-12.14	170.00	0.07
Span # 5	5	6.167	-15.10	170.00	0.09
Span # 6	6	6.167	-16.94	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	-19.85	169.11	0.12
Span # 2	2	6.167	-22.53	170.00	0.13
Span # 3	3	6.167	-11.94	170.00	0.07
Span # 4	4	6.167	-11.99	170.00	0.07
Span # 5	5	6.167	-14.88	170.00	0.09
Span # 6	6	6.167	-16.79	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	-19.85	169.11	0.12
Span # 2	2	6.167	-22.53	170.00	0.13
Span # 3	3	6.167	-11.93	170.00	0.07
Span # 4	4	6.167	-12.03	170.00	0.07
Span # 5	5	6.167	-15.41	170.00	0.09
Span # 6	6	6.167	-17.34	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	16.66	126.94	0.13
Span # 2	2	6.167	-16.95	170.00	0.10
Span # 3	3	6.167	-13.53	170.00	0.08
Span # 4	4	6.167	-17.01	170.00	0.10
Span # 5	5	6.167	-14.98	170.00	0.09
Span # 6	6	6.167	-16.86	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	16.66	126.94	0.13
Span # 2	2	6.167	-16.95	170.00	0.10
Span # 3	3	6.167	-13.57	170.00	0.08
Span # 4	4	6.167	-17.05	170.00	0.10

Concrete Beam

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Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	6.167	-15.51	170.00	0.09
Span # 6	6	6.167	-17.40	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	16.66	126.94	0.13
Span # 2	2	6.167	-16.94	170.00	0.10
Span # 3	3	6.167	-13.42	170.00	0.08
Span # 4	4	6.167	-16.89	170.00	0.10
Span # 5	5	6.167	-15.29	170.00	0.09
Span # 6	6	6.167	-17.25	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	16.66	126.94	0.13
Span # 2	2	6.167	-16.94	170.00	0.10
Span # 3	3	6.167	-13.46	170.00	0.08
Span # 4	4	6.167	-16.93	170.00	0.10
Span # 5	5	6.167	-15.82	170.00	0.09
Span # 6	6	6.167	-17.80	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	16.65	126.94	0.13
Span # 2	2	6.167	-16.98	170.00	0.10
Span # 3	3	6.167	-13.93	170.00	0.08
Span # 4	4	6.167	-17.42	170.00	0.10
Span # 5	5	6.167	-14.89	170.00	0.09
Span # 6	6	6.167	-16.75	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	16.65	126.94	0.13
Span # 2	2	6.167	-16.98	170.00	0.10
Span # 3	3	6.167	-13.97	170.00	0.08
Span # 4	4	6.167	-17.46	170.00	0.10
Span # 5	5	6.167	-15.42	170.00	0.09
Span # 6	6	6.167	-17.30	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	16.65	126.94	0.13
Span # 2	2	6.167	-16.97	170.00	0.10
Span # 3	3	6.167	-13.82	170.00	0.08
Span # 4	4	6.167	-17.30	170.00	0.10
Span # 5	5	6.167	-15.20	170.00	0.09
Span # 6	6	6.167	-17.15	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	16.65	126.94	0.13
Span # 2	2	6.167	-16.97	170.00	0.10
Span # 3	3	6.167	-13.85	170.00	0.08
Span # 4	4	6.167	-17.34	170.00	0.10
Span # 5	5	6.167	-15.72	170.00	0.09
Span # 6	6	6.167	-17.69	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	16.20	126.94	0.13
Span # 2	2	6.167	-18.08	170.00	0.11
Span # 3	3	6.167	-9.21	170.00	0.05
Span # 4	4	6.167	-13.00	170.00	0.08
Span # 5	5	6.167	-14.75	170.00	0.09
Span # 6	6	6.167	-16.59	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	16.19	126.94	0.13
Span # 2	2	6.167	-18.08	170.00	0.11
Span # 3	3	6.167	-9.25	170.00	0.05
Span # 4	4	6.167	-13.04	170.00	0.08
Span # 5	5	6.167	-15.27	170.00	0.09
Span # 6	6	6.167	-17.13	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	16.20	126.94	0.13
Span # 2	2	6.167	-18.07	170.00	0.11
Span # 3	3	6.167	-9.10	170.00	0.05
Span # 4	4	6.167	-12.88	170.00	0.08
Span # 5	5	6.167	-15.05	170.00	0.09
Span # 6	6	6.167	-16.99	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	16.20	126.94	0.13
Span # 2	2	6.167	-18.08	170.00	0.11
Span # 3	3	6.167	-9.13	170.00	0.05

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	6.167	-12.92	170.00	0.08
Span # 5	5	6.167	-15.58	170.00	0.09
Span # 6	6	6.167	-17.53	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	16.18	126.94	0.13
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-9.61	170.00	0.06
Span # 4	4	6.167	-13.41	170.00	0.08
Span # 5	5	6.167	-14.65	170.00	0.09
Span # 6	6	6.167	-16.48	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	16.18	126.94	0.13
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-9.65	170.00	0.06
Span # 4	4	6.167	-13.44	170.00	0.08
Span # 5	5	6.167	-15.18	170.00	0.09
Span # 6	6	6.167	-17.03	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	16.19	126.94	0.13
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-9.49	170.00	0.06
Span # 4	4	6.167	-13.29	170.00	0.08
Span # 5	5	6.167	-14.96	170.00	0.09
Span # 6	6	6.167	-16.88	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	16.19	126.94	0.13
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-9.53	170.00	0.06
Span # 4	4	6.167	-13.33	170.00	0.08
Span # 5	5	6.167	-15.49	170.00	0.09
Span # 6	6	6.167	-17.42	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	-13.82	169.11	0.08
Span # 2	2	6.167	-15.81	170.00	0.09
Span # 3	3	6.167	-18.16	170.00	0.11
Span # 4	4	6.167	-15.28	170.00	0.09
Span # 5	5	6.167	-14.88	170.00	0.09
Span # 6	6	6.167	-16.74	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	-13.82	169.11	0.08
Span # 2	2	6.167	-15.80	170.00	0.09
Span # 3	3	6.167	-18.15	170.00	0.11
Span # 4	4	6.167	-15.31	170.00	0.09
Span # 5	5	6.167	-15.41	170.00	0.09
Span # 6	6	6.167	-17.28	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	-13.81	169.11	0.08
Span # 2	2	6.167	-15.84	170.00	0.09
Span # 3	3	6.167	-18.20	170.00	0.11
Span # 4	4	6.167	-15.16	170.00	0.09
Span # 5	5	6.167	-15.19	170.00	0.09
Span # 6	6	6.167	-17.14	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	-13.81	169.11	0.08
Span # 2	2	6.167	-15.83	170.00	0.09
Span # 3	3	6.167	-18.19	170.00	0.11
Span # 4	4	6.167	-15.20	170.00	0.09
Span # 5	5	6.167	-15.72	170.00	0.09
Span # 6	6	6.167	-17.68	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	6.167	-13.84	169.11	0.08
Span # 2	2	6.167	-15.70	170.00	0.09
Span # 3	3	6.167	-18.06	170.00	0.11
Span # 4	4	6.167	-15.68	170.00	0.09
Span # 5	5	6.167	-14.79	170.00	0.09
Span # 6	6	6.167	-16.64	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	6.167	-13.85	169.11	0.08
Span # 2	2	6.167	-15.69	170.00	0.09

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.167	-18.04	170.00	0.11
Span # 4	4	6.167	-15.72	170.00	0.09
Span # 5	5	6.167	-15.31	170.00	0.09
Span # 6	6	6.167	-17.18	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	6.167	-13.84	169.11	0.08
Span # 2	2	6.167	-15.74	170.00	0.09
Span # 3	3	6.167	-18.09	170.00	0.11
Span # 4	4	6.167	-15.57	170.00	0.09
Span # 5	5	6.167	-15.09	170.00	0.09
Span # 6	6	6.167	-17.03	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	6.167	-13.84	169.11	0.08
Span # 2	2	6.167	-15.72	170.00	0.09
Span # 3	3	6.167	-18.08	170.00	0.11
Span # 4	4	6.167	-15.61	170.00	0.09
Span # 5	5	6.167	-15.62	170.00	0.09
Span # 6	6	6.167	-17.58	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	6.167	-14.92	169.11	0.09
Span # 2	2	6.167	-16.46	170.00	0.10
Span # 3	3	6.167	-13.64	170.00	0.08
Span # 4	4	6.167	-11.26	170.00	0.07
Span # 5	5	6.167	-14.64	170.00	0.09
Span # 6	6	6.167	-16.47	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	6.167	-14.92	169.11	0.09
Span # 2	2	6.167	-16.46	170.00	0.10
Span # 3	3	6.167	-13.63	170.00	0.08
Span # 4	4	6.167	-11.30	170.00	0.07
Span # 5	5	6.167	-15.17	170.00	0.09
Span # 6	6	6.167	-17.02	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	6.167	-14.91	169.11	0.09
Span # 2	2	6.167	-16.45	170.00	0.10
Span # 3	3	6.167	-13.67	170.00	0.08
Span # 4	4	6.167	-11.37	170.00	0.07
Span # 5	5	6.167	-14.95	170.00	0.09
Span # 6	6	6.167	-16.87	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	6.167	-14.92	169.11	0.09
Span # 2	2	6.167	-16.46	170.00	0.10
Span # 3	3	6.167	-13.66	170.00	0.08
Span # 4	4	6.167	-11.22	170.00	0.07
Span # 5	5	6.167	-15.48	170.00	0.09
Span # 6	6	6.167	-17.41	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	6.167	-14.95	169.11	0.09
Span # 2	2	6.167	-16.49	170.00	0.10
Span # 3	3	6.167	-13.53	170.00	0.08
Span # 4	4	6.167	-11.67	170.00	0.07
Span # 5	5	6.167	-14.55	170.00	0.09
Span # 6	6	6.167	-16.37	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	6.167	-14.95	169.11	0.09
Span # 2	2	6.167	-16.49	170.00	0.10
Span # 3	3	6.167	-13.52	170.00	0.08
Span # 4	4	6.167	-11.71	170.00	0.07
Span # 5	5	6.167	-15.08	170.00	0.09
Span # 6	6	6.167	-16.91	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	6.167	-14.94	169.11	0.09
Span # 2	2	6.167	-16.48	170.00	0.10
Span # 3	3	6.167	-13.56	170.00	0.08
Span # 4	4	6.167	-11.70	170.00	0.07
Span # 5	5	6.167	-14.86	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	6.167	-14.94	169.11	0.09

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.167	-16.48	170.00	0.10
Span # 3	3	6.167	-13.55	170.00	0.08
Span # 4	4	6.167	-11.59	170.00	0.07
Span # 5	5	6.167	-15.38	170.00	0.09
Span # 6	6	6.167	-17.31	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	6.167	8.23	126.94	0.06
Span # 2	2	6.167	-11.96	170.00	0.07
Span # 3	3	6.167	-13.31	170.00	0.08
Span # 4	4	6.167	-16.58	170.00	0.10
Span # 5	5	6.167	-14.96	170.00	0.09
Span # 6	6	6.167	-16.83	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	6.167	8.23	126.94	0.06
Span # 2	2	6.167	-11.95	170.00	0.07
Span # 3	3	6.167	-13.29	170.00	0.08
Span # 4	4	6.167	-16.62	170.00	0.10
Span # 5	5	6.167	-15.48	170.00	0.09
Span # 6	6	6.167	-17.37	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	6.167	8.23	126.94	0.06
Span # 2	2	6.167	-11.99	170.00	0.07
Span # 3	3	6.167	-13.34	170.00	0.08
Span # 4	4	6.167	-16.46	170.00	0.10
Span # 5	5	6.167	-15.26	170.00	0.09
Span # 6	6	6.167	-17.23	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	6.167	8.23	126.94	0.06
Span # 2	2	6.167	-11.98	170.00	0.07
Span # 3	3	6.167	-13.33	170.00	0.08
Span # 4	4	6.167	-16.50	170.00	0.10
Span # 5	5	6.167	-15.79	170.00	0.09
Span # 6	6	6.167	-17.77	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	6.167	8.22	126.94	0.06
Span # 2	2	6.167	-11.86	170.00	0.07
Span # 3	3	6.167	-13.54	170.00	0.08
Span # 4	4	6.167	-16.99	170.00	0.10
Span # 5	5	6.167	-14.86	170.00	0.09
Span # 6	6	6.167	-16.72	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	6.167	8.22	126.94	0.06
Span # 2	2	6.167	-11.85	170.00	0.07
Span # 3	3	6.167	-13.58	170.00	0.08
Span # 4	4	6.167	-17.03	170.00	0.10
Span # 5	5	6.167	-15.39	170.00	0.09
Span # 6	6	6.167	-17.27	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	6.167	8.22	126.94	0.06
Span # 2	2	6.167	-11.89	170.00	0.07
Span # 3	3	6.167	-13.43	170.00	0.08
Span # 4	4	6.167	-16.87	170.00	0.10
Span # 5	5	6.167	-15.17	170.00	0.09
Span # 6	6	6.167	-17.12	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	6.167	8.22	126.94	0.06
Span # 2	2	6.167	-11.88	170.00	0.07
Span # 3	3	6.167	-13.47	170.00	0.08
Span # 4	4	6.167	-16.91	170.00	0.10
Span # 5	5	6.167	-15.70	170.00	0.09
Span # 6	6	6.167	-17.66	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	6.167	-10.60	169.11	0.06
Span # 2	2	6.167	-12.04	170.00	0.07
Span # 3	3	6.167	-8.82	170.00	0.05
Span # 4	4	6.167	-12.56	170.00	0.07
Span # 5	5	6.167	-14.72	170.00	0.09
Span # 6	6	6.167	-16.56	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.167	-10.60	169.11	0.06
Span # 2	2	6.167	-12.04	170.00	0.07
Span # 3	3	6.167	-8.86	170.00	0.05
Span # 4	4	6.167	-12.60	170.00	0.07
Span # 5	5	6.167	-15.25	170.00	0.09
Span # 6	6	6.167	-17.10	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	6.167	-10.59	169.11	0.06
Span # 2	2	6.167	-12.03	170.00	0.07
Span # 3	3	6.167	-8.81	170.00	0.05
Span # 4	4	6.167	-12.45	170.00	0.07
Span # 5	5	6.167	-15.03	170.00	0.09
Span # 6	6	6.167	-16.96	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	6.167	-10.59	169.11	0.06
Span # 2	2	6.167	-12.03	170.00	0.07
Span # 3	3	6.167	-8.80	170.00	0.05
Span # 4	4	6.167	-12.48	170.00	0.07
Span # 5	5	6.167	-15.55	170.00	0.09
Span # 6	6	6.167	-17.50	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	6.167	-10.62	169.11	0.06
Span # 2	2	6.167	-12.06	170.00	0.07
Span # 3	3	6.167	-9.22	170.00	0.05
Span # 4	4	6.167	-12.97	170.00	0.08
Span # 5	5	6.167	-14.63	170.00	0.09
Span # 6	6	6.167	-16.46	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	6.167	-10.63	169.11	0.06
Span # 2	2	6.167	-12.07	170.00	0.07
Span # 3	3	6.167	-9.26	170.00	0.05
Span # 4	4	6.167	-13.01	170.00	0.08
Span # 5	5	6.167	-15.15	170.00	0.09
Span # 6	6	6.167	-17.00	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	6.167	-10.62	169.11	0.06
Span # 2	2	6.167	-12.06	170.00	0.07
Span # 3	3	6.167	-9.11	170.00	0.05
Span # 4	4	6.167	-12.85	170.00	0.08
Span # 5	5	6.167	-14.93	170.00	0.09
Span # 6	6	6.167	-16.85	170.00	0.10
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	6.167	-10.62	169.11	0.06
Span # 2	2	6.167	-12.06	170.00	0.07
Span # 3	3	6.167	-9.14	170.00	0.05
Span # 4	4	6.167	-12.89	170.00	0.08
Span # 5	5	6.167	-15.46	170.00	0.09
Span # 6	6	6.167	-17.40	170.00	0.10
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	6.167	-21.27	169.11	0.13
Span # 2	2	6.167	-23.99	170.00	0.14
Span # 3	3	6.167	-19.26	170.00	0.11
Span # 4	4	6.167	-16.94	170.00	0.10
Span # 5	5	6.167	-17.19	170.00	0.10
Span # 6	6	6.167	-19.30	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	6.167	-21.26	169.11	0.13
Span # 2	2	6.167	-23.98	170.00	0.14
Span # 3	3	6.167	-19.30	170.00	0.11
Span # 4	4	6.167	-16.78	170.00	0.10
Span # 5	5	6.167	-16.97	170.00	0.10
Span # 6	6	6.167	-19.15	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	6.167	-21.27	169.11	0.13
Span # 2	2	6.167	-23.98	170.00	0.14
Span # 3	3	6.167	-19.29	170.00	0.11
Span # 4	4	6.167	-16.82	170.00	0.10
Span # 5	5	6.167	-17.50	170.00	0.10
Span # 6	6	6.167	-19.69	170.00	0.12

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	6.167	-21.30	169.11	0.13
Span # 2	2	6.167	-24.01	170.00	0.14
Span # 3	3	6.167	-19.16	170.00	0.11
Span # 4	4	6.167	-17.31	170.00	0.10
Span # 5	5	6.167	-16.57	170.00	0.10
Span # 6	6	6.167	-18.65	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	6.167	-21.30	169.11	0.13
Span # 2	2	6.167	-24.01	170.00	0.14
Span # 3	3	6.167	-19.15	170.00	0.11
Span # 4	4	6.167	-17.35	170.00	0.10
Span # 5	5	6.167	-17.10	170.00	0.10
Span # 6	6	6.167	-19.19	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	6.167	-21.29	169.11	0.13
Span # 2	2	6.167	-24.00	170.00	0.14
Span # 3	3	6.167	-19.19	170.00	0.11
Span # 4	4	6.167	-17.19	170.00	0.10
Span # 5	5	6.167	-16.88	170.00	0.10
Span # 6	6	6.167	-19.04	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	6.167	-21.29	169.11	0.13
Span # 2	2	6.167	-24.01	170.00	0.14
Span # 3	3	6.167	-19.18	170.00	0.11
Span # 4	4	6.167	-17.23	170.00	0.10
Span # 5	5	6.167	-17.41	170.00	0.10
Span # 6	6	6.167	-19.59	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L***					
Span # 1	1	6.167	-22.38	169.11	0.13
Span # 2	2	6.167	-25.11	170.00	0.15
Span # 3	3	6.167	-14.75	170.00	0.09
Span # 4	4	6.167	-12.88	170.00	0.08
Span # 5	5	6.167	-16.43	170.00	0.10
Span # 6	6	6.167	-18.48	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L**L					
Span # 1	1	6.167	-22.38	169.11	0.13
Span # 2	2	6.167	-25.12	170.00	0.15
Span # 3	3	6.167	-14.74	170.00	0.09
Span # 4	4	6.167	-12.92	170.00	0.08
Span # 5	5	6.167	-16.96	170.00	0.10
Span # 6	6	6.167	-19.03	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*L*					
Span # 1	1	6.167	-22.37	169.11	0.13
Span # 2	2	6.167	-25.11	170.00	0.15
Span # 3	3	6.167	-14.78	170.00	0.09
Span # 4	4	6.167	-12.77	170.00	0.08
Span # 5	5	6.167	-16.74	170.00	0.10
Span # 6	6	6.167	-18.88	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*LL					
Span # 1	1	6.167	-22.37	169.11	0.13
Span # 2	2	6.167	-25.11	170.00	0.15
Span # 3	3	6.167	-14.77	170.00	0.09
Span # 4	4	6.167	-12.81	170.00	0.08
Span # 5	5	6.167	-17.26	170.00	0.10
Span # 6	6	6.167	-19.42	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL**					
Span # 1	1	6.167	-22.40	169.11	0.13
Span # 2	2	6.167	-25.14	170.00	0.15
Span # 3	3	6.167	-14.64	170.00	0.09
Span # 4	4	6.167	-13.29	170.00	0.08
Span # 5	5	6.167	-16.34	170.00	0.10
Span # 6	6	6.167	-18.38	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL*L					
Span # 1	1	6.167	-22.40	169.11	0.13
Span # 2	2	6.167	-25.14	170.00	0.15
Span # 3	3	6.167	-14.63	170.00	0.09
Span # 4	4	6.167	-13.33	170.00	0.08
Span # 5	5	6.167	-16.86	170.00	0.10

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	6.167	-18.92	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLL*					
Span # 1	1	6.167	-22.39	169.11	0.13
Span # 2	2	6.167	-25.13	170.00	0.15
Span # 3	3	6.167	-14.67	170.00	0.09
Span # 4	4	6.167	-13.18	170.00	0.08
Span # 5	5	6.167	-16.64	170.00	0.10
Span # 6	6	6.167	-18.78	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLLL					
Span # 1	1	6.167	-22.40	169.11	0.13
Span # 2	2	6.167	-25.14	170.00	0.15
Span # 3	3	6.167	-14.66	170.00	0.09
Span # 4	4	6.167	-13.22	170.00	0.08
Span # 5	5	6.167	-17.17	170.00	0.10
Span # 6	6	6.167	-19.32	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L****					
Span # 1	1	6.167	15.59	126.94	0.12
Span # 2	2	6.167	-19.56	170.00	0.12
Span # 3	3	6.167	-14.41	170.00	0.08
Span # 4	4	6.167	-18.20	170.00	0.11
Span # 5	5	6.167	-16.74	170.00	0.10
Span # 6	6	6.167	-18.84	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L***L					
Span # 1	1	6.167	15.59	126.94	0.12
Span # 2	2	6.167	-19.56	170.00	0.12
Span # 3	3	6.167	-14.40	170.00	0.08
Span # 4	4	6.167	-18.24	170.00	0.11
Span # 5	5	6.167	-17.27	170.00	0.10
Span # 6	6	6.167	-19.38	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**L*					
Span # 1	1	6.167	15.60	126.94	0.12
Span # 2	2	6.167	-19.55	170.00	0.12
Span # 3	3	6.167	-14.44	170.00	0.08
Span # 4	4	6.167	-18.08	170.00	0.11
Span # 5	5	6.167	-17.05	170.00	0.10
Span # 6	6	6.167	-19.24	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**LL					
Span # 1	1	6.167	15.60	126.94	0.12
Span # 2	2	6.167	-19.55	170.00	0.12
Span # 3	3	6.167	-14.43	170.00	0.08
Span # 4	4	6.167	-18.12	170.00	0.11
Span # 5	5	6.167	-17.58	170.00	0.10
Span # 6	6	6.167	-19.78	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L**					
Span # 1	1	6.167	15.58	126.94	0.12
Span # 2	2	6.167	-19.59	170.00	0.12
Span # 3	3	6.167	-14.30	170.00	0.08
Span # 4	4	6.167	-18.61	170.00	0.11
Span # 5	5	6.167	-16.65	170.00	0.10
Span # 6	6	6.167	-18.73	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L*L					
Span # 1	1	6.167	15.58	126.94	0.12
Span # 2	2	6.167	-19.59	170.00	0.12
Span # 3	3	6.167	-14.29	170.00	0.08
Span # 4	4	6.167	-18.65	170.00	0.11
Span # 5	5	6.167	-17.18	170.00	0.10
Span # 6	6	6.167	-19.28	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LL*					
Span # 1	1	6.167	15.59	126.94	0.12
Span # 2	2	6.167	-19.58	170.00	0.12
Span # 3	3	6.167	-14.34	170.00	0.08
Span # 4	4	6.167	-18.49	170.00	0.11
Span # 5	5	6.167	-16.96	170.00	0.10
Span # 6	6	6.167	-19.13	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LLL					
Span # 1	1	6.167	15.58	126.94	0.12
Span # 2	2	6.167	-19.58	170.00	0.12
Span # 3	3	6.167	-14.32	170.00	0.08
Span # 4	4	6.167	-18.53	170.00	0.11

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	6.167	-17.49	170.00	0.10
Span # 6	6	6.167	-19.67	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL***					
Span # 1	1	6.167	15.15	126.94	0.12
Span # 2	2	6.167	-20.69	170.00	0.12
Span # 3	3	6.167	-9.89	170.00	0.06
Span # 4	4	6.167	-14.19	170.00	0.08
Span # 5	5	6.167	-16.51	170.00	0.10
Span # 6	6	6.167	-18.57	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL**L					
Span # 1	1	6.167	15.15	126.94	0.12
Span # 2	2	6.167	-20.69	170.00	0.12
Span # 3	3	6.167	-9.88	170.00	0.06
Span # 4	4	6.167	-14.23	170.00	0.08
Span # 5	5	6.167	-17.03	170.00	0.10
Span # 6	6	6.167	-19.11	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*L*					
Span # 1	1	6.167	15.15	126.94	0.12
Span # 2	2	6.167	-20.68	170.00	0.12
Span # 3	3	6.167	-9.92	170.00	0.06
Span # 4	4	6.167	-14.07	170.00	0.08
Span # 5	5	6.167	-16.81	170.00	0.10
Span # 6	6	6.167	-18.97	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*LL					
Span # 1	1	6.167	15.15	126.94	0.12
Span # 2	2	6.167	-20.68	170.00	0.12
Span # 3	3	6.167	-9.91	170.00	0.06
Span # 4	4	6.167	-14.11	170.00	0.08
Span # 5	5	6.167	-17.34	170.00	0.10
Span # 6	6	6.167	-19.51	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL**					
Span # 1	1	6.167	15.14	126.94	0.12
Span # 2	2	6.167	-20.72	170.00	0.12
Span # 3	3	6.167	-9.78	170.00	0.06
Span # 4	4	6.167	-14.60	170.00	0.09
Span # 5	5	6.167	-16.41	170.00	0.10
Span # 6	6	6.167	-18.47	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL*L					
Span # 1	1	6.167	15.14	126.94	0.12
Span # 2	2	6.167	-20.72	170.00	0.12
Span # 3	3	6.167	-9.77	170.00	0.06
Span # 4	4	6.167	-14.63	170.00	0.09
Span # 5	5	6.167	-16.94	170.00	0.10
Span # 6	6	6.167	-19.01	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLL*					
Span # 1	1	6.167	15.14	126.94	0.12
Span # 2	2	6.167	-20.71	170.00	0.12
Span # 3	3	6.167	-9.81	170.00	0.06
Span # 4	4	6.167	-14.48	170.00	0.09
Span # 5	5	6.167	-16.72	170.00	0.10
Span # 6	6	6.167	-18.86	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLLL					
Span # 1	1	6.167	15.14	126.94	0.12
Span # 2	2	6.167	-20.71	170.00	0.12
Span # 3	3	6.167	-9.80	170.00	0.06
Span # 4	4	6.167	-14.52	170.00	0.09
Span # 5	5	6.167	-17.25	170.00	0.10
Span # 6	6	6.167	-19.41	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*****					
Span # 1	1	6.167	-16.37	169.11	0.10
Span # 2	2	6.167	-18.18	170.00	0.11
Span # 3	3	6.167	-20.89	170.00	0.12
Span # 4	4	6.167	-16.47	170.00	0.10
Span # 5	5	6.167	-16.64	170.00	0.10
Span # 6	6	6.167	-18.72	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L****L					
Span # 1	1	6.167	-16.37	169.11	0.10
Span # 2	2	6.167	-18.17	170.00	0.11
Span # 3	3	6.167	-20.88	170.00	0.12

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	6.167	-16.50	170.00	0.10
Span # 5	5	6.167	-17.17	170.00	0.10
Span # 6	6	6.167	-19.27	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***L*					
Span # 1	1	6.167	-16.36	169.11	0.10
Span # 2	2	6.167	-18.21	170.00	0.11
Span # 3	3	6.167	-20.92	170.00	0.12
Span # 4	4	6.167	-16.35	170.00	0.10
Span # 5	5	6.167	-16.95	170.00	0.10
Span # 6	6	6.167	-19.12	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***LL					
Span # 1	1	6.167	-16.36	169.11	0.10
Span # 2	2	6.167	-18.20	170.00	0.11
Span # 3	3	6.167	-20.91	170.00	0.12
Span # 4	4	6.167	-16.39	170.00	0.10
Span # 5	5	6.167	-17.48	170.00	0.10
Span # 6	6	6.167	-19.66	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L**					
Span # 1	1	6.167	-16.39	169.11	0.10
Span # 2	2	6.167	-18.07	170.00	0.11
Span # 3	3	6.167	-20.78	170.00	0.12
Span # 4	4	6.167	-16.87	170.00	0.10
Span # 5	5	6.167	-16.55	170.00	0.10
Span # 6	6	6.167	-18.62	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L*L					
Span # 1	1	6.167	-16.40	169.11	0.10
Span # 2	2	6.167	-18.06	170.00	0.11
Span # 3	3	6.167	-20.77	170.00	0.12
Span # 4	4	6.167	-16.91	170.00	0.10
Span # 5	5	6.167	-17.08	170.00	0.10
Span # 6	6	6.167	-19.16	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LL*					
Span # 1	1	6.167	-16.39	169.11	0.10
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-20.81	170.00	0.12
Span # 4	4	6.167	-16.76	170.00	0.10
Span # 5	5	6.167	-16.86	170.00	0.10
Span # 6	6	6.167	-19.02	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LLL					
Span # 1	1	6.167	-16.39	169.11	0.10
Span # 2	2	6.167	-18.09	170.00	0.11
Span # 3	3	6.167	-20.80	170.00	0.12
Span # 4	4	6.167	-16.80	170.00	0.10
Span # 5	5	6.167	-17.38	170.00	0.10
Span # 6	6	6.167	-19.56	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L***					
Span # 1	1	6.167	-17.47	169.11	0.10
Span # 2	2	6.167	-19.07	170.00	0.11
Span # 3	3	6.167	-16.37	170.00	0.10
Span # 4	4	6.167	-12.45	170.00	0.07
Span # 5	5	6.167	-16.40	170.00	0.10
Span # 6	6	6.167	-18.46	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L**L					
Span # 1	1	6.167	-17.47	169.11	0.10
Span # 2	2	6.167	-19.07	170.00	0.11
Span # 3	3	6.167	-16.36	170.00	0.10
Span # 4	4	6.167	-12.49	170.00	0.07
Span # 5	5	6.167	-16.93	170.00	0.10
Span # 6	6	6.167	-19.00	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*L*					
Span # 1	1	6.167	-17.46	169.11	0.10
Span # 2	2	6.167	-19.06	170.00	0.11
Span # 3	3	6.167	-16.40	170.00	0.10
Span # 4	4	6.167	-12.73	170.00	0.07
Span # 5	5	6.167	-16.71	170.00	0.10
Span # 6	6	6.167	-18.85	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*LL					
Span # 1	1	6.167	-17.47	169.11	0.10
Span # 2	2	6.167	-19.06	170.00	0.11

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.167	-16.39	170.00	0.10
Span # 4	4	6.167	-12.59	170.00	0.07
Span # 5	5	6.167	-17.24	170.00	0.10
Span # 6	6	6.167	-19.40	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL**					
Span # 1	1	6.167	-17.50	169.11	0.10
Span # 2	2	6.167	-19.10	170.00	0.11
Span # 3	3	6.167	-16.26	170.00	0.10
Span # 4	4	6.167	-12.86	170.00	0.08
Span # 5	5	6.167	-16.31	170.00	0.10
Span # 6	6	6.167	-18.35	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL*L					
Span # 1	1	6.167	-17.50	169.11	0.10
Span # 2	2	6.167	-19.10	170.00	0.11
Span # 3	3	6.167	-16.25	170.00	0.10
Span # 4	4	6.167	-12.90	170.00	0.08
Span # 5	5	6.167	-16.84	170.00	0.10
Span # 6	6	6.167	-18.89	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLL*					
Span # 1	1	6.167	-17.49	169.11	0.10
Span # 2	2	6.167	-19.09	170.00	0.11
Span # 3	3	6.167	-16.29	170.00	0.10
Span # 4	4	6.167	-13.06	170.00	0.08
Span # 5	5	6.167	-16.62	170.00	0.10
Span # 6	6	6.167	-18.75	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLLL					
Span # 1	1	6.167	-17.49	169.11	0.10
Span # 2	2	6.167	-19.09	170.00	0.11
Span # 3	3	6.167	-16.28	170.00	0.10
Span # 4	4	6.167	-12.92	170.00	0.08
Span # 5	5	6.167	-17.15	170.00	0.10
Span # 6	6	6.167	-19.29	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL****					
Span # 1	1	6.167	-12.04	169.11	0.07
Span # 2	2	6.167	-14.33	170.00	0.08
Span # 3	3	6.167	-16.03	170.00	0.09
Span # 4	4	6.167	-17.77	170.00	0.10
Span # 5	5	6.167	-16.72	170.00	0.10
Span # 6	6	6.167	-18.81	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL***L					
Span # 1	1	6.167	-12.04	169.11	0.07
Span # 2	2	6.167	-14.32	170.00	0.08
Span # 3	3	6.167	-16.02	170.00	0.09
Span # 4	4	6.167	-17.81	170.00	0.10
Span # 5	5	6.167	-17.25	170.00	0.10
Span # 6	6	6.167	-19.35	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**L*					
Span # 1	1	6.167	-12.03	169.11	0.07
Span # 2	2	6.167	-14.36	170.00	0.08
Span # 3	3	6.167	-16.06	170.00	0.09
Span # 4	4	6.167	-17.65	170.00	0.10
Span # 5	5	6.167	-17.03	170.00	0.10
Span # 6	6	6.167	-19.21	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**LL					
Span # 1	1	6.167	-12.04	169.11	0.07
Span # 2	2	6.167	-14.35	170.00	0.08
Span # 3	3	6.167	-16.05	170.00	0.09
Span # 4	4	6.167	-17.69	170.00	0.10
Span # 5	5	6.167	-17.55	170.00	0.10
Span # 6	6	6.167	-19.75	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L**					
Span # 1	1	6.167	-12.07	169.11	0.07
Span # 2	2	6.167	-14.22	170.00	0.08
Span # 3	3	6.167	-15.92	170.00	0.09
Span # 4	4	6.167	-18.18	170.00	0.11
Span # 5	5	6.167	-16.63	170.00	0.10
Span # 6	6	6.167	-18.71	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L*L					
Span # 1	1	6.167	-12.07	169.11	0.07

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

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Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.167	-14.21	170.00	0.08
Span # 3	3	6.167	-15.91	170.00	0.09
Span # 4	4	6.167	-18.22	170.00	0.11
Span # 5	5	6.167	-17.15	170.00	0.10
Span # 6	6	6.167	-19.25	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LL*					
Span # 1	1	6.167	-12.06	169.11	0.07
Span # 2	2	6.167	-14.25	170.00	0.08
Span # 3	3	6.167	-15.95	170.00	0.09
Span # 4	4	6.167	-18.06	170.00	0.11
Span # 5	5	6.167	-16.93	170.00	0.10
Span # 6	6	6.167	-19.10	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LLL					
Span # 1	1	6.167	-12.06	169.11	0.07
Span # 2	2	6.167	-14.24	170.00	0.08
Span # 3	3	6.167	-15.94	170.00	0.09
Span # 4	4	6.167	-18.10	170.00	0.11
Span # 5	5	6.167	-17.46	170.00	0.10
Span # 6	6	6.167	-19.64	170.00	0.12
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL***					
Span # 1	1	6.167	-13.15	169.11	0.08
Span # 2	2	6.167	-14.64	170.00	0.09
Span # 3	3	6.167	-11.51	170.00	0.07
Span # 4	4	6.167	-13.75	170.00	0.08
Span # 5	5	6.167	-16.48	170.00	0.10
Span # 6	6	6.167	-18.54	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL**L					
Span # 1	1	6.167	-13.15	169.11	0.08
Span # 2	2	6.167	-14.65	170.00	0.09
Span # 3	3	6.167	-11.50	170.00	0.07
Span # 4	4	6.167	-13.79	170.00	0.08
Span # 5	5	6.167	-17.01	170.00	0.10
Span # 6	6	6.167	-19.09	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*L*					
Span # 1	1	6.167	-13.14	169.11	0.08
Span # 2	2	6.167	-14.64	170.00	0.09
Span # 3	3	6.167	-11.54	170.00	0.07
Span # 4	4	6.167	-13.64	170.00	0.08
Span # 5	5	6.167	-16.79	170.00	0.10
Span # 6	6	6.167	-18.94	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*LL					
Span # 1	1	6.167	-13.14	169.11	0.08
Span # 2	2	6.167	-14.64	170.00	0.09
Span # 3	3	6.167	-11.53	170.00	0.07
Span # 4	4	6.167	-13.67	170.00	0.08
Span # 5	5	6.167	-17.32	170.00	0.10
Span # 6	6	6.167	-19.48	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL**					
Span # 1	1	6.167	-13.17	169.11	0.08
Span # 2	2	6.167	-14.67	170.00	0.09
Span # 3	3	6.167	-11.40	170.00	0.07
Span # 4	4	6.167	-14.16	170.00	0.08
Span # 5	5	6.167	-16.39	170.00	0.10
Span # 6	6	6.167	-18.44	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL*L					
Span # 1	1	6.167	-13.18	169.11	0.08
Span # 2	2	6.167	-14.67	170.00	0.09
Span # 3	3	6.167	-11.39	170.00	0.07
Span # 4	4	6.167	-14.20	170.00	0.08
Span # 5	5	6.167	-16.92	170.00	0.10
Span # 6	6	6.167	-18.98	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLL*					
Span # 1	1	6.167	-13.17	169.11	0.08
Span # 2	2	6.167	-14.66	170.00	0.09
Span # 3	3	6.167	-11.43	170.00	0.07
Span # 4	4	6.167	-14.04	170.00	0.08
Span # 5	5	6.167	-16.70	170.00	0.10
Span # 6	6	6.167	-18.83	170.00	0.11
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLLL					

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.167	-13.17	169.11	0.08
Span # 2	2	6.167	-14.67	170.00	0.09
Span # 3	3	6.167	-11.42	170.00	0.07
Span # 4	4	6.167	-14.08	170.00	0.08
Span # 5	5	6.167	-17.22	170.00	0.10
Span # 6	6	6.167	-19.38	170.00	0.11
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*****					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.72	170.00	0.09
Span # 5	5	6.167	-15.07	170.00	0.09
Span # 6	6	6.167	-16.94	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.37	170.00	0.13
Span # 3	3	6.167	-16.55	170.00	0.10
Span # 4	4	6.167	-15.67	170.00	0.09
Span # 5	5	6.167	-15.00	170.00	0.09
Span # 6	6	6.167	-16.89	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.37	170.00	0.13
Span # 3	3	6.167	-16.55	170.00	0.10
Span # 4	4	6.167	-15.68	170.00	0.09
Span # 5	5	6.167	-15.17	170.00	0.09
Span # 6	6	6.167	-17.06	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.51	170.00	0.10
Span # 4	4	6.167	-15.84	170.00	0.09
Span # 5	5	6.167	-14.88	170.00	0.09
Span # 6	6	6.167	-16.74	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.51	170.00	0.10
Span # 4	4	6.167	-15.85	170.00	0.09
Span # 5	5	6.167	-15.04	170.00	0.09
Span # 6	6	6.167	-16.91	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.52	170.00	0.10
Span # 4	4	6.167	-15.80	170.00	0.09
Span # 5	5	6.167	-14.97	170.00	0.09
Span # 6	6	6.167	-16.86	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.52	170.00	0.10
Span # 4	4	6.167	-15.81	170.00	0.09
Span # 5	5	6.167	-15.14	170.00	0.09
Span # 6	6	6.167	-17.03	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.73	170.00	0.13
Span # 3	3	6.167	-15.13	170.00	0.09
Span # 4	4	6.167	-14.45	170.00	0.09
Span # 5	5	6.167	-14.83	170.00	0.09
Span # 6	6	6.167	-16.69	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.73	170.00	0.13
Span # 3	3	6.167	-15.13	170.00	0.09
Span # 4	4	6.167	-14.47	170.00	0.09
Span # 5	5	6.167	-15.00	170.00	0.09
Span # 6	6	6.167	-16.86	170.00	0.10

Concrete Beam

File = C:\Users\Jeff\GOOGLE~1\HELICA~1\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.73	170.00	0.13
Span # 3	3	6.167	-15.14	170.00	0.09
Span # 4	4	6.167	-14.42	170.00	0.08
Span # 5	5	6.167	-14.93	170.00	0.09
Span # 6	6	6.167	-16.81	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.73	170.00	0.13
Span # 3	3	6.167	-15.14	170.00	0.09
Span # 4	4	6.167	-14.43	170.00	0.08
Span # 5	5	6.167	-15.09	170.00	0.09
Span # 6	6	6.167	-16.98	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.74	170.00	0.13
Span # 3	3	6.167	-15.10	170.00	0.09
Span # 4	4	6.167	-14.58	170.00	0.09
Span # 5	5	6.167	-14.80	170.00	0.09
Span # 6	6	6.167	-16.65	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.74	170.00	0.13
Span # 3	3	6.167	-15.09	170.00	0.09
Span # 4	4	6.167	-14.59	170.00	0.09
Span # 5	5	6.167	-14.97	170.00	0.09
Span # 6	6	6.167	-16.82	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.73	170.00	0.13
Span # 3	3	6.167	-15.11	170.00	0.09
Span # 4	4	6.167	-14.55	170.00	0.09
Span # 5	5	6.167	-14.90	170.00	0.09
Span # 6	6	6.167	-16.78	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	14.74	126.94	0.12
Span # 2	2	6.167	-21.74	170.00	0.13
Span # 3	3	6.167	-15.10	170.00	0.09
Span # 4	4	6.167	-14.56	170.00	0.09
Span # 5	5	6.167	-15.06	170.00	0.09
Span # 6	6	6.167	-16.95	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-19.99	170.00	0.12
Span # 3	3	6.167	-15.03	170.00	0.09
Span # 4	4	6.167	-16.12	170.00	0.09
Span # 5	5	6.167	-14.93	170.00	0.09
Span # 6	6	6.167	-16.80	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-19.99	170.00	0.12
Span # 3	3	6.167	-15.02	170.00	0.09
Span # 4	4	6.167	-16.13	170.00	0.09
Span # 5	5	6.167	-15.09	170.00	0.09
Span # 6	6	6.167	-16.97	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-19.99	170.00	0.12
Span # 3	3	6.167	-15.04	170.00	0.09
Span # 4	4	6.167	-16.08	170.00	0.09
Span # 5	5	6.167	-15.03	170.00	0.09
Span # 6	6	6.167	-16.92	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-19.99	170.00	0.12
Span # 3	3	6.167	-15.03	170.00	0.09
Span # 4	4	6.167	-16.09	170.00	0.09
Span # 5	5	6.167	-15.19	170.00	0.09

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	6.167	-17.09	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-20.00	170.00	0.12
Span # 3	3	6.167	-14.99	170.00	0.09
Span # 4	4	6.167	-16.24	170.00	0.10
Span # 5	5	6.167	-14.90	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-20.00	170.00	0.12
Span # 3	3	6.167	-14.99	170.00	0.09
Span # 4	4	6.167	-16.26	170.00	0.10
Span # 5	5	6.167	-15.07	170.00	0.09
Span # 6	6	6.167	-16.93	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-20.00	170.00	0.12
Span # 3	3	6.167	-15.00	170.00	0.09
Span # 4	4	6.167	-16.21	170.00	0.10
Span # 5	5	6.167	-15.00	170.00	0.09
Span # 6	6	6.167	-16.89	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	15.41	126.94	0.12
Span # 2	2	6.167	-20.00	170.00	0.12
Span # 3	3	6.167	-15.00	170.00	0.09
Span # 4	4	6.167	-16.22	170.00	0.10
Span # 5	5	6.167	-15.16	170.00	0.09
Span # 6	6	6.167	-17.06	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	15.28	126.94	0.12
Span # 2	2	6.167	-20.35	170.00	0.12
Span # 3	3	6.167	-13.61	170.00	0.08
Span # 4	4	6.167	-14.86	170.00	0.09
Span # 5	5	6.167	-14.86	170.00	0.09
Span # 6	6	6.167	-16.71	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	15.28	126.94	0.12
Span # 2	2	6.167	-20.35	170.00	0.12
Span # 3	3	6.167	-13.61	170.00	0.08
Span # 4	4	6.167	-14.87	170.00	0.09
Span # 5	5	6.167	-15.02	170.00	0.09
Span # 6	6	6.167	-16.88	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	15.28	126.94	0.12
Span # 2	2	6.167	-20.34	170.00	0.12
Span # 3	3	6.167	-13.62	170.00	0.08
Span # 4	4	6.167	-14.82	170.00	0.09
Span # 5	5	6.167	-14.95	170.00	0.09
Span # 6	6	6.167	-16.84	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	15.28	126.94	0.12
Span # 2	2	6.167	-20.34	170.00	0.12
Span # 3	3	6.167	-13.62	170.00	0.08
Span # 4	4	6.167	-14.84	170.00	0.09
Span # 5	5	6.167	-15.12	170.00	0.09
Span # 6	6	6.167	-17.01	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	15.27	126.94	0.12
Span # 2	2	6.167	-20.35	170.00	0.12
Span # 3	3	6.167	-13.58	170.00	0.08
Span # 4	4	6.167	-14.99	170.00	0.09
Span # 5	5	6.167	-14.83	170.00	0.09
Span # 6	6	6.167	-16.68	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	15.27	126.94	0.12
Span # 2	2	6.167	-20.36	170.00	0.12
Span # 3	3	6.167	-13.58	170.00	0.08
Span # 4	4	6.167	-15.00	170.00	0.09

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	6.167	-14.99	170.00	0.09
Span # 6	6	6.167	-16.85	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	15.27	126.94	0.12
Span # 2	2	6.167	-20.35	170.00	0.12
Span # 3	3	6.167	-13.59	170.00	0.08
Span # 4	4	6.167	-14.95	170.00	0.09
Span # 5	5	6.167	-14.92	170.00	0.09
Span # 6	6	6.167	-16.81	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	15.27	126.94	0.12
Span # 2	2	6.167	-20.35	170.00	0.12
Span # 3	3	6.167	-13.59	170.00	0.08
Span # 4	4	6.167	-14.96	170.00	0.09
Span # 5	5	6.167	-15.09	170.00	0.09
Span # 6	6	6.167	-16.98	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	-17.19	169.11	0.10
Span # 2	2	6.167	-19.49	170.00	0.11
Span # 3	3	6.167	-17.05	170.00	0.10
Span # 4	4	6.167	-15.57	170.00	0.09
Span # 5	5	6.167	-14.90	170.00	0.09
Span # 6	6	6.167	-16.76	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	-17.19	169.11	0.10
Span # 2	2	6.167	-19.49	170.00	0.11
Span # 3	3	6.167	-17.05	170.00	0.10
Span # 4	4	6.167	-15.59	170.00	0.09
Span # 5	5	6.167	-15.06	170.00	0.09
Span # 6	6	6.167	-16.93	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	-17.19	169.11	0.10
Span # 2	2	6.167	-19.48	170.00	0.11
Span # 3	3	6.167	-17.06	170.00	0.10
Span # 4	4	6.167	-15.54	170.00	0.09
Span # 5	5	6.167	-14.99	170.00	0.09
Span # 6	6	6.167	-16.89	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	-17.19	169.11	0.10
Span # 2	2	6.167	-19.48	170.00	0.11
Span # 3	3	6.167	-17.06	170.00	0.10
Span # 4	4	6.167	-15.55	170.00	0.09
Span # 5	5	6.167	-15.16	170.00	0.09
Span # 6	6	6.167	-17.06	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	6.167	-17.20	169.11	0.10
Span # 2	2	6.167	-19.50	170.00	0.11
Span # 3	3	6.167	-17.02	170.00	0.10
Span # 4	4	6.167	-15.70	170.00	0.09
Span # 5	5	6.167	-14.87	170.00	0.09
Span # 6	6	6.167	-16.73	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	6.167	-17.20	169.11	0.10
Span # 2	2	6.167	-19.50	170.00	0.11
Span # 3	3	6.167	-17.01	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-15.03	170.00	0.09
Span # 6	6	6.167	-16.90	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	6.167	-17.20	169.11	0.10
Span # 2	2	6.167	-19.49	170.00	0.11
Span # 3	3	6.167	-17.03	170.00	0.10
Span # 4	4	6.167	-15.66	170.00	0.09
Span # 5	5	6.167	-14.96	170.00	0.09
Span # 6	6	6.167	-16.85	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	6.167	-17.20	169.11	0.10
Span # 2	2	6.167	-19.49	170.00	0.11
Span # 3	3	6.167	-17.02	170.00	0.10

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	6.167	-15.68	170.00	0.09
Span # 5	5	6.167	-15.13	170.00	0.09
Span # 6	6	6.167	-17.02	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	6.167	-17.53	169.11	0.10
Span # 2	2	6.167	-19.84	170.00	0.12
Span # 3	3	6.167	-15.64	170.00	0.09
Span # 4	4	6.167	-14.32	170.00	0.08
Span # 5	5	6.167	-14.82	170.00	0.09
Span # 6	6	6.167	-16.68	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	6.167	-17.54	169.11	0.10
Span # 2	2	6.167	-19.84	170.00	0.12
Span # 3	3	6.167	-15.63	170.00	0.09
Span # 4	4	6.167	-14.33	170.00	0.08
Span # 5	5	6.167	-14.99	170.00	0.09
Span # 6	6	6.167	-16.85	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	6.167	-17.53	169.11	0.10
Span # 2	2	6.167	-19.84	170.00	0.12
Span # 3	3	6.167	-15.65	170.00	0.09
Span # 4	4	6.167	-14.28	170.00	0.08
Span # 5	5	6.167	-14.92	170.00	0.09
Span # 6	6	6.167	-16.80	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	6.167	-17.53	169.11	0.10
Span # 2	2	6.167	-19.84	170.00	0.12
Span # 3	3	6.167	-15.64	170.00	0.09
Span # 4	4	6.167	-14.29	170.00	0.08
Span # 5	5	6.167	-15.08	170.00	0.09
Span # 6	6	6.167	-16.97	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	6.167	-17.54	169.11	0.10
Span # 2	2	6.167	-19.85	170.00	0.12
Span # 3	3	6.167	-15.60	170.00	0.09
Span # 4	4	6.167	-14.45	170.00	0.08
Span # 5	5	6.167	-14.79	170.00	0.09
Span # 6	6	6.167	-16.65	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	6.167	-17.54	169.11	0.10
Span # 2	2	6.167	-19.85	170.00	0.12
Span # 3	3	6.167	-15.60	170.00	0.09
Span # 4	4	6.167	-14.46	170.00	0.09
Span # 5	5	6.167	-14.96	170.00	0.09
Span # 6	6	6.167	-16.81	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	6.167	-17.54	169.11	0.10
Span # 2	2	6.167	-19.85	170.00	0.12
Span # 3	3	6.167	-15.61	170.00	0.09
Span # 4	4	6.167	-14.41	170.00	0.08
Span # 5	5	6.167	-14.89	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	6.167	-17.54	169.11	0.10
Span # 2	2	6.167	-19.85	170.00	0.12
Span # 3	3	6.167	-15.61	170.00	0.09
Span # 4	4	6.167	-14.42	170.00	0.08
Span # 5	5	6.167	-15.06	170.00	0.09
Span # 6	6	6.167	-16.94	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-15.53	170.00	0.09
Span # 4	4	6.167	-15.98	170.00	0.09
Span # 5	5	6.167	-14.92	170.00	0.09
Span # 6	6	6.167	-16.79	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.10	170.00	0.11

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	6.167	-15.53	170.00	0.09
Span # 4	4	6.167	-15.99	170.00	0.09
Span # 5	5	6.167	-15.09	170.00	0.09
Span # 6	6	6.167	-16.96	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-15.54	170.00	0.09
Span # 4	4	6.167	-15.94	170.00	0.09
Span # 5	5	6.167	-15.02	170.00	0.09
Span # 6	6	6.167	-16.91	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.10	170.00	0.11
Span # 3	3	6.167	-15.54	170.00	0.09
Span # 4	4	6.167	-15.96	170.00	0.09
Span # 5	5	6.167	-15.18	170.00	0.09
Span # 6	6	6.167	-17.08	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-15.50	170.00	0.09
Span # 4	4	6.167	-16.11	170.00	0.09
Span # 5	5	6.167	-14.89	170.00	0.09
Span # 6	6	6.167	-16.76	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-15.50	170.00	0.09
Span # 4	4	6.167	-16.12	170.00	0.09
Span # 5	5	6.167	-15.06	170.00	0.09
Span # 6	6	6.167	-16.93	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-15.51	170.00	0.09
Span # 4	4	6.167	-16.07	170.00	0.09
Span # 5	5	6.167	-14.99	170.00	0.09
Span # 6	6	6.167	-16.88	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	6.167	12.80	126.94	0.10
Span # 2	2	6.167	-18.11	170.00	0.11
Span # 3	3	6.167	-15.50	170.00	0.09
Span # 4	4	6.167	-16.08	170.00	0.09
Span # 5	5	6.167	-15.15	170.00	0.09
Span # 6	6	6.167	-17.05	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.46	170.00	0.11
Span # 3	3	6.167	-14.12	170.00	0.08
Span # 4	4	6.167	-14.73	170.00	0.09
Span # 5	5	6.167	-14.85	170.00	0.09
Span # 6	6	6.167	-16.71	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.46	170.00	0.11
Span # 3	3	6.167	-14.12	170.00	0.08
Span # 4	4	6.167	-14.74	170.00	0.09
Span # 5	5	6.167	-15.01	170.00	0.09
Span # 6	6	6.167	-16.87	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	6.167	12.67	126.94	0.10
Span # 2	2	6.167	-18.45	170.00	0.11
Span # 3	3	6.167	-14.13	170.00	0.08
Span # 4	4	6.167	-14.69	170.00	0.09
Span # 5	5	6.167	-14.94	170.00	0.09
Span # 6	6	6.167	-16.83	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	6.167	12.67	126.94	0.10

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	6.167	-18.46	170.00	0.11
Span # 3	3	6.167	-14.13	170.00	0.08
Span # 4	4	6.167	-14.70	170.00	0.09
Span # 5	5	6.167	-15.11	170.00	0.09
Span # 6	6	6.167	-17.00	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.47	170.00	0.11
Span # 3	3	6.167	-14.09	170.00	0.08
Span # 4	4	6.167	-14.85	170.00	0.09
Span # 5	5	6.167	-14.82	170.00	0.09
Span # 6	6	6.167	-16.67	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.47	170.00	0.11
Span # 3	3	6.167	-14.08	170.00	0.08
Span # 4	4	6.167	-14.87	170.00	0.09
Span # 5	5	6.167	-14.98	170.00	0.09
Span # 6	6	6.167	-16.84	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.46	170.00	0.11
Span # 3	3	6.167	-14.09	170.00	0.08
Span # 4	4	6.167	-14.82	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.80	170.00	0.10
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	6.167	12.66	126.94	0.10
Span # 2	2	6.167	-18.46	170.00	0.11
Span # 3	3	6.167	-14.09	170.00	0.08
Span # 4	4	6.167	-14.83	170.00	0.09
Span # 5	5	6.167	-15.08	170.00	0.09
Span # 6	6	6.167	-16.97	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*****					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LLL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL**					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09

Concrete Beam

Description : GB-I-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLL*					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LLLL					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L****					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09
Span # 5	5	6.167	-14.91	170.00	0.09
Span # 6	6	6.167	-16.77	170.00	0.10
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (L***L					
Span # 1	1	6.167	14.88	126.94	0.12
Span # 2	2	6.167	-21.38	170.00	0.13
Span # 3	3	6.167	-16.54	170.00	0.10
Span # 4	4	6.167	-15.71	170.00	0.09

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

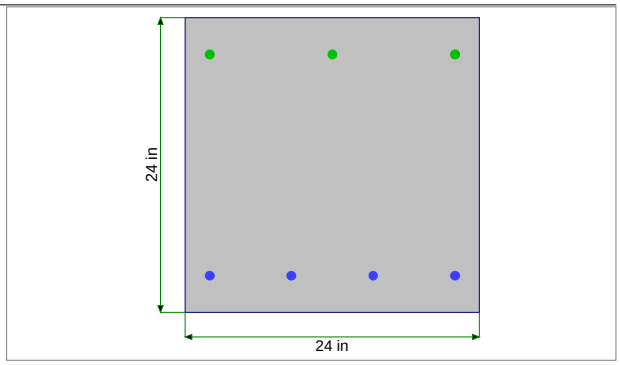
Description : GB-J-62R

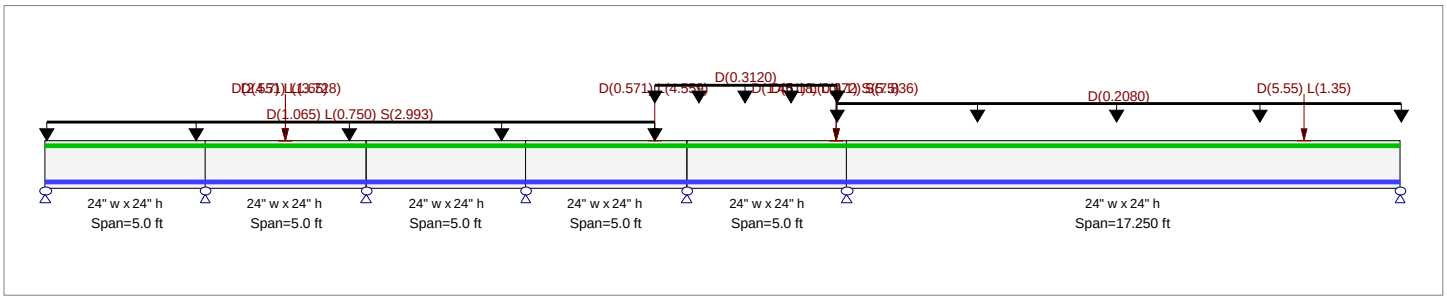
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	2.50 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	375.0 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 8.389 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 8.389 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 8.389 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 8.389 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 8.389 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 8.389 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 8.389 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 8.389 ft in this span

Span #5 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 8.389 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 8.389 ft in this span

Span #6 Reinforcing....
- 4-#6 at 3.0 in from Bottom, from 0.0 to 20.125 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 20.125 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Partial Length Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Extent = 0.0 -->> 19.0 ft
- Partial Length Uniform Load : D = 0.2080 k/ft, Extent = 24.667 -->> 42.250 ft
- Partial Length Uniform Load : D = 0.3120 k/ft, Extent = 19.0 -->> 24.667 ft

Load for Span Number 2
- Point Load : D = 2.551, L = 3.728 k @ 2.50 ft, (P12)
- Point Load : D = 4.70, L = 1.650 k @ 2.50 ft, (GB-E)

Load for Span Number 4
- Point Load : D = 0.5710, L = 4.559 k @ 4.0 ft, (P15)

Load for Span Number 5
- Point Load : D = 1.451, L = 0.9720, S = 7.836 k @ 4.667 ft, (P16)
- Point Load : D = 6.180, L = 4.10, S = 5.50 k @ 4.667 ft, (GB-D)

Load for Span Number 6
- Point Load : D = 5.550, L = 1.350 k @ 14.250 ft

Concrete Beam

File = f:\Job\2017\2017~3.XXX\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096

Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.349** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	-42.835	k-ft
Mn * Phi : Allowable	122.703	k-ft
Location of maximum on span	0.000	ft
Span # where maximum occurs	Span # 6	

Maximum Deflection

Max Downward Transient Deflection	0.001	in	Ratio =	201407 >=360
Max Upward Transient Deflection	0.000	in	Ratio =	0 <360
Max Downward Total Deflection	0.014	in	Ratio =	14728 >=240
Max Upward Total Deflection	0.000	in	Ratio =	999 <240

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Overall MAXimum	8.578	32.113	28.081	25.647	6.670	38.893	10.648
Overall MINimum	-0.000	0.001	-0.004	-0.011	-0.028	0.005	-0.000
+D+H	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+L+H, LL Comb Run (*****L)	2.680	13.614	11.627	10.077	-2.652	26.541	10.632
+D+L+H, LL Comb Run (****L*)	2.683	13.597	11.695	9.822	-1.702	30.555	9.590
+D+L+H, LL Comb Run (****LL)	2.681	13.606	11.659	9.958	-2.207	31.279	10.614
+D+L+H, LL Comb Run (***L**)	2.659	13.742	11.115	12.971	3.327	25.291	9.623
+D+L+H, LL Comb Run (***L*L)	2.657	13.751	11.079	13.106	2.823	26.015	10.647
+D+L+H, LL Comb Run (***LL*)	2.660	13.734	11.146	12.852	3.773	30.029	9.605
+D+L+H, LL Comb Run (***LLL)	2.658	13.743	11.110	12.987	3.268	30.753	10.629
+D+L+H, LL Comb Run (**L***)	2.731	13.309	13.784	12.066	-2.453	25.875	9.606
+D+L+H, LL Comb Run (**L**L)	2.729	13.318	13.748	12.201	-2.957	26.599	10.630
+D+L+H, LL Comb Run (**L*L*)	2.732	13.301	13.816	11.947	-2.007	30.613	9.588
+D+L+H, LL Comb Run (**L*LL)	2.731	13.310	13.780	12.082	-2.512	31.337	10.613
+D+L+H, LL Comb Run (**LL**)	2.708	13.446	13.236	15.095	3.022	25.349	9.621
+D+L+H, LL Comb Run (**LL*L)	2.706	13.455	13.200	15.230	2.518	26.073	10.645
+D+L+H, LL Comb Run (**LLL*)	2.709	13.439	13.268	14.976	3.468	30.087	9.603
+D+L+H, LL Comb Run (**LLLL)	2.708	13.448	13.231	15.111	2.963	30.811	10.628
+D+L+H, LL Comb Run (*L****)	2.102	18.692	17.090	8.922	-1.885	25.767	9.609
+D+L+H, LL Comb Run (*L***L)	2.100	18.701	17.054	9.057	-2.390	26.491	10.633
+D+L+H, LL Comb Run (*L**L*)	2.103	18.684	17.122	8.803	-1.440	30.505	9.592
+D+L+H, LL Comb Run (*L**LL)	2.102	18.693	17.086	8.938	-1.944	31.229	10.616
+D+L+H, LL Comb Run (*L*L**)	2.079	18.829	16.542	11.951	3.590	25.241	9.624
+D+L+H, LL Comb Run (*L*L*L)	2.078	18.838	16.506	12.086	3.085	25.965	10.648
+D+L+H, LL Comb Run (*L*LL*)	2.080	18.821	16.573	11.832	4.035	29.979	9.607
+D+L+H, LL Comb Run (*L*LLL)	2.079	18.830	16.537	11.967	3.530	30.703	10.631
+D+L+H, LL Comb Run (*LL***)	2.151	18.396	19.211	11.046	-2.190	25.825	9.607
+D+L+H, LL Comb Run (*LL**L)	2.150	18.405	19.175	11.181	-2.695	26.549	10.632
+D+L+H, LL Comb Run (*LL*L*)	2.153	18.388	19.243	10.927	-1.745	30.563	9.590
+D+L+H, LL Comb Run (*LL*LL)	2.151	18.397	19.207	11.062	-2.250	31.287	10.614
+D+L+H, LL Comb Run (*LLL**)	2.128	18.533	18.663	14.075	3.285	25.299	9.622
+D+L+H, LL Comb Run (*LLL*L)	2.127	18.542	18.627	14.210	2.780	26.023	10.647
+D+L+H, LL Comb Run (*LLLL*)	2.130	18.525	18.694	13.956	3.730	30.037	9.605
+D+L+H, LL Comb Run (*LLLLL)	2.128	18.534	18.658	14.091	3.225	30.761	10.629
+D+L+H, LL Comb Run (L*****)	4.305	16.050	11.260	10.049	-2.175	25.822	9.607
+D+L+H, LL Comb Run (L****L)	4.304	16.059	11.223	10.184	-2.680	26.546	10.632
+D+L+H, LL Comb Run (L***L*)	4.307	16.042	11.291	9.930	-1.730	30.560	9.590
+D+L+H, LL Comb Run (L***LL)	4.305	16.051	11.255	10.066	-2.235	31.284	10.614
+D+L+H, LL Comb Run (L**L**)	4.282	16.187	10.711	13.079	3.300	25.296	9.622
+D+L+H, LL Comb Run (L**L*L)	4.281	16.196	10.675	13.214	2.795	26.020	10.647
+D+L+H, LL Comb Run (L**LL*)	4.284	16.179	10.743	12.960	3.745	30.034	9.605
+D+L+H, LL Comb Run (L**LLL)	4.282	16.188	10.707	13.095	3.240	30.758	10.629
+D+L+H, LL Comb Run (L*L***)	4.355	15.754	13.381	12.173	-2.480	25.880	9.606
+D+L+H, LL Comb Run (L*L**L)	4.353	15.763	13.345	12.309	-2.985	26.604	10.630
+D+L+H, LL Comb Run (L*L*L*)	4.356	15.746	13.412	12.055	-2.035	30.618	9.588
+D+L+H, LL Comb Run (L*L*LL)	4.354	15.755	13.376	12.190	-2.540	31.342	10.613
+D+L+H, LL Comb Run (L*LL**)	4.332	15.891	12.832	15.203	2.994	25.354	9.621
+D+L+H, LL Comb Run (L*LL*L)	4.330	15.900	12.796	15.338	2.490	26.078	10.645
+D+L+H, LL Comb Run (L*LLL*)	4.333	15.883	12.864	15.084	3.440	30.092	9.603
+D+L+H, LL Comb Run (L*LLLL)	4.332	15.892	12.828	15.219	2.935	30.816	10.628

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+L+H, LL Comb Run (LL****)	3.726	21.137	16.686	9.029	-1.913	25.772	9.609
+D+L+H, LL Comb Run (LL***L)	3.724	21.146	16.650	9.165	-2.418	26.496	10.633
+D+L+H, LL Comb Run (LL**L*)	3.727	21.129	16.718	8.910	-1.467	30.510	9.591
+D+L+H, LL Comb Run (LL**LL)	3.726	21.138	16.682	9.046	-1.972	31.234	10.616
+D+L+H, LL Comb Run (LL*L**)	3.703	21.274	16.138	12.059	3.562	25.246	9.624
+D+L+H, LL Comb Run (LL*L*L)	3.701	21.283	16.102	12.194	3.057	25.970	10.648
+D+L+H, LL Comb Run (LL*LL*)	3.704	21.266	16.170	11.940	4.007	29.984	9.606
+D+L+H, LL Comb Run (LL*LLL)	3.703	21.275	16.133	12.075	3.503	30.708	10.631
+D+L+H, LL Comb Run (LLL***)	3.775	20.841	18.807	11.154	-2.218	25.830	9.607
+D+L+H, LL Comb Run (LLL**L)	3.774	20.850	18.771	11.289	-2.723	26.554	10.631
+D+L+H, LL Comb Run (LLL*L*)	3.776	20.833	18.839	11.035	-1.773	30.568	9.590
+D+L+H, LL Comb Run (LLL*LL)	3.775	20.842	18.803	11.170	-2.277	31.292	10.614
+D+L+H, LL Comb Run (LLLL**)	3.752	20.978	18.259	14.183	3.257	25.304	9.622
+D+L+H, LL Comb Run (LLLL*L)	3.751	20.987	18.223	14.318	2.752	26.028	10.646
+D+L+H, LL Comb Run (LLLLL*)	3.754	20.970	18.291	14.064	3.702	30.042	9.605
+D+L+H, LL Comb Run (LLLLLL)	3.752	20.979	18.255	14.199	3.197	30.766	10.629
+D+Lr+H, LL Comb Run (*****L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (****L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (****LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (***L**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (***L*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (***LL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (***LLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**L***)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**L**L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**L*L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**L*LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**LL**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**LL*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**LLL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (**LLLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L****)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L***L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L**L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L**LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L*L**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L*L*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L*LL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*L*LLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LL***)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LL**L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LL*L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LL*LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LLL**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LLL*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LLLL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (*LLLLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*****)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L****L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L***L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L***LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L**L**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L**L*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L**LL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L**LLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*L***)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*L**L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*L*L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*L*LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+Lr+H, LL Comb Run (L*LL**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*LL*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*LLL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (L*LLLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL****)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL***L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL**L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL**LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL*L**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL*L*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL*LL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LL*LLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLL***)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLL**L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLL*L*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLL*LL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLLL**)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLLL*L)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLLLL*)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+Lr+H, LL Comb Run (LLLLLL)	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+S+H	8.578	30.605	25.973	25.485	3.426	37.727	9.577
+D+0.750Lr+0.750L+H, LL Comb Run (	2.680	13.612	11.636	10.043	-2.526	26.360	10.376
+D+0.750Lr+0.750L+H, LL Comb Run (	2.682	13.599	11.687	9.852	-1.813	29.370	9.594
+D+0.750Lr+0.750L+H, LL Comb Run (	2.681	13.606	11.660	9.954	-2.192	29.913	10.363
+D+0.750Lr+0.750L+H, LL Comb Run (	2.664	13.708	11.252	12.213	1.959	25.422	9.619
+D+0.750Lr+0.750L+H, LL Comb Run (	2.663	13.715	11.225	12.315	1.580	25.965	10.387
+D+0.750Lr+0.750L+H, LL Comb Run (	2.665	13.702	11.276	12.124	2.293	28.976	9.606
+D+0.750Lr+0.750L+H, LL Comb Run (	2.664	13.709	11.249	12.226	1.914	29.519	10.374
+D+0.750Lr+0.750L+H, LL Comb Run (	2.718	13.383	13.254	11.534	-2.376	25.861	9.606
+D+0.750Lr+0.750L+H, LL Comb Run (	2.717	13.390	13.227	11.636	-2.755	26.404	10.374
+D+0.750Lr+0.750L+H, LL Comb Run (	2.719	13.377	13.278	11.445	-2.042	29.414	9.593
+D+0.750Lr+0.750L+H, LL Comb Run (	2.718	13.384	13.251	11.547	-2.421	29.957	10.361
+D+0.750Lr+0.750L+H, LL Comb Run (	2.701	13.486	12.843	13.807	1.730	25.466	9.618
+D+0.750Lr+0.750L+H, LL Comb Run (	2.700	13.493	12.816	13.908	1.351	26.009	10.386
+D+0.750Lr+0.750L+H, LL Comb Run (	2.702	13.480	12.866	13.717	2.064	29.019	9.604
+D+0.750Lr+0.750L+H, LL Comb Run (	2.701	13.487	12.839	13.819	1.685	29.562	10.373
+D+0.750Lr+0.750L+H, LL Comb Run (	2.247	17.420	15.733	9.176	-1.951	25.779	9.609
+D+0.750Lr+0.750L+H, LL Comb Run (	2.246	17.427	15.706	9.278	-2.329	26.322	10.377
+D+0.750Lr+0.750L+H, LL Comb Run (	2.248	17.414	15.757	9.087	-1.617	29.333	9.596
+D+0.750Lr+0.750L+H, LL Comb Run (	2.247	17.421	15.730	9.189	-1.995	29.876	10.364
+D+0.750Lr+0.750L+H, LL Comb Run (	2.230	17.523	15.322	11.449	2.155	25.385	9.620
+D+0.750Lr+0.750L+H, LL Comb Run (	2.229	17.530	15.295	11.550	1.777	25.928	10.388
+D+0.750Lr+0.750L+H, LL Comb Run (	2.231	17.517	15.346	11.359	2.490	28.938	9.607
+D+0.750Lr+0.750L+H, LL Comb Run (	2.230	17.524	15.319	11.461	2.111	29.481	10.375
+D+0.750Lr+0.750L+H, LL Comb Run (	2.284	17.198	17.324	10.770	-2.180	25.823	9.607
+D+0.750Lr+0.750L+H, LL Comb Run (	2.283	17.205	17.297	10.871	-2.558	26.366	10.376
+D+0.750Lr+0.750L+H, LL Comb Run (	2.285	17.192	17.348	10.680	-1.846	29.376	9.594
+D+0.750Lr+0.750L+H, LL Comb Run (	2.284	17.199	17.321	10.782	-2.224	29.919	10.362
+D+0.750Lr+0.750L+H, LL Comb Run (	2.267	17.301	16.913	13.042	1.927	25.429	9.619
+D+0.750Lr+0.750L+H, LL Comb Run (	2.266	17.308	16.886	13.143	1.548	25.971	10.387
+D+0.750Lr+0.750L+H, LL Comb Run (	2.268	17.295	16.937	12.952	2.261	28.982	9.606
+D+0.750Lr+0.750L+H, LL Comb Run (	2.267	17.302	16.910	13.054	1.882	29.525	10.374
+D+0.750Lr+0.750L+H, LL Comb Run (	3.899	15.439	11.360	10.022	-2.168	25.821	9.607
+D+0.750Lr+0.750L+H, LL Comb Run (	3.898	15.445	11.333	10.124	-2.547	26.364	10.376
+D+0.750Lr+0.750L+H, LL Comb Run (	3.900	15.433	11.384	9.933	-1.834	29.374	9.594
+D+0.750Lr+0.750L+H, LL Comb Run (	3.899	15.440	11.357	10.034	-2.213	29.917	10.363
+D+0.750Lr+0.750L+H, LL Comb Run (	3.882	15.542	10.949	12.294	1.938	25.426	9.619
+D+0.750Lr+0.750L+H, LL Comb Run (	3.881	15.548	10.922	12.396	1.559	25.969	10.387
+D+0.750Lr+0.750L+H, LL Comb Run (	3.883	15.536	10.973	12.205	2.272	28.980	9.606

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+H, LL Comb Run (	3.882	15.542	10.946	12.307	1.893	29.523	10.374
+D+0.750Lr+0.750L+H, LL Comb Run (	3.936	15.217	12.951	11.615	-2.397	25.865	9.606
+D+0.750Lr+0.750L+H, LL Comb Run (	3.935	15.224	12.924	11.717	-2.776	26.407	10.374
+D+0.750Lr+0.750L+H, LL Comb Run (	3.937	15.211	12.975	11.526	-2.063	29.418	9.593
+D+0.750Lr+0.750L+H, LL Comb Run (	3.936	15.218	12.948	11.628	-2.442	29.961	10.361
+D+0.750Lr+0.750L+H, LL Comb Run (	3.919	15.320	12.540	13.887	1.709	25.470	9.617
+D+0.750Lr+0.750L+H, LL Comb Run (	3.918	15.326	12.513	13.989	1.330	26.013	10.386
+D+0.750Lr+0.750L+H, LL Comb Run (	3.920	15.314	12.564	13.798	2.043	29.023	9.604
+D+0.750Lr+0.750L+H, LL Comb Run (	3.919	15.320	12.537	13.900	1.665	29.566	10.373
+D+0.750Lr+0.750L+H, LL Comb Run (	3.465	19.254	15.431	9.257	-1.972	25.783	9.609
+D+0.750Lr+0.750L+H, LL Comb Run (	3.464	19.261	15.404	9.359	-2.350	26.326	10.377
+D+0.750Lr+0.750L+H, LL Comb Run (	3.466	19.248	15.454	9.168	-1.637	29.337	9.595
+D+0.750Lr+0.750L+H, LL Comb Run (	3.465	19.255	15.427	9.270	-2.016	29.880	10.364
+D+0.750Lr+0.750L+H, LL Comb Run (	3.448	19.357	15.019	11.529	2.135	25.389	9.620
+D+0.750Lr+0.750L+H, LL Comb Run (	3.446	19.363	14.992	11.631	1.756	25.932	10.388
+D+0.750Lr+0.750L+H, LL Comb Run (	3.449	19.351	15.043	11.440	2.469	28.942	9.607
+D+0.750Lr+0.750L+H, LL Comb Run (	3.447	19.358	15.016	11.542	2.090	29.485	10.375
+D+0.750Lr+0.750L+H, LL Comb Run (	3.502	19.032	17.021	10.851	-2.200	25.827	9.607
+D+0.750Lr+0.750L+H, LL Comb Run (	3.501	19.039	16.994	10.952	-2.579	26.370	10.375
+D+0.750Lr+0.750L+H, LL Comb Run (	3.503	19.026	17.045	10.761	-1.866	29.380	9.594
+D+0.750Lr+0.750L+H, LL Comb Run (	3.502	19.033	17.018	10.863	-2.245	29.923	10.362
+D+0.750Lr+0.750L+H, LL Comb Run (	3.485	19.135	16.610	13.123	1.906	25.433	9.619
+D+0.750Lr+0.750L+H, LL Comb Run (	3.483	19.142	16.583	13.224	1.527	25.975	10.387
+D+0.750Lr+0.750L+H, LL Comb Run (	3.485	19.129	16.634	13.033	2.240	28.986	9.605
+D+0.750Lr+0.750L+H, LL Comb Run (	3.484	19.136	16.607	13.135	1.861	29.529	10.374
+D+0.750L+0.750S+H, LL Comb Run (*	7.103	26.361	22.369	21.701	1.654	35.292	10.353
+D+0.750L+0.750S+H, LL Comb Run (*	7.105	26.349	22.420	21.510	2.367	38.303	9.572
+D+0.750L+0.750S+H, LL Comb Run (*	7.104	26.356	22.393	21.612	1.988	38.845	10.340
+D+0.750L+0.750S+H, LL Comb Run (*	7.087	26.458	21.985	23.871	6.139	34.355	9.596
+D+0.750L+0.750S+H, LL Comb Run (*	7.085	26.464	21.957	23.973	5.760	34.898	10.364
+D+0.750L+0.750S+H, LL Comb Run (*	7.088	26.452	22.008	23.782	6.473	37.908	9.583
+D+0.750L+0.750S+H, LL Comb Run (*	7.086	26.458	21.981	23.884	6.094	38.451	10.351
+D+0.750L+0.750S+H, LL Comb Run (*	7.141	26.133	23.987	23.193	1.804	34.793	9.584
+D+0.750L+0.750S+H, LL Comb Run (*	7.140	26.140	23.960	23.294	1.425	35.336	10.352
+D+0.750L+0.750S+H, LL Comb Run (*	7.142	26.127	24.010	23.103	2.138	38.346	9.571
+D+0.750L+0.750S+H, LL Comb Run (*	7.141	26.134	23.983	23.205	1.759	38.889	10.339
+D+0.750L+0.750S+H, LL Comb Run (*	7.124	26.236	23.575	25.465	5.910	34.398	9.595
+D+0.750L+0.750S+H, LL Comb Run (*	7.122	26.242	23.548	25.566	5.532	34.941	10.363
+D+0.750L+0.750S+H, LL Comb Run (*	7.125	26.230	23.599	25.375	6.244	37.952	9.582
+D+0.750L+0.750S+H, LL Comb Run (*	7.123	26.236	23.572	25.477	5.866	38.495	10.350
+D+0.750L+0.750S+H, LL Comb Run (*	6.669	30.170	26.466	20.835	2.230	34.712	9.586
+D+0.750L+0.750S+H, LL Comb Run (*	6.668	30.177	26.439	20.936	1.851	35.255	10.354
+D+0.750L+0.750S+H, LL Comb Run (*	6.670	30.164	26.490	20.745	2.564	38.265	9.573
+D+0.750L+0.750S+H, LL Comb Run (*	6.669	30.171	26.463	20.847	2.185	38.808	10.341
+D+0.750L+0.750S+H, LL Comb Run (*	6.652	30.273	26.055	23.107	6.336	34.317	9.597
+D+0.750L+0.750S+H, LL Comb Run (*	6.651	30.279	26.028	23.208	5.957	34.860	10.365
+D+0.750L+0.750S+H, LL Comb Run (*	6.653	30.267	26.078	23.017	6.670	37.871	9.584
+D+0.750L+0.750S+H, LL Comb Run (*	6.652	30.274	26.051	23.119	6.291	38.413	10.352
+D+0.750L+0.750S+H, LL Comb Run (*	6.706	29.948	28.057	22.428	2.001	34.755	9.585
+D+0.750L+0.750S+H, LL Comb Run (*	6.705	29.955	28.030	22.529	1.622	35.298	10.353
+D+0.750L+0.750S+H, LL Comb Run (*	6.707	29.942	28.081	22.338	2.335	38.309	9.572
+D+0.750L+0.750S+H, LL Comb Run (*	6.706	29.949	28.054	22.440	1.956	38.852	10.340
+D+0.750L+0.750S+H, LL Comb Run (*	6.689	30.051	27.645	24.700	6.107	34.361	9.596
+D+0.750L+0.750S+H, LL Comb Run (*	6.688	30.058	27.618	24.801	5.728	34.904	10.364
+D+0.750L+0.750S+H, LL Comb Run (*	6.690	30.045	27.669	24.611	6.441	37.914	9.583
+D+0.750L+0.750S+H, LL Comb Run (*	6.689	30.052	27.642	24.712	6.062	38.457	10.351
+D+0.750L+0.750S+H, LL Comb Run (L	8.322	28.188	22.093	21.680	2.012	34.753	9.585
+D+0.750L+0.750S+H, LL Comb Run (L	8.320	28.195	22.066	21.782	1.633	35.296	10.353
+D+0.750L+0.750S+H, LL Comb Run (L	8.323	28.182	22.117	21.591	2.346	38.307	9.572

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+H, LL Comb Run (L	8.321	28.189	22.090	21.693	1.968	38.849	10.340
+D+0.750L+0.750S+H, LL Comb Run (L	8.304	28.291	21.682	23.952	6.118	34.359	9.596
+D+0.750L+0.750S+H, LL Comb Run (L	8.303	28.298	21.655	24.054	5.740	34.902	10.364
+D+0.750L+0.750S+H, LL Comb Run (L	8.305	28.285	21.705	23.863	6.452	37.912	9.583
+D+0.750L+0.750S+H, LL Comb Run (L	8.304	28.292	21.678	23.965	6.074	38.455	10.351
+D+0.750L+0.750S+H, LL Comb Run (L	8.359	27.966	23.684	23.273	1.783	34.797	9.584
+D+0.750L+0.750S+H, LL Comb Run (L	8.357	27.973	23.657	23.375	1.405	35.340	10.352
+D+0.750L+0.750S+H, LL Comb Run (L	8.360	27.960	23.708	23.184	2.117	38.350	9.570
+D+0.750L+0.750S+H, LL Comb Run (L	8.358	27.967	23.681	23.286	1.739	38.893	10.339
+D+0.750L+0.750S+H, LL Comb Run (L	8.341	28.069	23.272	25.546	5.889	34.402	9.595
+D+0.750L+0.750S+H, LL Comb Run (L	8.340	28.076	23.245	25.647	5.511	34.945	10.363
+D+0.750L+0.750S+H, LL Comb Run (L	8.342	28.063	23.296	25.456	6.223	37.956	9.582
+D+0.750L+0.750S+H, LL Comb Run (L	8.341	28.070	23.269	25.558	5.845	38.499	10.350
+D+0.750L+0.750S+H, LL Comb Run (L	7.887	32.003	26.163	20.915	2.209	34.716	9.586
+D+0.750L+0.750S+H, LL Comb Run (L	7.886	32.010	26.136	21.017	1.830	35.259	10.354
+D+0.750L+0.750S+H, LL Comb Run (L	7.888	31.997	26.187	20.826	2.543	38.269	9.573
+D+0.750L+0.750S+H, LL Comb Run (L	7.887	32.004	26.160	20.928	2.164	38.812	10.341
+D+0.750L+0.750S+H, LL Comb Run (L	7.870	32.106	25.752	23.187	6.315	34.321	9.597
+D+0.750L+0.750S+H, LL Comb Run (L	7.869	32.113	25.725	23.289	5.936	34.864	10.365
+D+0.750L+0.750S+H, LL Comb Run (L	7.871	32.100	25.776	23.098	6.649	37.875	9.584
+D+0.750L+0.750S+H, LL Comb Run (L	7.870	32.107	25.749	23.200	6.270	38.417	10.352
+D+0.750L+0.750S+H, LL Comb Run (L	7.924	31.781	27.754	22.509	1.980	34.759	9.585
+D+0.750L+0.750S+H, LL Comb Run (L	7.923	31.788	27.727	22.610	1.601	35.302	10.353
+D+0.750L+0.750S+H, LL Comb Run (L	7.925	31.776	27.778	22.419	2.314	38.313	9.571
+D+0.750L+0.750S+H, LL Comb Run (L	7.924	31.782	27.751	22.521	1.935	38.856	10.340
+D+0.750L+0.750S+H, LL Comb Run (L	7.907	31.884	27.343	24.781	6.086	34.365	9.596
+D+0.750L+0.750S+H, LL Comb Run (L	7.906	31.891	27.316	24.882	5.707	34.908	10.364
+D+0.750L+0.750S+H, LL Comb Run (L	7.908	31.878	27.366	24.691	6.420	37.918	9.583
+D+0.750L+0.750S+H, LL Comb Run (L	7.907	31.885	27.339	24.793	6.042	38.461	10.351
+D+0.60W+H	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+0.70E+H	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.680	13.612	11.636	10.043	-2.526	26.360	10.376
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.682	13.599	11.687	9.852	-1.813	29.370	9.594
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.681	13.606	11.660	9.954	-2.192	29.913	10.363
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.664	13.708	11.252	12.213	1.959	25.422	9.619
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.663	13.715	11.225	12.315	1.580	25.965	10.387
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.665	13.702	11.276	12.124	2.293	28.976	9.606
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.664	13.709	11.249	12.226	1.914	29.519	10.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.718	13.383	13.254	11.534	-2.376	25.861	9.606
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.717	13.390	13.227	11.636	-2.755	26.404	10.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.719	13.377	13.278	11.445	-2.042	29.414	9.593
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.718	13.384	13.251	11.547	-2.421	29.957	10.361
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.701	13.486	12.843	13.807	1.730	25.466	9.618
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.700	13.493	12.816	13.908	1.351	26.009	10.386
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.702	13.480	12.866	13.717	2.064	29.019	9.604
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.701	13.487	12.839	13.819	1.685	29.562	10.373
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.247	17.420	15.733	9.176	-1.951	25.779	9.609
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.246	17.427	15.706	9.278	-2.329	26.322	10.377
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.248	17.414	15.757	9.087	-1.617	29.333	9.596
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.247	17.421	15.730	9.189	-1.995	29.876	10.364
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.230	17.523	15.322	11.449	2.155	25.385	9.620
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.229	17.530	15.295	11.550	1.777	25.928	10.388
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.231	17.517	15.346	11.359	2.490	28.938	9.607
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.230	17.524	15.319	11.461	2.111	29.481	10.375
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.284	17.198	17.324	10.770	-2.180	25.823	9.607
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.283	17.205	17.297	10.871	-2.558	26.366	10.376
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.285	17.192	17.348	10.680	-1.846	29.376	9.594
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.284	17.199	17.321	10.782	-2.224	29.919	10.362
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.267	17.301	16.913	13.042	1.927	25.429	9.619

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.266	17.308	16.886	13.143	1.548	25.971	10.387
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.268	17.295	16.937	12.952	2.261	28.982	9.606
+D+0.750Lr+0.750L+0.450W+H, LL Com	2.267	17.302	16.910	13.054	1.882	29.525	10.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.899	15.439	11.360	10.022	-2.168	25.821	9.607
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.898	15.445	11.333	10.124	-2.547	26.364	10.376
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.900	15.433	11.384	9.933	-1.834	29.374	9.594
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.899	15.440	11.357	10.034	-2.213	29.917	10.363
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.882	15.542	10.949	12.294	1.938	25.426	9.619
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.881	15.548	10.922	12.396	1.559	25.969	10.387
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.883	15.536	10.973	12.205	2.272	28.980	9.606
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.882	15.542	10.946	12.307	1.893	29.523	10.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.936	15.217	12.951	11.615	-2.397	25.865	9.606
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.935	15.224	12.924	11.717	-2.776	26.407	10.374
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.937	15.211	12.975	11.526	-2.063	29.418	9.593
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.936	15.218	12.948	11.628	-2.442	29.961	10.361
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.919	15.320	12.540	13.887	1.709	25.470	9.617
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.918	15.326	12.513	13.989	1.330	26.013	10.386
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.920	15.314	12.564	13.798	2.043	29.023	9.604
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.919	15.320	12.537	13.900	1.665	29.566	10.373
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.465	19.254	15.431	9.257	-1.972	25.783	9.609
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.464	19.261	15.404	9.359	-2.350	26.326	10.377
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.466	19.248	15.454	9.168	-1.637	29.337	9.595
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.465	19.255	15.427	9.270	-2.016	29.880	10.364
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.448	19.357	15.019	11.529	2.135	25.389	9.620
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.446	19.363	14.992	11.631	1.756	25.932	10.388
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.449	19.351	15.043	11.440	2.469	28.942	9.607
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.447	19.358	15.016	11.542	2.090	29.485	10.375
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.502	19.032	17.021	10.851	-2.200	25.827	9.607
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.501	19.039	16.994	10.952	-2.579	26.370	10.375
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.503	19.026	17.045	10.761	-1.866	29.380	9.594
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.502	19.033	17.018	10.863	-2.245	29.923	10.362
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.485	19.135	16.610	13.123	1.906	25.433	9.619
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.483	19.142	16.583	13.224	1.527	25.975	10.387
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.485	19.129	16.634	13.033	2.240	28.986	9.605
+D+0.750Lr+0.750L+0.450W+H, LL Com	3.484	19.136	16.607	13.135	1.861	29.529	10.374
+D+0.750L+0.750S+0.450W+H, LL Comb	7.103	26.361	22.369	21.701	1.654	35.292	10.353
+D+0.750L+0.750S+0.450W+H, LL Comb	7.105	26.349	22.420	21.510	2.367	38.303	9.572
+D+0.750L+0.750S+0.450W+H, LL Comb	7.104	26.356	22.393	21.612	1.988	38.845	10.340
+D+0.750L+0.750S+0.450W+H, LL Comb	7.087	26.458	21.985	23.871	6.139	34.355	9.596
+D+0.750L+0.750S+0.450W+H, LL Comb	7.085	26.464	21.957	23.973	5.760	34.898	10.364
+D+0.750L+0.750S+0.450W+H, LL Comb	7.088	26.452	22.008	23.782	6.473	37.908	9.583
+D+0.750L+0.750S+0.450W+H, LL Comb	7.086	26.458	21.981	23.884	6.094	38.451	10.351
+D+0.750L+0.750S+0.450W+H, LL Comb	7.141	26.133	23.987	23.193	1.804	34.793	9.584
+D+0.750L+0.750S+0.450W+H, LL Comb	7.140	26.140	23.960	23.294	1.425	35.336	10.352
+D+0.750L+0.750S+0.450W+H, LL Comb	7.142	26.127	24.010	23.103	2.138	38.346	9.571
+D+0.750L+0.750S+0.450W+H, LL Comb	7.141	26.134	23.983	23.205	1.759	38.889	10.339
+D+0.750L+0.750S+0.450W+H, LL Comb	7.124	26.236	23.575	25.465	5.910	34.398	9.595
+D+0.750L+0.750S+0.450W+H, LL Comb	7.122	26.242	23.548	25.566	5.532	34.941	10.363
+D+0.750L+0.750S+0.450W+H, LL Comb	7.125	26.230	23.599	25.375	6.244	37.952	9.582
+D+0.750L+0.750S+0.450W+H, LL Comb	7.123	26.236	23.572	25.477	5.866	38.495	10.350
+D+0.750L+0.750S+0.450W+H, LL Comb	6.669	30.170	26.466	20.835	2.230	34.712	9.586
+D+0.750L+0.750S+0.450W+H, LL Comb	6.668	30.177	26.439	20.936	1.851	35.255	10.354
+D+0.750L+0.750S+0.450W+H, LL Comb	6.670	30.164	26.490	20.745	2.564	38.265	9.573
+D+0.750L+0.750S+0.450W+H, LL Comb	6.669	30.171	26.463	20.847	2.185	38.808	10.341
+D+0.750L+0.750S+0.450W+H, LL Comb	6.652	30.273	26.055	23.107	6.336	34.317	9.597
+D+0.750L+0.750S+0.450W+H, LL Comb	6.651	30.279	26.028	23.208	5.957	34.860	10.365
+D+0.750L+0.750S+0.450W+H, LL Comb	6.653	30.267	26.078	23.017	6.670	37.871	9.584
+D+0.750L+0.750S+0.450W+H, LL Comb	6.652	30.274	26.051	23.119	6.291	38.413	10.352
+D+0.750L+0.750S+0.450W+H, LL Comb	6.706	29.948	28.057	22.428	2.001	34.755	9.585

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.450W+H, LL Comb	6.705	29.955	28.030	22.529	1.622	35.298	10.353
+D+0.750L+0.750S+0.450W+H, LL Comb	6.707	29.942	28.081	22.338	2.335	38.309	9.572
+D+0.750L+0.750S+0.450W+H, LL Comb	6.706	29.949	28.054	22.440	1.956	38.852	10.340
+D+0.750L+0.750S+0.450W+H, LL Comb	6.689	30.051	27.645	24.700	6.107	34.361	9.596
+D+0.750L+0.750S+0.450W+H, LL Comb	6.688	30.058	27.618	24.801	5.728	34.904	10.364
+D+0.750L+0.750S+0.450W+H, LL Comb	6.690	30.045	27.669	24.611	6.441	37.914	9.583
+D+0.750L+0.750S+0.450W+H, LL Comb	6.689	30.052	27.642	24.712	6.062	38.457	10.351
+D+0.750L+0.750S+0.450W+H, LL Comb	8.322	28.188	22.093	21.680	2.012	34.753	9.585
+D+0.750L+0.750S+0.450W+H, LL Comb	8.320	28.195	22.066	21.782	1.633	35.296	10.353
+D+0.750L+0.750S+0.450W+H, LL Comb	8.323	28.182	22.117	21.591	2.346	38.307	9.572
+D+0.750L+0.750S+0.450W+H, LL Comb	8.321	28.189	22.090	21.693	1.968	38.849	10.340
+D+0.750L+0.750S+0.450W+H, LL Comb	8.304	28.291	21.682	23.952	6.118	34.359	9.596
+D+0.750L+0.750S+0.450W+H, LL Comb	8.303	28.298	21.655	24.054	5.740	34.902	10.364
+D+0.750L+0.750S+0.450W+H, LL Comb	8.305	28.285	21.705	23.863	6.452	37.912	9.583
+D+0.750L+0.750S+0.450W+H, LL Comb	8.304	28.292	21.678	23.965	6.074	38.455	10.351
+D+0.750L+0.750S+0.450W+H, LL Comb	8.359	27.966	23.684	23.273	1.783	34.797	9.584
+D+0.750L+0.750S+0.450W+H, LL Comb	8.357	27.973	23.657	23.375	1.405	35.340	10.352
+D+0.750L+0.750S+0.450W+H, LL Comb	8.360	27.960	23.708	23.184	2.117	38.350	9.570
+D+0.750L+0.750S+0.450W+H, LL Comb	8.358	27.967	23.681	23.286	1.739	38.893	10.339
+D+0.750L+0.750S+0.450W+H, LL Comb	8.341	28.069	23.272	25.546	5.889	34.402	9.595
+D+0.750L+0.750S+0.450W+H, LL Comb	8.340	28.076	23.245	25.647	5.511	34.945	10.363
+D+0.750L+0.750S+0.450W+H, LL Comb	8.342	28.063	23.296	25.456	6.223	37.956	9.582
+D+0.750L+0.750S+0.450W+H, LL Comb	8.341	28.070	23.269	25.558	5.845	38.499	10.350
+D+0.750L+0.750S+0.450W+H, LL Comb	7.887	32.003	26.163	20.915	2.209	34.716	9.586
+D+0.750L+0.750S+0.450W+H, LL Comb	7.886	32.010	26.136	21.017	1.830	35.259	10.354
+D+0.750L+0.750S+0.450W+H, LL Comb	7.888	31.997	26.187	20.826	2.543	38.269	9.573
+D+0.750L+0.750S+0.450W+H, LL Comb	7.887	32.004	26.160	20.928	2.164	38.812	10.341
+D+0.750L+0.750S+0.450W+H, LL Comb	7.870	32.106	25.752	23.187	6.315	34.321	9.597
+D+0.750L+0.750S+0.450W+H, LL Comb	7.869	32.113	25.725	23.289	5.936	34.864	10.365
+D+0.750L+0.750S+0.450W+H, LL Comb	7.871	32.100	25.776	23.098	6.649	37.875	9.584
+D+0.750L+0.750S+0.450W+H, LL Comb	7.870	32.107	25.749	23.200	6.270	38.417	10.352
+D+0.750L+0.750S+0.450W+H, LL Comb	7.924	31.781	27.754	22.509	1.980	34.759	9.585
+D+0.750L+0.750S+0.450W+H, LL Comb	7.923	31.788	27.727	22.610	1.601	35.302	10.353
+D+0.750L+0.750S+0.450W+H, LL Comb	7.925	31.776	27.778	22.419	2.314	38.313	9.571
+D+0.750L+0.750S+0.450W+H, LL Comb	7.924	31.782	27.751	22.521	1.935	38.856	10.340
+D+0.750L+0.750S+0.450W+H, LL Comb	7.907	31.884	27.343	24.781	6.086	34.365	9.596
+D+0.750L+0.750S+0.450W+H, LL Comb	7.906	31.891	27.316	24.882	5.707	34.908	10.364
+D+0.750L+0.750S+0.450W+H, LL Comb	7.908	31.878	27.366	24.691	6.420	37.918	9.583
+D+0.750L+0.750S+0.450W+H, LL Comb	7.907	31.885	27.339	24.793	6.042	38.461	10.351
+D+0.750L+0.750S+0.5250E+H, LL Com	7.103	26.361	22.369	21.701	1.654	35.292	10.353
+D+0.750L+0.750S+0.5250E+H, LL Com	7.105	26.349	22.420	21.510	2.367	38.303	9.572
+D+0.750L+0.750S+0.5250E+H, LL Com	7.104	26.356	22.393	21.612	1.988	38.845	10.340
+D+0.750L+0.750S+0.5250E+H, LL Com	7.087	26.458	21.985	23.871	6.139	34.355	9.596
+D+0.750L+0.750S+0.5250E+H, LL Com	7.085	26.464	21.957	23.973	5.760	34.898	10.364
+D+0.750L+0.750S+0.5250E+H, LL Com	7.088	26.452	22.008	23.782	6.473	37.908	9.583
+D+0.750L+0.750S+0.5250E+H, LL Com	7.086	26.458	21.981	23.884	6.094	38.451	10.351
+D+0.750L+0.750S+0.5250E+H, LL Com	7.141	26.133	23.987	23.193	1.804	34.793	9.584
+D+0.750L+0.750S+0.5250E+H, LL Com	7.140	26.140	23.960	23.294	1.425	35.336	10.352
+D+0.750L+0.750S+0.5250E+H, LL Com	7.142	26.127	24.010	23.103	2.138	38.346	9.571
+D+0.750L+0.750S+0.5250E+H, LL Com	7.141	26.134	23.983	23.205	1.759	38.889	10.339
+D+0.750L+0.750S+0.5250E+H, LL Com	7.124	26.236	23.575	25.465	5.910	34.398	9.595
+D+0.750L+0.750S+0.5250E+H, LL Com	7.122	26.242	23.548	25.566	5.532	34.941	10.363
+D+0.750L+0.750S+0.5250E+H, LL Com	7.125	26.230	23.599	25.375	6.244	37.952	9.582
+D+0.750L+0.750S+0.5250E+H, LL Com	7.123	26.236	23.572	25.477	5.866	38.495	10.350
+D+0.750L+0.750S+0.5250E+H, LL Com	6.669	30.170	26.466	20.835	2.230	34.712	9.586
+D+0.750L+0.750S+0.5250E+H, LL Com	6.668	30.177	26.439	20.936	1.851	35.255	10.354
+D+0.750L+0.750S+0.5250E+H, LL Com	6.670	30.164	26.490	20.745	2.564	38.265	9.573
+D+0.750L+0.750S+0.5250E+H, LL Com	6.669	30.171	26.463	20.847	2.185	38.808	10.341
+D+0.750L+0.750S+0.5250E+H, LL Com	6.652	30.273	26.055	23.107	6.336	34.317	9.597

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
+D+0.750L+0.750S+0.5250E+H, LL Com	6.651	30.279	26.028	23.208	5.957	34.860	10.365
+D+0.750L+0.750S+0.5250E+H, LL Com	6.653	30.267	26.078	23.017	6.670	37.871	9.584
+D+0.750L+0.750S+0.5250E+H, LL Com	6.652	30.274	26.051	23.119	6.291	38.413	10.352
+D+0.750L+0.750S+0.5250E+H, LL Com	6.706	29.948	28.057	22.428	2.001	34.755	9.585
+D+0.750L+0.750S+0.5250E+H, LL Com	6.705	29.955	28.030	22.529	1.622	35.298	10.353
+D+0.750L+0.750S+0.5250E+H, LL Com	6.707	29.942	28.081	22.338	2.335	38.309	9.572
+D+0.750L+0.750S+0.5250E+H, LL Com	6.706	29.949	28.054	22.440	1.956	38.852	10.340
+D+0.750L+0.750S+0.5250E+H, LL Com	6.689	30.051	27.645	24.700	6.107	34.361	9.596
+D+0.750L+0.750S+0.5250E+H, LL Com	6.688	30.058	27.618	24.801	5.728	34.904	10.364
+D+0.750L+0.750S+0.5250E+H, LL Com	6.690	30.045	27.669	24.611	6.441	37.914	9.583
+D+0.750L+0.750S+0.5250E+H, LL Com	6.689	30.052	27.642	24.712	6.062	38.457	10.351
+D+0.750L+0.750S+0.5250E+H, LL Com	8.322	28.188	22.093	21.680	2.012	34.753	9.585
+D+0.750L+0.750S+0.5250E+H, LL Com	8.320	28.195	22.066	21.782	1.633	35.296	10.353
+D+0.750L+0.750S+0.5250E+H, LL Com	8.323	28.182	22.117	21.591	2.346	38.307	9.572
+D+0.750L+0.750S+0.5250E+H, LL Com	8.321	28.189	22.090	21.693	1.968	38.849	10.340
+D+0.750L+0.750S+0.5250E+H, LL Com	8.304	28.291	21.682	23.952	6.118	34.359	9.596
+D+0.750L+0.750S+0.5250E+H, LL Com	8.303	28.298	21.655	24.054	5.740	34.902	10.364
+D+0.750L+0.750S+0.5250E+H, LL Com	8.305	28.285	21.705	23.863	6.452	37.912	9.583
+D+0.750L+0.750S+0.5250E+H, LL Com	8.304	28.292	21.678	23.965	6.074	38.455	10.351
+D+0.750L+0.750S+0.5250E+H, LL Com	8.359	27.966	23.684	23.273	1.783	34.797	9.584
+D+0.750L+0.750S+0.5250E+H, LL Com	8.357	27.973	23.657	23.375	1.405	35.340	10.352
+D+0.750L+0.750S+0.5250E+H, LL Com	8.360	27.960	23.708	23.184	2.117	38.350	9.570
+D+0.750L+0.750S+0.5250E+H, LL Com	8.358	27.967	23.681	23.286	1.739	38.893	10.339
+D+0.750L+0.750S+0.5250E+H, LL Com	8.341	28.069	23.272	25.546	5.889	34.402	9.595
+D+0.750L+0.750S+0.5250E+H, LL Com	8.340	28.076	23.245	25.647	5.511	34.945	10.363
+D+0.750L+0.750S+0.5250E+H, LL Com	8.342	28.063	23.296	25.456	6.223	37.956	9.582
+D+0.750L+0.750S+0.5250E+H, LL Com	8.341	28.070	23.269	25.558	5.845	38.499	10.350
+D+0.750L+0.750S+0.5250E+H, LL Com	7.887	32.003	26.163	20.915	2.209	34.716	9.586
+D+0.750L+0.750S+0.5250E+H, LL Com	7.886	32.010	26.136	21.017	1.830	35.259	10.354
+D+0.750L+0.750S+0.5250E+H, LL Com	7.888	31.997	26.187	20.826	2.543	38.269	9.573
+D+0.750L+0.750S+0.5250E+H, LL Com	7.887	32.004	26.160	20.928	2.164	38.812	10.341
+D+0.750L+0.750S+0.5250E+H, LL Com	7.870	32.106	25.752	23.187	6.315	34.321	9.597
+D+0.750L+0.750S+0.5250E+H, LL Com	7.869	32.113	25.725	23.289	5.936	34.864	10.365
+D+0.750L+0.750S+0.5250E+H, LL Com	7.871	32.100	25.776	23.098	6.649	37.875	9.584
+D+0.750L+0.750S+0.5250E+H, LL Com	7.870	32.107	25.749	23.200	6.270	38.417	10.352
+D+0.750L+0.750S+0.5250E+H, LL Com	7.924	31.781	27.754	22.509	1.980	34.759	9.585
+D+0.750L+0.750S+0.5250E+H, LL Com	7.923	31.788	27.727	22.610	1.601	35.302	10.353
+D+0.750L+0.750S+0.5250E+H, LL Com	7.925	31.776	27.778	22.419	2.314	38.313	9.571
+D+0.750L+0.750S+0.5250E+H, LL Com	7.924	31.782	27.751	22.521	1.935	38.856	10.340
+D+0.750L+0.750S+0.5250E+H, LL Com	7.907	31.884	27.343	24.781	6.086	34.365	9.596
+D+0.750L+0.750S+0.5250E+H, LL Com	7.906	31.891	27.316	24.882	5.707	34.908	10.364
+D+0.750L+0.750S+0.5250E+H, LL Com	7.908	31.878	27.366	24.691	6.420	37.918	9.583
+D+0.750L+0.750S+0.5250E+H, LL Com	7.907	31.885	27.339	24.793	6.042	38.461	10.351
+0.60D+0.60W+0.60H	1.609	8.163	6.998	5.965	-1.288	15.490	5.765
+0.60D+0.70E+0.60H	1.609	8.163	6.998	5.965	-1.288	15.490	5.765
D Only	2.681	13.605	11.663	9.941	-2.147	25.817	9.608
Lr Only, LL Comb Run (*****L)							
Lr Only, LL Comb Run (****L*)							
Lr Only, LL Comb Run (****LL)							
Lr Only, LL Comb Run (***L**)							
Lr Only, LL Comb Run (***L*L)							
Lr Only, LL Comb Run (***LL*)							
Lr Only, LL Comb Run (***LLL)							
Lr Only, LL Comb Run (**L***)							
Lr Only, LL Comb Run (**L**L)							
Lr Only, LL Comb Run (**L*L*)							
Lr Only, LL Comb Run (**L*LL)							
Lr Only, LL Comb Run (**LL**)							
Lr Only, LL Comb Run (**LL*L)							

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
Lr Only, LL Comb Run (**LLL*)							
Lr Only, LL Comb Run (**LLLL)							
Lr Only, LL Comb Run (*L****)							
Lr Only, LL Comb Run (*L***L)							
Lr Only, LL Comb Run (*L**L*)							
Lr Only, LL Comb Run (*L**LL)							
Lr Only, LL Comb Run (*L*L**)							
Lr Only, LL Comb Run (*L*L*L)							
Lr Only, LL Comb Run (*L*LL*)							
Lr Only, LL Comb Run (*L*LLL)							
Lr Only, LL Comb Run (*LL***)							
Lr Only, LL Comb Run (*LL**L)							
Lr Only, LL Comb Run (*LL*L*)							
Lr Only, LL Comb Run (*LL*LL)							
Lr Only, LL Comb Run (*LLL**)							
Lr Only, LL Comb Run (*LLL*L)							
Lr Only, LL Comb Run (*LLLL*)							
Lr Only, LL Comb Run (*LLLLL)							
Lr Only, LL Comb Run (L*****)							
Lr Only, LL Comb Run (L****L)							
Lr Only, LL Comb Run (L***L*)							
Lr Only, LL Comb Run (L***LL)							
Lr Only, LL Comb Run (L**L**)							
Lr Only, LL Comb Run (L**L*L)							
Lr Only, LL Comb Run (L**LL*)							
Lr Only, LL Comb Run (L**LLL)							
Lr Only, LL Comb Run (L*L***)							
Lr Only, LL Comb Run (L*L**L)							
Lr Only, LL Comb Run (L*L*L*)							
Lr Only, LL Comb Run (L*L*LL)							
Lr Only, LL Comb Run (L*LL**)							
Lr Only, LL Comb Run (L*LL*L)							
Lr Only, LL Comb Run (L*LLL*)							
Lr Only, LL Comb Run (L*LLLL)							
Lr Only, LL Comb Run (LL****)							
Lr Only, LL Comb Run (LL***L)							
Lr Only, LL Comb Run (LL**L*)							
Lr Only, LL Comb Run (LL**LL)							
Lr Only, LL Comb Run (LL*L**)							
Lr Only, LL Comb Run (LL*L*L)							
Lr Only, LL Comb Run (LL*LL*)							
Lr Only, LL Comb Run (LL*LLL)							
Lr Only, LL Comb Run (LLL***)							
Lr Only, LL Comb Run (LLL**L)							
Lr Only, LL Comb Run (LLL*L*)							
Lr Only, LL Comb Run (LLL*LL)							
Lr Only, LL Comb Run (LLLL**)							
Lr Only, LL Comb Run (LLLL*L)							
Lr Only, LL Comb Run (LLLLL*)							
Lr Only, LL Comb Run (LLLLLL)							
L Only, LL Comb Run (*****L)	-0.002	0.009	-0.036	0.135	-0.505	0.724	1.024
L Only, LL Comb Run (****L*)	0.001	-0.008	0.032	-0.119	0.445	4.738	-0.017
L Only, LL Comb Run (****LL)	-0.000	0.001	-0.004	0.016	-0.059	5.462	1.007
L Only, LL Comb Run (***L**)	-0.023	0.137	-0.549	3.029	5.475	-0.526	0.015
L Only, LL Comb Run (***L*L)	-0.024	0.146	-0.585	3.165	4.970	0.198	1.039
L Only, LL Comb Run (***LL*)	-0.022	0.129	-0.517	2.911	5.920	4.212	-0.002
L Only, LL Comb Run (***LLL)	-0.023	0.138	-0.553	3.046	5.416	4.936	1.022
L Only, LL Comb Run (**L***)	0.049	-0.296	2.121	2.124	-0.305	0.058	-0.002
L Only, LL Comb Run (**L**L)	0.048	-0.287	2.085	2.259	-0.810	0.782	1.023

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7
L Only, LL Comb Run (**L*L*)	0.051	-0.304	2.153	2.005	0.140	4.796	-0.019
L Only, LL Comb Run (**L*LL)	0.049	-0.295	2.117	2.140	-0.365	5.520	1.005
L Only, LL Comb Run (**LL**)	0.026	-0.159	1.573	5.154	5.170	-0.468	0.013
L Only, LL Comb Run (**LL*L)	0.025	-0.150	1.536	5.289	4.665	0.256	1.038
L Only, LL Comb Run (**LLL*)	0.028	-0.167	1.604	5.035	5.615	4.270	-0.004
L Only, LL Comb Run (**LLLL)	0.026	-0.158	1.568	5.170	5.110	4.994	1.020
L Only, LL Comb Run (*L****)	-0.580	5.087	5.427	-1.020	0.262	-0.050	0.001
L Only, LL Comb Run (*L***L)	-0.581	5.096	5.391	-0.885	-0.242	0.674	1.026
L Only, LL Comb Run (*L**L*)	-0.578	5.079	5.459	-1.139	0.708	4.688	-0.016
L Only, LL Comb Run (*L**LL)	-0.580	5.088	5.422	-1.004	0.203	5.412	1.008
L Only, LL Comb Run (*L*L**)	-0.602	5.224	4.878	2.010	5.737	-0.576	0.016
L Only, LL Comb Run (*L*L*L)	-0.604	5.233	4.842	2.145	5.233	0.148	1.041
L Only, LL Comb Run (*L*LL*)	-0.601	5.216	4.910	1.891	6.183	4.162	-0.001
L Only, LL Comb Run (*L*LLL)	-0.603	5.225	4.874	2.026	5.678	4.886	1.023
L Only, LL Comb Run (*LL***)	-0.530	4.791	7.548	1.104	-0.043	0.008	-0.000
L Only, LL Comb Run (*LL**L)	-0.532	4.800	7.512	1.240	-0.548	0.732	1.024
L Only, LL Comb Run (*LL*L*)	-0.529	4.783	7.580	0.985	0.402	4.746	-0.018
L Only, LL Comb Run (*LL*LL)	-0.530	4.792	7.544	1.121	-0.102	5.470	1.007
L Only, LL Comb Run (*LLL**)	-0.553	4.928	6.999	4.134	5.432	-0.518	0.015
L Only, LL Comb Run (*LLL*L)	-0.555	4.937	6.963	4.269	4.927	0.206	1.039
L Only, LL Comb Run (*LLLL*)	-0.552	4.920	7.031	4.015	5.877	4.220	-0.003
L Only, LL Comb Run (*LLLLL)	-0.553	4.929	6.995	4.150	5.373	4.944	1.022
L Only, LL Comb Run (L*****)	1.624	2.445	-0.404	0.108	-0.028	0.005	-0.000
L Only, LL Comb Run (L****L)	1.622	2.454	-0.440	0.243	-0.532	0.729	1.024
L Only, LL Comb Run (L***L*)	1.625	2.437	-0.372	-0.011	0.418	4.743	-0.018
L Only, LL Comb Run (L***LL)	1.624	2.446	-0.408	0.124	-0.087	5.467	1.007
L Only, LL Comb Run (L**L**)	1.601	2.582	-0.952	3.137	5.447	-0.521	0.015
L Only, LL Comb Run (L**L*L)	1.599	2.591	-0.988	3.272	4.942	0.203	1.039
L Only, LL Comb Run (L**LL*)	1.602	2.574	-0.921	3.018	5.893	4.217	-0.003
L Only, LL Comb Run (L**LLL)	1.601	2.583	-0.957	3.154	5.388	4.941	1.022
L Only, LL Comb Run (L*L***)	1.673	2.149	1.717	2.232	-0.333	0.064	-0.002
L Only, LL Comb Run (L*L**L)	1.672	2.158	1.681	2.367	-0.838	0.787	1.022
L Only, LL Comb Run (L*L*L*)	1.674	2.141	1.749	2.113	0.112	4.801	-0.019
L Only, LL Comb Run (L*L*LL)	1.673	2.150	1.713	2.248	-0.392	5.525	1.005
L Only, LL Comb Run (L*LL**)	1.650	2.286	1.169	5.261	5.142	-0.462	0.013
L Only, LL Comb Run (L*LL*L)	1.649	2.295	1.133	5.397	4.637	0.261	1.037
L Only, LL Comb Run (L*LLL*)	1.652	2.278	1.200	5.143	5.587	4.275	-0.004
L Only, LL Comb Run (L*LLLL)	1.650	2.287	1.164	5.278	5.083	4.999	1.020
L Only, LL Comb Run (LL****)	1.044	7.532	5.023	-0.912	0.235	-0.045	0.001
L Only, LL Comb Run (LL***L)	1.043	7.541	4.987	-0.777	-0.270	0.679	1.025
L Only, LL Comb Run (LL**L*)	1.046	7.524	5.055	-1.031	0.680	4.693	-0.016
L Only, LL Comb Run (LL**LL)	1.044	7.533	5.019	-0.896	0.175	5.417	1.008
L Only, LL Comb Run (LL*L**)	1.021	7.669	4.475	2.117	5.709	-0.571	0.016
L Only, LL Comb Run (LL*L*L)	1.020	7.678	4.438	2.253	5.205	0.153	1.040
L Only, LL Comb Run (LL*LL*)	1.023	7.661	4.506	1.999	6.155	4.167	-0.001
L Only, LL Comb Run (LL*LLL)	1.021	7.670	4.470	2.134	5.650	4.891	1.023
L Only, LL Comb Run (LLL***)	1.094	7.236	7.144	1.212	-0.071	0.013	-0.000
L Only, LL Comb Run (LLL**L)	1.092	7.245	7.108	1.347	-0.575	0.737	1.024
L Only, LL Comb Run (LLL*L*)	1.095	7.228	7.176	1.093	0.375	4.751	-0.018
L Only, LL Comb Run (LLL*LL)	1.093	7.237	7.140	1.228	-0.130	5.475	1.006
L Only, LL Comb Run (LLLL**)	1.071	7.373	6.596	4.242	5.404	-0.513	0.015
L Only, LL Comb Run (LLLL*L)	1.069	7.382	6.560	4.377	4.900	0.211	1.039
L Only, LL Comb Run (LLLLL*)	1.072	7.365	6.627	4.123	5.850	4.225	-0.003
L Only, LL Comb Run (LLLLLL)	1.071	7.374	6.591	4.258	5.345	4.949	1.021
S Only	5.896	16.999	14.310	15.544	5.574	11.910	-0.030
W Only							
E Only							
H Only							

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	21.00	13.49	13.49	0.00	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	21.00	12.68	12.68	1.49	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	21.00	11.87	11.87	2.88	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	21.00	11.06	11.06	4.18	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	21.00	10.24	10.24	5.39	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	21.00	9.43	9.43	6.51	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	21.00	8.62	8.62	7.54	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	21.00	7.81	7.81	8.47	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	21.00	7.00	7.00	9.31	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	21.00	6.19	6.19	10.06	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	21.00	5.38	5.38	10.72	0.88	38.81	Vu < PhiVc/2	Not Reqd 1	38.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	21.00	4.57	4.57	11.29	0.71	38.25	Vu < PhiVc/2	Not Reqd 1	38.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	21.00	3.76	3.76	11.76	0.56	37.75	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	21.00	2.94	2.94	12.14	0.42	37.31	Vu < PhiVc/2	Not Reqd 1	37.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	21.00	2.13	2.13	12.43	0.30	36.90	Vu < PhiVc/2	Not Reqd 1	36.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.70	21.00	1.32	1.32	12.62	0.18	36.51	Vu < PhiVc/2	Not Reqd 1	36.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.82	21.00	-1.34	1.34	0.83	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.93	21.00	-1.56	1.56	0.67	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.05	21.00	-1.90	1.90	3.38	0.98	39.16	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	2.16	21.00	-2.29	2.29	3.14	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.27	21.00	-3.06	3.06	11.48	0.47	37.45	Vu < PhiVc/2	Not Reqd 1	37.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.39	21.00	-3.87	3.87	11.09	0.61	37.93	Vu < PhiVc/2	Not Reqd 1	37.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.50	21.00	-4.68	4.68	10.60	0.77	38.46	Vu < PhiVc/2	Not Reqd 1	38.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.61	21.00	-5.49	5.49	10.02	0.96	39.08	Vu < PhiVc/2	Not Reqd 1	39.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.73	21.00	-6.30	6.30	9.35	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.84	21.00	-7.12	7.12	8.59	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	21.00	-7.93	7.93	7.73	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	21.00	-8.74	8.74	6.79	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	21.00	-9.55	9.55	5.75	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	21.00	-10.36	10.36	4.62	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	21.00	-11.17	11.17	3.39	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	21.00	-11.98	11.98	2.08	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	21.00	-12.79	12.79	0.67	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	21.00	-13.60	13.60	0.83	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	21.00	-14.42	14.42	2.42	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	21.00	-15.23	15.23	4.11	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	21.00	-16.04	16.04	5.88	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	21.00	-16.85	16.85	7.75	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	21.00	-17.66	17.66	9.71	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	21.00	-18.47	18.47	11.77	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	21.00	-19.28	19.28	13.91	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	21.00	-20.09	20.09	16.15	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.77	21.00	-20.90	20.90	18.48	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	21.00	-21.72	21.72	20.90	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	21.00	24.84	24.84	23.41	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	21.00	24.03	24.03	20.64	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	21.00	23.21	23.21	17.95	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	21.00	22.40	22.40	15.36	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	21.00	21.59	21.59	12.86	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	21.00	20.78	20.78	10.45	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	21.00	19.97	19.97	8.14	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	21.00	19.16	19.16	5.91	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	21.00	18.35	18.35	3.78	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	21.00	17.54	17.54	1.74	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	2	6.14	21.00	16.73	16.73	0.20	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	21.00	15.91	15.91	2.06	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.36	21.00	15.19	15.19	5.66	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.48	21.00	14.66	14.66	7.35	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.59	21.00	14.13	14.13	8.99	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.70	21.00	13.59	13.59	10.57	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.82	21.00	13.06	13.06	12.08	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	6.93	21.00	12.53	12.53	13.53	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.05	21.00	12.00	12.00	14.93	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.16	21.00	11.47	11.47	16.26	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.27	21.00	10.94	10.94	17.54	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.39	21.00	10.41	10.41	18.75	0.97	39.12	Vu < PhiVc/2	Not Reqd 1	39.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.50	21.00	9.88	9.88	19.90	0.87	38.78	Vu < PhiVc/2	Not Reqd 1	38.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	2	7.61	21.00	-9.12	9.12	17.45	0.91	38.93	Vu < PhiVc/2	Not Reqd 1	38.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.73	21.00	-9.60	9.60	17.68	0.95	39.05	Vu < PhiVc/2	Not Reqd 1	39.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.84	21.00	-10.13	10.13	16.56	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	7.95	21.00	-10.66	10.66	15.37	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.07	21.00	-11.19	11.19	14.13	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.18	21.00	-11.72	11.72	12.83	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.30	21.00	-12.25	12.25	11.47	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.41	21.00	-12.78	12.78	10.05	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.52	21.00	-13.31	13.31	8.56	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.64	21.00	-13.84	13.84	7.02	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.75	21.00	-14.37	14.37	5.42	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.86	21.00	-14.91	14.91	3.75	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	2	8.98	21.00	-15.44	15.44	2.03	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	21.00	-16.10	16.10	0.26	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	21.00	-16.91	16.91	2.13	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	21.00	-17.72	17.72	4.10	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	21.00	-18.53	18.53	6.16	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	21.00	-19.34	19.34	8.31	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	21.00	-20.16	20.16	10.56	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	21.00	-20.97	20.97	12.90	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	21.00	-21.78	21.78	15.32	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	21.00	18.09	18.09	17.84	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	21.00	17.28	17.28	15.83	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	21.00	16.47	16.47	13.92	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	21.00	15.66	15.66	12.09	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	21.00	14.85	14.85	10.36	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	21.00	14.04	14.04	8.72	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	21.00	13.23	13.23	7.17	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	21.00	12.42	12.42	5.71	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.91	21.00	11.60	11.60	4.35	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	21.00	10.79	10.79	3.07	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.14	21.00	9.98	9.98	1.89	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.25	21.00	9.17	9.17	0.80	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.36	21.00	8.36	8.36	0.19	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.48	21.00	7.55	7.55	1.09	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.59	21.00	6.74	6.74	1.91	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.70	21.00	5.93	5.93	2.63	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.82	21.00	5.12	5.12	3.25	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.93	21.00	4.30	4.30	3.79	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	21.00	3.51	3.51	0.76	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	21.00	2.98	2.98	1.13	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H, I	3	12.27	21.00	2.45	2.45	1.43	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	12.39	21.00	1.92	1.92	1.68	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.50	21.00	1.49	1.49	1.87	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	3	12.61	21.00	-1.35	1.35	2.68	0.88	38.82	Vu < PhiVc/2	Not Reqd 1	38.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	12.73	21.00	-2.06	2.06	5.09	0.71	38.25	Vu < PhiVc/2	Not Reqd 1	38.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	12.84	21.00	-2.87	2.87	4.81	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	12.95	21.00	-3.69	3.69	4.44	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.07	21.00	-4.50	4.50	3.97	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.18	21.00	-5.31	5.31	3.41	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.30	21.00	-6.12	6.12	2.76	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.41	21.00	-6.93	6.93	2.02	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.52	21.00	-7.74	7.74	1.19	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.64	21.00	-8.55	8.55	0.26	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.75	21.00	-9.36	9.36	0.75	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.86	21.00	-10.17	10.17	1.86	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	13.98	21.00	-10.99	10.99	3.07	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.09	21.00	-11.80	11.80	4.36	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.20	21.00	-12.61	12.61	5.75	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.32	21.00	-13.42	13.42	7.23	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.43	21.00	-14.23	14.23	8.80	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.55	21.00	-15.04	15.04	10.46	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.66	21.00	-15.85	15.85	12.22	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.77	21.00	-16.66	16.66	14.06	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	3	14.89	21.00	-17.47	17.47	16.00	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.00	21.00	21.21	21.21	18.04	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.11	21.00	20.40	20.40	15.67	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.23	21.00	19.59	19.59	13.40	1.00	38.39	PhiVc/2 < Vu <=	Min 11.5.6	58.2	7.3	7.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.34	21.00	18.78	18.78	11.22	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.45	21.00	17.97	17.97	9.13	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.57	21.00	17.16	17.16	7.13	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.68	21.00	16.35	16.35	5.23	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.80	21.00	15.53	15.53	3.42	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	15.91	21.00	14.72	14.72	1.70	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.02	21.00	13.91	13.91	0.07	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.14	21.00	13.10	13.10	1.46	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.25	21.00	12.29	12.29	2.90	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.36	21.00	11.48	11.48	4.25	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.48	21.00	10.67	10.67	5.51	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.59	21.00	9.86	9.86	6.68	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.70	21.00	9.05	9.05	7.75	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.82	21.00	8.23	8.23	8.74	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	16.93	21.00	7.42	7.42	9.63	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	17.05	21.00	6.61	6.61	10.42	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	17.16	21.00	5.80	5.80	11.13	0.91	38.92	Vu < PhiVc/2	Not Reqd 1	38.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	17.27	21.00	5.23	5.23	10.11	0.91	38.90	Vu < PhiVc/2	Not Reqd 1	38.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	17.39	21.00	4.70	4.70	10.67	0.77	38.45	Vu < PhiVc/2	Not Reqd 1	38.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	17.50	21.00	4.17	4.17	11.18	0.65	38.06	Vu < PhiVc/2	Not Reqd 1	38.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	17.61	21.00	3.64	3.64	11.62	0.55	37.72	Vu < PhiVc/2	Not Reqd 1	37.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	21.00	3.26	3.26	10.22	0.56	37.75	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	21.00	2.90	2.90	10.57	0.48	37.49	Vu < PhiVc/2	Not Reqd 1	37.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	21.00	2.54	2.54	10.88	0.41	37.26	Vu < PhiVc/2	Not Reqd 1	37.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	21.00	2.18	2.18	11.14	0.34	37.04	Vu < PhiVc/2	Not Reqd 1	37.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.18	21.00	-1.95	1.95	11.93	0.29	36.85	Vu < PhiVc/2	Not Reqd 1	36.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.30	21.00	-2.71	2.71	11.67	0.41	37.25	Vu < PhiVc/2	Not Reqd 1	37.3	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H, I	4	18.41	21.00	-3.48	3.48	11.32	0.54	37.69	Vu < PhiVc/2	Not Reqd 1	37.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.52	21.00	-4.27	4.27	12.27	0.61	37.92	Vu < PhiVc/2	Not Reqd 1	37.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.64	21.00	-5.09	5.09	11.73	0.76	38.41	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.75	21.00	-5.90	5.90	11.11	0.93	38.98	Vu < PhiVc/2	Not Reqd 1	39.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.86	21.00	-6.71	6.71	10.39	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H, I	4	18.98	21.00	-7.52	7.52	9.59	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.09	21.00	-12.01	12.01	10.12	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.20	21.00	-12.13	12.13	8.75	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.32	21.00	-12.26	12.26	7.36	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.43	21.00	-12.38	12.38	5.96	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.55	21.00	-12.50	12.50	4.55	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.66	21.00	-12.62	12.62	3.12	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.77	21.00	-12.74	12.74	1.68	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H, I	4	19.89	21.00	-12.86	12.86	0.23	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.00	21.00	-5.92	5.92	5.90	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.11	21.00	-6.06	6.06	5.22	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.23	21.00	-6.20	6.20	4.52	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.34	21.00	-6.34	6.34	3.81	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.45	21.00	-6.48	6.48	3.08	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.57	21.00	-6.62	6.62	2.34	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.68	21.00	-6.77	6.77	1.58	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.80	21.00	-6.91	6.91	0.80	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	20.91	21.00	-7.05	7.05	0.01	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	5	21.02	21.00	-7.19	7.19	0.80	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.14	21.00	-7.33	7.33	1.63	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.25	21.00	-7.48	7.48	2.47	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.36	21.00	-7.62	7.62	3.33	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.48	21.00	-7.76	7.76	4.20	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.59	21.00	-7.90	7.90	5.09	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.70	21.00	-8.04	8.04	6.00	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.82	21.00	-8.19	8.19	6.92	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	21.93	21.00	-8.33	8.33	7.86	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.05	21.00	-8.47	8.47	8.81	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.16	21.00	-8.61	8.61	9.78	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.27	21.00	-8.75	8.75	10.77	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.39	21.00	-8.90	8.90	11.77	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.50	21.00	-9.04	9.04	12.79	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.61	21.00	-9.18	9.18	13.83	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.73	21.00	-9.32	9.32	14.88	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.84	21.00	-9.46	9.46	15.94	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	22.95	21.00	-9.60	9.60	17.03	0.99	38.35	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	5	23.07	21.00	-9.75	9.75	18.13	0.94	38.24	Vu < PhiVc/2	Not Reqd 1	38.2	0.0	0.0
+1.40D+1.60H	5	23.18	21.00	-9.89	9.89	19.24	0.90	38.14	Vu < PhiVc/2	Not Reqd 1	38.1	0.0	0.0
+1.40D+1.60H	5	23.30	21.00	-10.03	10.03	20.37	0.86	38.04	Vu < PhiVc/2	Not Reqd 1	38.0	0.0	0.0
+1.40D+1.60H	5	23.41	21.00	-10.17	10.17	21.52	0.83	37.96	Vu < PhiVc/2	Not Reqd 1	38.0	0.0	0.0
+1.40D+1.60H	5	23.52	21.00	-10.31	10.31	22.69	0.80	37.88	Vu < PhiVc/2	Not Reqd 1	37.9	0.0	0.0
+1.40D+1.60H	5	23.64	21.00	-10.46	10.46	23.87	0.77	37.81	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.40D+1.60H	5	23.75	21.00	-10.60	10.60	25.06	0.74	37.74	Vu < PhiVc/2	Not Reqd 1	37.7	0.0	0.0
+1.40D+1.60H	5	23.86	21.00	-10.74	10.74	26.27	0.72	37.68	Vu < PhiVc/2	Not Reqd 1	37.7	0.0	0.0
+1.40D+1.60H	5	23.98	21.00	-10.88	10.88	27.50	0.69	37.62	Vu < PhiVc/2	Not Reqd 1	37.6	0.0	0.0
+1.40D+1.60H	5	24.09	21.00	-11.02	11.02	28.75	0.67	37.57	Vu < PhiVc/2	Not Reqd 1	37.6	0.0	0.0
+1.40D+1.60H	5	24.20	21.00	-11.17	11.17	30.01	0.65	37.52	Vu < PhiVc/2	Not Reqd 1	37.5	0.0	0.0
+1.40D+1.60H	5	24.32	21.00	-11.31	11.31	31.29	0.63	37.48	Vu < PhiVc/2	Not Reqd 1	37.5	0.0	0.0
+1.40D+1.60H	5	24.43	21.00	-11.45	11.45	32.58	0.62	37.43	Vu < PhiVc/2	Not Reqd 1	37.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.40D+1.60H	5	24.55	21.00	-11.59	11.59	33.89	0.60	37.39	Vu < PhiVc/2	Not Reqd 1	37.4	0.0	0.0
+1.40D+1.60H	5	24.66	21.00	-11.73	11.73	35.21	0.58	37.35	Vu < PhiVc/2	Not Reqd 1	37.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.77	21.00	-40.92	40.92	29.18	1.00	38.39	PhiVc < Vu	2.535	53.8	9.8	9.0
+1.20D+0.50L+1.60S+1.60H,	5	24.89	21.00	-41.03	41.03	33.83	1.00	38.39	PhiVc < Vu	2.643	53.8	9.8	9.0
+1.40D+1.60H	6	25.00	21.00	13.35	13.35	42.83	0.55	37.26	Vu < PhiVc/2	Not Reqd 1	37.3	0.0	0.0
+1.40D+1.60H	6	25.39	21.00	12.92	12.92	37.69	0.60	37.39	Vu < PhiVc/2	Not Reqd 1	37.4	0.0	0.0
+1.40D+1.60H	6	25.78	21.00	12.48	12.48	32.71	0.67	37.56	Vu < PhiVc/2	Not Reqd 1	37.6	0.0	0.0
+1.40D+1.60H	6	26.18	21.00	12.05	12.05	27.90	0.76	37.78	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.40D+1.60H	6	26.57	21.00	11.62	11.62	23.26	0.87	38.07	Vu < PhiVc/2	Not Reqd 1	38.1	0.0	0.0
+1.40D+1.60H	6	26.96	21.00	11.19	11.19	18.79	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	6	27.35	21.00	10.75	10.75	14.49	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	6	27.74	21.00	10.32	10.32	10.35	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	6	28.14	21.00	9.89	9.89	6.39	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	6	28.53	21.00	9.46	9.46	2.60	1.00	38.39	Vu < PhiVc/2	Not Reqd 1	38.4	0.0	0.0
+1.40D+1.60H	6	28.92	21.00	9.02	9.02	1.02	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	29.31	21.00	8.59	8.59	4.48	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	29.70	21.00	8.16	8.16	7.76	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	30.10	21.00	7.73	7.73	10.87	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	30.49	21.00	7.29	7.29	13.82	0.92	38.96	Vu < PhiVc/2	Not Reqd 1	39.0	0.0	0.0
+1.40D+1.60H	6	30.88	21.00	6.86	6.86	16.59	0.72	38.30	Vu < PhiVc/2	Not Reqd 1	38.3	0.0	0.0
+1.40D+1.60H	6	31.27	21.00	6.43	6.43	19.20	0.59	37.84	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.40D+1.60H	6	31.66	21.00	6.00	6.00	21.64	0.49	37.51	Vu < PhiVc/2	Not Reqd 1	37.5	0.0	0.0
+1.40D+1.60H	6	32.06	21.00	5.56	5.56	23.90	0.41	37.25	Vu < PhiVc/2	Not Reqd 1	37.3	0.0	0.0
+1.40D+1.60H	6	32.45	21.00	5.13	5.13	26.00	0.35	37.05	Vu < PhiVc/2	Not Reqd 1	37.0	0.0	0.0
+1.40D+1.60H	6	32.84	21.00	4.70	4.70	27.93	0.29	36.88	Vu < PhiVc/2	Not Reqd 1	36.9	0.0	0.0
+1.40D+1.60H	6	33.23	21.00	4.27	4.27	29.68	0.25	36.74	Vu < PhiVc/2	Not Reqd 1	36.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	33.63	21.00	3.85	3.85	28.39	0.24	36.69	Vu < PhiVc/2	Not Reqd 1	36.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	34.02	21.00	3.48	3.48	29.83	0.20	36.58	Vu < PhiVc/2	Not Reqd 1	36.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	34.41	21.00	3.11	3.11	31.12	0.18	36.49	Vu < PhiVc/2	Not Reqd 1	36.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	34.80	21.00	2.74	2.74	32.27	0.15	36.40	Vu < PhiVc/2	Not Reqd 1	36.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	35.19	21.00	2.37	2.37	33.27	0.12	36.32	Vu < PhiVc/2	Not Reqd 1	36.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	35.59	21.00	2.00	2.00	34.13	0.10	36.25	Vu < PhiVc/2	Not Reqd 1	36.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	35.98	21.00	1.63	1.63	34.84	0.08	36.18	Vu < PhiVc/2	Not Reqd 1	36.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	36.37	21.00	1.26	1.26	35.41	0.06	36.12	Vu < PhiVc/2	Not Reqd 1	36.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	36.76	21.00	0.89	0.89	35.83	0.04	36.05	Vu < PhiVc/2	Not Reqd 1	36.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	6	37.15	21.00	0.52	0.52	36.10	0.03	35.99	Vu < PhiVc/2	Not Reqd 1	36.0	0.0	0.0
+1.40D+1.60H	6	37.55	21.00	-0.49	0.49	37.83	0.02	35.98	Vu < PhiVc/2	Not Reqd 1	36.0	0.0	0.0
+1.40D+1.60H	6	37.94	21.00	-0.92	0.92	37.55	0.04	36.05	Vu < PhiVc/2	Not Reqd 1	36.1	0.0	0.0
+1.40D+1.60H	6	38.33	21.00	-1.36	1.36	37.10	0.06	36.12	Vu < PhiVc/2	Not Reqd 1	36.1	0.0	0.0
+1.40D+1.60H	6	38.72	21.00	-1.79	1.79	36.49	0.09	36.19	Vu < PhiVc/2	Not Reqd 1	36.2	0.0	0.0
+1.40D+1.60H	6	39.11	21.00	-2.22	2.22	35.70	0.11	36.27	Vu < PhiVc/2	Not Reqd 1	36.3	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	39.51	21.00	-10.60	10.60	32.65	0.57	37.78	Vu < PhiVc/2	Not Reqd 1	37.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	39.90	21.00	-10.97	10.97	28.42	0.68	38.14	Vu < PhiVc/2	Not Reqd 1	38.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	6	40.29	21.00	-11.34	11.34	24.05	0.83	38.63	Vu < PhiVc/2	Not Reqd 1	38.6	0.0	0.0
+1.40D+1.60H	6	40.68	21.00	-11.72	11.72	19.74	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	41.07	21.00	-12.15	12.15	15.06	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	41.47	21.00	-12.59	12.59	10.21	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	41.86	21.00	-13.02	13.02	5.19	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0
+1.40D+1.60H	6	42.25	21.00	-13.45	13.45	0.00	1.00	39.21	Vu < PhiVc/2	Not Reqd 1	39.2	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	5.000	-20.90	122.70	0.17

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-23.41	122.70	0.19
Span # 3	3	5.000	-17.84	122.70	0.15
Span # 4	4	5.000	-18.04	122.70	0.15
Span # 5	5	5.000	-40.25	122.70	0.33
Span # 6	6	17.250	-42.83	122.70	0.35
+1.40D+1.60H					
Span # 1	1	5.000	-9.15	122.70	0.07
Span # 2	2	5.000	-10.02	122.70	0.08
Span # 3	3	5.000	-7.75	122.70	0.06
Span # 4	4	5.000	-6.80	122.70	0.06
Span # 5	5	5.000	-40.25	122.70	0.33
Span # 6	6	17.250	-42.83	122.70	0.35
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-7.85	122.70	0.06
Span # 2	2	5.000	-8.60	122.70	0.07
Span # 3	3	5.000	-6.60	122.70	0.05
Span # 4	4	5.000	-6.01	122.70	0.05
Span # 5	5	5.000	-36.94	122.70	0.30
Span # 6	6	17.250	-39.23	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.83	122.70	0.06
Span # 2	2	5.000	-8.58	122.70	0.07
Span # 3	3	5.000	-6.69	122.70	0.05
Span # 4	4	5.000	-5.67	122.70	0.05
Span # 5	5	5.000	-34.12	122.70	0.28
Span # 6	6	17.250	-37.20	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.85	122.70	0.05
Span # 5	5	5.000	-36.56	122.70	0.30
Span # 6	6	17.250	-39.71	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-8.02	122.70	0.07
Span # 2	2	5.000	-8.77	122.70	0.07
Span # 3	3	5.000	-7.96	122.70	0.06
Span # 4	4	5.000	11.58	158.86	0.07
Span # 5	5	5.000	-34.18	122.70	0.28
Span # 6	6	17.250	-36.30	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-8.03	122.70	0.07
Span # 2	2	5.000	-8.78	122.70	0.07
Span # 3	3	5.000	-8.14	122.70	0.07
Span # 4	4	5.000	12.02	158.86	0.08
Span # 5	5	5.000	-36.62	122.70	0.30
Span # 6	6	17.250	-38.81	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-8.01	122.70	0.07
Span # 2	2	5.000	-8.76	122.70	0.07
Span # 3	3	5.000	-7.81	122.70	0.06
Span # 4	4	5.000	11.21	158.86	0.07
Span # 5	5	5.000	-33.80	122.70	0.28
Span # 6	6	17.250	-36.78	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-8.02	122.70	0.07
Span # 2	2	5.000	-8.77	122.70	0.07
Span # 3	3	5.000	-7.98	122.70	0.07
Span # 4	4	5.000	11.63	158.86	0.07
Span # 5	5	5.000	-36.24	122.70	0.30
Span # 6	6	17.250	-39.30	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-7.46	122.70	0.06
Span # 2	2	5.000	-8.19	122.70	0.07
Span # 3	3	5.000	-8.22	122.70	0.07
Span # 4	4	5.000	-7.41	122.70	0.06
Span # 5	5	5.000	-34.54	122.70	0.28
Span # 6	6	17.250	-36.76	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	-7.47	122.70	0.06
Span # 2	2	5.000	-8.20	122.70	0.07
Span # 3	3	5.000	-8.17	122.70	0.07
Span # 4	4	5.000	-7.59	122.70	0.06
Span # 5	5	5.000	-36.98	122.70	0.30
Span # 6	6	17.250	-39.27	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.45	122.70	0.06
Span # 2	2	5.000	-8.18	122.70	0.07
Span # 3	3	5.000	-8.26	122.70	0.07
Span # 4	4	5.000	-7.25	122.70	0.06
Span # 5	5	5.000	-34.16	122.70	0.28
Span # 6	6	17.250	-37.24	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.46	122.70	0.06
Span # 2	2	5.000	-8.19	122.70	0.07
Span # 3	3	5.000	-8.22	122.70	0.07
Span # 4	4	5.000	-7.43	122.70	0.06
Span # 5	5	5.000	-36.60	122.70	0.30
Span # 6	6	17.250	-39.75	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-7.64	122.70	0.06
Span # 2	2	5.000	-8.37	122.70	0.07
Span # 3	3	5.000	-9.21	122.70	0.08
Span # 4	4	5.000	-10.15	122.70	0.08
Span # 5	5	5.000	-34.22	122.70	0.28
Span # 6	6	17.250	-36.35	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-7.65	122.70	0.06
Span # 2	2	5.000	-8.39	122.70	0.07
Span # 3	3	5.000	-9.38	122.70	0.08
Span # 4	4	5.000	-10.33	122.70	0.08
Span # 5	5	5.000	-36.66	122.70	0.30
Span # 6	6	17.250	-38.86	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-7.63	122.70	0.06
Span # 2	2	5.000	-8.36	122.70	0.07
Span # 3	3	5.000	-9.06	122.70	0.07
Span # 4	4	5.000	-9.99	122.70	0.08
Span # 5	5	5.000	-33.84	122.70	0.28
Span # 6	6	17.250	-36.83	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-7.64	122.70	0.06
Span # 2	2	5.000	-8.38	122.70	0.07
Span # 3	3	5.000	-9.23	122.70	0.08
Span # 4	4	5.000	-10.17	122.70	0.08
Span # 5	5	5.000	-36.28	122.70	0.30
Span # 6	6	17.250	-39.34	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-12.37	122.70	0.10
Span # 2	2	5.000	19.07	158.86	0.12
Span # 3	3	5.000	-11.73	122.70	0.10
Span # 4	4	5.000	7.30	158.86	0.05
Span # 5	5	5.000	-34.47	122.70	0.28
Span # 6	6	17.250	-36.68	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-12.39	122.70	0.10
Span # 2	2	5.000	19.09	158.86	0.12
Span # 3	3	5.000	-11.69	122.70	0.10
Span # 4	4	5.000	7.72	158.86	0.05
Span # 5	5	5.000	-36.91	122.70	0.30
Span # 6	6	17.250	-39.19	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-12.36	122.70	0.10
Span # 2	2	5.000	19.06	158.86	0.12
Span # 3	3	5.000	-11.78	122.70	0.10
Span # 4	4	5.000	6.95	158.86	0.04
Span # 5	5	5.000	-34.09	122.70	0.28
Span # 6	6	17.250	-37.16	122.70	0.30

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-12.38	122.70	0.10
Span # 2	2	5.000	19.08	158.86	0.12
Span # 3	3	5.000	-11.73	122.70	0.10
Span # 4	4	5.000	7.35	158.86	0.05
Span # 5	5	5.000	-36.53	122.70	0.30
Span # 6	6	17.250	-39.67	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-12.55	122.70	0.10
Span # 2	2	5.000	19.35	158.86	0.12
Span # 3	3	5.000	-11.00	122.70	0.09
Span # 4	4	5.000	11.74	158.86	0.07
Span # 5	5	5.000	-34.15	122.70	0.28
Span # 6	6	17.250	-36.26	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-12.56	122.70	0.10
Span # 2	2	5.000	19.37	158.86	0.12
Span # 3	3	5.000	-10.95	122.70	0.09
Span # 4	4	5.000	12.16	158.86	0.08
Span # 5	5	5.000	-36.59	122.70	0.30
Span # 6	6	17.250	-38.77	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-12.54	122.70	0.10
Span # 2	2	5.000	19.33	158.86	0.12
Span # 3	3	5.000	-11.04	122.70	0.09
Span # 4	4	5.000	11.39	158.86	0.07
Span # 5	5	5.000	-33.77	122.70	0.28
Span # 6	6	17.250	-36.74	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-12.55	122.70	0.10
Span # 2	2	5.000	19.35	158.86	0.12
Span # 3	3	5.000	-11.00	122.70	0.09
Span # 4	4	5.000	11.79	158.86	0.07
Span # 5	5	5.000	-36.21	122.70	0.30
Span # 6	6	17.250	-39.26	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-11.99	122.70	0.10
Span # 2	2	5.000	18.48	158.86	0.12
Span # 3	3	5.000	-13.31	122.70	0.11
Span # 4	4	5.000	-6.05	122.70	0.05
Span # 5	5	5.000	-34.51	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-12.00	122.70	0.10
Span # 2	2	5.000	18.50	158.86	0.12
Span # 3	3	5.000	-13.26	122.70	0.11
Span # 4	4	5.000	-6.23	122.70	0.05
Span # 5	5	5.000	-36.95	122.70	0.30
Span # 6	6	17.250	-39.23	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-11.98	122.70	0.10
Span # 2	2	5.000	18.47	158.86	0.12
Span # 3	3	5.000	-13.35	122.70	0.11
Span # 4	4	5.000	-5.89	122.70	0.05
Span # 5	5	5.000	-34.13	122.70	0.28
Span # 6	6	17.250	-37.20	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-11.99	122.70	0.10
Span # 2	2	5.000	18.48	158.86	0.12
Span # 3	3	5.000	-13.31	122.70	0.11
Span # 4	4	5.000	-6.07	122.70	0.05
Span # 5	5	5.000	-36.57	122.70	0.30
Span # 6	6	17.250	-39.72	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-12.17	122.70	0.10
Span # 2	2	5.000	18.76	158.86	0.12
Span # 3	3	5.000	-12.58	122.70	0.10
Span # 4	4	5.000	11.56	158.86	0.07
Span # 5	5	5.000	-34.19	122.70	0.28

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	17.250	-36.31	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-12.18	122.70	0.10
Span # 2	2	5.000	18.77	158.86	0.12
Span # 3	3	5.000	-12.53	122.70	0.10
Span # 4	4	5.000	12.00	158.86	0.08
Span # 5	5	5.000	-36.63	122.70	0.30
Span # 6	6	17.250	-38.82	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-12.16	122.70	0.10
Span # 2	2	5.000	18.74	158.86	0.12
Span # 3	3	5.000	-12.62	122.70	0.10
Span # 4	4	5.000	11.19	158.86	0.07
Span # 5	5	5.000	-33.81	122.70	0.28
Span # 6	6	17.250	-36.79	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-12.17	122.70	0.10
Span # 2	2	5.000	18.76	158.86	0.12
Span # 3	3	5.000	-12.57	122.70	0.10
Span # 4	4	5.000	11.61	158.86	0.07
Span # 5	5	5.000	-36.25	122.70	0.30
Span # 6	6	17.250	-39.30	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-9.47	122.70	0.08
Span # 2	2	5.000	-10.60	122.70	0.09
Span # 3	3	5.000	-6.11	122.70	0.05
Span # 4	4	5.000	-5.97	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-9.49	122.70	0.08
Span # 2	2	5.000	-10.61	122.70	0.09
Span # 3	3	5.000	-6.06	122.70	0.05
Span # 4	4	5.000	-6.15	122.70	0.05
Span # 5	5	5.000	-36.94	122.70	0.30
Span # 6	6	17.250	-39.23	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-9.46	122.70	0.08
Span # 2	2	5.000	-10.59	122.70	0.09
Span # 3	3	5.000	-6.15	122.70	0.05
Span # 4	4	5.000	-5.81	122.70	0.05
Span # 5	5	5.000	-34.13	122.70	0.28
Span # 6	6	17.250	-37.20	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-9.48	122.70	0.08
Span # 2	2	5.000	-10.60	122.70	0.09
Span # 3	3	5.000	-6.10	122.70	0.05
Span # 4	4	5.000	-5.99	122.70	0.05
Span # 5	5	5.000	-36.57	122.70	0.30
Span # 6	6	17.250	-39.71	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-9.65	122.70	0.08
Span # 2	2	5.000	-10.78	122.70	0.09
Span # 3	3	5.000	-8.09	122.70	0.07
Span # 4	4	5.000	11.57	158.86	0.07
Span # 5	5	5.000	-34.18	122.70	0.28
Span # 6	6	17.250	-36.31	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-9.66	122.70	0.08
Span # 2	2	5.000	-10.79	122.70	0.09
Span # 3	3	5.000	-8.26	122.70	0.07
Span # 4	4	5.000	12.00	158.86	0.08
Span # 5	5	5.000	-36.62	122.70	0.30
Span # 6	6	17.250	-38.82	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-9.64	122.70	0.08
Span # 2	2	5.000	-10.77	122.70	0.09
Span # 3	3	5.000	-7.93	122.70	0.06
Span # 4	4	5.000	11.20	158.86	0.07

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-33.81	122.70	0.28
Span # 6	6	17.250	-36.79	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-9.65	122.70	0.08
Span # 2	2	5.000	-10.78	122.70	0.09
Span # 3	3	5.000	-8.11	122.70	0.07
Span # 4	4	5.000	11.62	158.86	0.07
Span # 5	5	5.000	-36.25	122.70	0.30
Span # 6	6	17.250	-39.30	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	-9.09	122.70	0.07
Span # 2	2	5.000	-10.20	122.70	0.08
Span # 3	3	5.000	-7.68	122.70	0.06
Span # 4	4	5.000	-7.55	122.70	0.06
Span # 5	5	5.000	-34.54	122.70	0.28
Span # 6	6	17.250	-36.77	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	-9.10	122.70	0.07
Span # 2	2	5.000	-10.21	122.70	0.08
Span # 3	3	5.000	-7.64	122.70	0.06
Span # 4	4	5.000	-7.73	122.70	0.06
Span # 5	5	5.000	-36.98	122.70	0.30
Span # 6	6	17.250	-39.28	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	-9.08	122.70	0.07
Span # 2	2	5.000	-10.19	122.70	0.08
Span # 3	3	5.000	-7.73	122.70	0.06
Span # 4	4	5.000	-7.39	122.70	0.06
Span # 5	5	5.000	-34.16	122.70	0.28
Span # 6	6	17.250	-37.25	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	-9.09	122.70	0.07
Span # 2	2	5.000	-10.20	122.70	0.08
Span # 3	3	5.000	-7.68	122.70	0.06
Span # 4	4	5.000	-7.57	122.70	0.06
Span # 5	5	5.000	-36.60	122.70	0.30
Span # 6	6	17.250	-39.76	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	-9.27	122.70	0.08
Span # 2	2	5.000	-10.38	122.70	0.08
Span # 3	3	5.000	-9.34	122.70	0.08
Span # 4	4	5.000	-10.29	122.70	0.08
Span # 5	5	5.000	-34.22	122.70	0.28
Span # 6	6	17.250	-36.35	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	-9.28	122.70	0.08
Span # 2	2	5.000	-10.40	122.70	0.08
Span # 3	3	5.000	-9.51	122.70	0.08
Span # 4	4	5.000	-10.47	122.70	0.09
Span # 5	5	5.000	-36.66	122.70	0.30
Span # 6	6	17.250	-38.86	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	-9.26	122.70	0.08
Span # 2	2	5.000	-10.37	122.70	0.08
Span # 3	3	5.000	-9.18	122.70	0.07
Span # 4	4	5.000	-10.14	122.70	0.08
Span # 5	5	5.000	-33.84	122.70	0.28
Span # 6	6	17.250	-36.83	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	-9.27	122.70	0.08
Span # 2	2	5.000	-10.39	122.70	0.08
Span # 3	3	5.000	-9.36	122.70	0.08
Span # 4	4	5.000	-10.32	122.70	0.08
Span # 5	5	5.000	-36.28	122.70	0.30
Span # 6	6	17.250	-39.35	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-14.00	122.70	0.11
Span # 2	2	5.000	-15.23	122.70	0.12
Span # 3	3	5.000	-11.20	122.70	0.09

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	7.28	158.86	0.05
Span # 5	5	5.000	-34.47	122.70	0.28
Span # 6	6	17.250	-36.68	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-14.02	122.70	0.11
Span # 2	2	5.000	-15.24	122.70	0.12
Span # 3	3	5.000	-11.15	122.70	0.09
Span # 4	4	5.000	7.70	158.86	0.05
Span # 5	5	5.000	-36.91	122.70	0.30
Span # 6	6	17.250	-39.19	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-13.99	122.70	0.11
Span # 2	2	5.000	-15.22	122.70	0.12
Span # 3	3	5.000	-11.24	122.70	0.09
Span # 4	4	5.000	6.93	158.86	0.04
Span # 5	5	5.000	-34.10	122.70	0.28
Span # 6	6	17.250	-37.16	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-14.01	122.70	0.11
Span # 2	2	5.000	-15.23	122.70	0.12
Span # 3	3	5.000	-11.19	122.70	0.09
Span # 4	4	5.000	7.33	158.86	0.05
Span # 5	5	5.000	-36.54	122.70	0.30
Span # 6	6	17.250	-39.67	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	-14.18	122.70	0.12
Span # 2	2	5.000	-15.41	122.70	0.13
Span # 3	3	5.000	-10.46	122.70	0.09
Span # 4	4	5.000	11.72	158.86	0.07
Span # 5	5	5.000	-34.15	122.70	0.28
Span # 6	6	17.250	-36.27	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	-14.20	122.70	0.12
Span # 2	2	5.000	-15.43	122.70	0.13
Span # 3	3	5.000	-10.42	122.70	0.08
Span # 4	4	5.000	12.14	158.86	0.08
Span # 5	5	5.000	-36.59	122.70	0.30
Span # 6	6	17.250	-38.78	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	-14.17	122.70	0.12
Span # 2	2	5.000	-15.40	122.70	0.13
Span # 3	3	5.000	-10.51	122.70	0.09
Span # 4	4	5.000	11.37	158.86	0.07
Span # 5	5	5.000	-33.78	122.70	0.28
Span # 6	6	17.250	-36.75	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	-14.18	122.70	0.12
Span # 2	2	5.000	-15.42	122.70	0.13
Span # 3	3	5.000	-10.46	122.70	0.09
Span # 4	4	5.000	11.77	158.86	0.07
Span # 5	5	5.000	-36.22	122.70	0.30
Span # 6	6	17.250	-39.26	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	-13.62	122.70	0.11
Span # 2	2	5.000	-14.84	122.70	0.12
Span # 3	3	5.000	-12.77	122.70	0.10
Span # 4	4	5.000	-6.19	122.70	0.05
Span # 5	5	5.000	-34.51	122.70	0.28
Span # 6	6	17.250	-36.73	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	-13.63	122.70	0.11
Span # 2	2	5.000	-14.85	122.70	0.12
Span # 3	3	5.000	-12.73	122.70	0.10
Span # 4	4	5.000	-6.37	122.70	0.05
Span # 5	5	5.000	-36.95	122.70	0.30
Span # 6	6	17.250	-39.24	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	-13.61	122.70	0.11
Span # 2	2	5.000	-14.83	122.70	0.12

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	-12.82	122.70	0.10
Span # 4	4	5.000	-6.03	122.70	0.05
Span # 5	5	5.000	-34.13	122.70	0.28
Span # 6	6	17.250	-37.21	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	-13.62	122.70	0.11
Span # 2	2	5.000	-14.84	122.70	0.12
Span # 3	3	5.000	-12.77	122.70	0.10
Span # 4	4	5.000	-6.21	122.70	0.05
Span # 5	5	5.000	-36.57	122.70	0.30
Span # 6	6	17.250	-39.72	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	-13.80	122.70	0.11
Span # 2	2	5.000	-15.02	122.70	0.12
Span # 3	3	5.000	-12.04	122.70	0.10
Span # 4	4	5.000	-8.93	122.70	0.07
Span # 5	5	5.000	-34.19	122.70	0.28
Span # 6	6	17.250	-36.31	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	-13.81	122.70	0.11
Span # 2	2	5.000	-15.03	122.70	0.12
Span # 3	3	5.000	-11.99	122.70	0.10
Span # 4	4	5.000	11.98	158.86	0.08
Span # 5	5	5.000	-36.63	122.70	0.30
Span # 6	6	17.250	-38.82	122.70	0.32
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	-13.79	122.70	0.11
Span # 2	2	5.000	-15.01	122.70	0.12
Span # 3	3	5.000	-12.08	122.70	0.10
Span # 4	4	5.000	-8.78	122.70	0.07
Span # 5	5	5.000	-33.81	122.70	0.28
Span # 6	6	17.250	-36.79	122.70	0.30
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	-13.80	122.70	0.11
Span # 2	2	5.000	-15.02	122.70	0.12
Span # 3	3	5.000	-12.04	122.70	0.10
Span # 4	4	5.000	11.60	158.86	0.07
Span # 5	5	5.000	-36.25	122.70	0.30
Span # 6	6	17.250	-39.31	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*****L					
Span # 1	1	5.000	-11.31	122.70	0.09
Span # 2	2	5.000	-12.56	122.70	0.10
Span # 3	3	5.000	-9.44	122.70	0.08
Span # 4	4	5.000	-9.37	122.70	0.08
Span # 5	5	5.000	-36.53	122.70	0.30
Span # 6	6	17.250	-39.49	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****L*					
Span # 1	1	5.000	-11.29	122.70	0.09
Span # 2	2	5.000	-12.54	122.70	0.10
Span # 3	3	5.000	-9.53	122.70	0.08
Span # 4	4	5.000	-9.03	122.70	0.07
Span # 5	5	5.000	-33.71	122.70	0.27
Span # 6	6	17.250	-37.46	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (****LL					
Span # 1	1	5.000	-11.30	122.70	0.09
Span # 2	2	5.000	-12.55	122.70	0.10
Span # 3	3	5.000	-9.48	122.70	0.08
Span # 4	4	5.000	-9.21	122.70	0.08
Span # 5	5	5.000	-36.15	122.70	0.29
Span # 6	6	17.250	-39.97	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L**					
Span # 1	1	5.000	-11.48	122.70	0.09
Span # 2	2	5.000	-12.73	122.70	0.10
Span # 3	3	5.000	-10.89	122.70	0.09
Span # 4	4	5.000	-11.93	122.70	0.10
Span # 5	5	5.000	-33.77	122.70	0.28
Span # 6	6	17.250	-36.56	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***L*L					
Span # 1	1	5.000	-11.49	122.70	0.09

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-12.75	122.70	0.10
Span # 3	3	5.000	-11.07	122.70	0.09
Span # 4	4	5.000	-12.11	122.70	0.10
Span # 5	5	5.000	-36.21	122.70	0.30
Span # 6	6	17.250	-39.08	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LL*					
Span # 1	1	5.000	-11.47	122.70	0.09
Span # 2	2	5.000	-12.72	122.70	0.10
Span # 3	3	5.000	-10.74	122.70	0.09
Span # 4	4	5.000	-11.77	122.70	0.10
Span # 5	5	5.000	-33.39	122.70	0.27
Span # 6	6	17.250	-37.05	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (***LLL					
Span # 1	1	5.000	-11.48	122.70	0.09
Span # 2	2	5.000	-12.74	122.70	0.10
Span # 3	3	5.000	-10.92	122.70	0.09
Span # 4	4	5.000	-11.95	122.70	0.10
Span # 5	5	5.000	-35.83	122.70	0.29
Span # 6	6	17.250	-39.56	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L***					
Span # 1	1	5.000	-10.92	122.70	0.09
Span # 2	2	5.000	-12.16	122.70	0.10
Span # 3	3	5.000	-11.07	122.70	0.09
Span # 4	4	5.000	-10.77	122.70	0.09
Span # 5	5	5.000	-34.12	122.70	0.28
Span # 6	6	17.250	-37.02	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L**L					
Span # 1	1	5.000	-10.93	122.70	0.09
Span # 2	2	5.000	-12.17	122.70	0.10
Span # 3	3	5.000	-11.02	122.70	0.09
Span # 4	4	5.000	-10.95	122.70	0.09
Span # 5	5	5.000	-36.56	122.70	0.30
Span # 6	6	17.250	-39.53	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*L*					
Span # 1	1	5.000	-10.91	122.70	0.09
Span # 2	2	5.000	-12.15	122.70	0.10
Span # 3	3	5.000	-11.11	122.70	0.09
Span # 4	4	5.000	-10.61	122.70	0.09
Span # 5	5	5.000	-33.75	122.70	0.28
Span # 6	6	17.250	-37.50	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**L*LL					
Span # 1	1	5.000	-10.92	122.70	0.09
Span # 2	2	5.000	-12.16	122.70	0.10
Span # 3	3	5.000	-11.06	122.70	0.09
Span # 4	4	5.000	-10.79	122.70	0.09
Span # 5	5	5.000	-36.19	122.70	0.29
Span # 6	6	17.250	-40.02	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL**					
Span # 1	1	5.000	-11.10	122.70	0.09
Span # 2	2	5.000	-12.34	122.70	0.10
Span # 3	3	5.000	-12.14	122.70	0.10
Span # 4	4	5.000	-13.51	122.70	0.11
Span # 5	5	5.000	-33.80	122.70	0.28
Span # 6	6	17.250	-36.61	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LL*L					
Span # 1	1	5.000	-11.11	122.70	0.09
Span # 2	2	5.000	-12.35	122.70	0.10
Span # 3	3	5.000	-12.32	122.70	0.10
Span # 4	4	5.000	-13.69	122.70	0.11
Span # 5	5	5.000	-36.24	122.70	0.30
Span # 6	6	17.250	-39.12	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLL*					
Span # 1	1	5.000	-11.09	122.70	0.09
Span # 2	2	5.000	-12.33	122.70	0.10
Span # 3	3	5.000	-11.99	122.70	0.10
Span # 4	4	5.000	-13.35	122.70	0.11
Span # 5	5	5.000	-33.43	122.70	0.27
Span # 6	6	17.250	-37.09	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (**LLLL					

Description : GB-J-62R

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	-11.10	122.70	0.09
Span # 2	2	5.000	-12.34	122.70	0.10
Span # 3	3	5.000	-12.16	122.70	0.10
Span # 4	4	5.000	-13.53	122.70	0.11
Span # 5	5	5.000	-35.87	122.70	0.29
Span # 6	6	17.250	-39.60	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L****					
Span # 1	1	5.000	-15.83	122.70	0.13
Span # 2	2	5.000	-17.19	122.70	0.14
Span # 3	3	5.000	-14.58	122.70	0.12
Span # 4	4	5.000	-7.83	122.70	0.06
Span # 5	5	5.000	-34.06	122.70	0.28
Span # 6	6	17.250	-36.94	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L***L					
Span # 1	1	5.000	-15.85	122.70	0.13
Span # 2	2	5.000	-17.20	122.70	0.14
Span # 3	3	5.000	-14.53	122.70	0.12
Span # 4	4	5.000	-8.01	122.70	0.07
Span # 5	5	5.000	-36.50	122.70	0.30
Span # 6	6	17.250	-39.45	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**L*					
Span # 1	1	5.000	-15.82	122.70	0.13
Span # 2	2	5.000	-17.18	122.70	0.14
Span # 3	3	5.000	-14.62	122.70	0.12
Span # 4	4	5.000	-7.67	122.70	0.06
Span # 5	5	5.000	-33.68	122.70	0.27
Span # 6	6	17.250	-37.42	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L**LL					
Span # 1	1	5.000	-15.84	122.70	0.13
Span # 2	2	5.000	-17.19	122.70	0.14
Span # 3	3	5.000	-14.57	122.70	0.12
Span # 4	4	5.000	-7.85	122.70	0.06
Span # 5	5	5.000	-36.12	122.70	0.29
Span # 6	6	17.250	-39.93	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L**					
Span # 1	1	5.000	-16.01	122.70	0.13
Span # 2	2	5.000	-17.37	122.70	0.14
Span # 3	3	5.000	-13.85	122.70	0.11
Span # 4	4	5.000	-10.57	122.70	0.09
Span # 5	5	5.000	-33.74	122.70	0.27
Span # 6	6	17.250	-36.52	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*L*L					
Span # 1	1	5.000	-16.02	122.70	0.13
Span # 2	2	5.000	-17.38	122.70	0.14
Span # 3	3	5.000	-13.80	122.70	0.11
Span # 4	4	5.000	-10.75	122.70	0.09
Span # 5	5	5.000	-36.18	122.70	0.29
Span # 6	6	17.250	-39.04	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LL*					
Span # 1	1	5.000	-16.00	122.70	0.13
Span # 2	2	5.000	-17.36	122.70	0.14
Span # 3	3	5.000	-13.89	122.70	0.11
Span # 4	4	5.000	-10.41	122.70	0.08
Span # 5	5	5.000	-33.36	122.70	0.27
Span # 6	6	17.250	-37.01	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*L*LLL					
Span # 1	1	5.000	-16.01	122.70	0.13
Span # 2	2	5.000	-17.37	122.70	0.14
Span # 3	3	5.000	-13.84	122.70	0.11
Span # 4	4	5.000	-10.59	122.70	0.09
Span # 5	5	5.000	-35.80	122.70	0.29
Span # 6	6	17.250	-39.52	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL***					
Span # 1	1	5.000	-15.45	122.70	0.13
Span # 2	2	5.000	-16.79	122.70	0.14
Span # 3	3	5.000	-16.16	122.70	0.13
Span # 4	4	5.000	-9.41	122.70	0.08
Span # 5	5	5.000	-34.09	122.70	0.28
Span # 6	6	17.250	-36.98	122.70	0.30

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL**L					
Span # 1	1	5.000	-15.46	122.70	0.13
Span # 2	2	5.000	-16.81	122.70	0.14
Span # 3	3	5.000	-16.11	122.70	0.13
Span # 4	4	5.000	-9.59	122.70	0.08
Span # 5	5	5.000	-36.53	122.70	0.30
Span # 6	6	17.250	-39.49	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*L*					
Span # 1	1	5.000	-15.44	122.70	0.13
Span # 2	2	5.000	-16.78	122.70	0.14
Span # 3	3	5.000	-16.20	122.70	0.13
Span # 4	4	5.000	-9.25	122.70	0.08
Span # 5	5	5.000	-33.72	122.70	0.27
Span # 6	6	17.250	-37.46	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LL*LL					
Span # 1	1	5.000	-15.45	122.70	0.13
Span # 2	2	5.000	-16.79	122.70	0.14
Span # 3	3	5.000	-16.15	122.70	0.13
Span # 4	4	5.000	-9.43	122.70	0.08
Span # 5	5	5.000	-36.16	122.70	0.29
Span # 6	6	17.250	-39.98	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL**					
Span # 1	1	5.000	-15.63	122.70	0.13
Span # 2	2	5.000	-16.98	122.70	0.14
Span # 3	3	5.000	-15.43	122.70	0.13
Span # 4	4	5.000	-12.15	122.70	0.10
Span # 5	5	5.000	-33.77	122.70	0.28
Span # 6	6	17.250	-36.57	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLL*L					
Span # 1	1	5.000	-15.64	122.70	0.13
Span # 2	2	5.000	-16.99	122.70	0.14
Span # 3	3	5.000	-15.38	122.70	0.13
Span # 4	4	5.000	-12.33	122.70	0.10
Span # 5	5	5.000	-36.21	122.70	0.30
Span # 6	6	17.250	-39.08	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLL*					
Span # 1	1	5.000	-15.62	122.70	0.13
Span # 2	2	5.000	-16.97	122.70	0.14
Span # 3	3	5.000	-15.47	122.70	0.13
Span # 4	4	5.000	-11.99	122.70	0.10
Span # 5	5	5.000	-33.40	122.70	0.27
Span # 6	6	17.250	-37.05	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (*LLLLL					
Span # 1	1	5.000	-15.63	122.70	0.13
Span # 2	2	5.000	-16.98	122.70	0.14
Span # 3	3	5.000	-15.42	122.70	0.13
Span # 4	4	5.000	-12.17	122.70	0.10
Span # 5	5	5.000	-35.84	122.70	0.29
Span # 6	6	17.250	-39.56	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*****					
Span # 1	1	5.000	-12.93	122.70	0.11
Span # 2	2	5.000	-14.56	122.70	0.12
Span # 3	3	5.000	-8.95	122.70	0.07
Span # 4	4	5.000	-9.33	122.70	0.08
Span # 5	5	5.000	-34.09	122.70	0.28
Span # 6	6	17.250	-36.98	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L****L					
Span # 1	1	5.000	-12.95	122.70	0.11
Span # 2	2	5.000	-14.57	122.70	0.12
Span # 3	3	5.000	-8.90	122.70	0.07
Span # 4	4	5.000	-9.51	122.70	0.08
Span # 5	5	5.000	-36.53	122.70	0.30
Span # 6	6	17.250	-39.49	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***L*					
Span # 1	1	5.000	-12.92	122.70	0.11
Span # 2	2	5.000	-14.55	122.70	0.12
Span # 3	3	5.000	-8.99	122.70	0.07
Span # 4	4	5.000	-9.17	122.70	0.07
Span # 5	5	5.000	-33.71	122.70	0.27

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	17.250	-37.46	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L***LL					
Span # 1	1	5.000	-12.94	122.70	0.11
Span # 2	2	5.000	-14.56	122.70	0.12
Span # 3	3	5.000	-8.95	122.70	0.07
Span # 4	4	5.000	-9.35	122.70	0.08
Span # 5	5	5.000	-36.15	122.70	0.29
Span # 6	6	17.250	-39.97	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L**					
Span # 1	1	5.000	-13.11	122.70	0.11
Span # 2	2	5.000	-14.74	122.70	0.12
Span # 3	3	5.000	-11.02	122.70	0.09
Span # 4	4	5.000	-12.07	122.70	0.10
Span # 5	5	5.000	-33.77	122.70	0.28
Span # 6	6	17.250	-36.57	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**L*L					
Span # 1	1	5.000	-13.12	122.70	0.11
Span # 2	2	5.000	-14.76	122.70	0.12
Span # 3	3	5.000	-11.20	122.70	0.09
Span # 4	4	5.000	-12.25	122.70	0.10
Span # 5	5	5.000	-36.21	122.70	0.30
Span # 6	6	17.250	-39.08	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LL*					
Span # 1	1	5.000	-13.10	122.70	0.11
Span # 2	2	5.000	-14.73	122.70	0.12
Span # 3	3	5.000	-10.87	122.70	0.09
Span # 4	4	5.000	-11.92	122.70	0.10
Span # 5	5	5.000	-33.39	122.70	0.27
Span # 6	6	17.250	-37.05	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L**LLL					
Span # 1	1	5.000	-13.11	122.70	0.11
Span # 2	2	5.000	-14.75	122.70	0.12
Span # 3	3	5.000	-11.04	122.70	0.09
Span # 4	4	5.000	-12.10	122.70	0.10
Span # 5	5	5.000	-35.83	122.70	0.29
Span # 6	6	17.250	-39.56	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L***					
Span # 1	1	5.000	-12.55	122.70	0.10
Span # 2	2	5.000	-14.17	122.70	0.12
Span # 3	3	5.000	-10.53	122.70	0.09
Span # 4	4	5.000	-10.91	122.70	0.09
Span # 5	5	5.000	-34.13	122.70	0.28
Span # 6	6	17.250	-37.03	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L**L					
Span # 1	1	5.000	-12.56	122.70	0.10
Span # 2	2	5.000	-14.18	122.70	0.12
Span # 3	3	5.000	-10.48	122.70	0.09
Span # 4	4	5.000	-11.09	122.70	0.09
Span # 5	5	5.000	-36.57	122.70	0.30
Span # 6	6	17.250	-39.54	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*L*					
Span # 1	1	5.000	-12.54	122.70	0.10
Span # 2	2	5.000	-14.16	122.70	0.12
Span # 3	3	5.000	-10.57	122.70	0.09
Span # 4	4	5.000	-10.75	122.70	0.09
Span # 5	5	5.000	-33.75	122.70	0.28
Span # 6	6	17.250	-37.51	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*L*LL					
Span # 1	1	5.000	-12.55	122.70	0.10
Span # 2	2	5.000	-14.17	122.70	0.12
Span # 3	3	5.000	-10.52	122.70	0.09
Span # 4	4	5.000	-10.94	122.70	0.09
Span # 5	5	5.000	-36.19	122.70	0.29
Span # 6	6	17.250	-40.02	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL**					
Span # 1	1	5.000	-12.73	122.70	0.10
Span # 2	2	5.000	-14.35	122.70	0.12
Span # 3	3	5.000	-12.27	122.70	0.10
Span # 4	4	5.000	-13.66	122.70	0.11

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-33.81	122.70	0.28
Span # 6	6	17.250	-36.61	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LL*L					
Span # 1	1	5.000	-12.74	122.70	0.10
Span # 2	2	5.000	-14.36	122.70	0.12
Span # 3	3	5.000	-12.45	122.70	0.10
Span # 4	4	5.000	-13.84	122.70	0.11
Span # 5	5	5.000	-36.25	122.70	0.30
Span # 6	6	17.250	-39.13	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLL*					
Span # 1	1	5.000	-12.72	122.70	0.10
Span # 2	2	5.000	-14.34	122.70	0.12
Span # 3	3	5.000	-12.12	122.70	0.10
Span # 4	4	5.000	-13.50	122.70	0.11
Span # 5	5	5.000	-33.43	122.70	0.27
Span # 6	6	17.250	-37.10	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (L*LLLL					
Span # 1	1	5.000	-12.73	122.70	0.10
Span # 2	2	5.000	-14.35	122.70	0.12
Span # 3	3	5.000	-12.29	122.70	0.10
Span # 4	4	5.000	-13.68	122.70	0.11
Span # 5	5	5.000	-35.87	122.70	0.29
Span # 6	6	17.250	-39.61	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL****					
Span # 1	1	5.000	-17.46	122.70	0.14
Span # 2	2	5.000	-19.20	122.70	0.16
Span # 3	3	5.000	-14.04	122.70	0.11
Span # 4	4	5.000	-7.97	122.70	0.06
Span # 5	5	5.000	-34.06	122.70	0.28
Span # 6	6	17.250	-36.94	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL***L					
Span # 1	1	5.000	-17.48	122.70	0.14
Span # 2	2	5.000	-19.21	122.70	0.16
Span # 3	3	5.000	-13.99	122.70	0.11
Span # 4	4	5.000	-8.15	122.70	0.07
Span # 5	5	5.000	-36.50	122.70	0.30
Span # 6	6	17.250	-39.45	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**L*					
Span # 1	1	5.000	-17.45	122.70	0.14
Span # 2	2	5.000	-19.19	122.70	0.16
Span # 3	3	5.000	-14.08	122.70	0.11
Span # 4	4	5.000	-7.81	122.70	0.06
Span # 5	5	5.000	-33.68	122.70	0.27
Span # 6	6	17.250	-37.42	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL**LL					
Span # 1	1	5.000	-17.47	122.70	0.14
Span # 2	2	5.000	-19.20	122.70	0.16
Span # 3	3	5.000	-14.03	122.70	0.11
Span # 4	4	5.000	-7.99	122.70	0.07
Span # 5	5	5.000	-36.12	122.70	0.29
Span # 6	6	17.250	-39.93	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L**					
Span # 1	1	5.000	-17.64	122.70	0.14
Span # 2	2	5.000	-19.38	122.70	0.16
Span # 3	3	5.000	-13.31	122.70	0.11
Span # 4	4	5.000	-10.71	122.70	0.09
Span # 5	5	5.000	-33.74	122.70	0.27
Span # 6	6	17.250	-36.53	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*L*L					
Span # 1	1	5.000	-17.65	122.70	0.14
Span # 2	2	5.000	-19.39	122.70	0.16
Span # 3	3	5.000	-13.26	122.70	0.11
Span # 4	4	5.000	-10.89	122.70	0.09
Span # 5	5	5.000	-36.18	122.70	0.29
Span # 6	6	17.250	-39.04	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LL*					
Span # 1	1	5.000	-17.63	122.70	0.14
Span # 2	2	5.000	-19.37	122.70	0.16
Span # 3	3	5.000	-13.35	122.70	0.11

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-10.56	122.70	0.09
Span # 5	5	5.000	-33.36	122.70	0.27
Span # 6	6	17.250	-37.01	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LL*LLL					
Span # 1	1	5.000	-17.64	122.70	0.14
Span # 2	2	5.000	-19.38	122.70	0.16
Span # 3	3	5.000	-13.30	122.70	0.11
Span # 4	4	5.000	-10.74	122.70	0.09
Span # 5	5	5.000	-35.80	122.70	0.29
Span # 6	6	17.250	-39.52	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL***					
Span # 1	1	5.000	-17.08	122.70	0.14
Span # 2	2	5.000	-18.80	122.70	0.15
Span # 3	3	5.000	-15.62	122.70	0.13
Span # 4	4	5.000	-9.55	122.70	0.08
Span # 5	5	5.000	-34.10	122.70	0.28
Span # 6	6	17.250	-36.99	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL**L					
Span # 1	1	5.000	-17.09	122.70	0.14
Span # 2	2	5.000	-18.81	122.70	0.15
Span # 3	3	5.000	-15.57	122.70	0.13
Span # 4	4	5.000	-9.73	122.70	0.08
Span # 5	5	5.000	-36.54	122.70	0.30
Span # 6	6	17.250	-39.50	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*L*					
Span # 1	1	5.000	-17.07	122.70	0.14
Span # 2	2	5.000	-18.79	122.70	0.15
Span # 3	3	5.000	-15.66	122.70	0.13
Span # 4	4	5.000	-9.40	122.70	0.08
Span # 5	5	5.000	-33.72	122.70	0.27
Span # 6	6	17.250	-37.47	122.70	0.31
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLL*LL					
Span # 1	1	5.000	-17.08	122.70	0.14
Span # 2	2	5.000	-18.80	122.70	0.15
Span # 3	3	5.000	-15.61	122.70	0.13
Span # 4	4	5.000	-9.58	122.70	0.08
Span # 5	5	5.000	-36.16	122.70	0.29
Span # 6	6	17.250	-39.98	122.70	0.33
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL**					
Span # 1	1	5.000	-17.26	122.70	0.14
Span # 2	2	5.000	-18.99	122.70	0.15
Span # 3	3	5.000	-14.89	122.70	0.12
Span # 4	4	5.000	-12.30	122.70	0.10
Span # 5	5	5.000	-33.78	122.70	0.28
Span # 6	6	17.250	-36.57	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLL*L					
Span # 1	1	5.000	-17.27	122.70	0.14
Span # 2	2	5.000	-19.00	122.70	0.15
Span # 3	3	5.000	-14.84	122.70	0.12
Span # 4	4	5.000	-12.48	122.70	0.10
Span # 5	5	5.000	-36.22	122.70	0.30
Span # 6	6	17.250	-39.09	122.70	0.32
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLL*					
Span # 1	1	5.000	-17.25	122.70	0.14
Span # 2	2	5.000	-18.98	122.70	0.15
Span # 3	3	5.000	-14.93	122.70	0.12
Span # 4	4	5.000	-12.14	122.70	0.10
Span # 5	5	5.000	-33.40	122.70	0.27
Span # 6	6	17.250	-37.06	122.70	0.30
+1.20D+1.60L+0.50S+1.60H, LL Comb Run (LLLLLL					
Span # 1	1	5.000	-17.26	122.70	0.14
Span # 2	2	5.000	-18.99	122.70	0.15
Span # 3	3	5.000	-14.88	122.70	0.12
Span # 4	4	5.000	-12.32	122.70	0.10
Span # 5	5	5.000	-35.84	122.70	0.29
Span # 6	6	17.250	-39.57	122.70	0.32
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-7.85	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	-6.63	122.70	0.05
Span # 4	4	5.000	-5.88	122.70	0.05
Span # 5	5	5.000	-35.26	122.70	0.29
Span # 6	6	17.250	-37.50	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.58	122.70	0.07
Span # 3	3	5.000	-6.66	122.70	0.05
Span # 4	4	5.000	-5.78	122.70	0.05
Span # 5	5	5.000	-34.38	122.70	0.28
Span # 6	6	17.250	-36.87	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-35.15	122.70	0.29
Span # 6	6	17.250	-37.65	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-7.90	122.70	0.06
Span # 2	2	5.000	-8.64	122.70	0.07
Span # 3	3	5.000	-6.42	122.70	0.05
Span # 4	4	5.000	-6.68	122.70	0.05
Span # 5	5	5.000	-34.40	122.70	0.28
Span # 6	6	17.250	-36.59	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-7.90	122.70	0.06
Span # 2	2	5.000	-8.65	122.70	0.07
Span # 3	3	5.000	-6.40	122.70	0.05
Span # 4	4	5.000	-6.74	122.70	0.05
Span # 5	5	5.000	-35.16	122.70	0.29
Span # 6	6	17.250	-37.37	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-7.90	122.70	0.06
Span # 2	2	5.000	-8.64	122.70	0.07
Span # 3	3	5.000	-6.43	122.70	0.05
Span # 4	4	5.000	-6.63	122.70	0.05
Span # 5	5	5.000	-34.28	122.70	0.28
Span # 6	6	17.250	-36.74	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-7.90	122.70	0.06
Span # 2	2	5.000	-8.64	122.70	0.07
Span # 3	3	5.000	-6.41	122.70	0.05
Span # 4	4	5.000	-6.69	122.70	0.05
Span # 5	5	5.000	-35.05	122.70	0.29
Span # 6	6	17.250	-37.52	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-7.72	122.70	0.06
Span # 2	2	5.000	-8.46	122.70	0.07
Span # 3	3	5.000	-7.14	122.70	0.06
Span # 4	4	5.000	-6.32	122.70	0.05
Span # 5	5	5.000	-34.51	122.70	0.28
Span # 6	6	17.250	-36.73	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-7.73	122.70	0.06
Span # 2	2	5.000	-8.47	122.70	0.07
Span # 3	3	5.000	-7.12	122.70	0.06
Span # 4	4	5.000	-6.38	122.70	0.05
Span # 5	5	5.000	-35.27	122.70	0.29
Span # 6	6	17.250	-37.51	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.72	122.70	0.06
Span # 2	2	5.000	-8.46	122.70	0.07
Span # 3	3	5.000	-7.15	122.70	0.06
Span # 4	4	5.000	-6.27	122.70	0.05
Span # 5	5	5.000	-34.39	122.70	0.28
Span # 6	6	17.250	-36.88	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.72	122.70	0.06

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-8.46	122.70	0.07
Span # 3	3	5.000	-7.14	122.70	0.06
Span # 4	4	5.000	-6.33	122.70	0.05
Span # 5	5	5.000	-35.16	122.70	0.29
Span # 6	6	17.250	-37.67	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-7.78	122.70	0.06
Span # 2	2	5.000	-8.52	122.70	0.07
Span # 3	3	5.000	-6.91	122.70	0.06
Span # 4	4	5.000	-7.18	122.70	0.06
Span # 5	5	5.000	-34.41	122.70	0.28
Span # 6	6	17.250	-36.60	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-7.78	122.70	0.06
Span # 2	2	5.000	-8.52	122.70	0.07
Span # 3	3	5.000	-6.89	122.70	0.06
Span # 4	4	5.000	-7.23	122.70	0.06
Span # 5	5	5.000	-35.17	122.70	0.29
Span # 6	6	17.250	-37.39	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-7.78	122.70	0.06
Span # 2	2	5.000	-8.52	122.70	0.07
Span # 3	3	5.000	-6.92	122.70	0.06
Span # 4	4	5.000	-7.13	122.70	0.06
Span # 5	5	5.000	-34.29	122.70	0.28
Span # 6	6	17.250	-36.75	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-7.78	122.70	0.06
Span # 2	2	5.000	-8.52	122.70	0.07
Span # 3	3	5.000	-6.91	122.70	0.06
Span # 4	4	5.000	-7.18	122.70	0.06
Span # 5	5	5.000	-35.06	122.70	0.29
Span # 6	6	17.250	-37.54	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-9.26	122.70	0.08
Span # 2	2	5.000	-10.04	122.70	0.08
Span # 3	3	5.000	-8.23	122.70	0.07
Span # 4	4	5.000	7.19	158.86	0.05
Span # 5	5	5.000	-34.49	122.70	0.28
Span # 6	6	17.250	-36.70	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-9.26	122.70	0.08
Span # 2	2	5.000	-10.04	122.70	0.08
Span # 3	3	5.000	-8.22	122.70	0.07
Span # 4	4	5.000	7.33	158.86	0.05
Span # 5	5	5.000	-35.25	122.70	0.29
Span # 6	6	17.250	-37.49	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-9.26	122.70	0.08
Span # 2	2	5.000	-10.03	122.70	0.08
Span # 3	3	5.000	-8.25	122.70	0.07
Span # 4	4	5.000	7.08	158.86	0.04
Span # 5	5	5.000	-34.37	122.70	0.28
Span # 6	6	17.250	-36.85	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-9.26	122.70	0.08
Span # 2	2	5.000	-10.04	122.70	0.08
Span # 3	3	5.000	-8.23	122.70	0.07
Span # 4	4	5.000	7.21	158.86	0.05
Span # 5	5	5.000	-35.14	122.70	0.29
Span # 6	6	17.250	-37.64	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-9.31	122.70	0.08
Span # 2	2	5.000	-10.09	122.70	0.08
Span # 3	3	5.000	-8.01	122.70	0.07
Span # 4	4	5.000	8.58	158.86	0.05
Span # 5	5	5.000	-34.39	122.70	0.28
Span # 6	6	17.250	-36.57	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*L*					

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	-9.32	122.70	0.08
Span # 2	2	5.000	-10.10	122.70	0.08
Span # 3	3	5.000	-7.99	122.70	0.07
Span # 4	4	5.000	8.71	158.86	0.05
Span # 5	5	5.000	-35.15	122.70	0.29
Span # 6	6	17.250	-37.36	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-9.31	122.70	0.08
Span # 2	2	5.000	-10.09	122.70	0.08
Span # 3	3	5.000	-8.02	122.70	0.07
Span # 4	4	5.000	8.46	158.86	0.05
Span # 5	5	5.000	-34.27	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-9.32	122.70	0.08
Span # 2	2	5.000	-10.09	122.70	0.08
Span # 3	3	5.000	-8.00	122.70	0.07
Span # 4	4	5.000	8.59	158.86	0.05
Span # 5	5	5.000	-35.04	122.70	0.29
Span # 6	6	17.250	-37.51	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-9.14	122.70	0.07
Span # 2	2	5.000	-9.91	122.70	0.08
Span # 3	3	5.000	-8.73	122.70	0.07
Span # 4	4	5.000	-5.90	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-9.14	122.70	0.07
Span # 2	2	5.000	-9.92	122.70	0.08
Span # 3	3	5.000	-8.71	122.70	0.07
Span # 4	4	5.000	-5.95	122.70	0.05
Span # 5	5	5.000	-35.27	122.70	0.29
Span # 6	6	17.250	-37.50	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-9.14	122.70	0.07
Span # 2	2	5.000	-9.91	122.70	0.08
Span # 3	3	5.000	-8.74	122.70	0.07
Span # 4	4	5.000	-5.85	122.70	0.05
Span # 5	5	5.000	-34.39	122.70	0.28
Span # 6	6	17.250	-36.87	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-9.14	122.70	0.07
Span # 2	2	5.000	-9.91	122.70	0.08
Span # 3	3	5.000	-8.73	122.70	0.07
Span # 4	4	5.000	-5.90	122.70	0.05
Span # 5	5	5.000	-35.15	122.70	0.29
Span # 6	6	17.250	-37.65	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-9.19	122.70	0.07
Span # 2	2	5.000	-9.97	122.70	0.08
Span # 3	3	5.000	-8.50	122.70	0.07
Span # 4	4	5.000	-6.75	122.70	0.06
Span # 5	5	5.000	-34.40	122.70	0.28
Span # 6	6	17.250	-36.59	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-9.20	122.70	0.07
Span # 2	2	5.000	-9.97	122.70	0.08
Span # 3	3	5.000	-8.48	122.70	0.07
Span # 4	4	5.000	-6.81	122.70	0.06
Span # 5	5	5.000	-35.17	122.70	0.29
Span # 6	6	17.250	-37.37	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-9.19	122.70	0.07
Span # 2	2	5.000	-9.97	122.70	0.08
Span # 3	3	5.000	-8.51	122.70	0.07
Span # 4	4	5.000	-6.70	122.70	0.05
Span # 5	5	5.000	-34.29	122.70	0.28
Span # 6	6	17.250	-36.74	122.70	0.30

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-9.19	122.70	0.07
Span # 2	2	5.000	-9.97	122.70	0.08
Span # 3	3	5.000	-8.50	122.70	0.07
Span # 4	4	5.000	-6.76	122.70	0.06
Span # 5	5	5.000	-35.05	122.70	0.29
Span # 6	6	17.250	-37.52	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-8.35	122.70	0.07
Span # 2	2	5.000	-9.21	122.70	0.08
Span # 3	3	5.000	-6.48	122.70	0.05
Span # 4	4	5.000	-5.87	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-8.36	122.70	0.07
Span # 2	2	5.000	-9.22	122.70	0.08
Span # 3	3	5.000	-6.46	122.70	0.05
Span # 4	4	5.000	-5.93	122.70	0.05
Span # 5	5	5.000	-35.26	122.70	0.29
Span # 6	6	17.250	-37.50	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-8.35	122.70	0.07
Span # 2	2	5.000	-9.21	122.70	0.08
Span # 3	3	5.000	-6.49	122.70	0.05
Span # 4	4	5.000	-5.82	122.70	0.05
Span # 5	5	5.000	-34.38	122.70	0.28
Span # 6	6	17.250	-36.87	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-8.35	122.70	0.07
Span # 2	2	5.000	-9.21	122.70	0.08
Span # 3	3	5.000	-6.47	122.70	0.05
Span # 4	4	5.000	-5.88	122.70	0.05
Span # 5	5	5.000	-35.15	122.70	0.29
Span # 6	6	17.250	-37.65	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-8.41	122.70	0.07
Span # 2	2	5.000	-9.27	122.70	0.08
Span # 3	3	5.000	-6.25	122.70	0.05
Span # 4	4	5.000	-6.73	122.70	0.05
Span # 5	5	5.000	-34.40	122.70	0.28
Span # 6	6	17.250	-36.59	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-8.41	122.70	0.07
Span # 2	2	5.000	-9.28	122.70	0.08
Span # 3	3	5.000	-6.23	122.70	0.05
Span # 4	4	5.000	-6.78	122.70	0.06
Span # 5	5	5.000	-35.16	122.70	0.29
Span # 6	6	17.250	-37.37	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-8.41	122.70	0.07
Span # 2	2	5.000	-9.27	122.70	0.08
Span # 3	3	5.000	-6.26	122.70	0.05
Span # 4	4	5.000	-6.68	122.70	0.05
Span # 5	5	5.000	-34.28	122.70	0.28
Span # 6	6	17.250	-36.74	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-8.41	122.70	0.07
Span # 2	2	5.000	-9.27	122.70	0.08
Span # 3	3	5.000	-6.25	122.70	0.05
Span # 4	4	5.000	-6.73	122.70	0.05
Span # 5	5	5.000	-35.05	122.70	0.29
Span # 6	6	17.250	-37.52	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	-8.23	122.70	0.07
Span # 2	2	5.000	-9.09	122.70	0.07
Span # 3	3	5.000	-6.97	122.70	0.06
Span # 4	4	5.000	-6.37	122.70	0.05
Span # 5	5	5.000	-34.51	122.70	0.28

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	17.250	-36.73	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	-8.24	122.70	0.07
Span # 2	2	5.000	-9.09	122.70	0.07
Span # 3	3	5.000	-6.95	122.70	0.06
Span # 4	4	5.000	-6.42	122.70	0.05
Span # 5	5	5.000	-35.28	122.70	0.29
Span # 6	6	17.250	-37.52	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	-8.23	122.70	0.07
Span # 2	2	5.000	-9.09	122.70	0.07
Span # 3	3	5.000	-6.98	122.70	0.06
Span # 4	4	5.000	-6.32	122.70	0.05
Span # 5	5	5.000	-34.40	122.70	0.28
Span # 6	6	17.250	-36.88	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	-8.23	122.70	0.07
Span # 2	2	5.000	-9.09	122.70	0.07
Span # 3	3	5.000	-6.97	122.70	0.06
Span # 4	4	5.000	-6.37	122.70	0.05
Span # 5	5	5.000	-35.16	122.70	0.29
Span # 6	6	17.250	-37.67	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	-8.29	122.70	0.07
Span # 2	2	5.000	-9.15	122.70	0.07
Span # 3	3	5.000	-6.74	122.70	0.05
Span # 4	4	5.000	-7.22	122.70	0.06
Span # 5	5	5.000	-34.41	122.70	0.28
Span # 6	6	17.250	-36.60	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	-8.29	122.70	0.07
Span # 2	2	5.000	-9.15	122.70	0.07
Span # 3	3	5.000	-6.73	122.70	0.05
Span # 4	4	5.000	-7.28	122.70	0.06
Span # 5	5	5.000	-35.18	122.70	0.29
Span # 6	6	17.250	-37.39	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	-8.28	122.70	0.07
Span # 2	2	5.000	-9.14	122.70	0.07
Span # 3	3	5.000	-6.75	122.70	0.06
Span # 4	4	5.000	-7.17	122.70	0.06
Span # 5	5	5.000	-34.30	122.70	0.28
Span # 6	6	17.250	-36.75	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	-8.29	122.70	0.07
Span # 2	2	5.000	-9.15	122.70	0.07
Span # 3	3	5.000	-6.74	122.70	0.05
Span # 4	4	5.000	-7.23	122.70	0.06
Span # 5	5	5.000	-35.06	122.70	0.29
Span # 6	6	17.250	-37.54	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-9.77	122.70	0.08
Span # 2	2	5.000	-10.66	122.70	0.09
Span # 3	3	5.000	-8.07	122.70	0.07
Span # 4	4	5.000	7.19	158.86	0.05
Span # 5	5	5.000	-34.49	122.70	0.28
Span # 6	6	17.250	-36.70	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-9.77	122.70	0.08
Span # 2	2	5.000	-10.67	122.70	0.09
Span # 3	3	5.000	-8.05	122.70	0.07
Span # 4	4	5.000	7.32	158.86	0.05
Span # 5	5	5.000	-35.26	122.70	0.29
Span # 6	6	17.250	-37.49	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-9.77	122.70	0.08
Span # 2	2	5.000	-10.66	122.70	0.09
Span # 3	3	5.000	-8.08	122.70	0.07
Span # 4	4	5.000	7.07	158.86	0.04

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-34.38	122.70	0.28
Span # 6	6	17.250	-36.86	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-9.77	122.70	0.08
Span # 2	2	5.000	-10.66	122.70	0.09
Span # 3	3	5.000	-8.06	122.70	0.07
Span # 4	4	5.000	7.20	158.86	0.05
Span # 5	5	5.000	-35.14	122.70	0.29
Span # 6	6	17.250	-37.64	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	-9.82	122.70	0.08
Span # 2	2	5.000	-10.72	122.70	0.09
Span # 3	3	5.000	-7.84	122.70	0.06
Span # 4	4	5.000	8.57	158.86	0.05
Span # 5	5	5.000	-34.39	122.70	0.28
Span # 6	6	17.250	-36.58	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*L*					
Span # 1	1	5.000	-9.83	122.70	0.08
Span # 2	2	5.000	-10.72	122.70	0.09
Span # 3	3	5.000	-7.82	122.70	0.06
Span # 4	4	5.000	8.71	158.86	0.05
Span # 5	5	5.000	-35.16	122.70	0.29
Span # 6	6	17.250	-37.36	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	-9.82	122.70	0.08
Span # 2	2	5.000	-10.72	122.70	0.09
Span # 3	3	5.000	-7.85	122.70	0.06
Span # 4	4	5.000	8.46	158.86	0.05
Span # 5	5	5.000	-34.28	122.70	0.28
Span # 6	6	17.250	-36.73	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LL*LL					
Span # 1	1	5.000	-9.82	122.70	0.08
Span # 2	2	5.000	-10.72	122.70	0.09
Span # 3	3	5.000	-7.84	122.70	0.06
Span # 4	4	5.000	8.59	158.86	0.05
Span # 5	5	5.000	-35.04	122.70	0.29
Span # 6	6	17.250	-37.51	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	-9.65	122.70	0.08
Span # 2	2	5.000	-10.54	122.70	0.09
Span # 3	3	5.000	-8.56	122.70	0.07
Span # 4	4	5.000	-5.94	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL**					
Span # 1	1	5.000	-9.65	122.70	0.08
Span # 2	2	5.000	-10.54	122.70	0.09
Span # 3	3	5.000	-8.54	122.70	0.07
Span # 4	4	5.000	-6.00	122.70	0.05
Span # 5	5	5.000	-35.27	122.70	0.29
Span # 6	6	17.250	-37.50	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	-9.64	122.70	0.08
Span # 2	2	5.000	-10.54	122.70	0.09
Span # 3	3	5.000	-8.57	122.70	0.07
Span # 4	4	5.000	-5.89	122.70	0.05
Span # 5	5	5.000	-34.39	122.70	0.28
Span # 6	6	17.250	-36.87	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLL*L					
Span # 1	1	5.000	-9.65	122.70	0.08
Span # 2	2	5.000	-10.54	122.70	0.09
Span # 3	3	5.000	-8.56	122.70	0.07
Span # 4	4	5.000	-5.95	122.70	0.05
Span # 5	5	5.000	-35.15	122.70	0.29
Span # 6	6	17.250	-37.65	122.70	0.31
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	-9.70	122.70	0.08
Span # 2	2	5.000	-10.60	122.70	0.09
Span # 3	3	5.000	-8.33	122.70	0.07

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-6.80	122.70	0.06
Span # 5	5	5.000	-34.40	122.70	0.28
Span # 6	6	17.250	-36.59	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLL*					
Span # 1	1	5.000	-9.71	122.70	0.08
Span # 2	2	5.000	-10.60	122.70	0.09
Span # 3	3	5.000	-8.32	122.70	0.07
Span # 4	4	5.000	-6.85	122.70	0.06
Span # 5	5	5.000	-35.17	122.70	0.29
Span # 6	6	17.250	-37.37	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	-9.70	122.70	0.08
Span # 2	2	5.000	-10.59	122.70	0.09
Span # 3	3	5.000	-8.34	122.70	0.07
Span # 4	4	5.000	-6.75	122.70	0.05
Span # 5	5	5.000	-34.29	122.70	0.28
Span # 6	6	17.250	-36.74	122.70	0.30
+1.20D+1.60Lr+0.50L+1.60H, LL Comb Run (LLLLL					
Span # 1	1	5.000	-9.70	122.70	0.08
Span # 2	2	5.000	-10.60	122.70	0.09
Span # 3	3	5.000	-8.33	122.70	0.07
Span # 4	4	5.000	-6.80	122.70	0.06
Span # 5	5	5.000	-35.05	122.70	0.29
Span # 6	6	17.250	-37.53	122.70	0.31
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
Span # 4	4	5.000	-5.83	122.70	0.05
Span # 5	5	5.000	-34.50	122.70	0.28
Span # 6	6	17.250	-36.72	122.70	0.30
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Span # 6	6	17.250	-36.72	122.70	0.30
+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-7.84	122.70	0.06

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-8.59	122.70	0.07
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+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
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+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*L*					
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Span # 2	2	5.000	-8.59	122.70	0.07
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+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-7.84	122.70	0.06
Span # 2	2	5.000	-8.59	122.70	0.07
Span # 3	3	5.000	-6.64	122.70	0.05
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+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-7.84	122.70	0.06
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+1.20D+1.60Lr+0.50W+1.60H, LL Comb Run (*LL*L					

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
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Concrete Beam

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.6.30

Lic. # : KW-06007096 — **Licensee : JM WILLIAMS & ASSOCIATES INC**

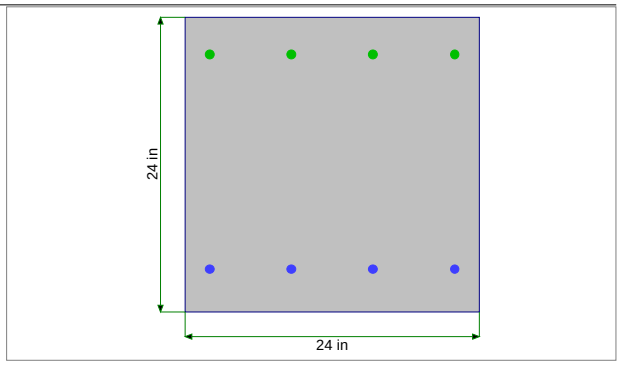
Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

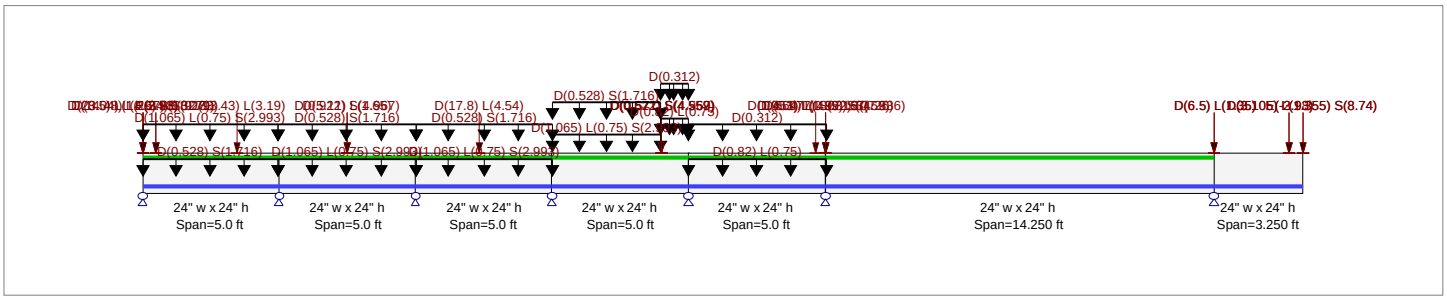
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #2 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #3 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #4 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #5 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span

Span #6 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 14.250 ft in this span
- 4-#6 at 3.0 in from Top, from 0.0 to 14.250 ft in this span

Span #7 Reinforcing....
- 4-#6 at 3.50 in from Bottom, from 0.0 to 3.250 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads

Load for Span Number 1
- Point Load : D = 8.50, L = 1.290, S = 18.270 k @ 0.0 ft, (GB-C-62-R)
- Point Load : D = 23.040, L = 4.670, S = 32.830 k @ 0.0 ft, (GB-G-62R)
- Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
- Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL TI)
- Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
- Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
- Point Load : E = 2.980 k @ 0.50 ft, (OTM)
- Point Load : E = 3.930 k @ 0.50 ft, (OTM)

Load for Span Number 2
- Point Load : D = 0.9220, S = 4.967 k @ 2.50 ft, (P12)
- Point Load : D = 5.110, L = 1.650 k @ 2.50 ft, (GB-E-62R)
- Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
- Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL TI)

Load for Span Number 3

Concrete Beam

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
Point Load : D = 17.80, L = 4.540 k @ 2.333 ft, (GB-E)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL T1)

Load for Span Number 4
Point Load : D = 0.5710, L = 4.559 k @ 4.0 ft, (P15)
Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Extent = 0.0 -->> 4.0 ft, Tributary Width = 1.0 ft, (WALL LI)
Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 4.0 -->> 5.0 ft, Tributary Width = 1.0 ft, (WALL L2)
Point Load : D = 0.5710, S = 4.559 k @ 4.0 ft, (P15)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Extent = 0.0 -->> 4.0 ft, Tributary Width = 1.0 ft, (WALL TI)
Uniform Load : D = 0.3120 k/ft, Extent = 4.0 -->> 5.0 ft, Tributary Width = 1.0 ft, (WALL T2)
Point Load : D = 0.6220, S = 4.967 k @ 4.0 ft, (P13)

Load for Span Number 5
Point Load : D = 1.451, L = 0.9720, S = 7.836 k @ 5.0 ft, (P16)
Point Load : D = 9.640, L = 4.030, S = 4.260 k @ 5.0 ft, (GB-D-62R)
Uniform Load : D = 0.820, L = 0.750 k/ft, Tributary Width = 1.0 ft, (WALL L2)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 5.0 ft, (GB-F)
Point Load : D = 0.9770, S = 9.167 k @ 4.667 ft, (P14)
Uniform Load : D = 0.3120 k/ft, Tributary Width = 1.0 ft, (WALL T2)

Load for Span Number 6
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)

Load for Span Number 7
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM REACTION)
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM REACTION)
Point Load : E = -2.980 k @ 2.750 ft, (OTM)
Point Load : E = -3.930 k @ 2.750 ft, (OTM)

DESIGN SUMMARY

Design N.G.

Maximum Bending Stress Ratio =	**0.694** : 1	Maximum Deflection	
Section used for this span	**Typical Section**	Max Downward Transient Deflection	0.018 in Ratio = 4298 >=36
Mu : Applied	-118.041 k-ft	Max Upward Transient Deflection	-0.006 in Ratio = 13072 >=36
Mn * Phi : Allowable	169.996 k-ft	Max Downward Total Deflection	0.023 in Ratio = 3408 >=24
Location of maximum on span	13.926 ft	Max Upward Total Deflection	-0.011 in Ratio = 15912 >=24
Span # where maximum occurs	Span # 6		

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Overall MAXimum	122.739	55.511	48.833	45.605	33.931	39.386	49.634	
Overall MINimum	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	
+D+H	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+L+H, LL Comb Run (******L)	52.957	25.895	23.462	20.782	10.071	22.691	30.185	
+D+L+H, LL Comb Run (*****L*)	52.954	25.914	23.384	21.073	8.985	24.403	29.320	
+D+L+H, LL Comb Run (*****LL)	52.957	25.895	23.462	20.783	10.071	22.692	32.885	
+D+L+H, LL Comb Run (****L**)	52.958	25.890	23.481	20.709	11.283	33.027	26.588	
+D+L+H, LL Comb Run (****L*L)	52.961	25.870	23.559	20.418	12.369	31.316	30.153	
+D+L+H, LL Comb Run (****LL*)	52.958	25.890	23.481	20.709	11.283	33.027	29.287	
+D+L+H, LL Comb Run (****LLL)	52.961	25.870	23.559	20.418	12.368	31.316	32.852	
+D+L+H, LL Comb Run (***L***)	52.930	26.056	22.817	24.173	15.197	23.827	26.643	
+D+L+H, LL Comb Run (***L**L)	52.933	26.036	22.895	23.882	16.282	22.115	30.207	
+D+L+H, LL Comb Run (***L*L*)	52.930	26.056	22.817	24.173	15.196	23.827	29.342	
+D+L+H, LL Comb Run (***L*LL)	52.933	26.036	22.895	23.883	16.282	22.116	32.907	
+D+L+H, LL Comb Run (***LL**)	52.934	26.031	22.915	23.809	17.494	32.451	26.610	
+D+L+H, LL Comb Run (***LL*L)	52.937	26.012	22.992	23.518	18.580	30.740	30.175	
+D+L+H, LL Comb Run (***LLL*)	52.934	26.031	22.914	23.809	17.494	32.451	29.310	
+D+L+H, LL Comb Run (***LLLL)	52.937	26.012	22.992	23.518	18.580	30.740	32.875	
+D+L+H, LL Comb Run (**L****)	53.096	25.063	28.416	25.723	8.145	24.567	26.614	
+D+L+H, LL Comb Run (**L***L)	53.099	25.043	28.494	25.432	9.231	22.856	30.179	
+D+L+H, LL Comb Run (**L**L*)	53.096	25.063	28.416	25.723	8.145	24.567	29.314	
+D+L+H, LL Comb Run (**L**LL)	53.099	25.043	28.494	25.432	9.231	22.856	32.878	
+D+L+H, LL Comb Run (**L*L**)	53.100	25.038	28.513	25.358	10.443	33.191	26.581	
+D+L+H, LL Comb Run (**L*L*L)	53.103	25.019	28.591	25.067	11.529	31.480	30.146	
+D+L+H, LL Comb Run (**L*LL*)	53.100	25.038	28.513	25.358	10.443	33.192	29.281	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (**L*LLL)	53.103	25.019	28.591	25.068	11.528	31.481	32.846	
+D+L+H, LL Comb Run (**LL***)	53.072	25.204	27.849	28.823	14.357	23.991	26.636	
+D+L+H, LL Comb Run (**LL**L)	53.075	25.185	27.927	28.532	15.442	22.280	30.201	
+D+L+H, LL Comb Run (**LL*L*)	53.072	25.204	27.849	28.823	14.356	23.992	29.336	
+D+L+H, LL Comb Run (**LL*LL)	53.075	25.185	27.927	28.532	15.442	22.280	32.901	
+D+L+H, LL Comb Run (**LLL**)	53.076	25.180	27.946	28.458	16.654	32.615	26.604	
+D+L+H, LL Comb Run (**LLL*L)	53.079	25.161	28.024	28.167	17.740	30.904	30.169	
+D+L+H, LL Comb Run (**LLLL*)	53.076	25.180	27.946	28.458	16.654	32.616	29.303	
+D+L+H, LL Comb Run (**LLLLL)	53.079	25.161	28.024	28.168	17.740	30.905	32.868	
+D+L+H, LL Comb Run (*L*****)	52.648	28.889	26.539	20.536	9.124	24.375	26.621	
+D+L+H, LL Comb Run (*L****L)	52.652	28.870	26.616	20.245	10.210	22.664	30.186	
+D+L+H, LL Comb Run (*L***L*)	52.648	28.889	26.539	20.536	9.124	24.376	29.321	
+D+L+H, LL Comb Run (*L***LL)	52.652	28.870	26.616	20.245	10.209	22.665	32.886	
+D+L+H, LL Comb Run (*L**L**)	52.652	28.865	26.636	20.172	11.422	33.000	26.589	
+D+L+H, LL Comb Run (*L**L*L)	52.656	28.846	26.714	19.881	12.507	31.288	30.154	
+D+L+H, LL Comb Run (*L**LL*)	52.652	28.865	26.636	20.172	11.421	33.000	29.289	
+D+L+H, LL Comb Run (*L**LLL)	52.656	28.846	26.714	19.881	12.507	31.289	32.853	
+D+L+H, LL Comb Run (*L*L***)	52.625	29.031	25.972	23.636	15.335	23.799	26.644	
+D+L+H, LL Comb Run (*L*L**L)	52.628	29.012	26.049	23.345	16.421	22.088	30.208	
+D+L+H, LL Comb Run (*L*L*L*)	52.625	29.031	25.972	23.636	15.335	23.800	29.343	
+D+L+H, LL Comb Run (*L*L*LL)	52.628	29.012	26.049	23.345	16.421	22.089	32.908	
+D+L+H, LL Comb Run (*L*LL**)	52.629	29.007	26.069	23.272	17.633	32.424	26.611	
+D+L+H, LL Comb Run (*L*LL*L)	52.632	28.987	26.147	22.981	18.719	30.712	30.176	
+D+L+H, LL Comb Run (*L*LLL*)	52.629	29.007	26.069	23.272	17.633	32.424	29.311	
+D+L+H, LL Comb Run (*L*LLLL)	52.632	28.987	26.147	22.981	18.718	30.713	32.876	
+D+L+H, LL Comb Run (*LL****)	52.790	28.038	31.571	25.185	8.284	24.540	26.615	
+D+L+H, LL Comb Run (*LL***L)	52.794	28.019	31.648	24.894	9.370	22.829	30.180	
+D+L+H, LL Comb Run (*LL**L*)	52.790	28.038	31.571	25.185	8.284	24.540	29.315	
+D+L+H, LL Comb Run (*LL**LL)	52.794	28.019	31.648	24.894	9.370	22.829	32.880	
+D+L+H, LL Comb Run (*LL*L**)	52.794	28.014	31.668	24.821	10.582	33.164	26.582	
+D+L+H, LL Comb Run (*LL*L*L)	52.798	27.994	31.745	24.530	11.667	31.453	30.147	
+D+L+H, LL Comb Run (*LL*LL*)	52.794	28.014	31.668	24.821	10.582	33.164	29.282	
+D+L+H, LL Comb Run (*LL*LLL)	52.798	27.994	31.745	24.530	11.667	31.453	32.847	
+D+L+H, LL Comb Run (*LLL***)	52.767	28.180	31.004	28.285	14.496	23.964	26.637	
+D+L+H, LL Comb Run (*LLL**L)	52.770	28.160	31.081	27.994	15.581	22.253	30.202	
+D+L+H, LL Comb Run (*LLL*L*)	52.767	28.180	31.004	28.285	14.495	23.964	29.337	
+D+L+H, LL Comb Run (*LLL*LL)	52.770	28.160	31.081	27.994	15.581	22.253	32.902	
+D+L+H, LL Comb Run (*LLLL**)	52.771	28.155	31.101	27.921	16.793	32.588	26.605	
+D+L+H, LL Comb Run (*LLLL*L)	52.774	28.136	31.178	27.630	17.879	30.877	30.170	
+D+L+H, LL Comb Run (*LLLLL*)	52.771	28.155	31.101	27.921	16.793	32.589	29.304	
+D+L+H, LL Comb Run (*LLLLLL)	52.774	28.136	31.178	27.630	17.879	30.877	32.869	
+D+L+H, LL Comb Run (L******)	62.528	31.286	22.490	21.312	8.923	24.415	26.620	
+D+L+H, LL Comb Run (L*****L)	62.531	31.266	22.567	21.022	10.009	22.703	30.185	
+D+L+H, LL Comb Run (L****L*)	62.528	31.286	22.489	21.312	8.923	24.415	29.320	
+D+L+H, LL Comb Run (L****LL)	62.531	31.266	22.567	21.022	10.009	22.704	32.884	
+D+L+H, LL Comb Run (L***L**)	62.532	31.261	22.587	20.948	11.221	33.039	26.587	
+D+L+H, LL Comb Run (L***L*L)	62.535	31.242	22.664	20.657	12.307	31.328	30.152	
+D+L+H, LL Comb Run (L***LL*)	62.532	31.261	22.587	20.948	11.221	33.039	29.287	
+D+L+H, LL Comb Run (L***LLL)	62.535	31.242	22.664	20.657	12.306	31.328	32.852	
+D+L+H, LL Comb Run (L**L***)	62.504	31.427	21.923	24.412	15.135	23.839	26.642	
+D+L+H, LL Comb Run (L**L**L)	62.507	31.408	22.000	24.122	16.220	22.128	30.207	
+D+L+H, LL Comb Run (L**L*L*)	62.504	31.427	21.923	24.413	15.135	23.839	29.342	
+D+L+H, LL Comb Run (L**L*LL)	62.507	31.408	22.000	24.122	16.220	22.128	32.907	
+D+L+H, LL Comb Run (L**LL**)	62.508	31.403	22.020	24.048	17.432	32.463	26.610	
+D+L+H, LL Comb Run (L**LL*L)	62.511	31.384	22.097	23.757	18.518	30.752	30.174	
+D+L+H, LL Comb Run (L**LLL*)	62.508	31.403	22.020	24.048	17.432	32.463	29.309	
+D+L+H, LL Comb Run (L**LLLL)	62.511	31.384	22.097	23.757	18.518	30.752	32.874	
+D+L+H, LL Comb Run (L*L****)	62.670	30.434	27.521	25.962	8.084	24.579	26.613	
+D+L+H, LL Comb Run (L*L***L)	62.673	30.415	27.599	25.671	9.169	22.868	30.178	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (L*L**L*)	62.670	30.434	27.521	25.962	8.083	24.580	29.313	
+D+L+H, LL Comb Run (L*L**LL)	62.673	30.415	27.599	25.671	9.169	22.868	32.878	
+D+L+H, LL Comb Run (L*L*L**)	62.674	30.410	27.619	25.597	10.381	33.203	26.581	
+D+L+H, LL Comb Run (L*L*L*L)	62.677	30.391	27.696	25.307	11.467	31.492	30.146	
+D+L+H, LL Comb Run (L*L*LL*)	62.674	30.410	27.619	25.597	10.381	33.204	29.281	
+D+L+H, LL Comb Run (L*L*LLL)	62.677	30.391	27.696	25.307	11.467	31.493	32.846	
+D+L+H, LL Comb Run (L*LL***)	62.646	30.576	26.954	29.062	14.295	24.003	26.636	
+D+L+H, LL Comb Run (L*LL**L)	62.649	30.557	27.032	28.771	15.381	22.292	30.201	
+D+L+H, LL Comb Run (L*LL*L*)	62.646	30.576	26.954	29.062	14.295	24.004	29.335	
+D+L+H, LL Comb Run (L*LL*LL)	62.649	30.557	27.032	28.771	15.380	22.293	32.900	
+D+L+H, LL Comb Run (L*LLL**)	62.650	30.552	27.052	28.697	16.593	32.627	26.603	
+D+L+H, LL Comb Run (L*LLL*L)	62.653	30.532	27.129	28.407	17.678	30.916	30.168	
+D+L+H, LL Comb Run (L*LLLL*)	62.650	30.552	27.052	28.698	16.592	32.628	29.303	
+D+L+H, LL Comb Run (L*LLLLL)	62.653	30.532	27.129	28.407	17.678	30.917	32.868	
+D+L+H, LL Comb Run (LL*****)	62.223	34.261	25.644	20.775	9.062	24.387	26.621	
+D+L+H, LL Comb Run (LL****L)	62.226	34.242	25.722	20.484	10.148	22.676	30.186	
+D+L+H, LL Comb Run (LL***L*)	62.223	34.261	25.644	20.775	9.062	24.388	29.321	
+D+L+H, LL Comb Run (LL***LL)	62.226	34.242	25.722	20.484	10.148	22.677	32.885	
+D+L+H, LL Comb Run (LL**L**)	62.227	34.237	25.741	20.411	11.360	33.012	26.588	
+D+L+H, LL Comb Run (LL**L*L)	62.230	34.217	25.819	20.120	12.446	31.300	30.153	
+D+L+H, LL Comb Run (LL**LL*)	62.227	34.237	25.741	20.411	11.360	33.012	29.288	
+D+L+H, LL Comb Run (LL**LLL)	62.230	34.217	25.819	20.120	12.445	31.301	32.853	
+D+L+H, LL Comb Run (LL*L***)	62.199	34.403	25.077	23.875	15.274	23.811	26.643	
+D+L+H, LL Comb Run (LL*L**L)	62.202	34.383	25.155	23.584	16.359	22.100	30.208	
+D+L+H, LL Comb Run (LL*L*L*)	62.199	34.403	25.077	23.875	15.273	23.812	29.343	
+D+L+H, LL Comb Run (LL*L*LL)	62.202	34.383	25.155	23.584	16.359	22.101	32.908	
+D+L+H, LL Comb Run (LL*LL**)	62.203	34.378	25.174	23.511	17.571	32.436	26.611	
+D+L+H, LL Comb Run (LL*LL*L)	62.206	34.359	25.252	23.220	18.657	30.725	30.175	
+D+L+H, LL Comb Run (LL*LLL*)	62.203	34.378	25.174	23.511	17.571	32.436	29.310	
+D+L+H, LL Comb Run (LL*LLLL)	62.206	34.359	25.252	23.220	18.657	30.725	32.875	
+D+L+H, LL Comb Run (LLL****)	62.364	33.410	30.676	25.424	8.222	24.552	26.614	
+D+L+H, LL Comb Run (LLL***L)	62.368	33.390	30.754	25.134	9.308	22.841	30.179	
+D+L+H, LL Comb Run (LLL**L*)	62.364	33.410	30.676	25.424	8.222	24.552	29.314	
+D+L+H, LL Comb Run (LLL**LL)	62.368	33.390	30.753	25.134	9.308	22.841	32.879	
+D+L+H, LL Comb Run (LLL*L**)	62.368	33.385	30.773	25.060	10.520	33.176	26.582	
+D+L+H, LL Comb Run (LLL*L*L)	62.372	33.366	30.851	24.769	11.606	31.465	30.147	
+D+L+H, LL Comb Run (LLL*LL*)	62.368	33.385	30.773	25.060	10.520	33.177	29.282	
+D+L+H, LL Comb Run (LLL*LLL)	62.372	33.366	30.851	24.769	11.605	31.465	32.847	
+D+L+H, LL Comb Run (LLLL***)	62.341	33.551	30.109	28.524	14.434	23.976	26.637	
+D+L+H, LL Comb Run (LLLL**L)	62.344	33.532	30.187	28.234	15.519	22.265	30.202	
+D+L+H, LL Comb Run (LLLL*L*)	62.341	33.551	30.109	28.524	14.433	23.976	29.337	
+D+L+H, LL Comb Run (LLLL*LL)	62.344	33.532	30.187	28.234	15.519	22.265	32.901	
+D+L+H, LL Comb Run (LLLLL**)	62.345	33.527	30.206	28.160	16.731	32.600	26.604	
+D+L+H, LL Comb Run (LLLLL*L)	62.348	33.508	30.284	27.869	17.817	30.889	30.169	
+D+L+H, LL Comb Run (LLLLLL*)	62.345	33.527	30.206	28.160	16.731	32.601	29.304	
+D+L+H, LL Comb Run (LLLLLLL)	62.348	33.508	30.284	27.869	17.817	30.890	32.869	
+D+Lr+H, LL Comb Run (******L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*****L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*****LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (****L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (****L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (****LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (****LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***L***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***L**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***L*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***L*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***LL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***LL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (***LLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (***LLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L***L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L**L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L**LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L*L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L*L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L*LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**L*LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LL***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LL**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LL*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LL*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LLL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LLL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LLLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (**LLLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L****L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L***L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L***LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L**L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L**L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L**LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L**LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*L***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*L**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*L*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*L*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*LL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*LL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*LLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*L*LLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL***L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL**L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL**LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL*L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL*L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL*LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LL*LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLL***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLL**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLL*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLL*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLLL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLLL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLLLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (*LLLLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L******)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*****L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L****L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L****LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L***L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L***L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L***LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L***LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**L***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (L**L**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**L*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**L*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**LL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**LL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**LLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L**LLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L***L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L**L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L**LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L*L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L*L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L*LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*L*LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LL***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LL**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LL*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LL*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LLL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LLL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LLLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (L*LLLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL****L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL***L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL***LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL**L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL**L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL**LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL**LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*L***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*L**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*L*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*L*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*LL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*LL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*LLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LL*LLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL****)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL***L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL**L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL**LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL*L**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL*L*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL*LL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLL*LLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLL***)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLL**L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLL*L*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLL*LL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLLL**)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLLL*L)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLLLL*)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+Lr+H, LL Comb Run (LLLLLLL)	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+S+H	122.739	55.511	48.833	45.300	32.513	32.991	49.634	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.956	25.899	23.442	20.855	9.799	23.119	29.294	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.954	25.914	23.384	21.073	8.985	24.403	28.645	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.956	25.899	23.442	20.855	9.799	23.119	31.319	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	52.957	25.896	23.457	20.800	10.708	30.871	26.596	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.959	25.881	23.515	20.582	11.523	29.587	29.269	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.957	25.896	23.457	20.800	10.708	30.871	28.621	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.959	25.881	23.515	20.582	11.522	29.588	31.294	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.936	26.020	22.959	23.398	13.644	23.971	26.637	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.938	26.006	23.017	23.180	14.458	22.687	29.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.936	26.020	22.959	23.398	13.644	23.971	28.662	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.938	26.006	23.017	23.180	14.458	22.688	31.335	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.939	26.002	23.032	23.125	15.367	30.439	26.613	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.941	25.987	23.090	22.907	16.181	29.155	29.286	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.939	26.002	23.032	23.125	15.367	30.439	28.637	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.941	25.987	23.090	22.907	16.181	29.156	31.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.060	25.275	27.158	24.560	8.355	24.526	26.615	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.063	25.261	27.216	24.342	9.170	23.243	29.289	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.060	25.275	27.158	24.560	8.355	24.526	28.640	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.063	25.261	27.216	24.342	9.169	23.243	31.314	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.063	25.257	27.231	24.287	10.079	30.994	26.591	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.066	25.243	27.289	24.069	10.893	29.711	29.265	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.063	25.257	27.231	24.287	10.078	30.994	28.616	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.066	25.243	27.289	24.069	10.893	29.711	31.290	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.042	25.382	26.733	26.885	13.014	24.094	26.632	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.045	25.367	26.791	26.667	13.828	22.811	29.306	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.042	25.382	26.733	26.885	13.014	24.094	28.657	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.045	25.367	26.791	26.667	13.828	22.811	31.331	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.045	25.363	26.806	26.612	14.737	30.562	26.608	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.048	25.349	26.864	26.394	15.551	29.279	29.281	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.045	25.363	26.806	26.612	14.737	30.562	28.633	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.048	25.349	26.864	26.394	15.551	29.279	31.306	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.725	28.145	25.750	20.670	9.089	24.382	26.621	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.727	28.131	25.808	20.452	9.904	23.099	29.295	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.725	28.145	25.750	20.670	9.089	24.382	28.646	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.727	28.131	25.808	20.452	9.903	23.099	31.319	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.728	28.127	25.823	20.397	10.813	30.850	26.597	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.730	28.113	25.881	20.179	11.627	29.567	29.270	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.728	28.127	25.823	20.397	10.812	30.851	28.621	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.730	28.113	25.881	20.179	11.627	29.567	31.295	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.707	28.252	25.325	22.995	13.748	23.950	26.638	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.709	28.237	25.383	22.777	14.562	22.667	29.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.707	28.252	25.325	22.995	13.748	23.950	28.663	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.709	28.237	25.383	22.777	14.562	22.667	31.336	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.710	28.234	25.398	22.722	15.471	30.418	26.613	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.712	28.219	25.456	22.504	16.285	29.135	29.287	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.710	28.234	25.398	22.722	15.471	30.419	28.638	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.712	28.219	25.456	22.504	16.285	29.135	31.312	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.831	27.507	29.524	24.157	8.459	24.505	26.616	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.834	27.492	29.582	23.939	9.274	23.222	29.290	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.831	27.507	29.524	24.157	8.459	24.506	28.641	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.834	27.492	29.582	23.939	9.273	23.222	31.315	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.834	27.489	29.597	23.884	10.183	30.974	26.592	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.837	27.474	29.655	23.666	10.997	29.690	29.265	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.834	27.489	29.597	23.884	10.182	30.974	28.617	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.837	27.474	29.655	23.666	10.997	29.691	31.290	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.813	27.613	29.099	26.482	13.118	24.074	26.633	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.816	27.599	29.157	26.264	13.932	22.790	29.307	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.813	27.613	29.099	26.482	13.118	24.074	28.658	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.816	27.599	29.157	26.264	13.932	22.791	31.331	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.816	27.595	29.172	26.209	14.841	30.542	26.609	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.819	27.580	29.230	25.991	15.655	29.258	29.282	
+D+0.750Lr+0.750L+H, LL Comb Run (	52.816	27.595	29.172	26.209	14.841	30.542	28.633	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	52.819	27.581	29.230	25.991	15.655	29.259	31.307	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.134	29.943	22.713	21.253	8.939	24.412	26.620	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.137	29.928	22.771	21.035	9.753	23.128	29.293	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.134	29.943	22.713	21.253	8.939	24.412	28.645	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.137	29.928	22.771	21.035	9.753	23.129	31.318	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.137	29.924	22.786	20.979	10.662	30.880	26.595	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.140	29.910	22.844	20.761	11.476	29.596	29.269	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.137	29.924	22.786	20.979	10.662	30.880	28.620	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.140	29.910	22.844	20.761	11.476	29.597	31.294	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.117	30.049	22.288	23.578	13.597	23.980	26.637	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.119	30.034	22.346	23.360	14.412	22.696	29.310	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.117	30.049	22.288	23.578	13.597	23.980	28.661	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.119	30.034	22.346	23.360	14.411	22.697	31.335	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.120	30.031	22.361	23.304	15.321	30.448	26.612	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.122	30.016	22.419	23.086	16.135	29.164	29.286	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.120	30.031	22.361	23.304	15.320	30.448	28.637	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.122	30.016	22.419	23.086	16.135	29.165	31.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.241	29.304	26.487	24.740	8.309	24.535	26.615	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.243	29.290	26.545	24.522	9.123	23.252	29.289	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.241	29.304	26.487	24.740	8.309	24.535	28.640	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.243	29.290	26.545	24.522	9.123	23.252	31.314	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.244	29.286	26.560	24.466	10.032	31.003	26.591	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.246	29.271	26.618	24.248	10.846	29.720	29.264	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.244	29.286	26.560	24.466	10.032	31.003	28.616	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.246	29.271	26.618	24.248	10.846	29.720	31.289	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.223	29.410	26.062	27.065	12.967	24.103	26.632	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.225	29.396	26.120	26.847	13.782	22.820	29.305	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.223	29.410	26.062	27.065	12.967	24.103	28.657	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.225	29.396	26.120	26.847	13.782	22.820	31.330	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.226	29.392	26.135	26.791	14.691	30.571	26.607	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.228	29.378	26.193	26.573	15.505	29.288	29.281	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.226	29.392	26.135	26.791	14.690	30.572	28.632	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.228	29.378	26.193	26.573	15.505	29.288	31.306	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.905	32.174	25.079	20.850	9.043	24.391	26.621	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.908	32.160	25.137	20.631	9.857	23.108	29.294	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.905	32.174	25.079	20.850	9.043	24.391	28.645	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.908	32.160	25.137	20.632	9.857	23.108	31.319	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.908	32.156	25.152	20.576	10.766	30.859	26.596	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.911	32.141	25.210	20.358	11.581	29.576	29.270	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.908	32.156	25.152	20.576	10.766	30.860	28.621	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.911	32.141	25.210	20.358	11.580	29.576	31.295	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.888	32.281	24.654	23.175	13.702	23.959	26.637	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.890	32.266	24.712	22.956	14.516	22.676	29.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.888	32.281	24.654	23.175	13.701	23.960	28.662	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.890	32.266	24.712	22.957	14.516	22.676	31.336	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.891	32.262	24.727	22.901	15.425	30.427	26.613	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.893	32.248	24.785	22.683	16.239	29.144	29.287	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.891	32.262	24.727	22.901	15.425	30.428	28.638	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.893	32.248	24.785	22.683	16.239	29.144	31.311	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.012	31.536	28.853	24.337	8.413	24.515	26.616	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.014	31.521	28.911	24.118	9.227	23.231	29.290	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.012	31.536	28.853	24.337	8.413	24.515	28.641	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.014	31.521	28.911	24.119	9.227	23.232	31.314	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.015	31.517	28.926	24.063	10.136	30.983	26.591	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.017	31.503	28.984	23.845	10.951	29.699	29.265	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.015	31.518	28.926	24.063	10.136	30.983	28.616	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.017	31.503	28.984	23.845	10.950	29.700	31.290	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.994	31.642	28.428	26.662	13.072	24.083	26.633	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.996	31.627	28.486	26.443	13.886	22.799	29.306	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	59.994	31.642	28.428	26.662	13.071	24.083	28.657	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.996	31.627	28.486	26.444	13.886	22.800	31.331	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.997	31.624	28.501	26.388	14.795	30.551	26.608	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.999	31.609	28.559	26.170	15.609	29.267	29.282	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.997	31.624	28.501	26.388	14.795	30.551	28.633	
+D+0.750Lr+0.750L+H, LL Comb Run (	59.999	31.609	28.559	26.170	15.609	29.268	31.307	
+D+0.750L+0.750S+H, LL Comb Run (*	105.295	48.098	42.529	39.025	27.445	29.560	46.554	
+D+0.750L+0.750S+H, LL Comb Run (*	105.292	48.112	42.470	39.243	26.631	30.844	45.905	
+D+0.750L+0.750S+H, LL Comb Run (*	105.295	48.098	42.529	39.025	27.445	29.561	48.579	
+D+0.750L+0.750S+H, LL Comb Run (*	105.295	48.094	42.543	38.970	28.354	37.312	43.856	
+D+0.750L+0.750S+H, LL Comb Run (*	105.298	48.079	42.601	38.752	29.168	36.029	46.530	
+D+0.750L+0.750S+H, LL Comb Run (*	105.295	48.094	42.543	38.970	28.354	37.312	45.881	
+D+0.750L+0.750S+H, LL Comb Run (*	105.298	48.079	42.601	38.752	29.168	36.029	48.555	
+D+0.750L+0.750S+H, LL Comb Run (*	105.275	48.218	42.045	41.568	31.290	30.412	43.897	
+D+0.750L+0.750S+H, LL Comb Run (*	105.277	48.204	42.103	41.350	32.104	29.128	46.571	
+D+0.750L+0.750S+H, LL Comb Run (*	105.275	48.218	42.045	41.568	31.289	30.412	45.922	
+D+0.750L+0.750S+H, LL Comb Run (*	105.277	48.204	42.103	41.350	32.104	29.129	48.596	
+D+0.750L+0.750S+H, LL Comb Run (*	105.278	48.200	42.118	41.295	33.013	36.880	43.873	
+D+0.750L+0.750S+H, LL Comb Run (*	105.280	48.186	42.176	41.077	33.827	35.597	46.547	
+D+0.750L+0.750S+H, LL Comb Run (*	105.278	48.200	42.118	41.295	33.013	36.880	45.898	
+D+0.750L+0.750S+H, LL Comb Run (*	105.280	48.186	42.176	41.077	33.827	35.597	48.571	
+D+0.750L+0.750S+H, LL Comb Run (*	105.399	47.474	46.244	42.730	26.001	30.967	43.876	
+D+0.750L+0.750S+H, LL Comb Run (*	105.401	47.459	46.303	42.512	26.815	29.684	46.549	
+D+0.750L+0.750S+H, LL Comb Run (*	105.399	47.474	46.244	42.730	26.001	30.967	45.901	
+D+0.750L+0.750S+H, LL Comb Run (*	105.401	47.459	46.303	42.512	26.815	29.684	48.574	
+D+0.750L+0.750S+H, LL Comb Run (*	105.402	47.455	46.317	42.457	27.724	37.435	43.851	
+D+0.750L+0.750S+H, LL Comb Run (*	105.404	47.441	46.375	42.239	28.539	36.152	46.525	
+D+0.750L+0.750S+H, LL Comb Run (*	105.402	47.455	46.317	42.457	27.724	37.436	45.876	
+D+0.750L+0.750S+H, LL Comb Run (*	105.404	47.441	46.375	42.239	28.538	36.152	48.550	
+D+0.750L+0.750S+H, LL Comb Run (*	105.381	47.580	45.819	45.055	30.660	30.535	43.892	
+D+0.750L+0.750S+H, LL Comb Run (*	105.384	47.565	45.877	44.837	31.474	29.252	46.566	
+D+0.750L+0.750S+H, LL Comb Run (*	105.381	47.580	45.819	45.055	30.659	30.536	45.917	
+D+0.750L+0.750S+H, LL Comb Run (*	105.384	47.565	45.877	44.837	31.474	29.252	48.591	
+D+0.750L+0.750S+H, LL Comb Run (*	105.384	47.562	45.892	44.782	32.383	37.003	43.868	
+D+0.750L+0.750S+H, LL Comb Run (*	105.387	47.547	45.950	44.564	33.197	35.720	46.542	
+D+0.750L+0.750S+H, LL Comb Run (*	105.384	47.562	45.892	44.782	32.383	37.004	45.893	
+D+0.750L+0.750S+H, LL Comb Run (*	105.387	47.547	45.950	44.564	33.197	35.720	48.567	
+D+0.750L+0.750S+H, LL Comb Run (*	105.063	50.344	44.836	38.840	26.735	30.823	43.881	
+D+0.750L+0.750S+H, LL Comb Run (*	105.066	50.329	44.895	38.622	27.549	29.540	46.555	
+D+0.750L+0.750S+H, LL Comb Run (*	105.063	50.344	44.836	38.840	26.735	30.824	45.906	
+D+0.750L+0.750S+H, LL Comb Run (*	105.066	50.329	44.895	38.622	27.549	29.540	48.580	
+D+0.750L+0.750S+H, LL Comb Run (*	105.066	50.325	44.909	38.567	28.458	37.292	43.857	
+D+0.750L+0.750S+H, LL Comb Run (*	105.069	50.311	44.967	38.349	29.273	36.008	46.531	
+D+0.750L+0.750S+H, LL Comb Run (*	105.066	50.325	44.909	38.567	28.458	37.292	45.882	
+D+0.750L+0.750S+H, LL Comb Run (*	105.069	50.311	44.967	38.349	29.272	36.008	48.555	
+D+0.750L+0.750S+H, LL Comb Run (*	105.046	50.450	44.411	41.165	31.394	30.391	43.898	
+D+0.750L+0.750S+H, LL Comb Run (*	105.048	50.435	44.469	40.947	32.208	29.108	46.572	
+D+0.750L+0.750S+H, LL Comb Run (*	105.046	50.450	44.411	41.165	31.393	30.392	45.923	
+D+0.750L+0.750S+H, LL Comb Run (*	105.048	50.435	44.469	40.947	32.208	29.108	48.597	
+D+0.750L+0.750S+H, LL Comb Run (*	105.049	50.432	44.484	40.892	33.117	36.860	43.874	
+D+0.750L+0.750S+H, LL Comb Run (*	105.051	50.417	44.542	40.674	33.931	35.576	46.547	
+D+0.750L+0.750S+H, LL Comb Run (*	105.049	50.432	44.484	40.892	33.117	36.860	45.899	
+D+0.750L+0.750S+H, LL Comb Run (*	105.051	50.417	44.542	40.674	33.931	35.577	48.572	
+D+0.750L+0.750S+H, LL Comb Run (*	105.170	49.705	48.610	42.327	26.105	30.947	43.877	
+D+0.750L+0.750S+H, LL Comb Run (*	105.172	49.691	48.668	42.109	26.919	29.663	46.550	
+D+0.750L+0.750S+H, LL Comb Run (*	105.170	49.705	48.610	42.327	26.105	30.947	45.901	
+D+0.750L+0.750S+H, LL Comb Run (*	105.172	49.691	48.668	42.109	26.919	29.664	48.575	
+D+0.750L+0.750S+H, LL Comb Run (*	105.173	49.687	48.683	42.054	27.828	37.415	43.852	
+D+0.750L+0.750S+H, LL Comb Run (*	105.175	49.672	48.741	41.836	28.643	36.132	46.526	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (*	105.173	49.687	48.683	42.054	27.828	37.415	45.877	
+D+0.750L+0.750S+H, LL Comb Run (*	105.175	49.672	48.741	41.836	28.642	36.132	48.551	
+D+0.750L+0.750S+H, LL Comb Run (*	105.152	49.811	48.185	44.652	30.764	30.515	43.893	
+D+0.750L+0.750S+H, LL Comb Run (*	105.155	49.797	48.243	44.434	31.578	29.231	46.567	
+D+0.750L+0.750S+H, LL Comb Run (*	105.152	49.811	48.185	44.652	30.764	30.515	45.918	
+D+0.750L+0.750S+H, LL Comb Run (*	105.155	49.797	48.243	44.434	31.578	29.232	48.592	
+D+0.750L+0.750S+H, LL Comb Run (*	105.155	49.793	48.258	44.379	32.487	36.983	43.869	
+D+0.750L+0.750S+H, LL Comb Run (*	105.158	49.779	48.316	44.161	33.301	35.700	46.543	
+D+0.750L+0.750S+H, LL Comb Run (*	105.155	49.793	48.258	44.379	32.487	36.983	45.894	
+D+0.750L+0.750S+H, LL Comb Run (*	105.158	49.779	48.316	44.161	33.301	35.700	48.567	
+D+0.750L+0.750S+H, LL Comb Run (L	112.473	52.141	41.799	39.422	26.585	30.853	43.880	
+D+0.750L+0.750S+H, LL Comb Run (L	112.475	52.126	41.858	39.204	27.399	29.569	46.554	
+D+0.750L+0.750S+H, LL Comb Run (L	112.473	52.141	41.799	39.422	26.584	30.853	45.905	
+D+0.750L+0.750S+H, LL Comb Run (L	112.475	52.126	41.858	39.204	27.399	29.570	48.579	
+D+0.750L+0.750S+H, LL Comb Run (L	112.476	52.123	41.872	39.149	28.308	37.321	43.856	
+D+0.750L+0.750S+H, LL Comb Run (L	112.478	52.108	41.930	38.931	29.122	36.038	46.529	
+D+0.750L+0.750S+H, LL Comb Run (L	112.476	52.123	41.872	39.149	28.308	37.321	45.881	
+D+0.750L+0.750S+H, LL Comb Run (L	112.478	52.108	41.930	38.931	29.122	36.038	48.554	
+D+0.750L+0.750S+H, LL Comb Run (L	112.455	52.247	41.374	41.747	31.243	30.421	43.897	
+D+0.750L+0.750S+H, LL Comb Run (L	112.458	52.233	41.432	41.529	32.057	29.138	46.571	
+D+0.750L+0.750S+H, LL Comb Run (L	112.455	52.247	41.374	41.748	31.243	30.421	45.922	
+D+0.750L+0.750S+H, LL Comb Run (L	112.458	52.233	41.432	41.529	32.057	29.138	48.595	
+D+0.750L+0.750S+H, LL Comb Run (L	112.458	52.229	41.447	41.474	32.966	36.889	43.873	
+D+0.750L+0.750S+H, LL Comb Run (L	112.461	52.214	41.505	41.256	33.781	35.606	46.546	
+D+0.750L+0.750S+H, LL Comb Run (L	112.458	52.229	41.447	41.474	32.966	36.889	45.897	
+D+0.750L+0.750S+H, LL Comb Run (L	112.461	52.214	41.505	41.256	33.780	35.606	48.571	
+D+0.750L+0.750S+H, LL Comb Run (L	112.579	51.502	45.573	42.909	25.955	30.976	43.875	
+D+0.750L+0.750S+H, LL Comb Run (L	112.582	51.488	45.631	42.691	26.769	29.693	46.549	
+D+0.750L+0.750S+H, LL Comb Run (L	112.579	51.502	45.573	42.909	25.954	30.977	45.900	
+D+0.750L+0.750S+H, LL Comb Run (L	112.582	51.488	45.631	42.691	26.769	29.693	48.574	
+D+0.750L+0.750S+H, LL Comb Run (L	112.582	51.484	45.646	42.636	27.678	37.444	43.851	
+D+0.750L+0.750S+H, LL Comb Run (L	112.585	51.470	45.704	42.418	28.492	36.161	46.525	
+D+0.750L+0.750S+H, LL Comb Run (L	112.582	51.484	45.646	42.636	27.678	37.445	45.876	
+D+0.750L+0.750S+H, LL Comb Run (L	112.585	51.470	45.704	42.418	28.492	36.161	48.550	
+D+0.750L+0.750S+H, LL Comb Run (L	112.562	51.609	45.148	45.234	30.613	30.544	43.892	
+D+0.750L+0.750S+H, LL Comb Run (L	112.564	51.594	45.206	45.016	31.427	29.261	46.566	
+D+0.750L+0.750S+H, LL Comb Run (L	112.562	51.609	45.148	45.235	30.613	30.545	45.917	
+D+0.750L+0.750S+H, LL Comb Run (L	112.564	51.594	45.206	45.016	31.427	29.261	48.591	
+D+0.750L+0.750S+H, LL Comb Run (L	112.565	51.590	45.221	44.961	32.336	37.012	43.868	
+D+0.750L+0.750S+H, LL Comb Run (L	112.567	51.576	45.279	44.743	33.151	35.729	46.541	
+D+0.750L+0.750S+H, LL Comb Run (L	112.565	51.590	45.221	44.961	32.336	37.013	45.893	
+D+0.750L+0.750S+H, LL Comb Run (L	112.567	51.576	45.279	44.743	33.150	35.729	48.566	
+D+0.750L+0.750S+H, LL Comb Run (L	112.244	54.372	44.165	39.019	26.689	30.832	43.881	
+D+0.750L+0.750S+H, LL Comb Run (L	112.246	54.358	44.223	38.801	27.503	29.549	46.555	
+D+0.750L+0.750S+H, LL Comb Run (L	112.244	54.372	44.165	39.019	26.689	30.833	45.906	
+D+0.750L+0.750S+H, LL Comb Run (L	112.246	54.358	44.223	38.801	27.503	29.549	48.579	
+D+0.750L+0.750S+H, LL Comb Run (L	112.247	54.354	44.238	38.746	28.412	37.301	43.857	
+D+0.750L+0.750S+H, LL Comb Run (L	112.250	54.340	44.296	38.528	29.226	36.017	46.530	
+D+0.750L+0.750S+H, LL Comb Run (L	112.247	54.354	44.238	38.746	28.412	37.301	45.881	
+D+0.750L+0.750S+H, LL Comb Run (L	112.250	54.340	44.296	38.528	29.226	36.018	48.555	
+D+0.750L+0.750S+H, LL Comb Run (L	112.226	54.479	43.740	41.344	31.347	30.400	43.898	
+D+0.750L+0.750S+H, LL Comb Run (L	112.229	54.464	43.798	41.126	32.162	29.117	46.571	
+D+0.750L+0.750S+H, LL Comb Run (L	112.226	54.479	43.740	41.344	31.347	30.401	45.923	
+D+0.750L+0.750S+H, LL Comb Run (L	112.229	54.464	43.798	41.126	32.161	29.117	48.596	
+D+0.750L+0.750S+H, LL Comb Run (L	112.229	54.460	43.813	41.071	33.071	36.869	43.873	
+D+0.750L+0.750S+H, LL Comb Run (L	112.232	54.446	43.871	40.853	33.885	35.585	46.547	
+D+0.750L+0.750S+H, LL Comb Run (L	112.229	54.460	43.813	41.071	33.070	36.869	45.898	
+D+0.750L+0.750S+H, LL Comb Run (L	112.232	54.446	43.871	40.853	33.885	35.586	48.572	
+D+0.750L+0.750S+H, LL Comb Run (L	112.350	53.734	47.939	42.506	26.059	30.956	43.876	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	112.353	53.719	47.997	42.288	26.873	29.672	46.550	
+D+0.750L+0.750S+H, LL Comb Run (L	112.350	53.734	47.939	42.506	26.059	30.956	45.901	
+D+0.750L+0.750S+H, LL Comb Run (L	112.353	53.719	47.997	42.288	26.873	29.673	48.575	
+D+0.750L+0.750S+H, LL Comb Run (L	112.353	53.716	48.012	42.233	27.782	37.424	43.852	
+D+0.750L+0.750S+H, LL Comb Run (L	112.356	53.701	48.070	42.015	28.596	36.141	46.525	
+D+0.750L+0.750S+H, LL Comb Run (L	112.353	53.716	48.012	42.233	27.782	37.424	45.877	
+D+0.750L+0.750S+H, LL Comb Run (L	112.356	53.701	48.070	42.015	28.596	36.141	48.550	
+D+0.750L+0.750S+H, LL Comb Run (L	112.333	53.840	47.514	44.831	30.717	30.524	43.893	
+D+0.750L+0.750S+H, LL Comb Run (L	112.335	53.826	47.572	44.613	31.532	29.241	46.567	
+D+0.750L+0.750S+H, LL Comb Run (L	112.333	53.840	47.514	44.831	30.717	30.524	45.918	
+D+0.750L+0.750S+H, LL Comb Run (L	112.335	53.826	47.572	44.613	31.531	29.241	48.591	
+D+0.750L+0.750S+H, LL Comb Run (L	112.336	53.822	47.587	44.558	32.441	36.992	43.869	
+D+0.750L+0.750S+H, LL Comb Run (L	112.338	53.807	47.645	44.340	33.255	35.709	46.542	
+D+0.750L+0.750S+H, LL Comb Run (L	112.336	53.822	47.587	44.558	32.440	36.992	45.893	
+D+0.750L+0.750S+H, LL Comb Run (L	112.338	53.807	47.645	44.340	33.255	35.709	48.567	
+D+0.60W+H	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
+D+0.70E+H	57.174	26.718	23.061	21.568	7.331	26.990	20.492	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.956	25.899	23.442	20.855	9.799	23.119	29.294	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.954	25.914	23.384	21.073	8.985	24.403	28.645	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.956	25.899	23.442	20.855	9.799	23.119	31.319	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.957	25.896	23.457	20.800	10.708	30.871	26.596	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.959	25.881	23.515	20.582	11.523	29.587	29.269	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.957	25.896	23.457	20.800	10.708	30.871	28.621	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.959	25.881	23.515	20.582	11.522	29.588	31.294	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.936	26.020	22.959	23.398	13.644	23.971	26.637	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.938	26.006	23.017	23.180	14.458	22.687	29.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.936	26.020	22.959	23.398	13.644	23.971	28.662	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.938	26.006	23.017	23.180	14.458	22.688	31.335	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.939	26.002	23.032	23.125	15.367	30.439	26.613	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.941	25.987	23.090	22.907	16.181	29.155	29.286	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.939	26.002	23.032	23.125	15.367	30.439	28.637	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.941	25.987	23.090	22.907	16.181	29.156	31.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.060	25.275	27.158	24.560	8.355	24.526	26.615	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.063	25.261	27.216	24.342	9.170	23.243	29.289	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.060	25.275	27.158	24.560	8.355	24.526	28.640	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.063	25.261	27.216	24.342	9.169	23.243	31.314	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.063	25.257	27.231	24.287	10.079	30.994	26.591	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.066	25.243	27.289	24.069	10.893	29.711	29.265	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.063	25.257	27.231	24.287	10.078	30.994	28.616	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.066	25.243	27.289	24.069	10.893	29.711	31.290	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.042	25.382	26.733	26.885	13.014	24.094	26.632	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.045	25.367	26.791	26.667	13.828	22.811	29.306	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.042	25.382	26.733	26.885	13.014	24.094	28.657	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.045	25.367	26.791	26.667	13.828	22.811	31.331	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.045	25.363	26.806	26.612	14.737	30.562	26.608	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.048	25.349	26.864	26.394	15.551	29.279	29.281	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.045	25.363	26.806	26.612	14.737	30.562	28.633	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.048	25.349	26.864	26.394	15.551	29.279	31.306	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.725	28.145	25.750	20.670	9.089	24.382	26.621	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.727	28.131	25.808	20.452	9.904	23.099	29.295	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.725	28.145	25.750	20.670	9.089	24.382	28.646	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.727	28.131	25.808	20.452	9.903	23.099	31.319	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.728	28.127	25.823	20.397	10.813	30.850	26.597	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.730	28.113	25.881	20.179	11.627	29.567	29.270	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.728	28.127	25.823	20.397	10.812	30.851	28.621	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.730	28.113	25.881	20.179	11.627	29.567	31.295	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.707	28.252	25.325	22.995	13.748	23.950	26.638	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.709	28.237	25.383	22.777	14.562	22.667	29.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.707	28.252	25.325	22.995	13.748	23.950	28.663	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.709	28.237	25.383	22.777	14.562	22.667	31.336	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.710	28.234	25.398	22.722	15.471	30.418	26.613	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.712	28.219	25.456	22.504	16.285	29.135	29.287	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.710	28.234	25.398	22.722	15.471	30.419	28.638	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.712	28.219	25.456	22.504	16.285	29.135	31.312	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.831	27.507	29.524	24.157	8.459	24.505	26.616	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.834	27.492	29.582	23.939	9.274	23.222	29.290	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.831	27.507	29.524	24.157	8.459	24.506	28.641	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.834	27.492	29.582	23.939	9.273	23.222	31.315	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.834	27.489	29.597	23.884	10.183	30.974	26.592	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.837	27.474	29.655	23.666	10.997	29.690	29.265	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.834	27.489	29.597	23.884	10.182	30.974	28.617	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.837	27.474	29.655	23.666	10.997	29.691	31.290	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.813	27.613	29.099	26.482	13.118	24.074	26.633	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.816	27.599	29.157	26.264	13.932	22.790	29.307	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.813	27.613	29.099	26.482	13.118	24.074	28.658	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.816	27.599	29.157	26.264	13.932	22.791	31.331	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.816	27.595	29.172	26.209	14.841	30.542	26.609	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.819	27.580	29.230	25.991	15.655	29.258	29.282	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.816	27.595	29.172	26.209	14.841	30.542	28.633	
+D+0.750Lr+0.750L+0.450W+H, LL Com	52.819	27.581	29.230	25.991	15.655	29.259	31.307	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.134	29.943	22.713	21.253	8.939	24.412	26.620	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.137	29.928	22.771	21.035	9.753	23.128	29.293	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.134	29.943	22.713	21.253	8.939	24.412	28.645	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.137	29.928	22.771	21.035	9.753	23.129	31.318	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.137	29.924	22.786	20.979	10.662	30.880	26.595	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.140	29.910	22.844	20.761	11.476	29.596	29.269	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.137	29.924	22.786	20.979	10.662	30.880	28.620	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.140	29.910	22.844	20.761	11.476	29.597	31.294	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.117	30.049	22.288	23.578	13.597	23.980	26.637	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.119	30.034	22.346	23.360	14.412	22.696	29.310	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.117	30.049	22.288	23.578	13.597	23.980	28.661	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.119	30.034	22.346	23.360	14.411	22.697	31.335	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.120	30.031	22.361	23.304	15.321	30.448	26.612	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.122	30.016	22.419	23.086	16.135	29.164	29.286	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.120	30.031	22.361	23.304	15.320	30.448	28.637	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.122	30.016	22.419	23.086	16.135	29.165	31.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.241	29.304	26.487	24.740	8.309	24.535	26.615	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.243	29.290	26.545	24.522	9.123	23.252	29.289	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.241	29.304	26.487	24.740	8.309	24.535	28.640	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.243	29.290	26.545	24.522	9.123	23.252	31.314	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.244	29.286	26.560	24.466	10.032	31.003	26.591	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.246	29.271	26.618	24.248	10.846	29.720	29.264	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.244	29.286	26.560	24.466	10.032	31.003	28.616	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.246	29.271	26.618	24.248	10.846	29.720	31.289	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.223	29.410	26.062	27.065	12.967	24.103	26.632	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.225	29.396	26.120	26.847	13.782	22.820	29.305	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.223	29.410	26.062	27.065	12.967	24.103	28.657	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.225	29.396	26.120	26.847	13.782	22.820	31.330	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.226	29.392	26.135	26.791	14.691	30.571	26.607	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.228	29.378	26.193	26.573	15.505	29.288	29.281	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.226	29.392	26.135	26.791	14.690	30.572	28.632	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.228	29.378	26.193	26.573	15.505	29.288	31.306	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.905	32.174	25.079	20.850	9.043	24.391	26.621	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.908	32.160	25.137	20.631	9.857	23.108	29.294	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.905	32.174	25.079	20.850	9.043	24.391	28.645	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.908	32.160	25.137	20.632	9.857	23.108	31.319	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.908	32.156	25.152	20.576	10.766	30.859	26.596	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.911	32.141	25.210	20.358	11.581	29.576	29.270	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.908	32.156	25.152	20.576	10.766	30.860	28.621	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.911	32.141	25.210	20.358	11.580	29.576	31.295	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.888	32.281	24.654	23.175	13.702	23.959	26.637	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.890	32.266	24.712	22.956	14.516	22.676	29.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.888	32.281	24.654	23.175	13.701	23.960	28.662	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.890	32.266	24.712	22.957	14.516	22.676	31.336	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.891	32.262	24.727	22.901	15.425	30.427	26.613	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.893	32.248	24.785	22.683	16.239	29.144	29.287	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.891	32.262	24.727	22.901	15.425	30.428	28.638	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.893	32.248	24.785	22.683	16.239	29.144	31.311	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.012	31.536	28.853	24.337	8.413	24.515	26.616	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.014	31.521	28.911	24.118	9.227	23.231	29.290	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.012	31.536	28.853	24.337	8.413	24.515	28.641	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.014	31.521	28.911	24.119	9.227	23.232	31.314	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.015	31.517	28.926	24.063	10.136	30.983	26.591	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.017	31.503	28.984	23.845	10.951	29.699	29.265	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.015	31.518	28.926	24.063	10.136	30.983	28.616	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.017	31.503	28.984	23.845	10.950	29.700	31.290	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.994	31.642	28.428	26.662	13.072	24.083	26.633	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.996	31.627	28.486	26.443	13.886	22.799	29.306	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.994	31.642	28.428	26.662	13.071	24.083	28.657	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.996	31.627	28.486	26.444	13.886	22.800	31.331	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.997	31.624	28.501	26.388	14.795	30.551	26.608	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.999	31.609	28.559	26.170	15.609	29.267	29.282	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.997	31.624	28.501	26.388	14.795	30.551	28.633	
+D+0.750Lr+0.750L+0.450W+H, LL Com	59.999	31.609	28.559	26.170	15.609	29.268	31.307	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.295	48.098	42.529	39.025	27.445	29.560	46.554	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.292	48.112	42.470	39.243	26.631	30.844	45.905	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.295	48.098	42.529	39.025	27.445	29.561	48.579	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.295	48.094	42.543	38.970	28.354	37.312	43.856	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.298	48.079	42.601	38.752	29.168	36.029	46.530	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.295	48.094	42.543	38.970	28.354	37.312	45.881	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.298	48.079	42.601	38.752	29.168	36.029	48.555	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.275	48.218	42.045	41.568	31.290	30.412	43.897	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.277	48.204	42.103	41.350	32.104	29.128	46.571	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.275	48.218	42.045	41.568	31.289	30.412	45.922	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.277	48.204	42.103	41.350	32.104	29.129	48.596	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.278	48.200	42.118	41.295	33.013	36.880	43.873	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.280	48.186	42.176	41.077	33.827	35.597	46.547	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.278	48.200	42.118	41.295	33.013	36.880	45.898	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.280	48.186	42.176	41.077	33.827	35.597	48.571	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.399	47.474	46.244	42.730	26.001	30.967	43.876	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.401	47.459	46.303	42.512	26.815	29.684	46.549	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.399	47.474	46.244	42.730	26.001	30.967	45.901	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.401	47.459	46.303	42.512	26.815	29.684	48.574	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.402	47.455	46.317	42.457	27.724	37.435	43.851	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.404	47.441	46.375	42.239	28.539	36.152	46.525	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.402	47.455	46.317	42.457	27.724	37.436	45.876	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.404	47.441	46.375	42.239	28.538	36.152	48.550	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.381	47.580	45.819	45.055	30.660	30.535	43.892	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.384	47.565	45.877	44.837	31.474	29.252	46.566	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.381	47.580	45.819	45.055	30.659	30.536	45.917	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.384	47.565	45.877	44.837	31.474	29.252	48.591	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.384	47.562	45.892	44.782	32.383	37.003	43.868	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.387	47.547	45.950	44.564	33.197	35.720	46.542	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.384	47.562	45.892	44.782	32.383	37.004	45.893	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.387	47.547	45.950	44.564	33.197	35.720	48.567	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.063	50.344	44.836	38.840	26.735	30.823	43.881	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.066	50.329	44.895	38.622	27.549	29.540	46.555	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	105.063	50.344	44.836	38.840	26.735	30.824	45.906	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.066	50.329	44.895	38.622	27.549	29.540	48.580	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.066	50.325	44.909	38.567	28.458	37.292	43.857	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.069	50.311	44.967	38.349	29.273	36.008	46.531	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.066	50.325	44.909	38.567	28.458	37.292	45.882	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.069	50.311	44.967	38.349	29.272	36.008	48.555	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.046	50.450	44.411	41.165	31.394	30.391	43.898	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.048	50.435	44.469	40.947	32.208	29.108	46.572	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.046	50.450	44.411	41.165	31.393	30.392	45.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.048	50.435	44.469	40.947	32.208	29.108	48.597	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.049	50.432	44.484	40.892	33.117	36.860	43.874	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.051	50.417	44.542	40.674	33.931	35.576	46.547	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.049	50.432	44.484	40.892	33.117	36.860	45.899	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.051	50.417	44.542	40.674	33.931	35.577	48.572	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.170	49.705	48.610	42.327	26.105	30.947	43.877	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.172	49.691	48.668	42.109	26.919	29.663	46.550	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.170	49.705	48.610	42.327	26.105	30.947	45.901	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.172	49.691	48.668	42.109	26.919	29.664	48.575	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.173	49.687	48.683	42.054	27.828	37.415	43.852	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.175	49.672	48.741	41.836	28.643	36.132	46.526	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.173	49.687	48.683	42.054	27.828	37.415	45.877	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.175	49.672	48.741	41.836	28.642	36.132	48.551	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.152	49.811	48.185	44.652	30.764	30.515	43.893	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.155	49.797	48.243	44.434	31.578	29.231	46.567	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.152	49.811	48.185	44.652	30.764	30.515	45.918	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.155	49.797	48.243	44.434	31.578	29.232	48.592	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.155	49.793	48.258	44.379	32.487	36.983	43.869	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.158	49.779	48.316	44.161	33.301	35.700	46.543	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.155	49.793	48.258	44.379	32.487	36.983	45.894	
+D+0.750L+0.750S+0.450W+H, LL Comb	105.158	49.779	48.316	44.161	33.301	35.700	48.567	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.473	52.141	41.799	39.422	26.585	30.853	43.880	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.475	52.126	41.858	39.204	27.399	29.569	46.554	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.473	52.141	41.799	39.422	26.584	30.853	45.905	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.475	52.126	41.858	39.204	27.399	29.570	48.579	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.476	52.123	41.872	39.149	28.308	37.321	43.856	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.478	52.108	41.930	38.931	29.122	36.038	46.529	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.476	52.123	41.872	39.149	28.308	37.321	45.881	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.478	52.108	41.930	38.931	29.122	36.038	48.554	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.455	52.247	41.374	41.747	31.243	30.421	43.897	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.458	52.233	41.432	41.529	32.057	29.138	46.571	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.455	52.247	41.374	41.748	31.243	30.421	45.922	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.458	52.233	41.432	41.529	32.057	29.138	48.595	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.458	52.229	41.447	41.474	32.966	36.889	43.873	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.461	52.214	41.505	41.256	33.781	35.606	46.546	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.458	52.229	41.447	41.474	32.966	36.889	45.897	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.461	52.214	41.505	41.256	33.780	35.606	48.571	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.579	51.502	45.573	42.909	25.955	30.976	43.875	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.582	51.488	45.631	42.691	26.769	29.693	46.549	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.579	51.502	45.573	42.909	25.954	30.977	45.900	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.582	51.488	45.631	42.691	26.769	29.693	48.574	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.582	51.484	45.646	42.636	27.678	37.444	43.851	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.585	51.470	45.704	42.418	28.492	36.161	46.525	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.582	51.484	45.646	42.636	27.678	37.445	45.876	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.585	51.470	45.704	42.418	28.492	36.161	48.550	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.562	51.609	45.148	45.234	30.613	30.544	43.892	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.564	51.594	45.206	45.016	31.427	29.261	46.566	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.562	51.609	45.148	45.235	30.613	30.545	45.917	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.564	51.594	45.206	45.016	31.427	29.261	48.591	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.565	51.590	45.221	44.961	32.336	37.012	43.868	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	112.567	51.576	45.279	44.743	33.151	35.729	46.541	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.565	51.590	45.221	44.961	32.336	37.013	45.893	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.567	51.576	45.279	44.743	33.150	35.729	48.566	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.244	54.372	44.165	39.019	26.689	30.832	43.881	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.246	54.358	44.223	38.801	27.503	29.549	46.555	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.244	54.372	44.165	39.019	26.689	30.833	45.906	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.246	54.358	44.223	38.801	27.503	29.549	48.579	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.247	54.354	44.238	38.746	28.412	37.301	43.857	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.250	54.340	44.296	38.528	29.226	36.017	46.530	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.247	54.354	44.238	38.746	28.412	37.301	45.881	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.250	54.340	44.296	38.528	29.226	36.018	48.555	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.226	54.479	43.740	41.344	31.347	30.400	43.898	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.229	54.464	43.798	41.126	32.162	29.117	46.571	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.226	54.479	43.740	41.344	31.347	30.401	45.923	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.229	54.464	43.798	41.126	32.161	29.117	48.596	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.229	54.460	43.813	41.071	33.071	36.869	43.873	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.232	54.446	43.871	40.853	33.885	35.585	46.547	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.229	54.460	43.813	41.071	33.070	36.869	45.898	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.232	54.446	43.871	40.853	33.885	35.586	48.572	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.350	53.734	47.939	42.506	26.059	30.956	43.876	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.353	53.719	47.997	42.288	26.873	29.672	46.550	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.350	53.734	47.939	42.506	26.059	30.956	45.901	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.353	53.719	47.997	42.288	26.873	29.673	48.575	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.353	53.716	48.012	42.233	27.782	37.424	43.852	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.356	53.701	48.070	42.015	28.596	36.141	46.525	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.353	53.716	48.012	42.233	27.782	37.424	45.877	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.356	53.701	48.070	42.015	28.596	36.141	48.550	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.333	53.840	47.514	44.831	30.717	30.524	43.893	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.335	53.826	47.572	44.613	31.532	29.241	46.567	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.333	53.840	47.514	44.831	30.717	30.524	45.918	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.335	53.826	47.572	44.613	31.531	29.241	48.591	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.336	53.822	47.587	44.558	32.441	36.992	43.869	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.338	53.807	47.645	44.340	33.255	35.709	46.542	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.336	53.822	47.587	44.558	32.440	36.992	45.893	
+D+0.750L+0.750S+0.450W+H, LL Comb	112.338	53.807	47.645	44.340	33.255	35.709	48.567	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.460	48.701	42.286	39.396	26.204	31.501	41.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.457	48.715	42.228	39.614	25.390	32.785	41.309	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.460	48.701	42.286	39.396	26.204	31.501	43.983	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.461	48.697	42.301	39.341	27.113	39.253	39.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.463	48.682	42.359	39.123	27.928	37.969	41.933	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.461	48.697	42.301	39.341	27.113	39.253	41.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.463	48.682	42.359	39.123	27.927	37.970	43.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.440	48.821	41.803	41.939	30.049	32.353	39.301	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.442	48.807	41.861	41.721	30.863	31.069	41.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.440	48.821	41.803	41.939	30.049	32.353	41.326	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.442	48.807	41.861	41.721	30.863	31.070	43.999	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.443	48.803	41.876	41.666	31.772	38.821	39.277	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.445	48.789	41.934	41.448	32.586	37.537	41.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.443	48.803	41.876	41.666	31.772	38.821	41.301	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.445	48.789	41.934	41.448	32.586	37.538	43.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.564	48.077	46.002	43.101	24.760	32.908	39.279	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.566	48.062	46.060	42.883	25.575	31.625	41.953	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.564	48.077	46.002	43.101	24.760	32.908	41.304	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.566	48.062	46.060	42.883	25.574	31.625	43.978	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.567	48.058	46.075	42.828	26.484	39.376	39.255	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.569	48.044	46.133	42.610	27.298	38.093	41.929	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.567	48.058	46.075	42.828	26.483	39.376	41.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.569	48.044	46.133	42.610	27.298	38.093	43.953	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.546	48.183	45.577	45.426	29.419	32.476	39.296	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	108.549	48.168	45.635	45.208	30.233	31.193	41.970	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.546	48.183	45.577	45.426	29.419	32.476	41.321	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.549	48.168	45.635	45.208	30.233	31.193	43.995	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.549	48.165	45.649	45.153	31.142	38.944	39.272	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.552	48.150	45.708	44.935	31.956	37.661	41.945	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.549	48.165	45.649	45.153	31.142	38.945	41.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.552	48.150	45.708	44.935	31.956	37.661	43.970	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.229	50.947	44.594	39.211	25.494	32.764	39.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.231	50.932	44.652	38.993	26.309	31.481	41.959	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.229	50.947	44.594	39.211	25.494	32.764	41.310	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.231	50.932	44.652	38.993	26.308	31.481	43.983	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.232	50.928	44.667	38.938	27.218	39.232	39.261	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.234	50.914	44.725	38.719	28.032	37.949	41.934	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.232	50.928	44.667	38.938	27.217	39.233	41.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.234	50.914	44.725	38.720	28.032	37.949	43.959	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.211	51.053	44.169	41.536	30.153	32.332	39.302	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.213	51.038	44.227	41.318	30.967	31.049	41.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.211	51.053	44.169	41.536	30.153	32.332	41.327	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.213	51.038	44.227	41.318	30.967	31.049	44.000	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.214	51.035	44.241	41.263	31.876	38.800	39.277	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.216	51.020	44.300	41.045	32.690	37.517	41.951	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.214	51.035	44.241	41.263	31.876	38.801	41.302	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.216	51.020	44.300	41.045	32.690	37.517	43.976	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.335	50.308	48.368	42.698	24.864	32.888	39.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.337	50.294	48.426	42.480	25.679	31.604	41.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.335	50.308	48.368	42.698	24.864	32.888	41.305	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.337	50.294	48.426	42.480	25.678	31.604	43.979	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.338	50.290	48.441	42.425	26.588	39.356	39.256	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.340	50.275	48.499	42.206	27.402	38.072	41.929	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.338	50.290	48.441	42.425	26.587	39.356	41.281	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.340	50.275	48.499	42.207	27.402	38.073	43.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.317	50.414	47.943	45.023	29.523	32.456	39.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.320	50.400	48.001	44.805	30.337	31.172	41.971	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.317	50.414	47.943	45.023	29.523	32.456	41.322	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.320	50.400	48.001	44.805	30.337	31.173	43.995	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.320	50.396	48.015	44.750	31.246	38.924	39.273	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.323	50.382	48.074	44.532	32.060	37.640	41.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.320	50.396	48.015	44.750	31.246	38.924	41.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	108.323	50.382	48.074	44.532	32.060	37.641	43.971	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.638	52.744	41.557	39.793	25.344	32.794	39.284	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.641	52.729	41.615	39.575	26.158	31.510	41.957	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.638	52.744	41.557	39.793	25.344	32.794	41.309	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.641	52.729	41.615	39.575	26.158	31.511	43.982	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.641	52.726	41.630	39.520	27.067	39.262	39.259	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.644	52.711	41.688	39.302	27.881	37.978	41.933	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.641	52.726	41.630	39.520	27.067	39.262	41.284	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.644	52.711	41.688	39.302	27.881	37.979	43.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.620	52.850	41.132	42.118	30.002	32.362	39.301	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.623	52.836	41.190	41.900	30.817	31.078	41.974	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.620	52.850	41.132	42.118	30.002	32.362	41.325	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.623	52.836	41.190	41.900	30.816	31.079	43.999	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.623	52.832	41.204	41.845	31.726	38.830	39.276	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.626	52.817	41.263	41.627	32.540	37.547	41.950	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.623	52.832	41.204	41.845	31.725	38.830	41.301	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.626	52.817	41.263	41.627	32.540	37.547	43.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.745	52.105	45.331	43.280	24.714	32.917	39.279	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.747	52.091	45.389	43.062	25.528	31.634	41.953	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.745	52.105	45.331	43.280	24.714	32.917	41.304	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.747	52.091	45.389	43.062	25.528	31.634	43.977	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	115.748	52.087	45.404	43.007	26.437	39.385	39.255	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.750	52.073	45.462	42.789	27.251	38.102	41.928	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.748	52.087	45.404	43.007	26.437	39.386	41.279	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.750	52.073	45.462	42.789	27.251	38.102	43.953	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.727	52.212	44.906	45.605	29.372	32.485	39.296	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.729	52.197	44.964	45.387	30.187	31.202	41.969	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.727	52.212	44.906	45.605	29.372	32.485	41.321	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.729	52.197	44.964	45.387	30.187	31.202	43.994	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.730	52.193	44.978	45.332	31.096	38.953	39.271	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.732	52.179	45.037	45.114	31.910	37.670	41.945	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.730	52.193	44.978	45.332	31.095	38.954	41.296	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.732	52.179	45.037	45.114	31.910	37.670	43.970	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.409	54.975	43.923	39.390	25.448	32.773	39.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.412	54.961	43.981	39.172	26.262	31.490	41.958	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.409	54.975	43.923	39.390	25.448	32.774	41.309	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.412	54.961	43.981	39.172	26.262	31.490	43.983	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.412	54.957	43.996	39.117	27.171	39.241	39.260	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.415	54.943	44.054	38.899	27.986	37.958	41.934	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.412	54.957	43.996	39.117	27.171	39.242	41.285	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.415	54.943	44.054	38.899	27.985	37.958	43.959	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.391	55.082	43.498	41.715	30.107	32.341	39.301	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.394	55.067	43.556	41.497	30.921	31.058	41.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.391	55.082	43.498	41.715	30.106	32.342	41.326	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.394	55.067	43.556	41.497	30.921	31.058	44.000	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.394	55.063	43.570	41.442	31.830	38.809	39.277	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.397	55.049	43.629	41.224	32.644	37.526	41.951	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.394	55.063	43.570	41.442	31.830	38.810	41.302	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.397	55.049	43.629	41.224	32.644	37.526	43.975	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.516	54.337	47.697	42.877	24.818	32.897	39.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.518	54.322	47.755	42.659	25.632	31.613	41.953	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.516	54.337	47.697	42.877	24.818	32.897	41.305	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.518	54.322	47.755	42.659	25.632	31.614	43.978	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.519	54.319	47.770	42.604	26.541	39.365	39.255	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.521	54.304	47.828	42.386	27.356	38.081	41.929	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.519	54.319	47.770	42.604	26.541	39.365	41.280	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.521	54.304	47.828	42.386	27.355	38.082	43.954	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.498	54.443	47.271	45.202	29.477	32.465	39.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.500	54.429	47.330	44.984	30.291	31.181	41.970	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.498	54.443	47.271	45.202	29.476	32.465	41.321	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.500	54.429	47.330	44.984	30.291	31.182	43.995	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.501	54.425	47.344	44.929	31.200	38.933	39.272	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.503	54.410	47.402	44.711	32.014	37.650	41.946	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.501	54.425	47.344	44.929	31.200	38.933	41.297	
+D+0.750L+0.750S+0.5250E+H, LL Com	115.503	54.410	47.402	44.711	32.014	37.650	43.971	
+0.60D+0.60W+0.60H	31.772	15.548	14.031	12.644	5.391	14.641	15.972	
+0.60D+0.70E+0.60H	35.992	16.352	13.707	13.138	3.737	17.229	9.844	
D Only	52.954	25.914	23.384	21.073	8.985	24.402	26.620	
Lr Only, LL Comb Run (******L)								
Lr Only, LL Comb Run (*****L*)								
Lr Only, LL Comb Run (*****LL)								
Lr Only, LL Comb Run (****L**)								
Lr Only, LL Comb Run (****L*L)								
Lr Only, LL Comb Run (****LL*)								
Lr Only, LL Comb Run (****LLL)								
Lr Only, LL Comb Run (***L***)								
Lr Only, LL Comb Run (***L**L)								
Lr Only, LL Comb Run (***L*L*)								
Lr Only, LL Comb Run (***L*LL)								
Lr Only, LL Comb Run (***LL**)								

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (***LL*L)								
Lr Only, LL Comb Run (***LLL*)								
Lr Only, LL Comb Run (***LLLL)								
Lr Only, LL Comb Run (**L****)								
Lr Only, LL Comb Run (**L***L)								
Lr Only, LL Comb Run (**L**L*)								
Lr Only, LL Comb Run (**L**LL)								
Lr Only, LL Comb Run (**L*L**)								
Lr Only, LL Comb Run (**L*L*L)								
Lr Only, LL Comb Run (**L*LL*)								
Lr Only, LL Comb Run (**L*LLL)								
Lr Only, LL Comb Run (**LL***)								
Lr Only, LL Comb Run (**LL**L)								
Lr Only, LL Comb Run (**LL*L*)								
Lr Only, LL Comb Run (**LL*LL)								
Lr Only, LL Comb Run (**LLL**)								
Lr Only, LL Comb Run (**LLL*L)								
Lr Only, LL Comb Run (**LLLL*)								
Lr Only, LL Comb Run (**LLLLL)								
Lr Only, LL Comb Run (*L*****)								
Lr Only, LL Comb Run (*L****L)								
Lr Only, LL Comb Run (*L***L*)								
Lr Only, LL Comb Run (*L***LL)								
Lr Only, LL Comb Run (*L**L**)								
Lr Only, LL Comb Run (*L**L*L)								
Lr Only, LL Comb Run (*L**LL*)								
Lr Only, LL Comb Run (*L**LLL)								
Lr Only, LL Comb Run (*L*L***)								
Lr Only, LL Comb Run (*L*L**L)								
Lr Only, LL Comb Run (*L*L*L*)								
Lr Only, LL Comb Run (*L*L*LL)								
Lr Only, LL Comb Run (*L*LL**)								
Lr Only, LL Comb Run (*L*LL*L)								
Lr Only, LL Comb Run (*L*LLL*)								
Lr Only, LL Comb Run (*L*LLLL)								
Lr Only, LL Comb Run (*LL****)								
Lr Only, LL Comb Run (*LL***L)								
Lr Only, LL Comb Run (*LL**L*)								
Lr Only, LL Comb Run (*LL**LL)								
Lr Only, LL Comb Run (*LL*L**)								
Lr Only, LL Comb Run (*LL*L*L)								
Lr Only, LL Comb Run (*LL*LL*)								
Lr Only, LL Comb Run (*LL*LLL)								
Lr Only, LL Comb Run (*LLL***)								
Lr Only, LL Comb Run (*LLL**L)								
Lr Only, LL Comb Run (*LLL*L*)								
Lr Only, LL Comb Run (*LLL*LL)								
Lr Only, LL Comb Run (*LLLL**)								
Lr Only, LL Comb Run (*LLLL*L)								
Lr Only, LL Comb Run (*LLLLL*)								
Lr Only, LL Comb Run (*LLLLLL)								
Lr Only, LL Comb Run (L******)								
Lr Only, LL Comb Run (L*****L)								
Lr Only, LL Comb Run (L****L*)								
Lr Only, LL Comb Run (L****LL)								
Lr Only, LL Comb Run (L***L**)								
Lr Only, LL Comb Run (L***L*L)								
Lr Only, LL Comb Run (L***LL*)								
Lr Only, LL Comb Run (L***LLL)								

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (L**L***)								
Lr Only, LL Comb Run (L**L**L)								
Lr Only, LL Comb Run (L**L*L*)								
Lr Only, LL Comb Run (L**L*LL)								
Lr Only, LL Comb Run (L**LL**)								
Lr Only, LL Comb Run (L**LL*L)								
Lr Only, LL Comb Run (L**LLL*)								
Lr Only, LL Comb Run (L**LLLL)								
Lr Only, LL Comb Run (L*L****)								
Lr Only, LL Comb Run (L*L***L)								
Lr Only, LL Comb Run (L*L**L*)								
Lr Only, LL Comb Run (L*L**LL)								
Lr Only, LL Comb Run (L*L*L**)								
Lr Only, LL Comb Run (L*L*L*L)								
Lr Only, LL Comb Run (L*L*LL*)								
Lr Only, LL Comb Run (L*L*LLL)								
Lr Only, LL Comb Run (L*LL***)								
Lr Only, LL Comb Run (L*LL**L)								
Lr Only, LL Comb Run (L*LL*L*)								
Lr Only, LL Comb Run (L*LL*LL)								
Lr Only, LL Comb Run (L*LLL**)								
Lr Only, LL Comb Run (L*LLL*L)								
Lr Only, LL Comb Run (L*LLLL*)								
Lr Only, LL Comb Run (L*LLLLL)								
Lr Only, LL Comb Run (LL*****)								
Lr Only, LL Comb Run (LL****L)								
Lr Only, LL Comb Run (LL***L*)								
Lr Only, LL Comb Run (LL***LL)								
Lr Only, LL Comb Run (LL**L**)								
Lr Only, LL Comb Run (LL**L*L)								
Lr Only, LL Comb Run (LL**LL*)								
Lr Only, LL Comb Run (LL**LLL)								
Lr Only, LL Comb Run (LL*L***)								
Lr Only, LL Comb Run (LL*L**L)								
Lr Only, LL Comb Run (LL*L*L*)								
Lr Only, LL Comb Run (LL*L*LL)								
Lr Only, LL Comb Run (LL*LL**)								
Lr Only, LL Comb Run (LL*LL*L)								
Lr Only, LL Comb Run (LL*LLL*)								
Lr Only, LL Comb Run (LL*LLLL)								
Lr Only, LL Comb Run (LLL****)								
Lr Only, LL Comb Run (LLL***L)								
Lr Only, LL Comb Run (LLL**L*)								
Lr Only, LL Comb Run (LLL**LL)								
Lr Only, LL Comb Run (LLL*L**)								
Lr Only, LL Comb Run (LLL*L*L)								
Lr Only, LL Comb Run (LLL*LL*)								
Lr Only, LL Comb Run (LLL*LLL)								
Lr Only, LL Comb Run (LLLL***)								
Lr Only, LL Comb Run (LLLL**L)								
Lr Only, LL Comb Run (LLLL*L*)								
Lr Only, LL Comb Run (LLLL*LL)								
Lr Only, LL Comb Run (LLLLL**)								
Lr Only, LL Comb Run (LLLLL*L)								
Lr Only, LL Comb Run (LLLLLL*)								
Lr Only, LL Comb Run (LLLLLLL)								
L Only, LL Comb Run (******L)	0.003	-0.019	0.078	-0.291	1.086	-1.711	3.565	
L Only, LL Comb Run (*****L*)	-0.000	0.000	-0.000	0.000	-0.000	0.000	2.700	
L Only, LL Comb Run (*****LL)	0.003	-0.019	0.078	-0.291	1.085	-1.711	6.265	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (****L**)	0.004	-0.024	0.097	-0.364	2.298	8.624	-0.032	
L Only, LL Comb Run (****L*L)	0.007	-0.044	0.175	-0.655	3.383	6.913	3.532	
L Only, LL Comb Run (****LL*)	0.004	-0.024	0.097	-0.364	2.297	8.625	2.667	
L Only, LL Comb Run (****LLL)	0.007	-0.044	0.175	-0.655	3.383	6.914	6.232	
L Only, LL Comb Run (***L***)	-0.024	0.142	-0.567	3.100	6.211	-0.576	0.022	
L Only, LL Comb Run (***L**L)	-0.020	0.122	-0.489	2.809	7.297	-2.287	3.587	
L Only, LL Comb Run (***L*L*)	-0.024	0.142	-0.567	3.100	6.211	-0.575	2.722	
L Only, LL Comb Run (***L*LL)	-0.020	0.122	-0.489	2.809	7.297	-2.287	6.287	
L Only, LL Comb Run (***LL**)	-0.020	0.117	-0.470	2.736	8.509	8.048	-0.010	
L Only, LL Comb Run (***LL*L)	-0.016	0.098	-0.392	2.445	9.595	6.337	3.555	
L Only, LL Comb Run (***LLL*)	-0.020	0.117	-0.470	2.736	8.509	8.049	2.690	
L Only, LL Comb Run (***LLLL)	-0.016	0.098	-0.392	2.445	9.594	6.338	6.254	
L Only, LL Comb Run (**L****)	0.142	-0.851	5.032	4.649	-0.840	0.165	-0.006	
L Only, LL Comb Run (**L***L)	0.145	-0.871	5.109	4.359	0.246	-1.547	3.558	
L Only, LL Comb Run (**L**L*)	0.142	-0.851	5.032	4.649	-0.840	0.165	2.693	
L Only, LL Comb Run (**L**LL)	0.145	-0.871	5.109	4.359	0.245	-1.546	6.258	
L Only, LL Comb Run (**L*L**)	0.146	-0.876	5.129	4.285	1.458	8.789	-0.039	
L Only, LL Comb Run (**L*L*L)	0.149	-0.895	5.207	3.994	2.543	7.078	3.526	
L Only, LL Comb Run (**L*LL*)	0.146	-0.876	5.129	4.285	1.457	8.789	2.661	
L Only, LL Comb Run (**L*LLL)	0.149	-0.895	5.207	3.994	2.543	7.078	6.226	
L Only, LL Comb Run (**LL***)	0.118	-0.710	4.465	7.749	5.371	-0.411	0.016	
L Only, LL Comb Run (**LL**L)	0.121	-0.729	4.542	7.459	6.457	-2.122	3.581	
L Only, LL Comb Run (**LL*L*)	0.118	-0.710	4.465	7.749	5.371	-0.411	2.716	
L Only, LL Comb Run (**LL*LL)	0.121	-0.729	4.542	7.459	6.457	-2.122	6.281	
L Only, LL Comb Run (**LLL**)	0.122	-0.734	4.562	7.385	7.669	8.213	-0.017	
L Only, LL Comb Run (**LLL*L)	0.126	-0.753	4.640	7.094	8.755	6.502	3.548	
L Only, LL Comb Run (**LLLL*)	0.122	-0.734	4.562	7.385	7.669	8.213	2.683	
L Only, LL Comb Run (**LLLLL)	0.126	-0.753	4.640	7.094	8.754	6.502	6.248	
L Only, LL Comb Run (*L*****)	-0.305	2.975	3.155	-0.537	0.139	-0.027	0.001	
L Only, LL Comb Run (*L****L)	-0.302	2.956	3.232	-0.828	1.225	-1.738	3.566	
L Only, LL Comb Run (*L***L*)	-0.305	2.975	3.155	-0.537	0.139	-0.027	2.701	
L Only, LL Comb Run (*L***LL)	-0.302	2.956	3.232	-0.828	1.224	-1.738	6.266	
L Only, LL Comb Run (*L**L**)	-0.301	2.951	3.252	-0.902	2.436	8.597	-0.031	
L Only, LL Comb Run (*L**L*L)	-0.298	2.932	3.329	-1.193	3.522	6.886	3.533	
L Only, LL Comb Run (*L**LL*)	-0.301	2.951	3.252	-0.902	2.436	8.598	2.668	
L Only, LL Comb Run (*L**LLL)	-0.298	2.932	3.329	-1.192	3.522	6.886	6.233	
L Only, LL Comb Run (*L*L***)	-0.329	3.117	2.588	2.563	6.350	-0.603	0.023	
L Only, LL Comb Run (*L*L**L)	-0.326	3.098	2.665	2.272	7.436	-2.314	3.588	
L Only, LL Comb Run (*L*L*L*)	-0.329	3.117	2.588	2.563	6.350	-0.603	2.723	
L Only, LL Comb Run (*L*L*LL)	-0.326	3.098	2.665	2.272	7.436	-2.314	6.288	
L Only, LL Comb Run (*L*LL**)	-0.325	3.093	2.685	2.198	8.648	8.021	-0.009	
L Only, LL Comb Run (*L*LL*L)	-0.322	3.073	2.762	1.907	9.734	6.310	3.556	
L Only, LL Comb Run (*L*LLL*)	-0.325	3.093	2.685	2.198	8.648	8.022	2.691	
L Only, LL Comb Run (*L*LLLL)	-0.322	3.073	2.762	1.908	9.733	6.310	6.256	
L Only, LL Comb Run (*LL****)	-0.163	2.124	8.186	4.112	-0.701	0.137	-0.005	
L Only, LL Comb Run (*LL***L)	-0.160	2.105	8.264	3.821	0.385	-1.574	3.560	
L Only, LL Comb Run (*LL**L*)	-0.163	2.124	8.186	4.112	-0.701	0.138	2.694	
L Only, LL Comb Run (*LL**LL)	-0.160	2.105	8.264	3.821	0.384	-1.573	6.259	
L Only, LL Comb Run (*LL*L**)	-0.159	2.100	8.284	3.748	1.597	8.762	-0.038	
L Only, LL Comb Run (*LL*L*L)	-0.156	2.080	8.361	3.457	2.682	7.050	3.527	
L Only, LL Comb Run (*LL*LL*)	-0.159	2.100	8.284	3.748	1.596	8.762	2.662	
L Only, LL Comb Run (*LL*LLL)	-0.156	2.080	8.361	3.457	2.682	7.051	6.227	
L Only, LL Comb Run (*LLL***)	-0.187	2.266	7.619	7.212	5.510	-0.439	0.017	
L Only, LL Comb Run (*LLL**L)	-0.184	2.246	7.697	6.921	6.596	-2.150	3.582	
L Only, LL Comb Run (*LLL*L*)	-0.187	2.266	7.619	7.212	5.510	-0.438	2.717	
L Only, LL Comb Run (*LLL*LL)	-0.184	2.246	7.697	6.921	6.596	-2.149	6.282	
L Only, LL Comb Run (*LLLL**)	-0.183	2.242	7.717	6.848	7.808	8.186	-0.015	
L Only, LL Comb Run (*LLLL*L)	-0.180	2.222	7.794	6.557	8.894	6.475	3.549	
L Only, LL Comb Run (*LLLLL*)	-0.183	2.242	7.717	6.848	7.808	8.186	2.684	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (*LLLLLL)	-0.180	2.222	7.794	6.557	8.893	6.475	6.249	
L Only, LL Comb Run (L******)	9.574	5.372	-0.895	0.239	-0.062	0.012	-0.000	
L Only, LL Comb Run (L*****L)	9.577	5.352	-0.817	-0.052	1.024	-1.699	3.564	
L Only, LL Comb Run (L****L*)	9.574	5.372	-0.895	0.239	-0.062	0.013	2.699	
L Only, LL Comb Run (L****LL)	9.577	5.352	-0.817	-0.052	1.024	-1.699	6.264	
L Only, LL Comb Run (L***L**)	9.578	5.347	-0.798	-0.125	2.236	8.636	-0.033	
L Only, LL Comb Run (L***L*L)	9.581	5.328	-0.720	-0.416	3.322	6.925	3.532	
L Only, LL Comb Run (L***LL*)	9.578	5.347	-0.798	-0.125	2.236	8.637	2.667	
L Only, LL Comb Run (L***LLL)	9.581	5.328	-0.720	-0.416	3.321	6.926	6.232	
L Only, LL Comb Run (L**L***)	9.550	5.513	-1.462	3.339	6.150	-0.564	0.022	
L Only, LL Comb Run (L**L**L)	9.554	5.494	-1.384	3.048	7.235	-2.275	3.587	
L Only, LL Comb Run (L**L*L*)	9.550	5.513	-1.462	3.339	6.149	-0.563	2.722	
L Only, LL Comb Run (L**L*LL)	9.554	5.494	-1.384	3.048	7.235	-2.274	6.287	
L Only, LL Comb Run (L**LL**)	9.555	5.489	-1.365	2.975	8.447	8.060	-0.011	
L Only, LL Comb Run (L**LL*L)	9.558	5.470	-1.287	2.684	9.533	6.349	3.554	
L Only, LL Comb Run (L**LLL*)	9.555	5.489	-1.365	2.975	8.447	8.061	2.689	
L Only, LL Comb Run (L**LLLL)	9.558	5.470	-1.287	2.684	9.533	6.350	6.254	
L Only, LL Comb Run (L*L****)	9.716	4.520	4.137	4.888	-0.902	0.177	-0.007	
L Only, LL Comb Run (L*L***L)	9.719	4.501	4.215	4.598	0.184	-1.534	3.558	
L Only, LL Comb Run (L*L**L*)	9.716	4.520	4.137	4.889	-0.902	0.177	2.693	
L Only, LL Comb Run (L*L**LL)	9.719	4.501	4.215	4.598	0.184	-1.534	6.258	
L Only, LL Comb Run (L*L*L**)	9.720	4.496	4.234	4.524	1.396	8.801	-0.039	
L Only, LL Comb Run (L*L*L*L)	9.723	4.477	4.312	4.233	2.482	7.090	3.526	
L Only, LL Comb Run (L*L*LL*)	9.720	4.496	4.234	4.524	1.396	8.801	2.660	
L Only, LL Comb Run (L*L*LLL)	9.723	4.477	4.312	4.233	2.481	7.090	6.225	
L Only, LL Comb Run (L*LL***)	9.692	4.662	3.570	7.989	5.310	-0.399	0.015	
L Only, LL Comb Run (L*LL**L)	9.696	4.643	3.648	7.698	6.395	-2.110	3.580	
L Only, LL Comb Run (L*LL*L*)	9.692	4.662	3.570	7.989	5.309	-0.399	2.715	
L Only, LL Comb Run (L*LL*LL)	9.696	4.643	3.648	7.698	6.395	-2.110	6.280	
L Only, LL Comb Run (L*LLL**)	9.696	4.638	3.667	7.624	7.607	8.225	-0.017	
L Only, LL Comb Run (L*LLL*L)	9.700	4.618	3.745	7.333	8.693	6.514	3.548	
L Only, LL Comb Run (L*LLLL*)	9.696	4.638	3.667	7.624	7.607	8.225	2.683	
L Only, LL Comb Run (L*LLLLL)	9.700	4.618	3.745	7.333	8.693	6.514	6.248	
L Only, LL Comb Run (LL*****)	9.269	8.347	2.260	-0.298	0.077	-0.015	0.001	
L Only, LL Comb Run (LL****L)	9.272	8.328	2.337	-0.589	1.163	-1.726	3.565	
L Only, LL Comb Run (LL***L*)	9.269	8.347	2.260	-0.298	0.077	-0.015	2.700	
L Only, LL Comb Run (LL***LL)	9.272	8.328	2.337	-0.589	1.162	-1.726	6.265	
L Only, LL Comb Run (LL**L**)	9.273	8.323	2.357	-0.663	2.375	8.609	-0.032	
L Only, LL Comb Run (LL**L*L)	9.276	8.303	2.434	-0.953	3.460	6.898	3.533	
L Only, LL Comb Run (LL**LL*)	9.273	8.323	2.357	-0.663	2.374	8.610	2.668	
L Only, LL Comb Run (LL**LLL)	9.276	8.303	2.434	-0.953	3.460	6.898	6.233	
L Only, LL Comb Run (LL*L***)	9.245	8.489	1.693	2.802	6.288	-0.591	0.023	
L Only, LL Comb Run (LL*L**L)	9.248	8.469	1.770	2.511	7.374	-2.302	3.588	
L Only, LL Comb Run (LL*L*L*)	9.245	8.489	1.693	2.802	6.288	-0.591	2.723	
L Only, LL Comb Run (LL*L*LL)	9.248	8.469	1.770	2.511	7.374	-2.302	6.288	
L Only, LL Comb Run (LL*LL**)	9.249	8.465	1.790	2.437	8.586	8.033	-0.010	
L Only, LL Comb Run (LL*LL*L)	9.252	8.445	1.868	2.147	9.672	6.322	3.555	
L Only, LL Comb Run (LL*LLL*)	9.249	8.465	1.790	2.438	8.586	8.034	2.690	
L Only, LL Comb Run (LL*LLLL)	9.252	8.445	1.868	2.147	9.671	6.323	6.255	
L Only, LL Comb Run (LLL****)	9.411	7.496	7.292	4.351	-0.763	0.149	-0.006	
L Only, LL Comb Run (LLL***L)	9.414	7.476	7.369	4.060	0.323	-1.562	3.559	
L Only, LL Comb Run (LLL**L*)	9.411	7.496	7.292	4.351	-0.763	0.150	2.694	
L Only, LL Comb Run (LLL**LL)	9.414	7.476	7.369	4.060	0.323	-1.561	6.259	
L Only, LL Comb Run (LLL*L**)	9.415	7.471	7.389	3.987	1.535	8.774	-0.038	
L Only, LL Comb Run (LLL*L*L)	9.418	7.452	7.466	3.696	2.620	7.063	3.527	
L Only, LL Comb Run (LLL*LL*)	9.415	7.471	7.389	3.987	1.534	8.774	2.661	
L Only, LL Comb Run (LLL*LLL)	9.418	7.452	7.466	3.696	2.620	7.063	6.226	
L Only, LL Comb Run (LLLL***)	9.387	7.637	6.725	7.451	5.449	-0.426	0.017	
L Only, LL Comb Run (LLLL**L)	9.390	7.618	6.802	7.160	6.534	-2.138	3.581	

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (LLLL*L*)	9.387	7.638	6.725	7.451	5.448	-0.426	2.716	
L Only, LL Comb Run (LLLL*LL)	9.390	7.618	6.802	7.160	6.534	-2.137	6.281	
L Only, LL Comb Run (LLLLL**)	9.391	7.613	6.822	7.087	7.746	8.198	-0.016	
L Only, LL Comb Run (LLLLL*L)	9.394	7.594	6.899	6.796	8.832	6.487	3.549	
L Only, LL Comb Run (LLLLLL*)	9.391	7.613	6.822	7.087	7.746	8.198	2.684	
L Only, LL Comb Run (LLLLLLL)	9.394	7.594	6.899	6.796	8.832	6.487	6.249	
S Only	69.785	29.598	25.448	24.226	23.528	8.588	23.014	
W Only								
E Only	6.029	1.149	-0.462	0.706	-2.363	3.697	-8.755	
H Only								

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	20.50	180.06	180.06	0.00	1.00	47.64	Vs>(4bdf'c^.5)	132.421	182.9	1.0	1.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	20.50	22.57	22.57	2.76	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	20.50	21.37	21.37	5.26	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	20.50	20.18	20.18	7.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	20.50	18.98	18.98	9.85	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	20.50	17.79	17.79	11.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	20.50	16.59	16.59	13.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	20.50	15.40	15.40	15.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	20.50	14.20	14.20	17.39	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	20.50	13.01	13.01	18.93	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	20.50	11.81	11.81	20.34	0.99	47.61	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	20.50	10.62	10.62	21.62	0.84	47.11	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	20.50	9.42	9.42	22.76	0.71	46.68	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	20.50	8.23	8.23	23.76	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	20.50	7.03	7.03	24.63	0.49	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.70	20.50	6.14	6.14	19.50	0.54	46.12	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	20.50	5.44	5.44	20.16	0.46	45.86	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.93	20.50	4.84	4.84	16.51	0.50	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	20.50	4.41	4.41	17.04	0.44	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	20.50	3.98	3.98	17.52	0.39	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	20.50	3.54	3.54	17.94	0.34	45.45	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	20.50	3.11	3.11	18.32	0.29	45.30	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.50	20.50	-2.97	2.97	24.40	0.21	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.61	20.50	-4.12	4.12	24.00	0.29	45.31	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.73	20.50	-5.27	5.27	23.47	0.38	45.61	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.84	20.50	-6.42	6.42	22.80	0.48	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	20.50	-7.58	7.58	22.01	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	20.50	-8.74	8.74	22.81	0.65	46.50	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	20.50	-9.94	9.94	21.75	0.78	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	20.50	-11.13	11.13	20.55	0.93	47.40	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	20.50	-12.33	12.33	19.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	20.50	-31.23	31.23	17.34	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	20.50	-32.43	32.43	13.73	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	20.50	-33.62	33.62	9.97	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	20.50	-34.82	34.82	6.08	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	20.50	-36.01	36.01	2.06	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	21.00	-37.21	37.21	2.10	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	21.00	-38.41	38.41	6.40	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	21.00	-39.60	39.60	10.83	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	21.00	-40.80	40.80	15.40	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	21.00	-41.99	41.99	20.10	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	21.00	-43.19	43.19	24.94	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	1	4.77	21.00	-44.38	44.38	29.92	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	21.00	-45.58	45.58	35.03	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	21.00	35.93	35.93	40.27	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	21.00	34.73	34.73	36.26	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	21.00	33.54	33.54	32.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	21.00	32.34	32.34	28.64	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	21.00	31.15	31.15	25.03	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	21.00	29.95	29.95	21.56	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	21.00	28.76	28.76	18.22	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	21.00	27.56	27.56	15.02	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	21.00	26.37	26.37	11.96	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	21.00	25.17	25.17	9.03	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.14	21.00	23.98	23.98	6.24	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	21.00	22.78	22.78	3.58	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	21.00	21.58	21.58	1.06	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	20.50	20.39	20.39	1.32	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	20.50	19.19	19.19	3.57	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	20.50	18.00	18.00	5.69	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	20.50	16.80	16.80	7.66	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	20.50	15.61	15.61	9.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	20.50	14.41	14.41	11.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	20.50	13.22	13.22	12.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	20.50	12.02	12.02	14.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.39	20.50	10.83	10.83	15.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.50	20.50	9.63	9.63	16.68	0.99	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.61	20.50	-8.36	8.36	15.66	0.91	47.35	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.73	20.50	-9.55	9.55	14.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.84	20.50	-10.75	10.75	13.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.95	20.50	-11.94	11.94	12.20	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	20.50	-13.14	13.14	10.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	20.50	-14.33	14.33	9.21	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.30	20.50	-15.53	15.53	7.51	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	20.50	-16.72	16.72	5.68	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	20.50	-17.92	17.92	3.71	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	20.50	-19.11	19.11	1.61	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	21.00	-20.31	20.31	0.63	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	21.00	-21.50	21.50	3.01	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	21.00	-22.70	22.70	5.52	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	21.00	-23.89	23.89	8.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	21.00	-25.09	25.09	10.95	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	21.00	-26.28	26.28	13.87	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	21.00	-27.48	27.48	16.92	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	21.00	-28.67	28.67	20.11	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	21.00	-29.87	29.87	23.44	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	21.00	-31.06	31.06	26.90	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	21.00	-32.26	32.26	30.50	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	21.00	39.50	39.50	34.23	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	21.00	38.31	38.31	29.81	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	21.00	37.11	37.11	25.53	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	21.00	35.92	35.92	21.38	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	21.00	34.72	34.72	17.36	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	21.00	33.53	33.53	13.48	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	21.00	32.33	32.33	9.74	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	21.00	31.14	31.14	6.14	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	3	10.91	21.00	29.94	29.94	2.67	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	20.50	28.75	28.75	0.67	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.14	20.50	27.55	27.55	3.87	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.25	20.50	26.36	26.36	6.93	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.36	20.50	25.16	25.16	9.86	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.48	20.50	23.97	23.97	12.65	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	11.59	20.50	22.77	22.77	15.31	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.70	20.50	21.58	21.58	17.83	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	20.50	20.60	20.60	20.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	20.50	19.90	19.90	22.56	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	20.50	19.20	19.20	24.78	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	20.50	18.50	18.50	26.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.27	20.50	17.80	17.80	28.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.39	20.50	-13.77	13.77	27.68	0.85	47.15	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.50	20.50	-14.20	14.20	26.09	0.93	47.41	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	20.50	-14.84	14.84	26.50	0.96	47.50	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	20.50	-15.54	15.54	24.77	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	20.50	-16.24	16.24	22.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	20.50	-16.95	16.95	21.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	20.50	-17.65	17.65	19.12	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.18	20.50	-18.35	18.35	17.07	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.30	20.50	-19.38	19.38	15.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.41	20.50	-20.58	20.58	13.37	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	20.50	-21.77	21.77	10.97	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	20.50	-22.97	22.97	8.42	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	20.50	-24.16	24.16	5.75	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	20.50	-25.36	25.36	2.93	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	21.00	-26.55	26.55	0.02	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	21.00	-27.75	27.75	3.10	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	21.00	-28.95	28.95	6.32	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	21.00	-30.14	30.14	9.68	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.43	21.00	-31.34	31.34	13.17	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	21.00	-32.53	32.53	16.80	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	21.00	-33.73	33.73	20.57	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	21.00	-34.92	34.92	24.47	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	21.00	-36.12	36.12	28.50	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	21.00	30.73	30.73	32.68	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	21.00	29.54	29.54	29.25	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	21.00	28.34	28.34	25.96	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	21.00	27.15	27.15	22.81	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	21.00	25.95	25.95	19.79	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	21.00	24.76	24.76	16.91	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	21.00	23.56	23.56	14.17	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	21.00	22.37	22.37	11.56	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	21.00	21.17	21.17	9.08	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	21.00	19.98	19.98	6.74	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	21.00	18.78	18.78	4.54	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	21.00	17.59	17.59	2.47	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	21.00	16.39	16.39	0.54	1.00	47.90	Vu < PhiVc/2	Not Reqd 1	47.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	20.50	15.20	15.20	1.25	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	20.50	14.00	14.00	2.91	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	20.50	12.81	12.81	4.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	20.50	11.61	11.61	5.82	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	20.50	10.42	10.42	7.07	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	4	17.05	20.50	9.22	9.22	8.19	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	20.50	8.03	8.03	9.17	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.27	20.50	6.83	6.83	10.01	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.39	20.50	5.93	5.93	5.22	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.50	20.50	5.23	5.23	5.86	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.61	20.50	4.53	4.53	6.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	20.50	3.97	3.97	3.67	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	20.50	3.53	3.53	4.10	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	20.50	3.10	3.10	4.47	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	20.50	2.67	2.67	4.80	0.95	47.47	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.18	20.50	-3.54	3.54	10.23	0.59	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.30	20.50	-4.70	4.70	9.76	0.82	47.05	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.41	20.50	-5.85	5.85	9.16	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.52	20.50	-7.00	7.00	8.43	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	20.50	-8.19	8.19	9.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	20.50	-9.39	9.39	8.03	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	20.50	-10.58	10.58	6.89	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	20.50	-11.78	11.78	5.62	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	20.50	-31.87	31.87	2.46	1.00	47.64	PhiVc/2 < Vu <=	Min 11.5.6	67.0	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	21.00	-32.15	32.15	1.17	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	21.00	-32.43	32.43	4.84	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	21.00	-32.70	32.70	8.54	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	21.00	-32.98	32.98	12.28	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	21.00	-33.25	33.25	16.04	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	21.00	-33.53	33.53	19.83	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	21.00	-33.81	33.81	23.66	1.00	47.90	PhiVc/2 < Vu <=	Min 11.5.6	67.7	7.3	7.0
+1.20D+0.50L+1.60S+1.60H,	5	20.00	21.00	19.21	19.21	27.52	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.11	21.00	18.93	18.93	25.35	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.23	21.00	18.66	18.66	23.21	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.34	21.00	18.38	18.38	21.11	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.45	21.00	18.11	18.11	19.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.57	21.00	17.83	17.83	16.99	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.68	21.00	17.55	17.55	14.98	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.80	21.00	17.28	17.28	13.00	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.91	21.00	17.00	17.00	11.06	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.02	21.00	16.73	16.73	9.14	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.14	21.00	16.45	16.45	7.25	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.25	21.00	16.17	16.17	5.40	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.36	21.00	15.90	15.90	3.58	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.48	21.00	15.62	15.62	1.79	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.59	21.00	15.35	15.35	0.03	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.70	20.50	15.07	15.07	1.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.82	20.50	14.79	14.79	3.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.93	20.50	14.52	14.52	5.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.05	20.50	14.24	14.24	6.70	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.16	20.50	13.97	13.97	8.30	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.27	20.50	13.69	13.69	9.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.39	20.50	13.41	13.41	11.41	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.50	20.50	13.14	13.14	12.92	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.61	20.50	12.86	12.86	14.40	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.73	20.50	12.60	12.60	15.06	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.84	20.50	12.37	12.37	16.48	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.95	20.50	12.14	12.14	17.87	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.07	20.50	11.90	11.90	19.24	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	5	23.18	20.50	11.67	11.67	20.58	0.97	47.54	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.30	20.50	11.44	11.44	21.89	0.89	47.29	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.41	20.50	11.20	11.20	23.18	0.83	47.07	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.52	20.50	10.97	10.97	24.44	0.77	46.87	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.64	20.50	10.74	10.74	25.67	0.71	46.70	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.75	20.50	10.50	10.50	26.88	0.67	46.54	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.86	20.50	10.27	10.27	28.06	0.63	46.40	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.98	20.50	10.03	10.03	29.21	0.59	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.09	20.50	9.80	9.80	30.34	0.55	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.20	20.50	9.57	9.57	31.44	0.52	46.06	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.32	20.50	9.33	9.33	32.51	0.49	45.96	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.43	20.50	9.10	9.10	33.56	0.46	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.55	20.50	8.87	8.87	34.58	0.44	45.79	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	24.66	20.50	8.63	8.63	35.58	0.41	45.71	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	24.77	20.50	-9.59	9.59	6.08	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	24.89	20.50	-9.86	9.86	4.98	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	25.00	20.50	-6.01	6.01	33.09	0.31	45.36	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	25.32	20.50	-6.23	6.23	31.11	0.34	45.47	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	25.65	20.50	-6.46	6.46	29.06	0.38	45.59	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	25.97	20.50	-6.68	6.68	26.93	0.42	45.74	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.30	20.50	-6.91	6.91	24.73	0.48	45.92	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.62	20.50	-7.13	7.13	22.45	0.54	46.13	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	26.94	20.50	-7.36	7.36	20.11	0.63	46.40	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.27	20.50	-7.58	7.58	17.69	0.73	46.76	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.59	20.50	-7.81	7.81	15.20	0.88	47.24	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	27.91	20.50	-8.03	8.03	12.63	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.24	20.50	-8.26	8.26	9.99	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.56	20.50	-8.48	8.48	7.28	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.89	20.50	-8.71	8.71	4.50	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.21	20.50	-8.94	8.94	1.64	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.53	21.00	-9.16	9.16	1.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.86	21.00	-9.39	9.39	4.29	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.18	21.00	-9.61	9.61	7.37	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.51	21.00	-9.84	9.84	10.52	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.83	21.00	-10.06	10.06	13.74	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.15	21.00	-10.29	10.29	17.04	1.00	48.72	Vu < PhiVc/2	Not Reqd 1	48.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.48	21.00	-10.51	10.51	20.41	0.90	48.40	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.80	21.00	-10.74	10.74	23.85	0.79	48.02	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.13	21.00	-10.96	10.96	27.36	0.70	47.74	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.45	21.00	-11.19	11.19	30.95	0.63	47.51	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.77	21.00	-11.42	11.42	34.61	0.58	47.33	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.10	21.00	-11.64	11.64	38.34	0.53	47.18	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.42	21.00	-11.87	11.87	42.15	0.49	47.05	Vu < PhiVc/2	Not Reqd 1	47.0	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.74	21.00	-12.09	12.09	46.03	0.46	46.94	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.07	21.00	-12.32	12.32	49.98	0.43	46.85	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.39	21.00	-12.54	12.54	54.01	0.41	46.76	Vu < PhiVc/2	Not Reqd 1	46.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.72	21.00	-12.77	12.77	58.11	0.38	46.69	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.04	21.00	-12.99	12.99	62.28	0.37	46.63	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.36	21.00	-13.22	13.22	66.52	0.35	46.57	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.69	21.00	-13.44	13.44	70.84	0.33	46.52	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.01	21.00	-13.67	13.67	75.23	0.32	46.47	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.34	21.00	-13.89	13.89	79.69	0.31	46.43	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.66	21.00	-14.12	14.12	84.23	0.29	46.39	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.98	21.00	-14.35	14.35	88.84	0.28	46.36	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	6	37.31	21.00	-14.57	14.57	93.52	0.27	46.32	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.63	21.00	-14.80	14.80	98.28	0.26	46.29	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.95	21.00	-15.02	15.02	103.11	0.25	46.26	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.28	21.00	-15.25	15.25	108.01	0.25	46.24	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.60	21.00	-15.47	15.47	112.98	0.24	46.21	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.93	21.00	-15.70	15.70	118.03	0.23	46.19	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.25	3.50	39.04	39.04	123.16	0.09	7.57	Vs>(4bdf'c^.5)	31.467	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.32	3.50	38.99	38.99	120.28	0.09	7.57	Vs>(4bdf'c^.5)	31.415	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.40	3.50	38.93	38.93	117.40	0.10	7.57	Vs>(4bdf'c^.5)	31.364	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.47	3.50	38.88	38.88	114.53	0.10	7.57	Vs>(4bdf'c^.5)	31.312	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.55	3.50	38.83	38.83	111.66	0.10	7.57	Vs>(4bdf'c^.5)	31.261	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.62	3.50	38.78	38.78	108.79	0.10	7.57	Vs>(4bdf'c^.5)	31.209	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.69	3.50	38.73	38.73	105.93	0.11	7.57	Vs>(4bdf'c^.5)	31.158	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.77	3.50	38.68	38.68	103.07	0.11	7.57	Vs>(4bdf'c^.5)	31.107	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.84	3.50	38.63	38.63	100.22	0.11	7.57	Vs>(4bdf'c^.5)	31.055	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.91	3.50	38.57	38.57	97.37	0.12	7.57	Vs>(4bdf'c^.5)	31.004	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.99	3.50	38.52	38.52	94.52	0.12	7.57	Vs>(4bdf'c^.5)	30.952	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.06	3.50	38.47	38.47	91.68	0.12	7.57	Vs>(4bdf'c^.5)	30.901	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.14	3.50	38.42	38.42	88.84	0.13	7.57	Vs>(4bdf'c^.5)	30.850	7.6	0.7	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.21	3.50	38.37	38.37	86.00	0.13	7.57	Vs>(4bdf'c^.5)	30.798	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.28	3.50	38.32	38.32	83.17	0.13	7.57	Vs>(4bdf'c^.5)	30.747	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.36	3.50	38.27	38.27	80.34	0.14	7.57	Vs>(4bdf'c^.5)	30.695	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.43	3.50	38.21	38.21	77.52	0.14	7.57	Vs>(4bdf'c^.5)	30.644	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.51	3.50	38.16	38.16	74.69	0.15	7.57	Vs>(4bdf'c^.5)	30.593	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.58	3.50	38.11	38.11	71.88	0.15	7.57	Vs>(4bdf'c^.5)	30.541	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.65	3.50	38.06	38.06	69.06	0.16	7.57	Vs>(4bdf'c^.5)	30.490	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.73	3.50	38.01	38.01	66.26	0.17	7.57	Vs>(4bdf'c^.5)	30.438	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.80	3.50	37.96	37.96	63.45	0.17	7.57	Vs>(4bdf'c^.5)	30.387	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.88	3.50	37.91	37.91	60.65	0.18	7.57	Vs>(4bdf'c^.5)	30.336	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.95	3.50	37.85	37.85	57.85	0.19	7.57	Vs>(4bdf'c^.5)	30.284	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.02	3.50	37.80	37.80	55.06	0.20	7.57	Vs>(4bdf'c^.5)	30.233	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.10	3.50	37.75	37.75	52.27	0.21	7.57	Vs>(4bdf'c^.5)	30.181	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.17	3.50	37.70	37.70	49.48	0.22	7.57	Vs>(4bdf'c^.5)	30.130	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.24	3.50	37.65	37.65	46.70	0.24	7.57	Vs>(4bdf'c^.5)	30.078	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.32	3.50	37.60	37.60	43.92	0.25	7.57	Vs>(4bdf'c^.5)	30.027	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.39	3.50	37.55	37.55	41.14	0.27	7.57	Vs>(4bdf'c^.5)	29.976	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.47	3.50	37.49	37.49	38.37	0.29	7.57	Vs>(4bdf'c^.5)	29.924	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.54	3.50	37.44	37.44	35.60	0.31	7.57	Vs>(4bdf'c^.5)	29.873	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.61	3.50	37.39	37.39	32.84	0.33	7.57	Vs>(4bdf'c^.5)	29.821	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.69	3.50	37.34	37.34	30.08	0.36	7.57	Vs>(4bdf'c^.5)	29.770	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.76	3.50	37.29	37.29	27.32	0.40	7.57	Vs>(4bdf'c^.5)	29.719	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.84	3.50	37.24	37.24	24.57	0.44	7.57	Vs>(4bdf'c^.5)	29.667	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.91	3.50	37.19	37.19	21.82	0.50	7.57	Vs>(4bdf'c^.5)	29.616	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.98	3.50	37.13	37.13	19.08	0.57	7.57	Vs>(4bdf'c^.5)	29.564	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.06	3.50	37.08	37.08	16.34	0.66	7.57	Vs>(4bdf'c^.5)	29.513	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.13	3.50	37.03	37.03	13.60	0.79	7.57	Vs>(4bdf'c^.5)	29.462	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.20	3.50	36.98	36.98	10.87	0.99	7.57	Vs>(4bdf'c^.5)	29.410	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.28	3.50	36.93	36.93	8.14	1.00	7.57	Vs>(4bdf'c^.5)	29.359	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.35	3.50	36.88	36.88	5.41	1.00	7.57	Vs>(4bdf'c^.5)	29.307	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.43	3.50	36.83	36.83	2.69	1.00	7.57	Vs>(4bdf'c^.5)	29.256	7.6	0.8	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.50	20.50	0.00	0.00	0.00	1.00	47.64	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

MAXimum BENDING Envelope					
Span # 1	1	5.000	-35.03	134.11	0.26
Span # 2	2	5.000	-40.27	134.11	0.30
Span # 3	3	5.000	-34.23	134.11	0.26
Span # 4	4	5.000	-32.68	134.11	0.24
Span # 5	5	5.000	35.62	162.54	0.22
Span # 6	6	14.250	-118.04	170.00	0.69
Span # 7	7	3.250	0.00	157.24	0.00
+1.40D+1.60H					
Span # 1	1	5.000	-14.90	134.11	0.11
Span # 2	2	5.000	-17.64	134.11	0.13
Span # 3	3	5.000	23.34	162.01	0.14
Span # 4	4	5.000	-16.12	134.11	0.12
Span # 5	5	5.000	-4.16	170.00	0.02
Span # 6	6	14.250	-30.06	170.00	0.18
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-12.75	134.11	0.10
Span # 2	2	5.000	-15.10	134.11	0.11
Span # 3	3	5.000	20.14	162.01	0.12
Span # 4	4	5.000	-13.43	134.11	0.10
Span # 5	5	5.000	5.23	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-12.77	134.11	0.10
Span # 2	2	5.000	-15.12	134.11	0.11
Span # 3	3	5.000	20.01	162.01	0.12
Span # 4	4	5.000	-13.82	134.11	0.10
Span # 5	5	5.000	-3.57	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	-12.75	134.11	0.10
Span # 2	2	5.000	-15.10	134.11	0.11
Span # 3	3	5.000	20.14	162.01	0.12
Span # 4	4	5.000	-13.43	134.11	0.10
Span # 5	5	5.000	5.23	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-12.74	134.11	0.09
Span # 2	2	5.000	-15.09	134.11	0.11
Span # 3	3	5.000	20.17	162.01	0.12
Span # 4	4	5.000	-13.33	134.11	0.10
Span # 5	5	5.000	5.29	162.54	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-12.71	134.11	0.09
Span # 2	2	5.000	-15.06	134.11	0.11
Span # 3	3	5.000	20.30	162.01	0.13
Span # 4	4	5.000	-12.95	134.11	0.10
Span # 5	5	5.000	7.64	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-12.74	134.11	0.09
Span # 2	2	5.000	-15.09	134.11	0.11
Span # 3	3	5.000	20.17	162.01	0.12
Span # 4	4	5.000	-13.33	134.11	0.10
Span # 5	5	5.000	5.29	162.54	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	-12.71	134.11	0.09
Span # 2	2	5.000	-15.06	134.11	0.11
Span # 3	3	5.000	20.30	162.01	0.13
Span # 4	4	5.000	-12.95	134.11	0.10

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	7.64	162.54	0.05
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-12.95	134.11	0.10
Span # 2	2	5.000	-15.31	134.11	0.11
Span # 3	3	5.000	19.05	162.01	0.12
Span # 4	4	5.000	-16.65	134.11	0.12
Span # 5	5	5.000	-7.49	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-12.93	134.11	0.10
Span # 2	2	5.000	-15.28	134.11	0.11
Span # 3	3	5.000	19.18	162.01	0.12
Span # 4	4	5.000	-16.27	134.11	0.12
Span # 5	5	5.000	-8.93	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-12.95	134.11	0.10
Span # 2	2	5.000	-15.31	134.11	0.11
Span # 3	3	5.000	19.05	162.01	0.12
Span # 4	4	5.000	-16.65	134.11	0.12
Span # 5	5	5.000	-7.48	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-12.93	134.11	0.10
Span # 2	2	5.000	-15.28	134.11	0.11
Span # 3	3	5.000	19.18	162.01	0.12
Span # 4	4	5.000	-16.27	134.11	0.12
Span # 5	5	5.000	-8.93	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-12.92	134.11	0.10
Span # 2	2	5.000	-15.28	134.11	0.11
Span # 3	3	5.000	19.21	162.01	0.12
Span # 4	4	5.000	-16.17	134.11	0.12
Span # 5	5	5.000	-9.30	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-12.90	134.11	0.10
Span # 2	2	5.000	-15.25	134.11	0.11
Span # 3	3	5.000	19.34	162.01	0.12
Span # 4	4	5.000	-15.78	134.11	0.12
Span # 5	5	5.000	-10.75	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-12.92	134.11	0.10
Span # 2	2	5.000	-15.28	134.11	0.11
Span # 3	3	5.000	19.21	162.01	0.12
Span # 4	4	5.000	-16.17	134.11	0.12
Span # 5	5	5.000	-9.30	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-12.90	134.11	0.10
Span # 2	2	5.000	-15.25	134.11	0.11
Span # 3	3	5.000	19.34	162.01	0.12
Span # 4	4	5.000	-15.78	134.11	0.12
Span # 5	5	5.000	-10.75	170.00	0.06
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-11.66	134.11	0.09

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-17.79	134.11	0.13
Span # 3	3	5.000	28.17	162.01	0.17
Span # 4	4	5.000	-18.15	134.11	0.14
Span # 5	5	5.000	3.32	162.54	0.02
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.07	162.01	0.09
Span # 2	2	5.000	-17.89	134.11	0.13
Span # 3	3	5.000	28.30	162.01	0.17
Span # 4	4	5.000	-17.77	134.11	0.13
Span # 5	5	5.000	5.57	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	-11.66	134.11	0.09
Span # 2	2	5.000	-17.79	134.11	0.13
Span # 3	3	5.000	28.17	162.01	0.17
Span # 4	4	5.000	-18.15	134.11	0.14
Span # 5	5	5.000	3.31	162.54	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.07	162.01	0.09
Span # 2	2	5.000	-17.89	134.11	0.13
Span # 3	3	5.000	28.30	162.01	0.17
Span # 4	4	5.000	-17.77	134.11	0.13
Span # 5	5	5.000	5.57	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.08	162.01	0.09
Span # 2	2	5.000	-17.91	134.11	0.13
Span # 3	3	5.000	28.33	162.01	0.17
Span # 4	4	5.000	-17.67	134.11	0.13
Span # 5	5	5.000	5.77	162.54	0.04
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.09	162.01	0.09
Span # 2	2	5.000	-18.01	134.11	0.13
Span # 3	3	5.000	28.46	162.01	0.18
Span # 4	4	5.000	-17.28	134.11	0.13
Span # 5	5	5.000	8.01	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.08	162.01	0.09
Span # 2	2	5.000	-17.91	134.11	0.13
Span # 3	3	5.000	28.33	162.01	0.17
Span # 4	4	5.000	-17.67	134.11	0.13
Span # 5	5	5.000	5.77	162.54	0.04
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.09	162.01	0.09
Span # 2	2	5.000	-18.01	134.11	0.13
Span # 3	3	5.000	28.46	162.01	0.18
Span # 4	4	5.000	-17.28	134.11	0.13
Span # 5	5	5.000	8.01	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-11.85	134.11	0.09
Span # 2	2	5.000	-17.05	134.11	0.13
Span # 3	3	5.000	27.21	162.01	0.17
Span # 4	4	5.000	-20.99	134.11	0.16
Span # 5	5	5.000	-6.37	170.00	0.04
Span # 6	6	14.250	-25.76	170.00	0.15

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-11.82	134.11	0.09
Span # 2	2	5.000	-17.15	134.11	0.13
Span # 3	3	5.000	27.34	162.01	0.17
Span # 4	4	5.000	-20.60	134.11	0.15
Span # 5	5	5.000	-7.81	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-11.85	134.11	0.09
Span # 2	2	5.000	-17.05	134.11	0.13
Span # 3	3	5.000	27.21	162.01	0.17
Span # 4	4	5.000	-20.99	134.11	0.16
Span # 5	5	5.000	-6.37	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	-11.82	134.11	0.09
Span # 2	2	5.000	-17.15	134.11	0.13
Span # 3	3	5.000	27.34	162.01	0.17
Span # 4	4	5.000	-20.60	134.11	0.15
Span # 5	5	5.000	-7.81	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-11.81	134.11	0.09
Span # 2	2	5.000	-17.18	134.11	0.13
Span # 3	3	5.000	27.37	162.01	0.17
Span # 4	4	5.000	-20.50	134.11	0.15
Span # 5	5	5.000	-8.18	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-11.79	134.11	0.09
Span # 2	2	5.000	-17.28	134.11	0.13
Span # 3	3	5.000	27.50	162.01	0.17
Span # 4	4	5.000	-20.11	134.11	0.15
Span # 5	5	5.000	-9.63	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-11.81	134.11	0.09
Span # 2	2	5.000	-17.18	134.11	0.13
Span # 3	3	5.000	27.37	162.01	0.17
Span # 4	4	5.000	-20.50	134.11	0.15
Span # 5	5	5.000	-8.18	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	-11.79	134.11	0.09
Span # 2	2	5.000	-17.28	134.11	0.13
Span # 3	3	5.000	27.50	162.01	0.17
Span # 4	4	5.000	-20.11	134.11	0.15
Span # 5	5	5.000	-9.63	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-15.16	134.11	0.11
Span # 2	2	5.000	-17.56	134.11	0.13
Span # 3	3	5.000	-17.18	134.11	0.13
Span # 4	4	5.000	-13.10	134.11	0.10
Span # 5	5	5.000	-3.75	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-15.13	134.11	0.11
Span # 2	2	5.000	-17.54	134.11	0.13
Span # 3	3	5.000	-17.28	134.11	0.13

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-12.72	134.11	0.09
Span # 5	5	5.000	5.18	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-15.16	134.11	0.11
Span # 2	2	5.000	-17.56	134.11	0.13
Span # 3	3	5.000	-17.18	134.11	0.13
Span # 4	4	5.000	-13.10	134.11	0.10
Span # 5	5	5.000	-3.75	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-15.13	134.11	0.11
Span # 2	2	5.000	-17.54	134.11	0.13
Span # 3	3	5.000	-17.28	134.11	0.13
Span # 4	4	5.000	-12.72	134.11	0.09
Span # 5	5	5.000	5.18	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-15.13	134.11	0.11
Span # 2	2	5.000	-17.53	134.11	0.13
Span # 3	3	5.000	-17.31	134.11	0.13
Span # 4	4	5.000	-12.62	134.11	0.09
Span # 5	5	5.000	-5.56	170.00	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-15.10	134.11	0.11
Span # 2	2	5.000	-17.50	134.11	0.13
Span # 3	3	5.000	-17.41	134.11	0.13
Span # 4	4	5.000	-12.23	134.11	0.09
Span # 5	5	5.000	7.58	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-15.13	134.11	0.11
Span # 2	2	5.000	-17.53	134.11	0.13
Span # 3	3	5.000	-17.31	134.11	0.13
Span # 4	4	5.000	-12.62	134.11	0.09
Span # 5	5	5.000	-5.56	170.00	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-15.10	134.11	0.11
Span # 2	2	5.000	-17.50	134.11	0.13
Span # 3	3	5.000	-17.41	134.11	0.13
Span # 4	4	5.000	-12.23	134.11	0.09
Span # 5	5	5.000	7.58	162.54	0.05
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-15.34	134.11	0.11
Span # 2	2	5.000	-17.75	134.11	0.13
Span # 3	3	5.000	-16.42	134.11	0.12
Span # 4	4	5.000	-15.94	134.11	0.12
Span # 5	5	5.000	-7.67	170.00	0.05
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-15.32	134.11	0.11
Span # 2	2	5.000	-17.73	134.11	0.13
Span # 3	3	5.000	-16.53	134.11	0.12
Span # 4	4	5.000	-15.55	134.11	0.12
Span # 5	5	5.000	-9.12	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	-15.34	134.11	0.11
Span # 2	2	5.000	-17.75	134.11	0.13
Span # 3	3	5.000	-16.42	134.11	0.12
Span # 4	4	5.000	-15.94	134.11	0.12
Span # 5	5	5.000	-7.67	170.00	0.05
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-15.32	134.11	0.11
Span # 2	2	5.000	-17.73	134.11	0.13
Span # 3	3	5.000	-16.52	134.11	0.12
Span # 4	4	5.000	-15.55	134.11	0.12
Span # 5	5	5.000	-9.12	170.00	0.05
Span # 6	6	14.250	-39.39	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-15.31	134.11	0.11
Span # 2	2	5.000	-17.72	134.11	0.13
Span # 3	3	5.000	-16.55	134.11	0.12
Span # 4	4	5.000	-15.45	134.11	0.12
Span # 5	5	5.000	-9.48	170.00	0.06
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-15.28	134.11	0.11
Span # 2	2	5.000	-17.69	134.11	0.13
Span # 3	3	5.000	-16.65	134.11	0.12
Span # 4	4	5.000	-15.06	134.11	0.11
Span # 5	5	5.000	-10.93	170.00	0.06
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-15.31	134.11	0.11
Span # 2	2	5.000	-17.72	134.11	0.13
Span # 3	3	5.000	-16.55	134.11	0.12
Span # 4	4	5.000	-15.45	134.11	0.12
Span # 5	5	5.000	-9.48	170.00	0.06
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-15.28	134.11	0.11
Span # 2	2	5.000	-17.69	134.11	0.13
Span # 3	3	5.000	-16.65	134.11	0.12
Span # 4	4	5.000	-15.06	134.11	0.11
Span # 5	5	5.000	-10.93	170.00	0.06
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-14.05	134.11	0.10
Span # 2	2	5.000	-19.98	134.11	0.15
Span # 3	3	5.000	27.11	162.01	0.17
Span # 4	4	5.000	-17.44	134.11	0.13
Span # 5	5	5.000	-3.44	170.00	0.02
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-14.02	134.11	0.10
Span # 2	2	5.000	-20.08	134.11	0.15
Span # 3	3	5.000	27.24	162.01	0.17
Span # 4	4	5.000	-17.05	134.11	0.13
Span # 5	5	5.000	5.51	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-14.05	134.11	0.10
Span # 2	2	5.000	-19.98	134.11	0.15
Span # 3	3	5.000	27.11	162.01	0.17
Span # 4	4	5.000	-17.44	134.11	0.13
Span # 5	5	5.000	-3.44	170.00	0.02

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-14.02	134.11	0.10
Span # 2	2	5.000	-20.08	134.11	0.15
Span # 3	3	5.000	27.24	162.01	0.17
Span # 4	4	5.000	-17.05	134.11	0.13
Span # 5	5	5.000	5.51	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-14.02	134.11	0.10
Span # 2	2	5.000	-20.11	134.11	0.15
Span # 3	3	5.000	27.27	162.01	0.17
Span # 4	4	5.000	-16.95	134.11	0.13
Span # 5	5	5.000	5.69	162.54	0.04
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-13.99	134.11	0.10
Span # 2	2	5.000	-20.21	134.11	0.15
Span # 3	3	5.000	27.40	162.01	0.17
Span # 4	4	5.000	-16.56	134.11	0.12
Span # 5	5	5.000	7.95	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-14.02	134.11	0.10
Span # 2	2	5.000	-20.11	134.11	0.15
Span # 3	3	5.000	27.27	162.01	0.17
Span # 4	4	5.000	-16.95	134.11	0.13
Span # 5	5	5.000	5.69	162.54	0.04
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-13.99	134.11	0.10
Span # 2	2	5.000	-20.21	134.11	0.15
Span # 3	3	5.000	27.40	162.01	0.17
Span # 4	4	5.000	-16.56	134.11	0.12
Span # 5	5	5.000	7.95	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-14.23	134.11	0.11
Span # 2	2	5.000	-19.24	134.11	0.14
Span # 3	3	5.000	26.15	162.01	0.16
Span # 4	4	5.000	-20.27	134.11	0.15
Span # 5	5	5.000	-6.55	170.00	0.04
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-14.21	134.11	0.11
Span # 2	2	5.000	-19.35	134.11	0.14
Span # 3	3	5.000	26.28	162.01	0.16
Span # 4	4	5.000	-19.88	134.11	0.15
Span # 5	5	5.000	-8.00	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-14.23	134.11	0.11
Span # 2	2	5.000	-19.24	134.11	0.14
Span # 3	3	5.000	26.15	162.01	0.16
Span # 4	4	5.000	-20.27	134.11	0.15
Span # 5	5	5.000	-6.55	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-14.21	134.11	0.11
Span # 2	2	5.000	-19.35	134.11	0.14

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	26.28	162.01	0.16
Span # 4	4	5.000	-19.88	134.11	0.15
Span # 5	5	5.000	-8.00	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-14.20	134.11	0.11
Span # 2	2	5.000	-19.37	134.11	0.14
Span # 3	3	5.000	26.31	162.01	0.16
Span # 4	4	5.000	-19.79	134.11	0.15
Span # 5	5	5.000	-8.36	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-14.18	134.11	0.11
Span # 2	2	5.000	-19.47	134.11	0.15
Span # 3	3	5.000	26.44	162.01	0.16
Span # 4	4	5.000	-19.40	134.11	0.14
Span # 5	5	5.000	-9.81	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-14.20	134.11	0.11
Span # 2	2	5.000	-19.37	134.11	0.14
Span # 3	3	5.000	26.31	162.01	0.16
Span # 4	4	5.000	-19.79	134.11	0.15
Span # 5	5	5.000	-8.36	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-14.18	134.11	0.11
Span # 2	2	5.000	-19.47	134.11	0.15
Span # 3	3	5.000	26.44	162.01	0.16
Span # 4	4	5.000	-19.40	134.11	0.14
Span # 5	5	5.000	-9.81	170.00	0.06
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-16.38	134.11	0.12
Span # 2	2	5.000	-19.57	134.11	0.15
Span # 3	3	5.000	20.48	162.01	0.13
Span # 4	4	5.000	-14.14	134.11	0.11
Span # 5	5	5.000	-3.48	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-16.36	134.11	0.12
Span # 2	2	5.000	-19.55	134.11	0.15
Span # 3	3	5.000	20.61	162.01	0.13
Span # 4	4	5.000	-13.75	134.11	0.10
Span # 5	5	5.000	5.26	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-16.38	134.11	0.12
Span # 2	2	5.000	-19.57	134.11	0.15
Span # 3	3	5.000	20.48	162.01	0.13
Span # 4	4	5.000	-14.14	134.11	0.11
Span # 5	5	5.000	-3.48	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	-16.36	134.11	0.12
Span # 2	2	5.000	-19.55	134.11	0.15
Span # 3	3	5.000	20.61	162.01	0.13
Span # 4	4	5.000	-13.75	134.11	0.10
Span # 5	5	5.000	5.25	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-16.35	134.11	0.12
Span # 2	2	5.000	-19.54	134.11	0.15
Span # 3	3	5.000	20.64	162.01	0.13
Span # 4	4	5.000	-13.65	134.11	0.10
Span # 5	5	5.000	5.32	162.54	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-16.33	134.11	0.12
Span # 2	2	5.000	-19.52	134.11	0.15
Span # 3	3	5.000	20.77	162.01	0.13
Span # 4	4	5.000	-13.26	134.11	0.10
Span # 5	5	5.000	7.67	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-16.35	134.11	0.12
Span # 2	2	5.000	-19.54	134.11	0.15
Span # 3	3	5.000	20.64	162.01	0.13
Span # 4	4	5.000	-13.65	134.11	0.10
Span # 5	5	5.000	5.32	162.54	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	-16.33	134.11	0.12
Span # 2	2	5.000	-19.52	134.11	0.15
Span # 3	3	5.000	20.77	162.01	0.13
Span # 4	4	5.000	-13.26	134.11	0.10
Span # 5	5	5.000	7.67	162.54	0.05
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-16.57	134.11	0.12
Span # 2	2	5.000	-19.76	134.11	0.15
Span # 3	3	5.000	19.52	162.01	0.12
Span # 4	4	5.000	-16.97	134.11	0.13
Span # 5	5	5.000	-7.40	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-16.54	134.11	0.12
Span # 2	2	5.000	-19.74	134.11	0.15
Span # 3	3	5.000	19.65	162.01	0.12
Span # 4	4	5.000	-16.59	134.11	0.12
Span # 5	5	5.000	-8.85	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-16.57	134.11	0.12
Span # 2	2	5.000	-19.76	134.11	0.15
Span # 3	3	5.000	19.52	162.01	0.12
Span # 4	4	5.000	-16.97	134.11	0.13
Span # 5	5	5.000	-7.40	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	-16.54	134.11	0.12
Span # 2	2	5.000	-19.74	134.11	0.15
Span # 3	3	5.000	19.65	162.01	0.12
Span # 4	4	5.000	-16.59	134.11	0.12
Span # 5	5	5.000	-8.85	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-16.54	134.11	0.12
Span # 2	2	5.000	-19.73	134.11	0.15
Span # 3	3	5.000	19.69	162.01	0.12
Span # 4	4	5.000	-16.49	134.11	0.12

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-9.22	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-16.51	134.11	0.12
Span # 2	2	5.000	-19.71	134.11	0.15
Span # 3	3	5.000	19.82	162.01	0.12
Span # 4	4	5.000	-16.10	134.11	0.12
Span # 5	5	5.000	-10.66	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-16.54	134.11	0.12
Span # 2	2	5.000	-19.73	134.11	0.15
Span # 3	3	5.000	19.69	162.01	0.12
Span # 4	4	5.000	-16.49	134.11	0.12
Span # 5	5	5.000	-9.22	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	-16.51	134.11	0.12
Span # 2	2	5.000	-19.71	134.11	0.15
Span # 3	3	5.000	19.82	162.01	0.12
Span # 4	4	5.000	-16.10	134.11	0.12
Span # 5	5	5.000	-10.66	170.00	0.06
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	19.56	162.01	0.12
Span # 2	2	5.000	-18.44	134.11	0.14
Span # 3	3	5.000	28.64	162.01	0.18
Span # 4	4	5.000	-18.47	134.11	0.14
Span # 5	5	5.000	3.35	162.54	0.02
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	19.57	162.01	0.12
Span # 2	2	5.000	-18.41	134.11	0.14
Span # 3	3	5.000	28.77	162.01	0.18
Span # 4	4	5.000	-18.08	134.11	0.13
Span # 5	5	5.000	5.59	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	19.56	162.01	0.12
Span # 2	2	5.000	-18.44	134.11	0.14
Span # 3	3	5.000	28.64	162.01	0.18
Span # 4	4	5.000	-18.47	134.11	0.14
Span # 5	5	5.000	3.35	162.54	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	19.57	162.01	0.12
Span # 2	2	5.000	-18.41	134.11	0.14
Span # 3	3	5.000	28.77	162.01	0.18
Span # 4	4	5.000	-18.08	134.11	0.13
Span # 5	5	5.000	5.59	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	19.58	162.01	0.12
Span # 2	2	5.000	-18.41	134.11	0.14
Span # 3	3	5.000	28.80	162.01	0.18
Span # 4	4	5.000	-17.99	134.11	0.13
Span # 5	5	5.000	5.81	162.54	0.04
Span # 6	6	14.250	-25.79	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	19.59	162.01	0.12

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-18.38	134.11	0.14
Span # 3	3	5.000	28.93	162.01	0.18
Span # 4	4	5.000	-17.60	134.11	0.13
Span # 5	5	5.000	8.04	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	19.58	162.01	0.12
Span # 2	2	5.000	-18.41	134.11	0.14
Span # 3	3	5.000	28.80	162.01	0.18
Span # 4	4	5.000	-17.99	134.11	0.13
Span # 5	5	5.000	5.81	162.54	0.04
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	19.59	162.01	0.12
Span # 2	2	5.000	-18.38	134.11	0.14
Span # 3	3	5.000	28.93	162.01	0.18
Span # 4	4	5.000	-17.60	134.11	0.13
Span # 5	5	5.000	8.04	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	19.44	162.01	0.12
Span # 2	2	5.000	-18.63	134.11	0.14
Span # 3	3	5.000	27.68	162.01	0.17
Span # 4	4	5.000	-21.31	134.11	0.16
Span # 5	5	5.000	-6.28	170.00	0.04
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	19.45	162.01	0.12
Span # 2	2	5.000	-18.60	134.11	0.14
Span # 3	3	5.000	27.81	162.01	0.17
Span # 4	4	5.000	-20.92	134.11	0.16
Span # 5	5	5.000	-7.73	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	19.44	162.01	0.12
Span # 2	2	5.000	-18.63	134.11	0.14
Span # 3	3	5.000	27.68	162.01	0.17
Span # 4	4	5.000	-21.31	134.11	0.16
Span # 5	5	5.000	-6.28	170.00	0.04
Span # 6	6	14.250	-25.75	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	19.45	162.01	0.12
Span # 2	2	5.000	-18.60	134.11	0.14
Span # 3	3	5.000	27.81	162.01	0.17
Span # 4	4	5.000	-20.92	134.11	0.16
Span # 5	5	5.000	-7.73	170.00	0.05
Span # 6	6	14.250	-39.40	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	19.46	162.01	0.12
Span # 2	2	5.000	-18.60	134.11	0.14
Span # 3	3	5.000	27.84	162.01	0.17
Span # 4	4	5.000	-20.82	134.11	0.16
Span # 5	5	5.000	-8.10	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	19.47	162.01	0.12
Span # 2	2	5.000	-18.57	134.11	0.14
Span # 3	3	5.000	27.98	162.01	0.17
Span # 4	4	5.000	-20.43	134.11	0.15
Span # 5	5	5.000	-9.54	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	19.46	162.01	0.12
Span # 2	2	5.000	-18.60	134.11	0.14
Span # 3	3	5.000	27.84	162.01	0.17
Span # 4	4	5.000	-20.82	134.11	0.16
Span # 5	5	5.000	-8.10	170.00	0.05
Span # 6	6	14.250	-25.77	170.00	0.15
Span # 7	7	3.250	-0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	19.47	162.01	0.12
Span # 2	2	5.000	-18.57	134.11	0.14
Span # 3	3	5.000	27.98	162.01	0.17
Span # 4	4	5.000	-20.43	134.11	0.15
Span # 5	5	5.000	-9.54	170.00	0.06
Span # 6	6	14.250	-39.42	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-18.77	134.11	0.14
Span # 2	2	5.000	-22.02	134.11	0.16
Span # 3	3	5.000	19.42	162.01	0.12
Span # 4	4	5.000	-13.42	134.11	0.10
Span # 5	5	5.000	-3.67	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-18.74	134.11	0.14
Span # 2	2	5.000	-21.99	134.11	0.16
Span # 3	3	5.000	19.55	162.01	0.12
Span # 4	4	5.000	-13.03	134.11	0.10
Span # 5	5	5.000	5.20	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-18.77	134.11	0.14
Span # 2	2	5.000	-22.02	134.11	0.16
Span # 3	3	5.000	19.42	162.01	0.12
Span # 4	4	5.000	-13.42	134.11	0.10
Span # 5	5	5.000	-3.67	170.00	0.02
Span # 6	6	14.250	-25.76	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-18.74	134.11	0.14
Span # 2	2	5.000	-21.99	134.11	0.16
Span # 3	3	5.000	19.55	162.01	0.12
Span # 4	4	5.000	-13.03	134.11	0.10
Span # 5	5	5.000	5.20	162.54	0.03
Span # 6	6	14.250	-39.41	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-18.74	134.11	0.14
Span # 2	2	5.000	-21.98	134.11	0.16
Span # 3	3	5.000	19.58	162.01	0.12
Span # 4	4	5.000	-12.94	134.11	0.10
Span # 5	5	5.000	5.25	162.54	0.03
Span # 6	6	14.250	-25.78	170.00	0.15
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-18.71	134.11	0.14
Span # 2	2	5.000	-21.96	134.11	0.16
Span # 3	3	5.000	19.71	162.01	0.12
Span # 4	4	5.000	-12.55	134.11	0.09
Span # 5	5	5.000	7.61	162.54	0.05
Span # 6	6	14.250	-39.43	170.00	0.23
Span # 7	7	3.250	0.00	157.24	0.00
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-18.74	134.11	0.14
Span # 2	2	5.000	-21.98	134.11	0.16
Span # 3	3	5.000	19.58	162.01	0.12

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

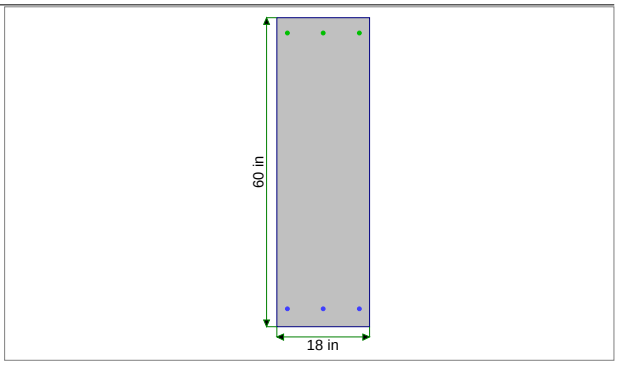
Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

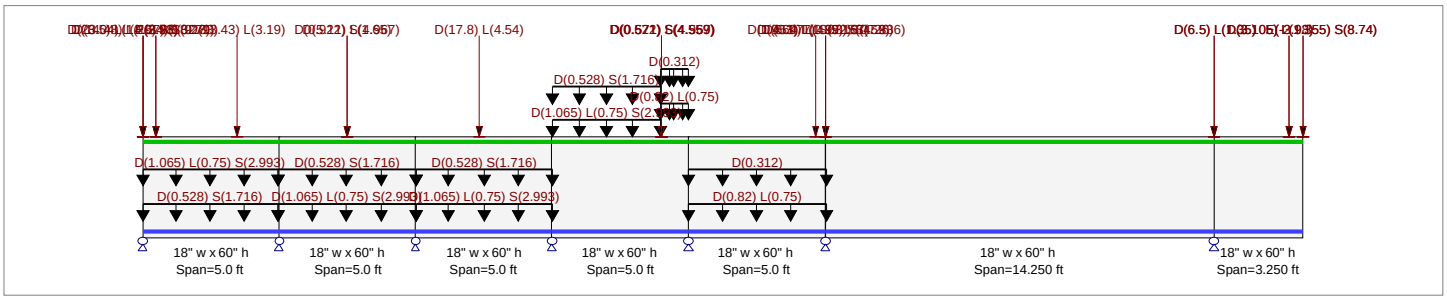
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup =		2





Cross Section & Reinforcing Details

Rectangular Section, Width = 18.0 in, Height = 60.0 in

Span #1 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #2 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #3 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #4 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #5 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 5.0 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 5.0 ft in this span
Span #6 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 14.250 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 14.250 ft in this span
Span #7 Reinforcing....	
3-#6 at 3.50 in from Bottom, from 0.0 to 3.250 ft in this span	3-#6 at 3.0 in from Top, from 0.0 to 3.250 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Load for Span Number 1
Point Load : D = 8.50, L = 1.290, S = 18.270 k @ 0.0 ft, (GB-C-62-R)
Point Load : D = 23.040, L = 4.670, S = 32.830 k @ 0.0 ft, (GB-G-62R)
Point Load : D = 14.480, L = 1.340, S = 9.790 k @ 0.0 ft, (GB-K)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL TI)
Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
Point Load : D = 13.430, L = 3.190 k @ 3.50 ft, (GB-D)
Point Load : E = 2.980 k @ 0.50 ft, (OTM)
Point Load : E = 3.930 k @ 0.50 ft, (OTM)
Load for Span Number 2
Point Load : D = 0.9220, S = 4.967 k @ 2.50 ft, (P12)
Point Load : D = 5.110, L = 1.650 k @ 2.50 ft, (GB-E-62R)
Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL TI)
Load for Span Number 3

Concrete Beam

Lic. # : KW-06007096 — Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Tributary Width = 1.0 ft, (WALL L1)
Point Load : D = 17.80, L = 4.540 k @ 2.333 ft, (GB-E)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Tributary Width = 1.0 ft, (WALL T1)

Load for Span Number 4
Point Load : D = 0.5710, L = 4.559 k @ 4.0 ft, (P15)
Uniform Load : D = 1.065, L = 0.750, S = 2.993 k/ft, Extent = 0.0 -->> 4.0 ft, Tributary Width = 1.0 ft, (WALL LI)
Uniform Load : D = 0.820, L = 0.750 k/ft, Extent = 4.0 -->> 5.0 ft, Tributary Width = 1.0 ft, (WALL L2)
Point Load : D = 0.5710, S = 4.559 k @ 4.0 ft, (P15)
Uniform Load : D = 0.5280, S = 1.716 k/ft, Extent = 0.0 -->> 4.0 ft, Tributary Width = 1.0 ft, (WALL TI)
Uniform Load : D = 0.3120 k/ft, Extent = 4.0 -->> 5.0 ft, Tributary Width = 1.0 ft, (WALL T2)
Point Load : D = 0.6220, S = 4.967 k @ 4.0 ft, (P13)

Load for Span Number 5
Point Load : D = 1.451, L = 0.9720, S = 7.836 k @ 5.0 ft, (P16)
Point Load : D = 9.640, L = 4.030, S = 4.260 k @ 5.0 ft, (GB-D-62R)
Uniform Load : D = 0.820, L = 0.750 k/ft, Tributary Width = 1.0 ft, (WALL L2)
Point Load : D = 5.30, L = 1.850, S = 0.590 k @ 5.0 ft, (GB-F)
Point Load : D = 0.9770, S = 9.167 k @ 4.667 ft, (P14)
Uniform Load : D = 0.3120 k/ft, Tributary Width = 1.0 ft, (WALL T2)

Load for Span Number 6
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)
Point Load : D = 6.50, L = 1.350 k @ 14.250 ft, (GB-A)

Load for Span Number 7
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM REACTION)
Point Load : D = 3.105, L = 1.355, S = 8.740 k @ 3.250 ft, (BEAM REACTION)
Point Load : E = -2.980 k @ 2.750 ft, (OTM)
Point Load : E = -3.930 k @ 2.750 ft, (OTM)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.370** : 1		Maximum Deflection			
Section used for this span	**Typical Section**		Max Downward Transient Deflection	0.002 in	Ratio =	50372 >=36
Mu : Applied	-126.380 k-ft		Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable	341.337 k-ft		Max Downward Total Deflection	0.002 in	Ratio =	42958 >=24
Location of maximum on span	0.000 ft		Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs	Span # 7					

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Overall MAXimum	123.732	58.435	51.094	48.860	33.877	46.761	54.449	
Overall MINimum	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	
+D+H	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+L+H, LL Comb Run (******L)	53.950	28.818	25.724	24.037	10.017	30.067	35.000	
+D+L+H, LL Comb Run (*****L*)	53.947	28.838	25.646	24.328	8.931	31.778	34.135	
+D+L+H, LL Comb Run (*****LL)	53.950	28.818	25.724	24.037	10.016	30.067	37.700	
+D+L+H, LL Comb Run (****L**)	53.951	28.813	25.743	23.963	11.229	40.402	31.403	
+D+L+H, LL Comb Run (****L*L)	53.954	28.794	25.821	23.672	12.314	38.691	34.967	
+D+L+H, LL Comb Run (****LL*)	53.951	28.813	25.743	23.963	11.228	40.403	34.102	
+D+L+H, LL Comb Run (****LLL)	53.954	28.794	25.821	23.673	12.314	38.691	37.667	
+D+L+H, LL Comb Run (***L***)	53.923	28.979	25.079	27.428	15.142	31.202	31.457	
+D+L+H, LL Comb Run (***L**L)	53.926	28.960	25.157	27.137	16.228	29.491	35.022	
+D+L+H, LL Comb Run (***L*L*)	53.923	28.979	25.079	27.428	15.142	31.202	34.157	
+D+L+H, LL Comb Run (***L*LL)	53.926	28.960	25.157	27.137	16.228	29.491	37.722	
+D+L+H, LL Comb Run (***LL**)	53.927	28.955	25.176	27.063	17.440	39.826	31.425	
+D+L+H, LL Comb Run (***LL*L)	53.930	28.936	25.254	26.773	18.526	38.115	34.990	
+D+L+H, LL Comb Run (***LLL*)	53.927	28.955	25.176	27.063	17.440	39.827	34.125	
+D+L+H, LL Comb Run (***LLLL)	53.930	28.936	25.254	26.773	18.525	38.116	37.690	
+D+L+H, LL Comb Run (**L****)	54.089	27.986	30.678	28.977	8.091	31.942	31.429	
+D+L+H, LL Comb Run (**L***L)	54.092	27.967	30.755	28.686	9.177	30.231	34.994	
+D+L+H, LL Comb Run (**L**L*)	54.089	27.986	30.678	28.977	8.091	31.943	34.128	
+D+L+H, LL Comb Run (**L**LL)	54.092	27.967	30.755	28.686	9.176	30.232	37.693	
+D+L+H, LL Comb Run (**L*L**)	54.093	27.962	30.775	28.613	10.389	40.567	31.396	
+D+L+H, LL Comb Run (**L*L*L)	54.096	27.942	30.853	28.322	11.474	38.856	34.961	
+D+L+H, LL Comb Run (**L*LL*)	54.093	27.962	30.775	28.613	10.388	40.567	34.096	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (**L*LLL)	54.096	27.943	30.853	28.322	11.474	38.856	37.661	
+D+L+H, LL Comb Run (**LL***)	54.065	28.128	30.111	32.077	14.302	31.366	31.451	
+D+L+H, LL Comb Run (**LL**L)	54.068	28.109	30.189	31.786	15.388	29.655	35.016	
+D+L+H, LL Comb Run (**LL*L*)	54.065	28.128	30.111	32.077	14.302	31.367	34.151	
+D+L+H, LL Comb Run (**LL*LL)	54.068	28.109	30.189	31.786	15.388	29.656	37.716	
+D+L+H, LL Comb Run (**LLL**)	54.069	28.104	30.208	31.713	16.600	39.991	31.419	
+D+L+H, LL Comb Run (**LLL*L)	54.072	28.084	30.286	31.422	17.686	38.280	34.983	
+D+L+H, LL Comb Run (**LLLL*)	54.069	28.104	30.208	31.713	16.600	39.991	34.118	
+D+L+H, LL Comb Run (**LLLLL)	54.072	28.084	30.286	31.422	17.685	38.280	37.683	
+D+L+H, LL Comb Run (*L*****)	53.641	31.813	28.801	23.790	9.070	31.751	31.436	
+D+L+H, LL Comb Run (*L****L)	53.645	31.794	28.878	23.499	10.156	30.040	35.001	
+D+L+H, LL Comb Run (*L***L*)	53.641	31.813	28.801	23.790	9.070	31.751	34.136	
+D+L+H, LL Comb Run (*L***LL)	53.645	31.794	28.878	23.499	10.155	30.040	37.701	
+D+L+H, LL Comb Run (*L**L**)	53.645	31.789	28.898	23.426	11.368	40.375	31.404	
+D+L+H, LL Comb Run (*L**L*L)	53.649	31.769	28.975	23.135	12.453	38.664	34.969	
+D+L+H, LL Comb Run (*L**LL*)	53.645	31.789	28.898	23.426	11.367	40.375	34.103	
+D+L+H, LL Comb Run (*L**LLL)	53.649	31.769	28.975	23.135	12.453	38.664	37.668	
+D+L+H, LL Comb Run (*L*L***)	53.618	31.955	28.234	26.890	15.281	31.175	31.458	
+D+L+H, LL Comb Run (*L*L**L)	53.621	31.935	28.311	26.599	16.367	29.464	35.023	
+D+L+H, LL Comb Run (*L*L*L*)	53.618	31.955	28.234	26.890	15.281	31.175	34.158	
+D+L+H, LL Comb Run (*L*L*LL)	53.621	31.935	28.311	26.600	16.367	29.464	37.723	
+D+L+H, LL Comb Run (*L*LL**)	53.622	31.930	28.331	26.526	17.579	39.799	31.426	
+D+L+H, LL Comb Run (*L*LL*L)	53.625	31.911	28.408	26.235	18.665	38.088	34.991	
+D+L+H, LL Comb Run (*L*LLL*)	53.622	31.930	28.331	26.526	17.579	39.799	34.126	
+D+L+H, LL Comb Run (*L*LLLL)	53.625	31.911	28.408	26.235	18.664	38.088	37.691	
+D+L+H, LL Comb Run (*LL****)	53.783	30.962	33.833	28.440	8.230	31.915	31.430	
+D+L+H, LL Comb Run (*LL***L)	53.786	30.942	33.910	28.149	9.316	30.204	34.995	
+D+L+H, LL Comb Run (*LL**L*)	53.783	30.962	33.832	28.440	8.230	31.916	34.130	
+D+L+H, LL Comb Run (*LL**LL)	53.786	30.942	33.910	28.149	9.315	30.204	37.694	
+D+L+H, LL Comb Run (*LL*L**)	53.787	30.937	33.930	28.075	10.528	40.539	31.397	
+D+L+H, LL Comb Run (*LL*L*L)	53.791	30.918	34.007	27.784	11.613	38.828	34.962	
+D+L+H, LL Comb Run (*LL*LL*)	53.787	30.937	33.930	28.075	10.527	40.540	34.097	
+D+L+H, LL Comb Run (*LL*LLL)	53.791	30.918	34.007	27.784	11.613	38.829	37.662	
+D+L+H, LL Comb Run (*LLL***)	53.760	31.103	33.266	31.540	14.441	31.339	31.452	
+D+L+H, LL Comb Run (*LLL**L)	53.763	31.084	33.343	31.249	15.527	29.628	35.017	
+D+L+H, LL Comb Run (*LLL*L*)	53.760	31.103	33.266	31.540	14.441	31.340	34.152	
+D+L+H, LL Comb Run (*LLL*LL)	53.763	31.084	33.343	31.249	15.527	29.629	37.717	
+D+L+H, LL Comb Run (*LLLL**)	53.764	31.079	33.363	31.175	16.739	39.964	31.420	
+D+L+H, LL Comb Run (*LLLL*L)	53.767	31.060	33.440	30.884	17.825	38.252	34.984	
+D+L+H, LL Comb Run (*LLLLL*)	53.764	31.079	33.363	31.175	16.739	39.964	34.119	
+D+L+H, LL Comb Run (*LLLLLL)	53.767	31.060	33.440	30.885	17.824	38.253	37.684	
+D+L+H, LL Comb Run (L******)	63.521	34.209	24.751	24.567	8.869	31.790	31.435	
+D+L+H, LL Comb Run (L*****L)	63.524	34.190	24.829	24.276	9.955	30.079	34.999	
+D+L+H, LL Comb Run (L****L*)	63.521	34.209	24.751	24.567	8.869	31.790	34.134	
+D+L+H, LL Comb Run (L****LL)	63.524	34.190	24.829	24.276	9.955	30.079	37.699	
+D+L+H, LL Comb Run (L***L**)	63.525	34.185	24.848	24.202	11.167	40.414	31.402	
+D+L+H, LL Comb Run (L***L*L)	63.528	34.166	24.926	23.912	12.253	38.703	34.967	
+D+L+H, LL Comb Run (L***LL*)	63.525	34.185	24.848	24.203	11.167	40.415	34.102	
+D+L+H, LL Comb Run (L***LLL)	63.528	34.166	24.926	23.912	12.252	38.704	37.667	
+D+L+H, LL Comb Run (L**L***)	63.497	34.351	24.184	27.667	15.081	31.214	31.457	
+D+L+H, LL Comb Run (L**L**L)	63.500	34.332	24.262	27.376	16.166	29.503	35.022	
+D+L+H, LL Comb Run (L**L*L*)	63.497	34.351	24.184	27.667	15.080	31.214	34.157	
+D+L+H, LL Comb Run (L**L*LL)	63.500	34.332	24.262	27.376	16.166	29.503	37.722	
+D+L+H, LL Comb Run (L**LL**)	63.501	34.327	24.281	27.302	17.378	39.838	31.424	
+D+L+H, LL Comb Run (L**LL*L)	63.504	34.307	24.359	27.012	18.464	38.127	34.989	
+D+L+H, LL Comb Run (L**LLL*)	63.501	34.327	24.281	27.303	17.378	39.839	34.124	
+D+L+H, LL Comb Run (L**LLLL)	63.504	34.307	24.359	27.012	18.464	38.128	37.689	
+D+L+H, LL Comb Run (L*L****)	63.663	33.358	29.783	29.216	8.029	31.954	31.428	
+D+L+H, LL Comb Run (L*L***L)	63.666	33.338	29.861	28.925	9.115	30.243	34.993	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+L+H, LL Comb Run (L*L**L*)	63.663	33.358	29.783	29.216	8.029	31.955	34.128	
+D+L+H, LL Comb Run (L*L**LL)	63.666	33.338	29.861	28.925	9.115	30.244	37.693	
+D+L+H, LL Comb Run (L*L*L**)	63.667	33.334	29.880	28.852	10.327	40.579	31.396	
+D+L+H, LL Comb Run (L*L*L*L)	63.670	33.314	29.958	28.561	11.413	38.868	34.961	
+D+L+H, LL Comb Run (L*L*LL*)	63.667	33.334	29.880	28.852	10.327	40.579	34.096	
+D+L+H, LL Comb Run (L*L*LLL)	63.670	33.314	29.958	28.561	11.412	38.868	37.660	
+D+L+H, LL Comb Run (L*LL***)	63.639	33.500	29.216	32.316	14.241	31.379	31.451	
+D+L+H, LL Comb Run (L*LL**L)	63.642	33.480	29.294	32.025	15.326	29.667	35.015	
+D+L+H, LL Comb Run (L*LL*L*)	63.639	33.500	29.216	32.316	14.240	31.379	34.150	
+D+L+H, LL Comb Run (L*LL*LL)	63.642	33.480	29.294	32.025	15.326	29.668	37.715	
+D+L+H, LL Comb Run (L*LLL**)	63.643	33.475	29.313	31.952	16.538	40.003	31.418	
+D+L+H, LL Comb Run (L*LLL*L)	63.646	33.456	29.391	31.661	17.624	38.292	34.983	
+D+L+H, LL Comb Run (L*LLLL*)	63.643	33.475	29.313	31.952	16.538	40.003	34.118	
+D+L+H, LL Comb Run (L*LLLLL)	63.646	33.456	29.391	31.661	17.624	38.292	37.683	
+D+L+H, LL Comb Run (LL*****)	63.215	37.185	27.906	24.029	9.008	31.763	31.436	
+D+L+H, LL Comb Run (LL****L)	63.219	37.165	27.983	23.739	10.094	30.052	35.001	
+D+L+H, LL Comb Run (LL***L*)	63.215	37.185	27.906	24.029	9.008	31.763	34.135	
+D+L+H, LL Comb Run (LL***LL)	63.219	37.165	27.983	23.739	10.093	30.052	37.700	
+D+L+H, LL Comb Run (LL**L**)	63.219	37.160	28.003	23.665	11.306	40.387	31.403	
+D+L+H, LL Comb Run (LL**L*L)	63.223	37.141	28.081	23.374	12.391	38.676	34.968	
+D+L+H, LL Comb Run (LL**LL*)	63.219	37.160	28.003	23.665	11.305	40.387	34.103	
+D+L+H, LL Comb Run (LL**LLL)	63.223	37.141	28.081	23.374	12.391	38.676	37.668	
+D+L+H, LL Comb Run (LL*L***)	63.192	37.326	27.339	27.129	15.219	31.187	31.458	
+D+L+H, LL Comb Run (LL*L**L)	63.195	37.307	27.416	26.839	16.305	29.476	35.023	
+D+L+H, LL Comb Run (LL*L*L*)	63.192	37.326	27.339	27.129	15.219	31.187	34.158	
+D+L+H, LL Comb Run (LL*L*LL)	63.195	37.307	27.416	26.839	16.305	29.476	37.723	
+D+L+H, LL Comb Run (LL*LL**)	63.196	37.302	27.436	26.765	17.517	39.811	31.425	
+D+L+H, LL Comb Run (LL*LL*L)	63.199	37.283	27.514	26.474	18.603	38.100	34.990	
+D+L+H, LL Comb Run (LL*LLL*)	63.196	37.302	27.436	26.765	17.517	39.812	34.125	
+D+L+H, LL Comb Run (LL*LLLL)	63.199	37.283	27.514	26.474	18.602	38.100	37.690	
+D+L+H, LL Comb Run (LLL****)	63.357	36.333	32.938	28.679	8.168	31.927	31.429	
+D+L+H, LL Comb Run (LLL***L)	63.361	36.314	33.015	28.388	9.254	30.216	34.994	
+D+L+H, LL Comb Run (LLL**L*)	63.357	36.333	32.938	28.679	8.168	31.928	34.129	
+D+L+H, LL Comb Run (LLL**LL)	63.361	36.314	33.015	28.388	9.254	30.217	37.694	
+D+L+H, LL Comb Run (LLL*L**)	63.361	36.309	33.035	28.314	10.466	40.552	31.397	
+D+L+H, LL Comb Run (LLL*L*L)	63.365	36.290	33.112	28.024	11.551	38.840	34.962	
+D+L+H, LL Comb Run (LLL*LL*)	63.361	36.309	33.035	28.314	10.466	40.552	34.097	
+D+L+H, LL Comb Run (LLL*LLL)	63.365	36.290	33.112	28.024	11.551	38.841	37.661	
+D+L+H, LL Comb Run (LLLL***)	63.334	36.475	32.371	31.779	14.380	31.351	31.452	
+D+L+H, LL Comb Run (LLLL**L)	63.337	36.456	32.448	31.488	15.465	29.640	35.016	
+D+L+H, LL Comb Run (LLLL*L*)	63.334	36.475	32.371	31.779	14.379	31.352	34.151	
+D+L+H, LL Comb Run (LLLL*LL)	63.337	36.456	32.448	31.488	15.465	29.641	37.716	
+D+L+H, LL Comb Run (LLLLL**)	63.338	36.451	32.468	31.414	16.677	39.976	31.419	
+D+L+H, LL Comb Run (LLLLL*L)	63.341	36.431	32.545	31.124	17.763	38.265	34.984	
+D+L+H, LL Comb Run (LLLLLL*)	63.338	36.451	32.468	31.414	16.677	39.976	34.119	
+D+L+H, LL Comb Run (LLLLLLL)	63.341	36.431	32.545	31.124	17.763	38.265	37.684	
+D+Lr+H, LL Comb Run (******L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*****L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*****LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (****L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (****L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (****LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (****LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***L***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***L**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***L*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***L*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***LL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***LL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (***LLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (***LLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L***L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L**L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L**LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L*L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L*L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L*LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**L*LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LL***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LL**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LL*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LL*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LLL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LLL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LLLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (**LLLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L****L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L***L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L***LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L**L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L**L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L**LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L**LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*L***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*L**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*L*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*L*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*LL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*LL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*LLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*L*LLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL***L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL**L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL**LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL*L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL*L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL*LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LL*LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLL***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLL**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLL*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLL*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLLL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLLL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLLLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (*LLLLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L******)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*****L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L****L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L****LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L***L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L***L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L***LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L***LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**L***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+Lr+H, LL Comb Run (L**L**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**L*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**L*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**LL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**LL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**LLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L**LLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L***L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L**L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L**LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L*L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L*L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L*LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*L*LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LL***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LL**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LL*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LL*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LLL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LLL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LLLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (L*LLLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL****L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL***L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL***LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL**L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL**L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL**LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL**LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*L***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*L**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*L*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*L*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*LL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*LL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*LLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LL*LLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL****)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL***L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL**L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL**LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL*L**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL*L*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL*LL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLL*LLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLL***)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLL**L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLL*L*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLL*LL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLLL**)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLLL*L)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLLLL*)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+Lr+H, LL Comb Run (LLLLLLL)	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+S+H	123.732	58.435	51.094	48.554	32.459	40.366	54.449	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.949	28.823	25.704	24.110	9.745	30.494	34.109	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.947	28.838	25.646	24.328	8.931	31.778	33.460	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.949	28.823	25.704	24.110	9.745	30.495	36.134	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	53.950	28.819	25.719	24.054	10.654	38.246	31.411	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.952	28.805	25.777	23.836	11.469	36.963	34.084	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.950	28.819	25.719	24.054	10.654	38.246	33.436	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.952	28.805	25.777	23.836	11.468	36.963	36.109	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.929	28.944	25.221	26.653	13.590	31.346	31.452	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.931	28.929	25.279	26.435	14.404	30.063	34.125	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.929	28.944	25.221	26.653	13.589	31.346	33.477	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.931	28.929	25.279	26.435	14.404	30.063	36.150	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.932	28.926	25.294	26.379	15.313	37.814	31.427	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.934	28.911	25.352	26.161	16.127	36.531	34.101	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.932	28.926	25.294	26.379	15.313	37.814	33.452	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.934	28.911	25.352	26.161	16.127	36.531	36.126	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.053	28.199	29.420	27.815	8.301	31.901	31.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.055	28.184	29.478	27.597	9.115	30.618	34.104	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.053	28.199	29.420	27.815	8.301	31.902	33.455	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.055	28.184	29.478	27.597	9.115	30.618	36.129	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.056	28.181	29.493	27.541	10.024	38.369	31.406	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.058	28.166	29.551	27.323	10.839	37.086	34.080	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.056	28.181	29.493	27.541	10.024	38.370	33.431	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.058	28.166	29.551	27.323	10.838	37.086	36.104	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.035	28.305	28.995	30.140	12.960	31.469	31.447	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.038	28.291	29.053	29.922	13.774	30.186	34.121	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.035	28.305	28.995	30.140	12.959	31.470	33.472	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.038	28.291	29.053	29.922	13.774	30.186	36.146	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.038	28.287	29.068	29.866	14.683	37.938	31.423	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.041	28.273	29.126	29.648	15.497	36.654	34.096	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.038	28.287	29.068	29.866	14.683	37.938	33.448	
+D+0.750Lr+0.750L+H, LL Comb Run (	54.041	28.273	29.126	29.648	15.497	36.655	36.121	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.718	31.069	28.012	23.925	9.035	31.757	31.436	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.720	31.055	28.070	23.706	9.849	30.474	34.110	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.718	31.069	28.012	23.925	9.035	31.758	33.461	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.720	31.055	28.070	23.707	9.849	30.474	36.134	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.721	31.051	28.085	23.651	10.758	38.226	31.411	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.723	31.036	28.143	23.433	11.573	36.942	34.085	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.721	31.051	28.085	23.651	10.758	38.226	33.436	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.723	31.036	28.143	23.433	11.572	36.943	36.110	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.700	31.175	27.587	26.250	13.694	31.326	31.453	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.702	31.161	27.645	26.031	14.508	30.042	34.126	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.700	31.175	27.587	26.250	13.693	31.326	33.477	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.702	31.161	27.645	26.032	14.508	30.042	36.151	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.703	31.157	27.660	25.976	15.417	37.794	31.428	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.705	31.143	27.718	25.758	16.231	36.510	34.102	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.703	31.157	27.660	25.976	15.417	37.794	33.453	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.705	31.143	27.718	25.758	16.231	36.511	36.127	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.824	30.431	31.786	27.412	8.405	31.881	31.431	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.826	30.416	31.844	27.193	9.219	30.598	34.105	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.824	30.431	31.786	27.412	8.405	31.881	33.456	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.826	30.416	31.844	27.194	9.219	30.598	36.130	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.827	30.412	31.859	27.138	10.128	38.349	31.407	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.830	30.398	31.917	26.920	10.943	37.066	34.080	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.827	30.412	31.859	27.138	10.128	38.349	33.432	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.830	30.398	31.917	26.920	10.942	37.066	36.105	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.806	30.537	31.361	29.737	13.064	31.449	31.448	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.809	30.522	31.419	29.518	13.878	30.166	34.121	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.806	30.537	31.361	29.737	13.064	31.449	33.473	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.809	30.522	31.419	29.519	13.878	30.166	36.146	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.809	30.519	31.434	29.463	14.787	37.917	31.423	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.812	30.504	31.492	29.245	15.601	36.634	34.097	
+D+0.750Lr+0.750L+H, LL Comb Run (	53.809	30.519	31.434	29.463	14.787	37.917	33.448	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	53.812	30.504	31.492	29.245	15.601	36.634	36.122	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.127	32.866	24.975	24.507	8.885	31.787	31.435	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.130	32.852	25.033	24.289	9.699	30.504	34.108	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.127	32.866	24.975	24.507	8.884	31.787	33.460	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.130	32.852	25.033	24.289	9.699	30.504	36.133	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.130	32.848	25.048	24.234	10.608	38.255	31.410	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.133	32.834	25.106	24.016	11.422	36.972	34.084	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.130	32.848	25.048	24.234	10.608	38.255	33.435	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.133	32.834	25.106	24.016	11.422	36.972	36.109	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.109	32.973	24.550	26.832	13.543	31.355	31.451	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.112	32.958	24.608	26.614	14.357	30.072	34.125	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.109	32.973	24.550	26.832	13.543	31.355	33.476	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.112	32.958	24.608	26.614	14.357	30.072	36.150	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.113	32.954	24.623	26.559	15.266	37.823	31.427	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.115	32.940	24.681	26.341	16.081	36.540	34.101	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.113	32.954	24.623	26.559	15.266	37.824	33.452	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.115	32.940	24.681	26.341	16.080	36.540	36.126	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.234	32.228	28.749	27.994	8.255	31.910	31.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.236	32.213	28.807	27.776	9.069	30.627	34.104	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.234	32.228	28.749	27.994	8.255	31.911	33.455	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.236	32.213	28.807	27.776	9.069	30.627	36.128	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.237	32.210	28.822	27.721	9.978	38.379	31.406	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.239	32.195	28.880	27.503	10.792	37.095	34.079	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.237	32.210	28.822	27.721	9.978	38.379	33.430	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.239	32.195	28.880	27.503	10.792	37.096	36.104	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.216	32.334	28.324	30.319	12.913	31.478	31.447	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.218	32.320	28.382	30.101	13.728	30.195	34.120	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.216	32.334	28.324	30.319	12.913	31.479	33.472	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.218	32.320	28.382	30.101	13.727	30.195	36.145	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.219	32.316	28.397	30.046	14.636	37.947	31.422	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.221	32.301	28.455	29.828	15.451	36.663	34.096	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.219	32.316	28.397	30.046	14.636	37.947	33.447	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.221	32.301	28.455	29.828	15.451	36.664	36.121	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.898	35.098	27.341	24.104	8.989	31.767	31.436	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.901	35.083	27.399	23.886	9.803	30.483	34.109	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.898	35.098	27.341	24.104	8.989	31.767	33.460	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.901	35.083	27.399	23.886	9.803	30.484	36.134	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.901	35.080	27.414	23.831	10.712	38.235	31.411	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.904	35.065	27.472	23.613	11.526	36.951	34.085	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.901	35.080	27.414	23.831	10.712	38.235	33.436	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.904	35.065	27.472	23.613	11.526	36.952	36.110	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.881	35.204	26.916	26.429	13.647	31.335	31.452	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.883	35.190	26.974	26.211	14.462	30.051	34.126	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.881	35.204	26.916	26.429	13.647	31.335	33.477	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.883	35.190	26.974	26.211	14.461	30.052	36.151	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.884	35.186	26.989	26.156	15.371	37.803	31.428	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.886	35.171	27.047	25.938	16.185	36.519	34.102	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.884	35.186	26.989	26.156	15.370	37.803	33.453	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.886	35.171	27.047	25.938	16.185	36.520	36.126	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.005	34.459	31.115	27.591	8.359	31.890	31.431	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.007	34.445	31.173	27.373	9.173	30.607	34.104	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.005	34.459	31.115	27.591	8.359	31.890	33.456	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.007	34.445	31.173	27.373	9.173	30.607	36.129	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.008	34.441	31.188	27.318	10.082	38.358	31.406	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.010	34.427	31.246	27.100	10.896	37.075	34.080	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.008	34.441	31.188	27.318	10.082	38.358	33.431	
+D+0.750Lr+0.750L+H, LL Comb Run (	61.010	34.427	31.246	27.100	10.896	37.075	36.105	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.987	34.566	30.690	29.916	13.017	31.458	31.447	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.989	34.551	30.748	29.698	13.832	30.175	34.121	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+H, LL Comb Run (	60.987	34.566	30.690	29.916	13.017	31.458	33.472	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.989	34.551	30.748	29.698	13.831	30.175	36.146	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.990	34.547	30.762	29.643	14.741	37.926	31.423	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.992	34.533	30.821	29.425	15.555	36.643	34.097	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.990	34.547	30.762	29.643	14.740	37.927	33.448	
+D+0.750Lr+0.750L+H, LL Comb Run (	60.992	34.533	30.821	29.425	15.555	36.643	36.122	
+D+0.750L+0.750S+H, LL Comb Run (*	106.288	51.021	44.790	42.279	27.391	36.936	51.369	
+D+0.750L+0.750S+H, LL Comb Run (*	106.285	51.036	44.732	42.497	26.577	38.219	50.720	
+D+0.750L+0.750S+H, LL Comb Run (*	106.288	51.021	44.790	42.279	27.391	36.936	53.394	
+D+0.750L+0.750S+H, LL Comb Run (*	106.288	51.017	44.805	42.224	28.300	44.687	48.671	
+D+0.750L+0.750S+H, LL Comb Run (*	106.291	51.003	44.863	42.006	29.114	43.404	51.345	
+D+0.750L+0.750S+H, LL Comb Run (*	106.288	51.017	44.805	42.224	28.300	44.688	50.696	
+D+0.750L+0.750S+H, LL Comb Run (*	106.291	51.003	44.863	42.006	29.114	43.404	53.370	
+D+0.750L+0.750S+H, LL Comb Run (*	106.268	51.142	44.307	44.822	31.235	37.787	48.712	
+D+0.750L+0.750S+H, LL Comb Run (*	106.270	51.127	44.365	44.604	32.050	36.504	51.386	
+D+0.750L+0.750S+H, LL Comb Run (*	106.268	51.142	44.307	44.823	31.235	37.788	50.737	
+D+0.750L+0.750S+H, LL Comb Run (*	106.270	51.127	44.365	44.604	32.049	36.504	53.411	
+D+0.750L+0.750S+H, LL Comb Run (*	106.271	51.124	44.380	44.549	32.959	44.255	48.688	
+D+0.750L+0.750S+H, LL Comb Run (*	106.273	51.109	44.438	44.331	33.773	42.972	51.361	
+D+0.750L+0.750S+H, LL Comb Run (*	106.271	51.124	44.380	44.549	32.958	44.256	50.713	
+D+0.750L+0.750S+H, LL Comb Run (*	106.273	51.109	44.438	44.331	33.773	42.972	53.386	
+D+0.750L+0.750S+H, LL Comb Run (*	106.392	50.397	48.506	45.984	25.947	38.343	48.691	
+D+0.750L+0.750S+H, LL Comb Run (*	106.394	50.383	48.564	45.766	26.761	37.059	51.364	
+D+0.750L+0.750S+H, LL Comb Run (*	106.392	50.397	48.506	45.984	25.947	38.343	50.715	
+D+0.750L+0.750S+H, LL Comb Run (*	106.394	50.383	48.564	45.766	26.761	37.059	53.389	
+D+0.750L+0.750S+H, LL Comb Run (*	106.395	50.379	48.579	45.711	27.670	44.811	48.666	
+D+0.750L+0.750S+H, LL Comb Run (*	106.397	50.364	48.637	45.493	28.484	43.527	51.340	
+D+0.750L+0.750S+H, LL Comb Run (*	106.395	50.379	48.579	45.711	27.670	44.811	50.691	
+D+0.750L+0.750S+H, LL Comb Run (*	106.397	50.364	48.637	45.493	28.484	43.528	53.365	
+D+0.750L+0.750S+H, LL Comb Run (*	106.374	50.503	48.081	48.309	30.605	37.911	48.707	
+D+0.750L+0.750S+H, LL Comb Run (*	106.376	50.489	48.139	48.091	31.420	36.627	51.381	
+D+0.750L+0.750S+H, LL Comb Run (*	106.374	50.504	48.081	48.310	30.605	37.911	50.732	
+D+0.750L+0.750S+H, LL Comb Run (*	106.376	50.489	48.139	48.091	31.419	36.628	53.406	
+D+0.750L+0.750S+H, LL Comb Run (*	106.377	50.485	48.154	48.036	32.329	44.379	48.683	
+D+0.750L+0.750S+H, LL Comb Run (*	106.380	50.471	48.212	47.818	33.143	43.095	51.357	
+D+0.750L+0.750S+H, LL Comb Run (*	106.377	50.485	48.154	48.036	32.328	44.379	50.708	
+D+0.750L+0.750S+H, LL Comb Run (*	106.380	50.471	48.212	47.818	33.143	43.096	53.381	
+D+0.750L+0.750S+H, LL Comb Run (*	106.056	53.267	47.098	42.094	26.681	38.199	48.696	
+D+0.750L+0.750S+H, LL Comb Run (*	106.059	53.253	47.156	41.876	27.495	36.915	51.370	
+D+0.750L+0.750S+H, LL Comb Run (*	106.056	53.267	47.098	42.094	26.681	38.199	50.721	
+D+0.750L+0.750S+H, LL Comb Run (*	106.059	53.253	47.156	41.876	27.495	36.916	53.395	
+D+0.750L+0.750S+H, LL Comb Run (*	106.059	53.249	47.171	41.821	28.404	44.667	48.672	
+D+0.750L+0.750S+H, LL Comb Run (*	106.062	53.235	47.229	41.603	29.218	43.384	51.345	
+D+0.750L+0.750S+H, LL Comb Run (*	106.059	53.249	47.171	41.821	28.404	44.667	50.697	
+D+0.750L+0.750S+H, LL Comb Run (*	106.062	53.235	47.229	41.603	29.218	43.384	53.370	
+D+0.750L+0.750S+H, LL Comb Run (*	106.039	53.374	46.673	44.419	31.339	37.767	48.713	
+D+0.750L+0.750S+H, LL Comb Run (*	106.041	53.359	46.731	44.201	32.154	36.483	51.387	
+D+0.750L+0.750S+H, LL Comb Run (*	106.039	53.374	46.673	44.419	31.339	37.767	50.738	
+D+0.750L+0.750S+H, LL Comb Run (*	106.041	53.359	46.731	44.201	32.153	36.484	53.411	
+D+0.750L+0.750S+H, LL Comb Run (*	106.042	53.355	46.746	44.146	33.063	44.235	48.689	
+D+0.750L+0.750S+H, LL Comb Run (*	106.044	53.341	46.804	43.928	33.877	42.952	51.362	
+D+0.750L+0.750S+H, LL Comb Run (*	106.042	53.355	46.746	44.146	33.062	44.235	50.713	
+D+0.750L+0.750S+H, LL Comb Run (*	106.044	53.341	46.804	43.928	33.877	42.952	53.387	
+D+0.750L+0.750S+H, LL Comb Run (*	106.163	52.629	50.872	45.581	26.051	38.322	48.691	
+D+0.750L+0.750S+H, LL Comb Run (*	106.165	52.614	50.930	45.363	26.865	37.039	51.365	
+D+0.750L+0.750S+H, LL Comb Run (*	106.163	52.629	50.872	45.581	26.051	38.322	50.716	
+D+0.750L+0.750S+H, LL Comb Run (*	106.165	52.614	50.930	45.363	26.865	37.039	53.390	
+D+0.750L+0.750S+H, LL Comb Run (*	106.166	52.611	50.945	45.308	27.774	44.790	48.667	
+D+0.750L+0.750S+H, LL Comb Run (*	106.168	52.596	51.003	45.090	28.588	43.507	51.341	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (*	106.166	52.611	50.945	45.308	27.774	44.791	50.692	
+D+0.750L+0.750S+H, LL Comb Run (*	106.168	52.596	51.003	45.090	28.588	43.507	53.366	
+D+0.750L+0.750S+H, LL Comb Run (*	106.145	52.735	50.447	47.906	30.710	37.890	48.708	
+D+0.750L+0.750S+H, LL Comb Run (*	106.148	52.721	50.505	47.688	31.524	36.607	51.382	
+D+0.750L+0.750S+H, LL Comb Run (*	106.145	52.735	50.447	47.906	30.709	37.891	50.733	
+D+0.750L+0.750S+H, LL Comb Run (*	106.148	52.721	50.505	47.688	31.524	36.607	53.407	
+D+0.750L+0.750S+H, LL Comb Run (*	106.148	52.717	50.520	47.633	32.433	44.358	48.684	
+D+0.750L+0.750S+H, LL Comb Run (*	106.151	52.702	50.578	47.415	33.247	43.075	51.357	
+D+0.750L+0.750S+H, LL Comb Run (*	106.148	52.717	50.520	47.633	32.433	44.359	50.709	
+D+0.750L+0.750S+H, LL Comb Run (*	106.151	52.702	50.578	47.415	33.247	43.075	53.382	
+D+0.750L+0.750S+H, LL Comb Run (L	113.466	55.064	44.061	42.677	26.530	38.228	48.695	
+D+0.750L+0.750S+H, LL Comb Run (L	113.468	55.050	44.119	42.459	27.345	36.945	51.369	
+D+0.750L+0.750S+H, LL Comb Run (L	113.466	55.064	44.061	42.677	26.530	38.229	50.720	
+D+0.750L+0.750S+H, LL Comb Run (L	113.468	55.050	44.119	42.459	27.344	36.945	53.394	
+D+0.750L+0.750S+H, LL Comb Run (L	113.469	55.046	44.134	42.404	28.254	44.696	48.671	
+D+0.750L+0.750S+H, LL Comb Run (L	113.471	55.032	44.192	42.185	29.068	43.413	51.344	
+D+0.750L+0.750S+H, LL Comb Run (L	113.469	55.046	44.134	42.404	28.253	44.697	50.696	
+D+0.750L+0.750S+H, LL Comb Run (L	113.471	55.032	44.192	42.186	29.068	43.413	53.369	
+D+0.750L+0.750S+H, LL Comb Run (L	113.448	55.171	43.636	45.002	31.189	37.796	48.712	
+D+0.750L+0.750S+H, LL Comb Run (L	113.451	55.156	43.694	44.784	32.003	36.513	51.385	
+D+0.750L+0.750S+H, LL Comb Run (L	113.448	55.171	43.636	45.002	31.189	37.797	50.737	
+D+0.750L+0.750S+H, LL Comb Run (L	113.451	55.156	43.694	44.784	32.003	36.513	53.410	
+D+0.750L+0.750S+H, LL Comb Run (L	113.451	55.153	43.709	44.729	32.912	44.264	48.687	
+D+0.750L+0.750S+H, LL Comb Run (L	113.454	55.138	43.767	44.510	33.726	42.981	51.361	
+D+0.750L+0.750S+H, LL Comb Run (L	113.451	55.153	43.709	44.729	32.912	44.265	50.712	
+D+0.750L+0.750S+H, LL Comb Run (L	113.454	55.138	43.767	44.511	33.726	42.981	53.386	
+D+0.750L+0.750S+H, LL Comb Run (L	113.572	54.426	47.835	46.164	25.900	38.352	48.690	
+D+0.750L+0.750S+H, LL Comb Run (L	113.575	54.411	47.893	45.946	26.715	37.068	51.364	
+D+0.750L+0.750S+H, LL Comb Run (L	113.572	54.426	47.835	46.164	25.900	38.352	50.715	
+D+0.750L+0.750S+H, LL Comb Run (L	113.575	54.411	47.893	45.946	26.715	37.069	53.389	
+D+0.750L+0.750S+H, LL Comb Run (L	113.575	54.408	47.908	45.891	27.624	44.820	48.666	
+D+0.750L+0.750S+H, LL Comb Run (L	113.578	54.393	47.966	45.672	28.438	43.536	51.340	
+D+0.750L+0.750S+H, LL Comb Run (L	113.575	54.408	47.908	45.891	27.624	44.820	50.691	
+D+0.750L+0.750S+H, LL Comb Run (L	113.578	54.393	47.966	45.673	28.438	43.537	53.364	
+D+0.750L+0.750S+H, LL Comb Run (L	113.555	54.532	47.410	48.489	30.559	37.920	48.707	
+D+0.750L+0.750S+H, LL Comb Run (L	113.557	54.518	47.468	48.271	31.373	36.636	51.381	
+D+0.750L+0.750S+H, LL Comb Run (L	113.555	54.532	47.410	48.489	30.559	37.920	50.732	
+D+0.750L+0.750S+H, LL Comb Run (L	113.557	54.518	47.468	48.271	31.373	36.637	53.405	
+D+0.750L+0.750S+H, LL Comb Run (L	113.558	54.514	47.483	48.216	32.282	44.388	48.683	
+D+0.750L+0.750S+H, LL Comb Run (L	113.560	54.500	47.541	47.997	33.096	43.105	51.356	
+D+0.750L+0.750S+H, LL Comb Run (L	113.558	54.514	47.483	48.216	32.282	44.388	50.707	
+D+0.750L+0.750S+H, LL Comb Run (L	113.560	54.500	47.541	47.998	33.096	43.105	53.381	
+D+0.750L+0.750S+H, LL Comb Run (L	113.237	57.296	46.427	42.274	26.635	38.208	48.696	
+D+0.750L+0.750S+H, LL Comb Run (L	113.239	57.281	46.485	42.056	27.449	36.924	51.369	
+D+0.750L+0.750S+H, LL Comb Run (L	113.237	57.296	46.427	42.274	26.634	38.208	50.721	
+D+0.750L+0.750S+H, LL Comb Run (L	113.239	57.281	46.485	42.056	27.449	36.925	53.394	
+D+0.750L+0.750S+H, LL Comb Run (L	113.240	57.278	46.500	42.000	28.358	44.676	48.671	
+D+0.750L+0.750S+H, LL Comb Run (L	113.242	57.263	46.558	41.782	29.172	43.393	51.345	
+D+0.750L+0.750S+H, LL Comb Run (L	113.240	57.278	46.500	42.001	28.358	44.676	50.696	
+D+0.750L+0.750S+H, LL Comb Run (L	113.242	57.263	46.558	41.782	29.172	43.393	53.370	
+D+0.750L+0.750S+H, LL Comb Run (L	113.219	57.402	46.002	44.599	31.293	37.776	48.713	
+D+0.750L+0.750S+H, LL Comb Run (L	113.222	57.388	46.060	44.381	32.107	36.493	51.386	
+D+0.750L+0.750S+H, LL Comb Run (L	113.219	57.402	46.002	44.599	31.293	37.776	50.737	
+D+0.750L+0.750S+H, LL Comb Run (L	113.222	57.388	46.060	44.381	32.107	36.493	53.411	
+D+0.750L+0.750S+H, LL Comb Run (L	113.222	57.384	46.075	44.326	33.016	44.244	48.688	
+D+0.750L+0.750S+H, LL Comb Run (L	113.225	57.370	46.133	44.107	33.831	42.961	51.362	
+D+0.750L+0.750S+H, LL Comb Run (L	113.222	57.384	46.075	44.326	33.016	44.244	50.713	
+D+0.750L+0.750S+H, LL Comb Run (L	113.225	57.370	46.133	44.107	33.830	42.961	53.387	
+D+0.750L+0.750S+H, LL Comb Run (L	113.343	56.658	50.201	45.761	26.005	38.331	48.691	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+H, LL Comb Run (L	113.346	56.643	50.259	45.543	26.819	37.048	51.365	
+D+0.750L+0.750S+H, LL Comb Run (L	113.343	56.658	50.201	45.761	26.004	38.332	50.716	
+D+0.750L+0.750S+H, LL Comb Run (L	113.346	56.643	50.259	45.543	26.819	37.048	53.390	
+D+0.750L+0.750S+H, LL Comb Run (L	113.346	56.639	50.274	45.487	27.728	44.799	48.667	
+D+0.750L+0.750S+H, LL Comb Run (L	113.349	56.625	50.332	45.269	28.542	43.516	51.340	
+D+0.750L+0.750S+H, LL Comb Run (L	113.346	56.639	50.274	45.488	27.728	44.800	50.692	
+D+0.750L+0.750S+H, LL Comb Run (L	113.349	56.625	50.332	45.269	28.542	43.516	53.365	
+D+0.750L+0.750S+H, LL Comb Run (L	113.326	56.764	49.776	48.086	30.663	37.899	48.708	
+D+0.750L+0.750S+H, LL Comb Run (L	113.328	56.749	49.834	47.868	31.477	36.616	51.381	
+D+0.750L+0.750S+H, LL Comb Run (L	113.326	56.764	49.776	48.086	30.663	37.900	50.733	
+D+0.750L+0.750S+H, LL Comb Run (L	113.328	56.749	49.834	47.868	31.477	36.616	53.406	
+D+0.750L+0.750S+H, LL Comb Run (L	113.329	56.746	49.849	47.813	32.386	44.367	48.683	
+D+0.750L+0.750S+H, LL Comb Run (L	113.331	56.731	49.907	47.594	33.201	43.084	51.357	
+D+0.750L+0.750S+H, LL Comb Run (L	113.329	56.746	49.849	47.813	32.386	44.368	50.708	
+D+0.750L+0.750S+H, LL Comb Run (L	113.331	56.731	49.907	47.594	33.200	43.084	53.382	
+D+0.60W+H	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
+D+0.70E+H	58.167	29.642	25.323	24.822	7.277	34.366	25.307	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.949	28.823	25.704	24.110	9.745	30.494	34.109	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.947	28.838	25.646	24.328	8.931	31.778	33.460	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.949	28.823	25.704	24.110	9.745	30.495	36.134	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.950	28.819	25.719	24.054	10.654	38.246	31.411	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.952	28.805	25.777	23.836	11.469	36.963	34.084	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.950	28.819	25.719	24.054	10.654	38.246	33.436	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.952	28.805	25.777	23.836	11.468	36.963	36.109	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.929	28.944	25.221	26.653	13.590	31.346	31.452	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.931	28.929	25.279	26.435	14.404	30.063	34.125	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.929	28.944	25.221	26.653	13.589	31.346	33.477	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.931	28.929	25.279	26.435	14.404	30.063	36.150	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.932	28.926	25.294	26.379	15.313	37.814	31.427	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.934	28.911	25.352	26.161	16.127	36.531	34.101	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.932	28.926	25.294	26.379	15.313	37.814	33.452	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.934	28.911	25.352	26.161	16.127	36.531	36.126	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.053	28.199	29.420	27.815	8.301	31.901	31.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.055	28.184	29.478	27.597	9.115	30.618	34.104	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.053	28.199	29.420	27.815	8.301	31.902	33.455	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.055	28.184	29.478	27.597	9.115	30.618	36.129	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.056	28.181	29.493	27.541	10.024	38.369	31.406	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.058	28.166	29.551	27.323	10.839	37.086	34.080	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.056	28.181	29.493	27.541	10.024	38.370	33.431	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.058	28.166	29.551	27.323	10.838	37.086	36.104	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.035	28.305	28.995	30.140	12.960	31.469	31.447	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.038	28.291	29.053	29.922	13.774	30.186	34.121	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.035	28.305	28.995	30.140	12.959	31.470	33.472	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.038	28.291	29.053	29.922	13.774	30.186	36.146	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.038	28.287	29.068	29.866	14.683	37.938	31.423	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.041	28.273	29.126	29.648	15.497	36.654	34.096	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.038	28.287	29.068	29.866	14.683	37.938	33.448	
+D+0.750Lr+0.750L+0.450W+H, LL Com	54.041	28.273	29.126	29.648	15.497	36.655	36.121	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.718	31.069	28.012	23.925	9.035	31.757	31.436	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.720	31.055	28.070	23.706	9.849	30.474	34.110	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.718	31.069	28.012	23.925	9.035	31.758	33.461	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.720	31.055	28.070	23.707	9.849	30.474	36.134	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.721	31.051	28.085	23.651	10.758	38.226	31.411	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.723	31.036	28.143	23.433	11.573	36.942	34.085	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.721	31.051	28.085	23.651	10.758	38.226	33.436	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.723	31.036	28.143	23.433	11.572	36.943	36.110	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.700	31.175	27.587	26.250	13.694	31.326	31.453	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.702	31.161	27.645	26.031	14.508	30.042	34.126	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.700	31.175	27.587	26.250	13.693	31.326	33.477	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.702	31.161	27.645	26.032	14.508	30.042	36.151	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.703	31.157	27.660	25.976	15.417	37.794	31.428	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.705	31.143	27.718	25.758	16.231	36.510	34.102	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.703	31.157	27.660	25.976	15.417	37.794	33.453	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.705	31.143	27.718	25.758	16.231	36.511	36.127	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.824	30.431	31.786	27.412	8.405	31.881	31.431	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.826	30.416	31.844	27.193	9.219	30.598	34.105	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.824	30.431	31.786	27.412	8.405	31.881	33.456	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.826	30.416	31.844	27.194	9.219	30.598	36.130	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.827	30.412	31.859	27.138	10.128	38.349	31.407	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.830	30.398	31.917	26.920	10.943	37.066	34.080	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.827	30.412	31.859	27.138	10.128	38.349	33.432	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.830	30.398	31.917	26.920	10.942	37.066	36.105	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.806	30.537	31.361	29.737	13.064	31.449	31.448	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.809	30.522	31.419	29.518	13.878	30.166	34.121	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.806	30.537	31.361	29.737	13.064	31.449	33.473	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.809	30.522	31.419	29.519	13.878	30.166	36.146	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.809	30.519	31.434	29.463	14.787	37.917	31.423	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.812	30.504	31.492	29.245	15.601	36.634	34.097	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.809	30.519	31.434	29.463	14.787	37.917	33.448	
+D+0.750Lr+0.750L+0.450W+H, LL Com	53.812	30.504	31.492	29.245	15.601	36.634	36.122	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.127	32.866	24.975	24.507	8.885	31.787	31.435	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.130	32.852	25.033	24.289	9.699	30.504	34.108	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.127	32.866	24.975	24.507	8.884	31.787	33.460	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.130	32.852	25.033	24.289	9.699	30.504	36.133	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.130	32.848	25.048	24.234	10.608	38.255	31.410	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.133	32.834	25.106	24.016	11.422	36.972	34.084	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.130	32.848	25.048	24.234	10.608	38.255	33.435	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.133	32.834	25.106	24.016	11.422	36.972	36.109	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.109	32.973	24.550	26.832	13.543	31.355	31.451	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.112	32.958	24.608	26.614	14.357	30.072	34.125	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.109	32.973	24.550	26.832	13.543	31.355	33.476	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.112	32.958	24.608	26.614	14.357	30.072	36.150	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.113	32.954	24.623	26.559	15.266	37.823	31.427	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.115	32.940	24.681	26.341	16.081	36.540	34.101	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.113	32.954	24.623	26.559	15.266	37.824	33.452	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.115	32.940	24.681	26.341	16.080	36.540	36.126	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.234	32.228	28.749	27.994	8.255	31.910	31.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.236	32.213	28.807	27.776	9.069	30.627	34.104	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.234	32.228	28.749	27.994	8.255	31.911	33.455	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.236	32.213	28.807	27.776	9.069	30.627	36.128	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.237	32.210	28.822	27.721	9.978	38.379	31.406	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.239	32.195	28.880	27.503	10.792	37.095	34.079	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.237	32.210	28.822	27.721	9.978	38.379	33.430	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.239	32.195	28.880	27.503	10.792	37.096	36.104	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.216	32.334	28.324	30.319	12.913	31.478	31.447	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.218	32.320	28.382	30.101	13.728	30.195	34.120	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.216	32.334	28.324	30.319	12.913	31.479	33.472	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.218	32.320	28.382	30.101	13.727	30.195	36.145	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.219	32.316	28.397	30.046	14.636	37.947	31.422	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.221	32.301	28.455	29.828	15.451	36.663	34.096	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.219	32.316	28.397	30.046	14.636	37.947	33.447	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.221	32.301	28.455	29.828	15.451	36.664	36.121	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.898	35.098	27.341	24.104	8.989	31.767	31.436	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.901	35.083	27.399	23.886	9.803	30.483	34.109	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.898	35.098	27.341	24.104	8.989	31.767	33.460	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.901	35.083	27.399	23.886	9.803	30.484	36.134	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.901	35.080	27.414	23.831	10.712	38.235	31.411	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.904	35.065	27.472	23.613	11.526	36.951	34.085	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.901	35.080	27.414	23.831	10.712	38.235	33.436	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.904	35.065	27.472	23.613	11.526	36.952	36.110	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.881	35.204	26.916	26.429	13.647	31.335	31.452	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.883	35.190	26.974	26.211	14.462	30.051	34.126	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.881	35.204	26.916	26.429	13.647	31.335	33.477	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.883	35.190	26.974	26.211	14.461	30.052	36.151	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.884	35.186	26.989	26.156	15.371	37.803	31.428	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.886	35.171	27.047	25.938	16.185	36.519	34.102	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.884	35.186	26.989	26.156	15.370	37.803	33.453	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.886	35.171	27.047	25.938	16.185	36.520	36.126	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.005	34.459	31.115	27.591	8.359	31.890	31.431	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.007	34.445	31.173	27.373	9.173	30.607	34.104	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.005	34.459	31.115	27.591	8.359	31.890	33.456	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.007	34.445	31.173	27.373	9.173	30.607	36.129	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.008	34.441	31.188	27.318	10.082	38.358	31.406	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.010	34.427	31.246	27.100	10.896	37.075	34.080	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.008	34.441	31.188	27.318	10.082	38.358	33.431	
+D+0.750Lr+0.750L+0.450W+H, LL Com	61.010	34.427	31.246	27.100	10.896	37.075	36.105	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.987	34.566	30.690	29.916	13.017	31.458	31.447	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.989	34.551	30.748	29.698	13.832	30.175	34.121	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.987	34.566	30.690	29.916	13.017	31.458	33.472	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.989	34.551	30.748	29.698	13.831	30.175	36.146	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.990	34.547	30.762	29.643	14.741	37.926	31.423	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.992	34.533	30.821	29.425	15.555	36.643	34.097	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.990	34.547	30.762	29.643	14.740	37.927	33.448	
+D+0.750Lr+0.750L+0.450W+H, LL Com	60.992	34.533	30.821	29.425	15.555	36.643	36.122	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.288	51.021	44.790	42.279	27.391	36.936	51.369	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.285	51.036	44.732	42.497	26.577	38.219	50.720	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.288	51.021	44.790	42.279	27.391	36.936	53.394	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.288	51.017	44.805	42.224	28.300	44.687	48.671	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.291	51.003	44.863	42.006	29.114	43.404	51.345	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.288	51.017	44.805	42.224	28.300	44.688	50.696	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.291	51.003	44.863	42.006	29.114	43.404	53.370	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.268	51.142	44.307	44.822	31.235	37.787	48.712	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.270	51.127	44.365	44.604	32.050	36.504	51.386	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.268	51.142	44.307	44.823	31.235	37.788	50.737	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.270	51.127	44.365	44.604	32.049	36.504	53.411	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.271	51.124	44.380	44.549	32.959	44.255	48.688	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.273	51.109	44.438	44.331	33.773	42.972	51.361	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.271	51.124	44.380	44.549	32.958	44.256	50.713	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.273	51.109	44.438	44.331	33.773	42.972	53.386	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.392	50.397	48.506	45.984	25.947	38.343	48.691	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.394	50.383	48.564	45.766	26.761	37.059	51.364	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.392	50.397	48.506	45.984	25.947	38.343	50.715	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.394	50.383	48.564	45.766	26.761	37.059	53.389	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.395	50.379	48.579	45.711	27.670	44.811	48.666	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.397	50.364	48.637	45.493	28.484	43.527	51.340	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.395	50.379	48.579	45.711	27.670	44.811	50.691	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.397	50.364	48.637	45.493	28.484	43.528	53.365	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.374	50.503	48.081	48.309	30.605	37.911	48.707	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.376	50.489	48.139	48.091	31.420	36.627	51.381	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.374	50.504	48.081	48.310	30.605	37.911	50.732	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.376	50.489	48.139	48.091	31.419	36.628	53.406	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.377	50.485	48.154	48.036	32.329	44.379	48.683	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.380	50.471	48.212	47.818	33.143	43.095	51.357	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.377	50.485	48.154	48.036	32.328	44.379	50.708	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.380	50.471	48.212	47.818	33.143	43.096	53.381	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.056	53.267	47.098	42.094	26.681	38.199	48.696	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.059	53.253	47.156	41.876	27.495	36.915	51.370	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	106.056	53.267	47.098	42.094	26.681	38.199	50.721	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.059	53.253	47.156	41.876	27.495	36.916	53.395	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.059	53.249	47.171	41.821	28.404	44.667	48.672	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.062	53.235	47.229	41.603	29.218	43.384	51.345	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.059	53.249	47.171	41.821	28.404	44.667	50.697	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.062	53.235	47.229	41.603	29.218	43.384	53.370	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.039	53.374	46.673	44.419	31.339	37.767	48.713	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.041	53.359	46.731	44.201	32.154	36.483	51.387	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.039	53.374	46.673	44.419	31.339	37.767	50.738	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.041	53.359	46.731	44.201	32.153	36.484	53.411	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.042	53.355	46.746	44.146	33.063	44.235	48.689	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.044	53.341	46.804	43.928	33.877	42.952	51.362	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.042	53.355	46.746	44.146	33.062	44.235	50.713	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.044	53.341	46.804	43.928	33.877	42.952	53.387	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.163	52.629	50.872	45.581	26.051	38.322	48.691	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.165	52.614	50.930	45.363	26.865	37.039	51.365	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.163	52.629	50.872	45.581	26.051	38.322	50.716	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.165	52.614	50.930	45.363	26.865	37.039	53.390	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.166	52.611	50.945	45.308	27.774	44.790	48.667	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.168	52.596	51.003	45.090	28.588	43.507	51.341	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.166	52.611	50.945	45.308	27.774	44.791	50.692	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.168	52.596	51.003	45.090	28.588	43.507	53.366	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.145	52.735	50.447	47.906	30.710	37.890	48.708	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.148	52.721	50.505	47.688	31.524	36.607	51.382	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.145	52.735	50.447	47.906	30.709	37.891	50.733	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.148	52.721	50.505	47.688	31.524	36.607	53.407	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.148	52.717	50.520	47.633	32.433	44.358	48.684	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.151	52.702	50.578	47.415	33.247	43.075	51.357	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.148	52.717	50.520	47.633	32.433	44.359	50.709	
+D+0.750L+0.750S+0.450W+H, LL Comb	106.151	52.702	50.578	47.415	33.247	43.075	53.382	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.466	55.064	44.061	42.677	26.530	38.228	48.695	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.468	55.050	44.119	42.459	27.345	36.945	51.369	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.466	55.064	44.061	42.677	26.530	38.229	50.720	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.468	55.050	44.119	42.459	27.344	36.945	53.394	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.469	55.046	44.134	42.404	28.254	44.696	48.671	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.471	55.032	44.192	42.185	29.068	43.413	51.344	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.469	55.046	44.134	42.404	28.253	44.697	50.696	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.471	55.032	44.192	42.186	29.068	43.413	53.369	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.448	55.171	43.636	45.002	31.189	37.796	48.712	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.451	55.156	43.694	44.784	32.003	36.513	51.385	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.448	55.171	43.636	45.002	31.189	37.797	50.737	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.451	55.156	43.694	44.784	32.003	36.513	53.410	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.451	55.153	43.709	44.729	32.912	44.264	48.687	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.454	55.138	43.767	44.510	33.726	42.981	51.361	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.451	55.153	43.709	44.729	32.912	44.265	50.712	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.454	55.138	43.767	44.511	33.726	42.981	53.386	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.572	54.426	47.835	46.164	25.900	38.352	48.690	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.575	54.411	47.893	45.946	26.715	37.068	51.364	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.572	54.426	47.835	46.164	25.900	38.352	50.715	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.575	54.411	47.893	45.946	26.715	37.069	53.389	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.575	54.408	47.908	45.891	27.624	44.820	48.666	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.578	54.393	47.966	45.672	28.438	43.536	51.340	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.575	54.408	47.908	45.891	27.624	44.820	50.691	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.578	54.393	47.966	45.673	28.438	43.537	53.364	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.555	54.532	47.410	48.489	30.559	37.920	48.707	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.557	54.518	47.468	48.271	31.373	36.636	51.381	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.555	54.532	47.410	48.489	30.559	37.920	50.732	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.557	54.518	47.468	48.271	31.373	36.637	53.405	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.558	54.514	47.483	48.216	32.282	44.388	48.683	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.450W+H, LL Comb	113.560	54.500	47.541	47.997	33.096	43.105	51.356	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.558	54.514	47.483	48.216	32.282	44.388	50.707	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.560	54.500	47.541	47.998	33.096	43.105	53.381	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.237	57.296	46.427	42.274	26.635	38.208	48.696	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.239	57.281	46.485	42.056	27.449	36.924	51.369	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.237	57.296	46.427	42.274	26.634	38.208	50.721	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.239	57.281	46.485	42.056	27.449	36.925	53.394	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.240	57.278	46.500	42.000	28.358	44.676	48.671	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.242	57.263	46.558	41.782	29.172	43.393	51.345	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.240	57.278	46.500	42.001	28.358	44.676	50.696	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.242	57.263	46.558	41.782	29.172	43.393	53.370	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.219	57.402	46.002	44.599	31.293	37.776	48.713	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.222	57.388	46.060	44.381	32.107	36.493	51.386	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.219	57.402	46.002	44.599	31.293	37.776	50.737	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.222	57.388	46.060	44.381	32.107	36.493	53.411	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.222	57.384	46.075	44.326	33.016	44.244	48.688	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.225	57.370	46.133	44.107	33.831	42.961	51.362	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.222	57.384	46.075	44.326	33.016	44.244	50.713	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.225	57.370	46.133	44.107	33.830	42.961	53.387	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.343	56.658	50.201	45.761	26.005	38.331	48.691	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.346	56.643	50.259	45.543	26.819	37.048	51.365	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.343	56.658	50.201	45.761	26.004	38.332	50.716	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.346	56.643	50.259	45.543	26.819	37.048	53.390	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.346	56.639	50.274	45.487	27.728	44.799	48.667	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.349	56.625	50.332	45.269	28.542	43.516	51.340	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.346	56.639	50.274	45.488	27.728	44.800	50.692	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.349	56.625	50.332	45.269	28.542	43.516	53.365	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.326	56.764	49.776	48.086	30.663	37.899	48.708	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.328	56.749	49.834	47.868	31.477	36.616	51.381	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.326	56.764	49.776	48.086	30.663	37.900	50.733	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.328	56.749	49.834	47.868	31.477	36.616	53.406	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.329	56.746	49.849	47.813	32.386	44.367	48.683	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.331	56.731	49.907	47.594	33.201	43.084	51.357	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.329	56.746	49.849	47.813	32.386	44.368	50.708	
+D+0.750L+0.750S+0.450W+H, LL Comb	113.331	56.731	49.907	47.594	33.200	43.084	53.382	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.453	51.624	44.548	42.650	26.150	38.877	46.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.450	51.639	44.490	42.868	25.336	40.160	46.124	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.453	51.624	44.548	42.650	26.150	38.877	48.797	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.453	51.620	44.563	42.595	27.059	46.628	44.075	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.456	51.606	44.621	42.377	27.874	45.345	46.748	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.453	51.620	44.563	42.595	27.059	46.628	46.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.456	51.606	44.621	42.377	27.873	45.345	48.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.433	51.745	44.064	45.193	29.995	39.728	44.116	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.435	51.730	44.123	44.975	30.809	38.445	46.789	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.433	51.745	44.064	45.193	29.994	39.728	46.141	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.435	51.730	44.123	44.975	30.809	38.445	48.814	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.436	51.727	44.137	44.920	31.718	46.196	44.091	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.438	51.712	44.195	44.702	32.532	44.913	46.765	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.436	51.727	44.137	44.920	31.718	46.197	46.116	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.438	51.712	44.195	44.702	32.532	44.913	48.790	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.557	51.000	48.264	46.355	24.706	40.283	44.094	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.559	50.986	48.322	46.137	25.520	39.000	46.768	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.557	51.000	48.264	46.355	24.706	40.284	46.119	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.559	50.986	48.322	46.137	25.520	39.000	48.793	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.560	50.982	48.336	46.082	26.429	46.752	44.070	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.562	50.967	48.395	45.864	27.244	45.468	46.744	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.560	50.982	48.336	46.082	26.429	46.752	46.095	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.562	50.967	48.395	45.864	27.243	45.468	48.768	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.539	51.106	47.838	48.680	29.365	39.851	44.111	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	109.542	51.092	47.897	48.462	30.179	38.568	46.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.539	51.106	47.838	48.680	29.364	39.852	46.136	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.542	51.092	47.897	48.462	30.179	38.568	48.809	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.542	51.088	47.911	48.407	31.088	46.320	44.087	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.545	51.074	47.969	48.189	31.902	45.036	46.760	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.542	51.088	47.911	48.407	31.088	46.320	46.111	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.545	51.074	47.969	48.189	31.902	45.037	48.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.221	53.870	46.856	42.465	25.440	40.139	44.100	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.224	53.856	46.914	42.247	26.254	38.856	46.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.221	53.870	46.856	42.465	25.440	40.140	46.125	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.224	53.856	46.914	42.247	26.254	38.856	48.798	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.225	53.852	46.928	42.192	27.163	46.608	44.075	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.227	53.838	46.987	41.974	27.978	45.324	46.749	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.225	53.852	46.928	42.192	27.163	46.608	46.100	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.227	53.838	46.987	41.974	27.977	45.325	48.774	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.204	53.977	46.430	44.790	30.099	39.708	44.117	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.206	53.962	46.489	44.572	30.913	38.424	46.790	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.204	53.977	46.430	44.790	30.098	39.708	46.141	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.206	53.962	46.489	44.572	30.913	38.425	48.815	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.207	53.958	46.503	44.517	31.822	46.176	44.092	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.209	53.944	46.561	44.299	32.636	44.892	46.766	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.207	53.958	46.503	44.517	31.822	46.176	46.117	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.209	53.944	46.561	44.299	32.636	44.893	48.791	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.328	53.232	50.630	45.952	24.810	40.263	44.095	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.330	53.217	50.688	45.734	25.624	38.980	46.769	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.328	53.232	50.629	45.952	24.810	40.263	46.120	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.330	53.217	50.688	45.734	25.624	38.980	48.794	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.331	53.214	50.702	45.679	26.533	46.731	44.071	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.333	53.199	50.761	45.461	27.348	45.448	46.744	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.331	53.214	50.702	45.679	26.533	46.731	46.095	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.333	53.199	50.761	45.461	27.347	45.448	48.769	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.310	53.338	50.204	48.277	29.469	39.831	44.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.313	53.324	50.262	48.059	30.283	38.548	46.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.310	53.338	50.204	48.277	29.469	39.831	46.137	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.313	53.324	50.262	48.059	30.283	38.548	48.810	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.313	53.320	50.277	48.004	31.192	46.299	44.087	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.316	53.305	50.335	47.786	32.006	45.016	46.761	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.313	53.320	50.277	48.004	31.192	46.300	46.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	109.316	53.305	50.335	47.786	32.006	45.016	48.786	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.631	55.667	43.819	43.048	25.290	40.169	44.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.633	55.653	43.877	42.830	26.104	38.886	46.772	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.631	55.667	43.819	43.048	25.289	40.169	46.123	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.633	55.653	43.877	42.830	26.104	38.886	48.797	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.634	55.649	43.891	42.774	27.013	46.637	44.074	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.636	55.635	43.950	42.556	27.827	45.354	46.748	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.634	55.649	43.891	42.774	27.013	46.638	46.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.636	55.635	43.950	42.556	27.827	45.354	48.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.613	55.774	43.393	45.373	29.948	39.737	44.115	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.616	55.759	43.452	45.155	30.762	38.454	46.789	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.613	55.774	43.393	45.373	29.948	39.737	46.140	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.616	55.759	43.452	45.155	30.762	38.454	48.814	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.616	55.756	43.466	45.099	31.671	46.205	44.091	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.619	55.741	43.524	44.881	32.486	44.922	46.765	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.616	55.756	43.466	45.099	31.671	46.206	46.116	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.619	55.741	43.524	44.881	32.485	44.922	48.790	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.737	55.029	47.593	46.535	24.660	40.292	44.094	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.740	55.014	47.651	46.317	25.474	39.009	46.768	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.737	55.029	47.592	46.535	24.660	40.293	46.119	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.740	55.014	47.651	46.317	25.474	39.009	48.792	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
+D+0.750L+0.750S+0.5250E+H, LL Com	116.740	55.011	47.665	46.261	26.383	46.761	44.070	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.743	54.996	47.724	46.043	27.197	45.477	46.743	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.740	55.011	47.665	46.261	26.383	46.761	46.094	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.743	54.996	47.724	46.043	27.197	45.478	48.768	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.720	55.135	47.167	48.860	29.318	39.860	44.111	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.722	55.121	47.225	48.642	30.133	38.577	46.784	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.720	55.135	47.167	48.860	29.318	39.861	46.135	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.722	55.121	47.225	48.642	30.132	38.577	48.809	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.723	55.117	47.240	48.586	31.041	46.329	44.086	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.725	55.102	47.298	48.368	31.856	45.045	46.760	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.723	55.117	47.240	48.586	31.041	46.329	46.111	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.725	55.102	47.298	48.368	31.856	45.046	48.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.402	57.899	46.185	42.645	25.394	40.149	44.099	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.404	57.884	46.243	42.426	26.208	38.865	46.773	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.402	57.899	46.184	42.645	25.394	40.149	46.124	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.404	57.884	46.243	42.427	26.208	38.866	48.798	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.405	57.881	46.257	42.371	27.117	46.617	44.075	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.408	57.866	46.316	42.153	27.931	45.333	46.749	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.405	57.881	46.257	42.371	27.117	46.617	46.100	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.408	57.866	46.316	42.153	27.931	45.334	48.774	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.384	58.005	45.759	44.970	30.052	39.717	44.116	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.387	57.991	45.817	44.751	30.867	38.433	46.790	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.384	58.005	45.759	44.970	30.052	39.717	46.141	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.387	57.991	45.817	44.752	30.866	38.434	48.815	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.387	57.987	45.832	44.696	31.776	46.185	44.092	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.390	57.973	45.890	44.478	32.590	44.902	46.765	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.387	57.987	45.832	44.696	31.775	46.185	46.117	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.390	57.973	45.890	44.478	32.590	44.902	48.790	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.508	57.261	49.958	46.132	24.764	40.272	44.095	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.511	57.246	50.017	45.913	25.578	38.989	46.768	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.508	57.261	49.958	46.132	24.764	40.272	46.120	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.511	57.246	50.017	45.914	25.578	38.989	48.793	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.512	57.242	50.031	45.858	26.487	46.740	44.070	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.514	57.228	50.089	45.640	27.301	45.457	46.744	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.512	57.242	50.031	45.858	26.487	46.741	46.095	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.514	57.228	50.089	45.640	27.301	45.457	48.769	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.491	57.367	49.533	48.457	29.422	39.840	44.111	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.493	57.352	49.591	48.238	30.237	38.557	46.785	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.491	57.367	49.533	48.457	29.422	39.840	46.136	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.493	57.352	49.591	48.239	30.236	38.557	48.810	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.494	57.349	49.606	48.183	31.146	46.308	44.087	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.496	57.334	49.664	47.965	31.960	45.025	46.761	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.494	57.349	49.606	48.183	31.145	46.309	46.112	
+D+0.750L+0.750S+0.5250E+H, LL Com	116.496	57.334	49.664	47.965	31.960	45.025	48.786	
+0.60D+0.60W+0.60H	32.368	17.303	15.388	14.597	5.359	19.067	18.861	
+0.60D+0.70E+0.60H	36.588	18.106	15.064	15.091	3.704	21.654	12.733	
D Only	53.947	28.838	25.646	24.328	8.931	31.778	31.435	
Lr Only, LL Comb Run (******L)								
Lr Only, LL Comb Run (*****L*)								
Lr Only, LL Comb Run (*****LL)								
Lr Only, LL Comb Run (****L**)								
Lr Only, LL Comb Run (****L*L)								
Lr Only, LL Comb Run (****LL*)								
Lr Only, LL Comb Run (****LLL)								
Lr Only, LL Comb Run (***L***)								
Lr Only, LL Comb Run (***L**L)								
Lr Only, LL Comb Run (***L*L*)								
Lr Only, LL Comb Run (***L*LL)								
Lr Only, LL Comb Run (***LL**)								

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (***LL*L)								
Lr Only, LL Comb Run (***LLL*)								
Lr Only, LL Comb Run (***LLLL)								
Lr Only, LL Comb Run (**L****)								
Lr Only, LL Comb Run (**L***L)								
Lr Only, LL Comb Run (**L**L*)								
Lr Only, LL Comb Run (**L**LL)								
Lr Only, LL Comb Run (**L*L**)								
Lr Only, LL Comb Run (**L*L*L)								
Lr Only, LL Comb Run (**L*LL*)								
Lr Only, LL Comb Run (**L*LLL)								
Lr Only, LL Comb Run (**LL***)								
Lr Only, LL Comb Run (**LL**L)								
Lr Only, LL Comb Run (**LL*L*)								
Lr Only, LL Comb Run (**LL*LL)								
Lr Only, LL Comb Run (**LLL**)								
Lr Only, LL Comb Run (**LLL*L)								
Lr Only, LL Comb Run (**LLLL*)								
Lr Only, LL Comb Run (**LLLLL)								
Lr Only, LL Comb Run (*L*****)								
Lr Only, LL Comb Run (*L****L)								
Lr Only, LL Comb Run (*L***L*)								
Lr Only, LL Comb Run (*L***LL)								
Lr Only, LL Comb Run (*L**L**)								
Lr Only, LL Comb Run (*L**L*L)								
Lr Only, LL Comb Run (*L**LL*)								
Lr Only, LL Comb Run (*L**LLL)								
Lr Only, LL Comb Run (*L*L***)								
Lr Only, LL Comb Run (*L*L**L)								
Lr Only, LL Comb Run (*L*L*L*)								
Lr Only, LL Comb Run (*L*L*LL)								
Lr Only, LL Comb Run (*L*LL**)								
Lr Only, LL Comb Run (*L*LL*L)								
Lr Only, LL Comb Run (*L*LLL*)								
Lr Only, LL Comb Run (*L*LLLL)								
Lr Only, LL Comb Run (*LL****)								
Lr Only, LL Comb Run (*LL***L)								
Lr Only, LL Comb Run (*LL**L*)								
Lr Only, LL Comb Run (*LL**LL)								
Lr Only, LL Comb Run (*LL*L**)								
Lr Only, LL Comb Run (*LL*L*L)								
Lr Only, LL Comb Run (*LL*LL*)								
Lr Only, LL Comb Run (*LL*LLL)								
Lr Only, LL Comb Run (*LLL***)								
Lr Only, LL Comb Run (*LLL**L)								
Lr Only, LL Comb Run (*LLL*L*)								
Lr Only, LL Comb Run (*LLL*LL)								
Lr Only, LL Comb Run (*LLLL**)								
Lr Only, LL Comb Run (*LLLL*L)								
Lr Only, LL Comb Run (*LLLLL*)								
Lr Only, LL Comb Run (*LLLLLL)								
Lr Only, LL Comb Run (L******)								
Lr Only, LL Comb Run (L*****L)								
Lr Only, LL Comb Run (L****L*)								
Lr Only, LL Comb Run (L****LL)								
Lr Only, LL Comb Run (L***L**)								
Lr Only, LL Comb Run (L***L*L)								
Lr Only, LL Comb Run (L***LL*)								
Lr Only, LL Comb Run (L***LLL)								

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
Lr Only, LL Comb Run (L**L***)								
Lr Only, LL Comb Run (L**L**L)								
Lr Only, LL Comb Run (L**L*L*)								
Lr Only, LL Comb Run (L**L*LL)								
Lr Only, LL Comb Run (L**LL**)								
Lr Only, LL Comb Run (L**LL*L)								
Lr Only, LL Comb Run (L**LLL*)								
Lr Only, LL Comb Run (L**LLLL)								
Lr Only, LL Comb Run (L*L****)								
Lr Only, LL Comb Run (L*L***L)								
Lr Only, LL Comb Run (L*L**L*)								
Lr Only, LL Comb Run (L*L**LL)								
Lr Only, LL Comb Run (L*L*L**)								
Lr Only, LL Comb Run (L*L*L*L)								
Lr Only, LL Comb Run (L*L*LL*)								
Lr Only, LL Comb Run (L*L*LLL)								
Lr Only, LL Comb Run (L*LL***)								
Lr Only, LL Comb Run (L*LL**L)								
Lr Only, LL Comb Run (L*LL*L*)								
Lr Only, LL Comb Run (L*LL*LL)								
Lr Only, LL Comb Run (L*LLL**)								
Lr Only, LL Comb Run (L*LLL*L)								
Lr Only, LL Comb Run (L*LLLL*)								
Lr Only, LL Comb Run (L*LLLLL)								
Lr Only, LL Comb Run (LL*****)								
Lr Only, LL Comb Run (LL****L)								
Lr Only, LL Comb Run (LL***L*)								
Lr Only, LL Comb Run (LL***LL)								
Lr Only, LL Comb Run (LL**L**)								
Lr Only, LL Comb Run (LL**L*L)								
Lr Only, LL Comb Run (LL**LL*)								
Lr Only, LL Comb Run (LL**LLL)								
Lr Only, LL Comb Run (LL*L***)								
Lr Only, LL Comb Run (LL*L**L)								
Lr Only, LL Comb Run (LL*L*L*)								
Lr Only, LL Comb Run (LL*L*LL)								
Lr Only, LL Comb Run (LL*LL**)								
Lr Only, LL Comb Run (LL*LL*L)								
Lr Only, LL Comb Run (LL*LLL*)								
Lr Only, LL Comb Run (LL*LLLL)								
Lr Only, LL Comb Run (LLL****)								
Lr Only, LL Comb Run (LLL***L)								
Lr Only, LL Comb Run (LLL**L*)								
Lr Only, LL Comb Run (LLL**LL)								
Lr Only, LL Comb Run (LLL*L**)								
Lr Only, LL Comb Run (LLL*L*L)								
Lr Only, LL Comb Run (LLL*LL*)								
Lr Only, LL Comb Run (LLL*LLL)								
Lr Only, LL Comb Run (LLLL***)								
Lr Only, LL Comb Run (LLLL**L)								
Lr Only, LL Comb Run (LLLL*L*)								
Lr Only, LL Comb Run (LLLL*LL)								
Lr Only, LL Comb Run (LLLLL**)								
Lr Only, LL Comb Run (LLLLL*L)								
Lr Only, LL Comb Run (LLLLLL*)								
Lr Only, LL Comb Run (LLLLLLL)								
L Only, LL Comb Run (******L)	0.003	-0.019	0.078	-0.291	1.086	-1.711	3.565	
L Only, LL Comb Run (*****L*)	-0.000	0.000	-0.000	0.000	-0.000	0.000	2.700	
L Only, LL Comb Run (*****LL)	0.003	-0.019	0.078	-0.291	1.085	-1.711	6.265	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (****L**)	0.004	-0.024	0.097	-0.364	2.298	8.624	-0.032	
L Only, LL Comb Run (****L*L)	0.007	-0.044	0.175	-0.655	3.383	6.913	3.532	
L Only, LL Comb Run (****LL*)	0.004	-0.024	0.097	-0.364	2.297	8.625	2.667	
L Only, LL Comb Run (****LLL)	0.007	-0.044	0.175	-0.655	3.383	6.914	6.232	
L Only, LL Comb Run (***L***)	-0.024	0.142	-0.567	3.100	6.211	-0.576	0.022	
L Only, LL Comb Run (***L**L)	-0.020	0.122	-0.489	2.809	7.297	-2.287	3.587	
L Only, LL Comb Run (***L*L*)	-0.024	0.142	-0.567	3.100	6.211	-0.575	2.722	
L Only, LL Comb Run (***L*LL)	-0.020	0.122	-0.489	2.809	7.297	-2.287	6.287	
L Only, LL Comb Run (***LL**)	-0.020	0.117	-0.470	2.736	8.509	8.048	-0.010	
L Only, LL Comb Run (***LL*L)	-0.016	0.098	-0.392	2.445	9.595	6.337	3.555	
L Only, LL Comb Run (***LLL*)	-0.020	0.117	-0.470	2.736	8.509	8.049	2.690	
L Only, LL Comb Run (***LLLL)	-0.016	0.098	-0.392	2.445	9.594	6.338	6.254	
L Only, LL Comb Run (**L****)	0.142	-0.851	5.032	4.649	-0.840	0.165	-0.006	
L Only, LL Comb Run (**L***L)	0.145	-0.871	5.109	4.359	0.246	-1.547	3.558	
L Only, LL Comb Run (**L**L*)	0.142	-0.851	5.032	4.649	-0.840	0.165	2.693	
L Only, LL Comb Run (**L**LL)	0.145	-0.871	5.109	4.359	0.245	-1.546	6.258	
L Only, LL Comb Run (**L*L**)	0.146	-0.876	5.129	4.285	1.458	8.789	-0.039	
L Only, LL Comb Run (**L*L*L)	0.149	-0.895	5.207	3.994	2.543	7.078	3.526	
L Only, LL Comb Run (**L*LL*)	0.146	-0.876	5.129	4.285	1.457	8.789	2.661	
L Only, LL Comb Run (**L*LLL)	0.149	-0.895	5.207	3.994	2.543	7.078	6.226	
L Only, LL Comb Run (**LL***)	0.118	-0.710	4.465	7.749	5.371	-0.411	0.016	
L Only, LL Comb Run (**LL**L)	0.121	-0.729	4.542	7.459	6.457	-2.122	3.581	
L Only, LL Comb Run (**LL*L*)	0.118	-0.710	4.465	7.749	5.371	-0.411	2.716	
L Only, LL Comb Run (**LL*LL)	0.121	-0.729	4.542	7.459	6.457	-2.122	6.281	
L Only, LL Comb Run (**LLL**)	0.122	-0.734	4.562	7.385	7.669	8.213	-0.017	
L Only, LL Comb Run (**LLL*L)	0.126	-0.753	4.640	7.094	8.755	6.502	3.548	
L Only, LL Comb Run (**LLLL*)	0.122	-0.734	4.562	7.385	7.669	8.213	2.683	
L Only, LL Comb Run (**LLLLL)	0.126	-0.753	4.640	7.094	8.754	6.502	6.248	
L Only, LL Comb Run (*L*****)	-0.305	2.975	3.155	-0.537	0.139	-0.027	0.001	
L Only, LL Comb Run (*L****L)	-0.302	2.956	3.232	-0.828	1.225	-1.738	3.566	
L Only, LL Comb Run (*L***L*)	-0.305	2.975	3.155	-0.537	0.139	-0.027	2.701	
L Only, LL Comb Run (*L***LL)	-0.302	2.956	3.232	-0.828	1.224	-1.738	6.266	
L Only, LL Comb Run (*L**L**)	-0.301	2.951	3.252	-0.902	2.436	8.597	-0.031	
L Only, LL Comb Run (*L**L*L)	-0.298	2.932	3.329	-1.193	3.522	6.886	3.533	
L Only, LL Comb Run (*L**LL*)	-0.301	2.951	3.252	-0.902	2.436	8.598	2.668	
L Only, LL Comb Run (*L**LLL)	-0.298	2.932	3.329	-1.192	3.522	6.886	6.233	
L Only, LL Comb Run (*L*L***)	-0.329	3.117	2.588	2.563	6.350	-0.603	0.023	
L Only, LL Comb Run (*L*L**L)	-0.326	3.098	2.665	2.272	7.436	-2.314	3.588	
L Only, LL Comb Run (*L*L*L*)	-0.329	3.117	2.588	2.563	6.350	-0.603	2.723	
L Only, LL Comb Run (*L*L*LL)	-0.326	3.098	2.665	2.272	7.436	-2.314	6.288	
L Only, LL Comb Run (*L*LL**)	-0.325	3.093	2.685	2.198	8.648	8.021	-0.009	
L Only, LL Comb Run (*L*LL*L)	-0.322	3.073	2.762	1.907	9.734	6.310	3.556	
L Only, LL Comb Run (*L*LLL*)	-0.325	3.093	2.685	2.198	8.648	8.022	2.691	
L Only, LL Comb Run (*L*LLLL)	-0.322	3.073	2.762	1.908	9.733	6.310	6.256	
L Only, LL Comb Run (*LL****)	-0.163	2.124	8.186	4.112	-0.701	0.137	-0.005	
L Only, LL Comb Run (*LL***L)	-0.160	2.105	8.264	3.821	0.385	-1.574	3.560	
L Only, LL Comb Run (*LL**L*)	-0.163	2.124	8.186	4.112	-0.701	0.138	2.694	
L Only, LL Comb Run (*LL**LL)	-0.160	2.105	8.264	3.821	0.384	-1.573	6.259	
L Only, LL Comb Run (*LL*L**)	-0.159	2.100	8.284	3.748	1.597	8.762	-0.038	
L Only, LL Comb Run (*LL*L*L)	-0.156	2.080	8.361	3.457	2.682	7.050	3.527	
L Only, LL Comb Run (*LL*LL*)	-0.159	2.100	8.284	3.748	1.596	8.762	2.662	
L Only, LL Comb Run (*LL*LLL)	-0.156	2.080	8.361	3.457	2.682	7.051	6.227	
L Only, LL Comb Run (*LLL***)	-0.187	2.266	7.619	7.212	5.510	-0.439	0.017	
L Only, LL Comb Run (*LLL**L)	-0.184	2.246	7.697	6.921	6.596	-2.150	3.582	
L Only, LL Comb Run (*LLL*L*)	-0.187	2.266	7.619	7.212	5.510	-0.438	2.717	
L Only, LL Comb Run (*LLL*LL)	-0.184	2.246	7.697	6.921	6.596	-2.149	6.282	
L Only, LL Comb Run (*LLLL**)	-0.183	2.242	7.717	6.848	7.808	8.186	-0.015	
L Only, LL Comb Run (*LLLL*L)	-0.180	2.222	7.794	6.557	8.894	6.475	3.549	
L Only, LL Comb Run (*LLLLL*)	-0.183	2.242	7.717	6.848	7.808	8.186	2.684	

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (*LLLLLL)	-0.180	2.222	7.794	6.557	8.893	6.475	6.249	
L Only, LL Comb Run (L******)	9.574	5.372	-0.895	0.239	-0.062	0.012	-0.000	
L Only, LL Comb Run (L*****L)	9.577	5.352	-0.817	-0.052	1.024	-1.699	3.564	
L Only, LL Comb Run (L****L*)	9.574	5.372	-0.895	0.239	-0.062	0.013	2.699	
L Only, LL Comb Run (L****LL)	9.577	5.352	-0.817	-0.052	1.024	-1.699	6.264	
L Only, LL Comb Run (L***L**)	9.578	5.347	-0.798	-0.125	2.236	8.636	-0.033	
L Only, LL Comb Run (L***L*L)	9.581	5.328	-0.720	-0.416	3.322	6.925	3.532	
L Only, LL Comb Run (L***LL*)	9.578	5.347	-0.798	-0.125	2.236	8.637	2.667	
L Only, LL Comb Run (L***LLL)	9.581	5.328	-0.720	-0.416	3.321	6.926	6.232	
L Only, LL Comb Run (L**L***)	9.550	5.513	-1.462	3.339	6.150	-0.564	0.022	
L Only, LL Comb Run (L**L**L)	9.554	5.494	-1.384	3.048	7.235	-2.275	3.587	
L Only, LL Comb Run (L**L*L*)	9.550	5.513	-1.462	3.339	6.149	-0.563	2.722	
L Only, LL Comb Run (L**L*LL)	9.554	5.494	-1.384	3.048	7.235	-2.274	6.287	
L Only, LL Comb Run (L**LL**)	9.555	5.489	-1.365	2.975	8.447	8.060	-0.011	
L Only, LL Comb Run (L**LL*L)	9.558	5.470	-1.287	2.684	9.533	6.349	3.554	
L Only, LL Comb Run (L**LLL*)	9.555	5.489	-1.365	2.975	8.447	8.061	2.689	
L Only, LL Comb Run (L**LLLL)	9.558	5.470	-1.287	2.684	9.533	6.350	6.254	
L Only, LL Comb Run (L*L****)	9.716	4.520	4.137	4.888	-0.902	0.177	-0.007	
L Only, LL Comb Run (L*L***L)	9.719	4.501	4.215	4.598	0.184	-1.534	3.558	
L Only, LL Comb Run (L*L**L*)	9.716	4.520	4.137	4.889	-0.902	0.177	2.693	
L Only, LL Comb Run (L*L**LL)	9.719	4.501	4.215	4.598	0.184	-1.534	6.258	
L Only, LL Comb Run (L*L*L**)	9.720	4.496	4.234	4.524	1.396	8.801	-0.039	
L Only, LL Comb Run (L*L*L*L)	9.723	4.477	4.312	4.233	2.482	7.090	3.526	
L Only, LL Comb Run (L*L*LL*)	9.720	4.496	4.234	4.524	1.396	8.801	2.660	
L Only, LL Comb Run (L*L*LLL)	9.723	4.477	4.312	4.233	2.481	7.090	6.225	
L Only, LL Comb Run (L*LL***)	9.692	4.662	3.570	7.989	5.310	-0.399	0.015	
L Only, LL Comb Run (L*LL**L)	9.696	4.643	3.648	7.698	6.395	-2.110	3.580	
L Only, LL Comb Run (L*LL*L*)	9.692	4.662	3.570	7.989	5.309	-0.399	2.715	
L Only, LL Comb Run (L*LL*LL)	9.696	4.643	3.648	7.698	6.395	-2.110	6.280	
L Only, LL Comb Run (L*LLL**)	9.696	4.638	3.667	7.624	7.607	8.225	-0.017	
L Only, LL Comb Run (L*LLL*L)	9.700	4.618	3.745	7.333	8.693	6.514	3.548	
L Only, LL Comb Run (L*LLLL*)	9.696	4.638	3.667	7.624	7.607	8.225	2.683	
L Only, LL Comb Run (L*LLLLL)	9.700	4.618	3.745	7.333	8.693	6.514	6.248	
L Only, LL Comb Run (LL*****)	9.269	8.347	2.260	-0.298	0.077	-0.015	0.001	
L Only, LL Comb Run (LL****L)	9.272	8.328	2.337	-0.589	1.163	-1.726	3.565	
L Only, LL Comb Run (LL***L*)	9.269	8.347	2.260	-0.298	0.077	-0.015	2.700	
L Only, LL Comb Run (LL***LL)	9.272	8.328	2.337	-0.589	1.162	-1.726	6.265	
L Only, LL Comb Run (LL**L**)	9.273	8.323	2.357	-0.663	2.375	8.609	-0.032	
L Only, LL Comb Run (LL**L*L)	9.276	8.303	2.434	-0.953	3.460	6.898	3.533	
L Only, LL Comb Run (LL**LL*)	9.273	8.323	2.357	-0.663	2.374	8.610	2.668	
L Only, LL Comb Run (LL**LLL)	9.276	8.303	2.434	-0.953	3.460	6.898	6.233	
L Only, LL Comb Run (LL*L***)	9.245	8.489	1.693	2.802	6.288	-0.591	0.023	
L Only, LL Comb Run (LL*L**L)	9.248	8.469	1.770	2.511	7.374	-2.302	3.588	
L Only, LL Comb Run (LL*L*L*)	9.245	8.489	1.693	2.802	6.288	-0.591	2.723	
L Only, LL Comb Run (LL*L*LL)	9.248	8.469	1.770	2.511	7.374	-2.302	6.288	
L Only, LL Comb Run (LL*LL**)	9.249	8.465	1.790	2.437	8.586	8.033	-0.010	
L Only, LL Comb Run (LL*LL*L)	9.252	8.445	1.868	2.147	9.672	6.322	3.555	
L Only, LL Comb Run (LL*LLL*)	9.249	8.465	1.790	2.438	8.586	8.034	2.690	
L Only, LL Comb Run (LL*LLLL)	9.252	8.445	1.868	2.147	9.671	6.323	6.255	
L Only, LL Comb Run (LLL****)	9.411	7.496	7.292	4.351	-0.763	0.149	-0.006	
L Only, LL Comb Run (LLL***L)	9.414	7.476	7.369	4.060	0.323	-1.562	3.559	
L Only, LL Comb Run (LLL**L*)	9.411	7.496	7.292	4.351	-0.763	0.150	2.694	
L Only, LL Comb Run (LLL**LL)	9.414	7.476	7.369	4.060	0.323	-1.561	6.259	
L Only, LL Comb Run (LLL*L**)	9.415	7.471	7.389	3.987	1.535	8.774	-0.038	
L Only, LL Comb Run (LLL*L*L)	9.418	7.452	7.466	3.696	2.620	7.063	3.527	
L Only, LL Comb Run (LLL*LL*)	9.415	7.471	7.389	3.987	1.534	8.774	2.661	
L Only, LL Comb Run (LLL*LLL)	9.418	7.452	7.466	3.696	2.620	7.063	6.226	
L Only, LL Comb Run (LLLL***)	9.387	7.637	6.725	7.451	5.449	-0.426	0.017	
L Only, LL Comb Run (LLLL**L)	9.390	7.618	6.802	7.160	6.534	-2.138	3.581	

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5	Support 6	Support 7	Support 8
L Only, LL Comb Run (LLLL*L*)	9.387	7.638	6.725	7.451	5.448	-0.426	2.716	
L Only, LL Comb Run (LLLL*LL)	9.390	7.618	6.802	7.160	6.534	-2.137	6.281	
L Only, LL Comb Run (LLLLL**)	9.391	7.613	6.822	7.087	7.746	8.198	-0.016	
L Only, LL Comb Run (LLLLL*L)	9.394	7.594	6.899	6.796	8.832	6.487	3.549	
L Only, LL Comb Run (LLLLLL*)	9.391	7.613	6.822	7.087	7.746	8.198	2.684	
L Only, LL Comb Run (LLLLLLL)	9.394	7.594	6.899	6.796	8.832	6.487	6.249	
S Only	69.785	29.598	25.448	24.226	23.528	8.588	23.014	
W Only								
E Only	6.029	1.149	-0.462	0.706	-2.363	3.697	-8.755	
H Only								

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	0.00	56.50	181.25	181.25	0.00	1.00	94.13	PhiVc < Vu	87.122	187.4	4.3	4.0
+1.20D+0.50L+1.60S+1.60H,	1	0.11	56.50	23.69	23.69	2.89	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.23	56.50	22.43	22.43	5.51	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.34	56.50	21.16	21.16	7.99	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.45	56.50	19.90	19.90	10.32	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.57	56.50	18.63	18.63	12.51	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.68	56.50	17.37	17.37	14.56	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.80	56.50	16.11	16.11	16.46	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	0.91	56.50	14.84	14.84	18.22	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.02	56.50	13.58	13.58	19.83	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.14	56.50	12.31	12.31	21.31	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.25	56.50	11.05	11.05	22.63	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.36	56.50	9.78	9.78	23.82	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.48	56.50	8.52	8.52	24.86	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	1.59	56.50	7.26	7.26	25.75	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.70	56.50	6.30	6.30	20.65	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	1	1.82	56.50	5.53	5.53	21.32	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	1.93	56.50	4.86	4.86	17.68	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.05	56.50	4.36	4.36	18.20	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.16	56.50	3.85	3.85	18.67	0.97	94.06	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.27	56.50	3.35	3.35	19.08	0.83	93.70	Vu < PhiVc/2	Not Reqd 1	93.7	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	1	2.39	56.50	2.85	2.85	19.43	0.69	93.37	Vu < PhiVc/2	Not Reqd 1	93.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.50	56.50	-3.30	3.30	25.48	0.61	93.17	Vu < PhiVc/2	Not Reqd 1	93.2	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.61	56.50	-4.52	4.52	25.03	0.85	93.76	Vu < PhiVc/2	Not Reqd 1	93.8	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.73	56.50	-5.74	5.74	24.45	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.84	56.50	-6.96	6.96	23.73	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	2.95	56.50	-8.18	8.18	22.87	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.07	56.50	-9.42	9.42	23.60	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.18	56.50	-10.68	10.68	22.45	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.30	56.50	-11.95	11.95	21.17	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.41	56.50	-13.21	13.21	19.74	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.52	56.50	-32.19	32.19	17.76	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.64	56.50	-33.45	33.45	14.03	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.75	56.50	-34.72	34.72	10.16	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.86	56.50	-35.98	35.98	6.14	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	3.98	56.50	-37.25	37.25	1.98	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.09	57.00	-38.51	38.51	2.32	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.20	57.00	-39.77	39.77	6.77	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.32	57.00	-41.04	41.04	11.36	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.43	57.00	-42.30	42.30	16.10	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.55	57.00	-43.57	43.57	20.98	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.66	57.00	-44.83	44.83	26.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	1	4.77	57.00	-46.10	46.10	31.16	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	1	4.89	57.00	-47.36	47.36	36.47	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.00	57.00	37.58	37.58	41.93	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.11	57.00	36.32	36.32	37.73	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.23	57.00	35.05	35.05	33.67	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.34	57.00	33.79	33.79	29.76	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.45	57.00	32.52	32.52	26.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.57	57.00	31.26	31.26	22.37	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.68	57.00	30.00	30.00	18.89	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.80	57.00	28.73	28.73	15.55	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	5.91	57.00	27.47	27.47	12.36	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.02	57.00	26.20	26.20	9.31	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.14	57.00	24.94	24.94	6.41	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.25	57.00	23.67	23.67	3.64	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.36	57.00	22.41	22.41	1.03	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.48	56.50	21.14	21.14	1.45	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.59	56.50	19.88	19.88	3.78	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.70	56.50	18.62	18.62	5.97	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.82	56.50	17.35	17.35	8.01	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	6.93	56.50	16.09	16.09	9.91	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.05	56.50	14.82	14.82	11.67	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.16	56.50	13.56	13.56	13.28	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.27	56.50	12.29	12.29	14.75	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.39	56.50	11.03	11.03	16.07	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.50	56.50	9.77	9.77	17.26	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.61	56.50	-8.29	8.29	16.25	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.73	56.50	-9.56	9.56	15.23	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.84	56.50	-10.82	10.82	14.07	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	7.95	56.50	-12.09	12.09	12.77	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.07	56.50	-13.35	13.35	11.33	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.18	56.50	-14.62	14.62	9.74	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.30	56.50	-15.88	15.88	8.01	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.41	56.50	-17.14	17.14	6.13	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.52	56.50	-18.41	18.41	4.11	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.64	56.50	-19.67	19.67	1.95	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.75	57.00	-20.94	20.94	0.36	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.86	57.00	-22.20	22.20	2.81	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	8.98	57.00	-23.47	23.47	5.41	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.09	57.00	-24.73	24.73	8.15	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.20	57.00	-25.99	25.99	11.03	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.32	57.00	-27.26	27.26	14.05	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.43	57.00	-28.52	28.52	17.22	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.55	57.00	-29.79	29.79	20.54	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.66	57.00	-31.05	31.05	23.99	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.77	57.00	-32.32	32.32	27.59	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	2	9.89	57.00	-33.58	33.58	31.34	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.00	57.00	40.83	40.83	35.23	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.11	57.00	39.56	39.56	30.66	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.23	57.00	38.30	38.30	26.23	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.34	57.00	37.04	37.04	21.95	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.45	57.00	35.77	35.77	17.82	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.57	57.00	34.51	34.51	13.82	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.68	57.00	33.24	33.24	9.97	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	10.80	57.00	31.98	31.98	6.27	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	3	10.91	57.00	30.71	30.71	2.71	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.02	56.50	29.45	29.45	0.71	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.14	56.50	28.19	28.19	3.99	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.25	56.50	26.92	26.92	7.12	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.36	56.50	25.66	25.66	10.11	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.48	56.50	24.39	24.39	12.95	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.59	56.50	23.13	23.13	15.65	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	11.70	56.50	21.86	21.86	18.21	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.82	56.50	20.82	20.82	20.66	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	11.93	56.50	20.05	20.05	22.98	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.05	56.50	19.28	19.28	25.22	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.16	56.50	18.51	18.51	27.37	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.27	56.50	17.74	17.74	29.43	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.39	56.50	-13.90	13.90	28.11	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	3	12.50	56.50	-14.40	14.40	26.50	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.61	56.50	-15.11	15.11	26.89	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.73	56.50	-15.88	15.88	25.13	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.84	56.50	-16.65	16.65	23.28	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	12.95	56.50	-17.42	17.42	21.34	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.07	56.50	-18.19	18.19	19.32	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	3	13.18	56.50	-18.96	18.96	17.21	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.30	56.50	-20.07	20.07	15.71	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.41	56.50	-21.33	21.33	13.36	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.52	56.50	-22.60	22.60	10.86	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.64	56.50	-23.86	23.86	8.22	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.75	56.50	-25.12	25.12	5.44	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.86	56.50	-26.39	26.39	2.51	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	13.98	57.00	-27.65	27.65	0.56	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.09	57.00	-28.92	28.92	3.78	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.20	57.00	-30.18	30.18	7.13	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.32	57.00	-31.45	31.45	10.63	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.43	57.00	-32.71	32.71	14.28	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.55	57.00	-33.97	33.97	18.07	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.66	57.00	-35.24	35.24	22.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.77	57.00	-36.50	36.50	26.08	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	3	14.89	57.00	-37.77	37.77	30.30	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.00	57.00	32.92	32.92	34.66	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.11	57.00	31.65	31.65	30.99	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.23	57.00	30.39	30.39	27.47	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.34	57.00	29.12	29.12	24.09	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.45	57.00	27.86	27.86	20.85	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.57	57.00	26.60	26.60	17.75	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.68	57.00	25.33	25.33	14.80	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.80	57.00	24.07	24.07	12.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	15.91	57.00	22.80	22.80	9.33	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.02	57.00	21.54	21.54	6.81	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.14	57.00	20.27	20.27	4.44	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.25	57.00	19.01	19.01	2.21	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.36	57.00	17.75	17.75	0.12	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.48	56.50	16.48	16.48	1.83	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.59	56.50	15.22	15.22	3.63	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.70	56.50	13.95	13.95	5.29	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.82	56.50	12.69	12.69	6.80	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	16.93	56.50	11.42	11.42	8.17	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	4	17.05	56.50	10.16	10.16	9.40	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.16	56.50	8.90	8.90	10.48	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	17.27	56.50	7.63	7.63	11.42	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.39	56.50	6.66	6.66	6.72	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.50	56.50	5.89	5.89	7.43	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H,	4	17.61	56.50	5.12	5.12	8.06	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.73	56.50	4.49	4.49	5.38	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.84	56.50	3.99	3.99	5.86	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	17.95	56.50	3.49	3.49	6.28	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	4	18.07	56.50	2.98	2.98	6.65	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.18	56.50	-3.30	3.30	12.11	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.30	56.50	-4.52	4.52	11.67	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.41	56.50	-5.74	5.74	11.08	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.52	56.50	-6.96	6.96	10.36	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.64	56.50	-8.22	8.22	10.96	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.75	56.50	-9.49	9.49	9.95	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.86	56.50	-10.75	10.75	8.80	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	18.98	56.50	-12.01	12.01	7.51	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.09	56.50	-32.18	32.18	4.32	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.20	56.50	-32.53	32.53	0.64	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.32	57.00	-32.87	32.87	3.07	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.43	57.00	-33.22	33.22	6.83	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.55	57.00	-33.56	33.56	10.62	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.66	57.00	-33.91	33.91	14.46	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.77	57.00	-34.25	34.25	18.33	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	4	19.89	57.00	-34.60	34.60	22.24	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.00	57.00	18.29	18.29	26.19	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.11	57.00	17.94	17.94	24.14	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.23	57.00	17.59	17.59	22.12	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.34	57.00	17.25	17.25	20.14	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.45	57.00	16.90	16.90	18.20	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.57	57.00	16.56	16.56	16.29	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.68	57.00	16.21	16.21	14.43	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.80	57.00	15.87	15.87	12.61	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	20.91	57.00	15.52	15.52	10.83	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.02	57.00	15.18	15.18	9.08	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.14	57.00	14.83	14.83	7.38	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.25	57.00	14.49	14.49	5.71	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.36	57.00	14.14	14.14	4.08	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.48	57.00	13.80	13.80	2.50	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.59	57.00	13.45	13.45	0.95	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.70	56.50	13.11	13.11	0.56	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.82	56.50	12.76	12.76	2.03	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	21.93	56.50	12.42	12.42	3.46	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.05	56.50	12.07	12.07	4.85	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.16	56.50	11.72	11.72	6.20	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.27	56.50	11.38	11.38	7.52	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.39	56.50	11.03	11.03	8.79	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.50	56.50	10.69	10.69	10.02	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.61	56.50	10.34	10.34	11.22	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.73	56.50	10.02	10.02	11.60	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.84	56.50	9.71	9.71	12.72	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	22.95	56.50	9.41	9.41	13.80	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.07	56.50	9.11	9.11	14.86	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+0.50L+1.60S+1.60H,	5	23.18	56.50	8.81	8.81	15.87	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.30	56.50	8.50	8.50	16.86	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.41	56.50	8.20	8.20	17.81	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.52	56.50	7.90	7.90	18.72	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	5	23.64	56.50	7.59	7.59	19.60	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.75	57.00	-7.35	7.35	3.25	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.86	57.00	-7.79	7.79	4.12	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	23.98	57.00	-8.23	8.23	5.03	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.09	57.00	-8.67	8.67	5.99	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.20	57.00	-9.11	9.11	7.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.32	57.00	-9.55	9.55	8.05	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.43	57.00	-9.98	9.98	9.16	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.55	57.00	-10.42	10.42	10.32	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50Lr+1.60L+1.60H,	5	24.66	57.00	-10.86	10.86	11.53	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	24.77	57.00	-13.42	13.42	3.95	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+0.70S+E+1.60	5	24.89	57.00	-13.76	13.76	5.50	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	25.00	57.00	9.53	9.53	17.48	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	25.32	57.00	9.04	9.04	14.47	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	25.65	57.00	8.54	8.54	11.62	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	25.97	57.00	8.05	8.05	8.94	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	26.30	57.00	7.56	7.56	6.41	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	26.62	57.00	7.06	7.06	4.04	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	26.94	57.00	6.57	6.57	1.83	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.40D+1.60H	6	27.27	56.50	6.08	6.08	0.21	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.40D+1.60H	6	27.59	56.50	5.58	5.58	2.10	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+0.90D+E+0.90H	6	27.91	56.50	5.12	5.12	0.55	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.24	56.50	-5.35	5.35	11.68	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.56	56.50	-5.77	5.77	9.88	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	28.89	56.50	-6.20	6.20	7.94	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.21	56.50	-6.62	6.62	5.87	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.53	56.50	-7.04	7.04	3.65	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	29.86	56.50	-7.47	7.47	1.31	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.18	57.00	-7.89	7.89	1.18	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.51	57.00	-8.31	8.31	3.80	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	30.83	57.00	-8.73	8.73	6.56	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.15	57.00	-9.16	9.16	9.46	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.48	57.00	-9.58	9.58	12.49	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	31.80	57.00	-10.00	10.00	15.67	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.13	57.00	-10.42	10.42	18.97	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.45	57.00	-10.85	10.85	22.42	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	32.77	57.00	-11.27	11.27	26.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.10	57.00	-11.69	11.69	29.72	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.42	57.00	-12.11	12.11	33.57	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	33.74	57.00	-12.54	12.54	37.56	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.07	57.00	-12.96	12.96	41.69	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.39	57.00	-13.38	13.38	45.96	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	34.72	57.00	-13.80	13.80	50.36	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.04	57.00	-14.23	14.23	54.90	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.36	57.00	-14.65	14.65	59.58	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	35.69	57.00	-15.07	15.07	64.39	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.01	57.00	-15.50	15.50	69.34	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.34	57.00	-15.92	15.92	74.43	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.66	57.00	-16.34	16.34	79.65	0.97	94.88	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	36.98	57.00	-16.76	16.76	85.01	0.94	94.79	Vu < PhiVc/2	Not Reqd 1	94.8	0.0	0.0

Concrete Beam

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+0.50L+1.60S+1.60H,	6	37.31	57.00	-17.19	17.19	90.51	0.90	94.70	Vu < PhiVc/2	Not Reqd 1	94.7	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.63	57.00	-17.61	17.61	96.14	0.87	94.62	Vu < PhiVc/2	Not Reqd 1	94.6	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	37.95	57.00	-18.03	18.03	101.91	0.84	94.55	Vu < PhiVc/2	Not Reqd 1	94.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.28	57.00	-18.45	18.45	107.82	0.81	94.48	Vu < PhiVc/2	Not Reqd 1	94.5	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.60	57.00	-18.88	18.88	113.87	0.79	94.42	Vu < PhiVc/2	Not Reqd 1	94.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	6	38.93	57.00	-19.30	19.30	120.05	0.76	94.36	Vu < PhiVc/2	Not Reqd 1	94.4	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.25	57.00	41.02	41.02	126.38	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.32	57.00	40.92	40.92	123.35	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.40	57.00	40.82	40.82	120.34	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.47	57.00	40.73	40.73	117.32	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.55	57.00	40.63	40.63	114.32	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.62	57.00	40.53	40.53	111.32	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.69	57.00	40.44	40.44	108.33	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.77	57.00	40.34	40.34	105.35	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.84	57.00	40.25	40.25	102.37	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.91	57.00	40.15	40.15	99.40	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	39.99	57.00	40.05	40.05	96.44	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.06	57.00	39.96	39.96	93.49	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.14	57.00	39.86	39.86	90.54	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.21	57.00	39.76	39.76	87.60	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.28	57.00	39.67	39.67	84.66	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.36	57.00	39.57	39.57	81.74	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.43	57.00	39.47	39.47	78.82	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.51	57.00	39.38	39.38	75.91	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.58	57.00	39.28	39.28	73.00	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.65	57.00	39.18	39.18	70.10	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.73	57.00	39.09	39.09	67.21	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.80	57.00	38.99	38.99	64.33	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.88	57.00	38.90	38.90	61.45	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	40.95	57.00	38.80	38.80	58.58	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.02	57.00	38.70	38.70	55.72	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.10	57.00	38.61	38.61	52.86	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.17	57.00	38.51	38.51	50.02	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.24	57.00	38.41	38.41	47.18	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.32	57.00	38.32	38.32	44.34	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.39	57.00	38.22	38.22	41.52	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.47	57.00	38.12	38.12	38.70	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.54	57.00	38.03	38.03	35.88	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.61	57.00	37.93	37.93	33.08	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.69	57.00	37.84	37.84	30.28	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.76	57.00	37.74	37.74	27.49	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.84	57.00	37.64	37.64	24.70	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.91	57.00	37.55	37.55	21.93	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	41.98	57.00	37.45	37.45	19.16	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.06	57.00	37.35	37.35	16.40	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.13	57.00	37.26	37.26	13.64	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.20	57.00	37.16	37.16	10.89	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.28	57.00	37.06	37.06	8.15	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.35	57.00	36.97	36.97	5.42	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.43	57.00	36.87	36.87	2.69	1.00	94.94	Vu < PhiVc/2	Not Reqd 1	94.9	0.0	0.0
+1.20D+0.50L+1.60S+1.60H,	7	42.50	56.50	0.00	0.00	0.00	1.00	94.13	Vu < PhiVc/2	Not Reqd 1	94.1	0.0	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

MAXimum BENDING Envelope					
Span # 1	1	5.000	-36.47	341.34	0.11
Span # 2	2	5.000	-41.93	341.34	0.12
Span # 3	3	5.000	-35.23	341.34	0.10
Span # 4	4	5.000	-34.66	341.34	0.10
Span # 5	5	5.000	26.02	335.75	0.08
Span # 6	6	14.250	-120.06	341.34	0.35
Span # 7	7	3.250	-126.38	341.34	0.37
+1.40D+1.60H					
Span # 1	1	5.000	16.46	335.75	0.05
Span # 2	2	5.000	-19.57	341.34	0.06
Span # 3	3	5.000	23.85	335.75	0.07
Span # 4	4	5.000	-18.44	341.34	0.05
Span # 5	5	5.000	-16.11	341.34	0.05
Span # 6	6	14.250	-32.41	341.34	0.09
Span # 7	7	3.250	-36.29	341.34	0.11
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	14.13	335.75	0.04
Span # 2	2	5.000	-16.75	341.34	0.05
Span # 3	3	5.000	20.57	335.75	0.06
Span # 4	4	5.000	-15.42	341.34	0.05
Span # 5	5	5.000	-8.56	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	14.11	335.75	0.04
Span # 2	2	5.000	-16.78	341.34	0.05
Span # 3	3	5.000	20.44	335.75	0.06
Span # 4	4	5.000	-15.81	341.34	0.05
Span # 5	5	5.000	-13.81	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*****					
Span # 1	1	5.000	14.13	335.75	0.04
Span # 2	2	5.000	-16.75	341.34	0.05
Span # 3	3	5.000	20.57	335.75	0.06
Span # 4	4	5.000	-15.42	341.34	0.05
Span # 5	5	5.000	-8.56	341.34	0.03
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	14.13	335.75	0.04
Span # 2	2	5.000	-16.74	341.34	0.05
Span # 3	3	5.000	20.60	335.75	0.06
Span # 4	4	5.000	-15.32	341.34	0.04
Span # 5	5	5.000	-14.23	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	14.14	335.75	0.04
Span # 2	2	5.000	-16.72	341.34	0.05
Span # 3	3	5.000	20.74	335.75	0.06
Span # 4	4	5.000	-14.93	341.34	0.04
Span # 5	5	5.000	-8.99	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	14.13	335.75	0.04
Span # 2	2	5.000	-16.74	341.34	0.05
Span # 3	3	5.000	20.60	335.75	0.06
Span # 4	4	5.000	-15.32	341.34	0.04
Span # 5	5	5.000	-14.23	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (****L					
Span # 1	1	5.000	14.14	335.75	0.04
Span # 2	2	5.000	-16.72	341.34	0.05
Span # 3	3	5.000	20.74	335.75	0.06
Span # 4	4	5.000	-14.93	341.34	0.04

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-8.99	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-14.40	341.34	0.04
Span # 2	2	5.000	-16.96	341.34	0.05
Span # 3	3	5.000	19.48	335.75	0.06
Span # 4	4	5.000	-18.64	341.34	0.05
Span # 5	5	5.000	-13.40	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-14.38	341.34	0.04
Span # 2	2	5.000	-16.94	341.34	0.05
Span # 3	3	5.000	19.61	335.75	0.06
Span # 4	4	5.000	-18.25	341.34	0.05
Span # 5	5	5.000	-8.15	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-14.40	341.34	0.04
Span # 2	2	5.000	-16.96	341.34	0.05
Span # 3	3	5.000	19.48	335.75	0.06
Span # 4	4	5.000	-18.64	341.34	0.05
Span # 5	5	5.000	-13.40	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***L*					
Span # 1	1	5.000	-14.38	341.34	0.04
Span # 2	2	5.000	-16.94	341.34	0.05
Span # 3	3	5.000	19.61	335.75	0.06
Span # 4	4	5.000	-18.25	341.34	0.05
Span # 5	5	5.000	-8.16	341.34	0.02
Span # 6	6	14.250	-41.41	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-14.37	341.34	0.04
Span # 2	2	5.000	-16.93	341.34	0.05
Span # 3	3	5.000	19.65	335.75	0.06
Span # 4	4	5.000	-18.15	341.34	0.05
Span # 5	5	5.000	-13.82	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-14.35	341.34	0.04
Span # 2	2	5.000	-16.91	341.34	0.05
Span # 3	3	5.000	19.78	335.75	0.06
Span # 4	4	5.000	-17.77	341.34	0.05
Span # 5	5	5.000	-9.42	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-14.37	341.34	0.04
Span # 2	2	5.000	-16.93	341.34	0.05
Span # 3	3	5.000	19.65	335.75	0.06
Span # 4	4	5.000	-18.15	341.34	0.05
Span # 5	5	5.000	-13.83	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (***LL					
Span # 1	1	5.000	-14.35	341.34	0.04
Span # 2	2	5.000	-16.91	341.34	0.05
Span # 3	3	5.000	19.78	335.75	0.06
Span # 4	4	5.000	-17.77	341.34	0.05
Span # 5	5	5.000	-9.42	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.79	335.75	0.04

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-18.63	341.34	0.05
Span # 3	3	5.000	28.60	335.75	0.09
Span # 4	4	5.000	-20.14	341.34	0.06
Span # 5	5	5.000	-13.93	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.80	335.75	0.04
Span # 2	2	5.000	-18.73	341.34	0.05
Span # 3	3	5.000	28.73	335.75	0.09
Span # 4	4	5.000	-19.75	341.34	0.06
Span # 5	5	5.000	-8.68	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.79	335.75	0.04
Span # 2	2	5.000	-18.63	341.34	0.05
Span # 3	3	5.000	28.60	335.75	0.09
Span # 4	4	5.000	-20.14	341.34	0.06
Span # 5	5	5.000	-13.93	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L**					
Span # 1	1	5.000	14.80	335.75	0.04
Span # 2	2	5.000	-18.73	341.34	0.05
Span # 3	3	5.000	28.73	335.75	0.09
Span # 4	4	5.000	-19.75	341.34	0.06
Span # 5	5	5.000	-8.68	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.81	335.75	0.04
Span # 2	2	5.000	-18.75	341.34	0.05
Span # 3	3	5.000	28.76	335.75	0.09
Span # 4	4	5.000	-19.65	341.34	0.06
Span # 5	5	5.000	-14.35	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.82	335.75	0.04
Span # 2	2	5.000	-18.85	341.34	0.06
Span # 3	3	5.000	28.89	335.75	0.09
Span # 4	4	5.000	-19.27	341.34	0.06
Span # 5	5	5.000	-9.10	341.34	0.03
Span # 6	6	14.250	-41.45	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.81	335.75	0.04
Span # 2	2	5.000	-18.75	341.34	0.05
Span # 3	3	5.000	28.76	335.75	0.09
Span # 4	4	5.000	-19.65	341.34	0.06
Span # 5	5	5.000	-14.35	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**L*L					
Span # 1	1	5.000	14.82	335.75	0.04
Span # 2	2	5.000	-18.85	341.34	0.06
Span # 3	3	5.000	28.89	335.75	0.09
Span # 4	4	5.000	-19.27	341.34	0.06
Span # 5	5	5.000	-9.10	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	14.67	335.75	0.04
Span # 2	2	5.000	-17.89	341.34	0.05
Span # 3	3	5.000	27.64	335.75	0.08
Span # 4	4	5.000	-22.97	341.34	0.07
Span # 5	5	5.000	-13.52	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	14.69	335.75	0.04
Span # 2	2	5.000	-17.99	341.34	0.05
Span # 3	3	5.000	27.77	335.75	0.08
Span # 4	4	5.000	-22.59	341.34	0.07
Span # 5	5	5.000	-8.27	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	14.67	335.75	0.04
Span # 2	2	5.000	-17.89	341.34	0.05
Span # 3	3	5.000	27.64	335.75	0.08
Span # 4	4	5.000	-22.97	341.34	0.07
Span # 5	5	5.000	-13.52	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LL*					
Span # 1	1	5.000	14.69	335.75	0.04
Span # 2	2	5.000	-17.99	341.34	0.05
Span # 3	3	5.000	27.77	335.75	0.08
Span # 4	4	5.000	-22.59	341.34	0.07
Span # 5	5	5.000	-8.27	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	14.69	335.75	0.04
Span # 2	2	5.000	-18.02	341.34	0.05
Span # 3	3	5.000	27.81	335.75	0.08
Span # 4	4	5.000	-22.49	341.34	0.07
Span # 5	5	5.000	-13.94	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	14.71	335.75	0.04
Span # 2	2	5.000	-18.12	341.34	0.05
Span # 3	3	5.000	27.94	335.75	0.08
Span # 4	4	5.000	-22.10	341.34	0.06
Span # 5	5	5.000	-8.69	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	14.69	335.75	0.04
Span # 2	2	5.000	-18.02	341.34	0.05
Span # 3	3	5.000	27.81	335.75	0.08
Span # 4	4	5.000	-22.49	341.34	0.07
Span # 5	5	5.000	-13.94	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (**LLL					
Span # 1	1	5.000	14.71	335.75	0.04
Span # 2	2	5.000	-18.12	341.34	0.05
Span # 3	3	5.000	27.94	335.75	0.08
Span # 4	4	5.000	-22.10	341.34	0.06
Span # 5	5	5.000	-8.70	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-16.61	341.34	0.05
Span # 2	2	5.000	-19.22	341.34	0.06
Span # 3	3	5.000	19.38	335.75	0.06
Span # 4	4	5.000	-15.09	341.34	0.04
Span # 5	5	5.000	-13.79	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-16.58	341.34	0.05
Span # 2	2	5.000	-19.19	341.34	0.06
Span # 3	3	5.000	19.51	335.75	0.06

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 4	4	5.000	-14.70	341.34	0.04
Span # 5	5	5.000	-8.54	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-16.61	341.34	0.05
Span # 2	2	5.000	-19.22	341.34	0.06
Span # 3	3	5.000	19.38	335.75	0.06
Span # 4	4	5.000	-15.09	341.34	0.04
Span # 5	5	5.000	-13.79	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L***					
Span # 1	1	5.000	-16.58	341.34	0.05
Span # 2	2	5.000	-19.19	341.34	0.06
Span # 3	3	5.000	19.51	335.75	0.06
Span # 4	4	5.000	-14.70	341.34	0.04
Span # 5	5	5.000	-8.55	341.34	0.03
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-16.57	341.34	0.05
Span # 2	2	5.000	-19.19	341.34	0.06
Span # 3	3	5.000	19.54	335.75	0.06
Span # 4	4	5.000	-14.60	341.34	0.04
Span # 5	5	5.000	-14.21	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-16.55	341.34	0.05
Span # 2	2	5.000	-19.16	341.34	0.06
Span # 3	3	5.000	19.68	335.75	0.06
Span # 4	4	5.000	-14.21	341.34	0.04
Span # 5	5	5.000	-8.97	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-16.57	341.34	0.05
Span # 2	2	5.000	-19.19	341.34	0.06
Span # 3	3	5.000	19.54	335.75	0.06
Span # 4	4	5.000	-14.60	341.34	0.04
Span # 5	5	5.000	-14.22	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L**L					
Span # 1	1	5.000	-16.55	341.34	0.05
Span # 2	2	5.000	-19.16	341.34	0.06
Span # 3	3	5.000	19.68	335.75	0.06
Span # 4	4	5.000	-14.21	341.34	0.04
Span # 5	5	5.000	-8.97	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-16.79	341.34	0.05
Span # 2	2	5.000	-19.41	341.34	0.06
Span # 3	3	5.000	18.42	335.75	0.05
Span # 4	4	5.000	-17.92	341.34	0.05
Span # 5	5	5.000	-13.38	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-16.76	341.34	0.05
Span # 2	2	5.000	-19.38	341.34	0.06
Span # 3	3	5.000	18.55	335.75	0.06
Span # 4	4	5.000	-17.54	341.34	0.05
Span # 5	5	5.000	-8.14	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	5.000	-16.79	341.34	0.05
Span # 2	2	5.000	-19.41	341.34	0.06
Span # 3	3	5.000	18.42	335.75	0.05
Span # 4	4	5.000	-17.92	341.34	0.05
Span # 5	5	5.000	-13.38	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*L*					
Span # 1	1	5.000	-16.76	341.34	0.05
Span # 2	2	5.000	-19.38	341.34	0.06
Span # 3	3	5.000	18.55	335.75	0.06
Span # 4	4	5.000	-17.54	341.34	0.05
Span # 5	5	5.000	-8.14	341.34	0.02
Span # 6	6	14.250	-41.41	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-16.76	341.34	0.05
Span # 2	2	5.000	-19.37	341.34	0.06
Span # 3	3	5.000	18.59	335.75	0.06
Span # 4	4	5.000	-17.44	341.34	0.05
Span # 5	5	5.000	-13.81	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-16.73	341.34	0.05
Span # 2	2	5.000	-19.35	341.34	0.06
Span # 3	3	5.000	18.72	335.75	0.06
Span # 4	4	5.000	-17.05	341.34	0.05
Span # 5	5	5.000	-9.61	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-16.76	341.34	0.05
Span # 2	2	5.000	-19.37	341.34	0.06
Span # 3	3	5.000	18.59	335.75	0.06
Span # 4	4	5.000	-17.44	341.34	0.05
Span # 5	5	5.000	-13.81	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*L*LL					
Span # 1	1	5.000	-16.73	341.34	0.05
Span # 2	2	5.000	-19.35	341.34	0.06
Span # 3	3	5.000	18.72	335.75	0.06
Span # 4	4	5.000	-17.05	341.34	0.05
Span # 5	5	5.000	-9.61	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-15.50	341.34	0.05
Span # 2	2	5.000	-20.82	341.34	0.06
Span # 3	3	5.000	27.54	335.75	0.08
Span # 4	4	5.000	-19.42	341.34	0.06
Span # 5	5	5.000	-13.91	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-15.47	341.34	0.05
Span # 2	2	5.000	-20.92	341.34	0.06
Span # 3	3	5.000	27.67	335.75	0.08
Span # 4	4	5.000	-19.03	341.34	0.06
Span # 5	5	5.000	-8.66	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-15.50	341.34	0.05
Span # 2	2	5.000	-20.82	341.34	0.06
Span # 3	3	5.000	27.54	335.75	0.08
Span # 4	4	5.000	-19.42	341.34	0.06
Span # 5	5	5.000	-13.91	341.34	0.04

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL**					
Span # 1	1	5.000	-15.47	341.34	0.05
Span # 2	2	5.000	-20.92	341.34	0.06
Span # 3	3	5.000	27.67	335.75	0.08
Span # 4	4	5.000	-19.03	341.34	0.06
Span # 5	5	5.000	-8.66	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-15.46	341.34	0.05
Span # 2	2	5.000	-20.94	341.34	0.06
Span # 3	3	5.000	27.70	335.75	0.08
Span # 4	4	5.000	-18.94	341.34	0.06
Span # 5	5	5.000	-14.33	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-15.44	341.34	0.05
Span # 2	2	5.000	-21.04	341.34	0.06
Span # 3	3	5.000	27.83	335.75	0.08
Span # 4	4	5.000	-18.55	341.34	0.05
Span # 5	5	5.000	-9.08	341.34	0.03
Span # 6	6	14.250	-41.45	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-15.46	341.34	0.05
Span # 2	2	5.000	-20.94	341.34	0.06
Span # 3	3	5.000	27.70	335.75	0.08
Span # 4	4	5.000	-18.94	341.34	0.06
Span # 5	5	5.000	-14.33	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LL*L					
Span # 1	1	5.000	-15.44	341.34	0.05
Span # 2	2	5.000	-21.04	341.34	0.06
Span # 3	3	5.000	27.83	335.75	0.08
Span # 4	4	5.000	-18.55	341.34	0.05
Span # 5	5	5.000	-9.08	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-15.68	341.34	0.05
Span # 2	2	5.000	-20.08	341.34	0.06
Span # 3	3	5.000	26.58	335.75	0.08
Span # 4	4	5.000	-22.26	341.34	0.07
Span # 5	5	5.000	-13.50	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-15.66	341.34	0.05
Span # 2	2	5.000	-20.18	341.34	0.06
Span # 3	3	5.000	26.71	335.75	0.08
Span # 4	4	5.000	-21.87	341.34	0.06
Span # 5	5	5.000	-8.25	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-15.68	341.34	0.05
Span # 2	2	5.000	-20.08	341.34	0.06
Span # 3	3	5.000	26.58	335.75	0.08
Span # 4	4	5.000	-22.26	341.34	0.07
Span # 5	5	5.000	-13.50	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLL*					
Span # 1	1	5.000	-15.66	341.34	0.05
Span # 2	2	5.000	-20.18	341.34	0.06

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 3	3	5.000	26.71	335.75	0.08
Span # 4	4	5.000	-21.87	341.34	0.06
Span # 5	5	5.000	-8.25	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-15.65	341.34	0.05
Span # 2	2	5.000	-20.21	341.34	0.06
Span # 3	3	5.000	26.75	335.75	0.08
Span # 4	4	5.000	-21.77	341.34	0.06
Span # 5	5	5.000	-13.92	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-15.62	341.34	0.05
Span # 2	2	5.000	-20.31	341.34	0.06
Span # 3	3	5.000	26.88	335.75	0.08
Span # 4	4	5.000	-21.38	341.34	0.06
Span # 5	5	5.000	-8.68	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-15.65	341.34	0.05
Span # 2	2	5.000	-20.21	341.34	0.06
Span # 3	3	5.000	26.75	335.75	0.08
Span # 4	4	5.000	-21.77	341.34	0.06
Span # 5	5	5.000	-13.92	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (*LLLL					
Span # 1	1	5.000	-15.62	341.34	0.05
Span # 2	2	5.000	-20.31	341.34	0.06
Span # 3	3	5.000	26.88	335.75	0.08
Span # 4	4	5.000	-21.38	341.34	0.06
Span # 5	5	5.000	-8.68	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	19.63	335.75	0.06
Span # 2	2	5.000	-21.23	341.34	0.06
Span # 3	3	5.000	20.91	335.75	0.06
Span # 4	4	5.000	-16.12	341.34	0.05
Span # 5	5	5.000	-13.82	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	19.65	335.75	0.06
Span # 2	2	5.000	-21.20	341.34	0.06
Span # 3	3	5.000	21.04	335.75	0.06
Span # 4	4	5.000	-15.74	341.34	0.05
Span # 5	5	5.000	-8.57	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	19.63	335.75	0.06
Span # 2	2	5.000	-21.23	341.34	0.06
Span # 3	3	5.000	20.91	335.75	0.06
Span # 4	4	5.000	-16.12	341.34	0.05
Span # 5	5	5.000	-13.82	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L****					
Span # 1	1	5.000	19.65	335.75	0.06
Span # 2	2	5.000	-21.20	341.34	0.06
Span # 3	3	5.000	21.04	335.75	0.06
Span # 4	4	5.000	-15.74	341.34	0.05
Span # 5	5	5.000	-8.57	341.34	0.03
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	19.65	335.75	0.06
Span # 2	2	5.000	-21.20	341.34	0.06
Span # 3	3	5.000	21.08	335.75	0.06
Span # 4	4	5.000	-15.64	341.34	0.05
Span # 5	5	5.000	-14.24	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	19.67	335.75	0.06
Span # 2	2	5.000	-21.17	341.34	0.06
Span # 3	3	5.000	21.21	335.75	0.06
Span # 4	4	5.000	-15.25	341.34	0.04
Span # 5	5	5.000	-8.99	341.34	0.03
Span # 6	6	14.250	-41.45	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	19.65	335.75	0.06
Span # 2	2	5.000	-21.20	341.34	0.06
Span # 3	3	5.000	21.08	335.75	0.06
Span # 4	4	5.000	-15.64	341.34	0.05
Span # 5	5	5.000	-14.24	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L***L					
Span # 1	1	5.000	19.67	335.75	0.06
Span # 2	2	5.000	-21.17	341.34	0.06
Span # 3	3	5.000	21.21	335.75	0.06
Span # 4	4	5.000	-15.25	341.34	0.04
Span # 5	5	5.000	-9.00	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	19.52	335.75	0.06
Span # 2	2	5.000	-21.42	341.34	0.06
Span # 3	3	5.000	19.95	335.75	0.06
Span # 4	4	5.000	-18.96	341.34	0.06
Span # 5	5	5.000	-13.41	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	19.54	335.75	0.06
Span # 2	2	5.000	-21.39	341.34	0.06
Span # 3	3	5.000	20.08	335.75	0.06
Span # 4	4	5.000	-18.57	341.34	0.05
Span # 5	5	5.000	-8.16	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	19.52	335.75	0.06
Span # 2	2	5.000	-21.42	341.34	0.06
Span # 3	3	5.000	19.95	335.75	0.06
Span # 4	4	5.000	-18.96	341.34	0.06
Span # 5	5	5.000	-13.41	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**L*					
Span # 1	1	5.000	19.54	335.75	0.06
Span # 2	2	5.000	-21.39	341.34	0.06
Span # 3	3	5.000	20.08	335.75	0.06
Span # 4	4	5.000	-18.57	341.34	0.05
Span # 5	5	5.000	-8.16	341.34	0.02
Span # 6	6	14.250	-41.41	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	19.54	335.75	0.06
Span # 2	2	5.000	-21.39	341.34	0.06
Span # 3	3	5.000	20.12	335.75	0.06
Span # 4	4	5.000	-18.47	341.34	0.05

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 5	5	5.000	-13.83	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	19.56	335.75	0.06
Span # 2	2	5.000	-21.36	341.34	0.06
Span # 3	3	5.000	20.25	335.75	0.06
Span # 4	4	5.000	-18.09	341.34	0.05
Span # 5	5	5.000	-9.34	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	19.54	335.75	0.06
Span # 2	2	5.000	-21.39	341.34	0.06
Span # 3	3	5.000	20.12	335.75	0.06
Span # 4	4	5.000	-18.47	341.34	0.05
Span # 5	5	5.000	-13.83	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L**LL					
Span # 1	1	5.000	19.56	335.75	0.06
Span # 2	2	5.000	-21.36	341.34	0.06
Span # 3	3	5.000	20.25	335.75	0.06
Span # 4	4	5.000	-18.09	341.34	0.05
Span # 5	5	5.000	-9.34	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	20.31	335.75	0.06
Span # 2	2	5.000	-20.09	341.34	0.06
Span # 3	3	5.000	29.07	335.75	0.09
Span # 4	4	5.000	-20.46	341.34	0.06
Span # 5	5	5.000	-13.94	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	20.33	335.75	0.06
Span # 2	2	5.000	-20.07	341.34	0.06
Span # 3	3	5.000	29.20	335.75	0.09
Span # 4	4	5.000	-20.07	341.34	0.06
Span # 5	5	5.000	-8.69	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	20.31	335.75	0.06
Span # 2	2	5.000	-20.09	341.34	0.06
Span # 3	3	5.000	29.07	335.75	0.09
Span # 4	4	5.000	-20.46	341.34	0.06
Span # 5	5	5.000	-13.94	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L**					
Span # 1	1	5.000	20.33	335.75	0.06
Span # 2	2	5.000	-20.07	341.34	0.06
Span # 3	3	5.000	29.20	335.75	0.09
Span # 4	4	5.000	-20.07	341.34	0.06
Span # 5	5	5.000	-8.69	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	20.33	335.75	0.06
Span # 2	2	5.000	-20.06	341.34	0.06
Span # 3	3	5.000	29.23	335.75	0.09
Span # 4	4	5.000	-19.97	341.34	0.06
Span # 5	5	5.000	-14.36	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	20.35	335.75	0.06

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 2	2	5.000	-20.04	341.34	0.06
Span # 3	3	5.000	29.37	335.75	0.09
Span # 4	4	5.000	-19.58	341.34	0.06
Span # 5	5	5.000	-9.11	341.34	0.03
Span # 6	6	14.250	-41.45	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	20.33	335.75	0.06
Span # 2	2	5.000	-20.06	341.34	0.06
Span # 3	3	5.000	29.23	335.75	0.09
Span # 4	4	5.000	-19.97	341.34	0.06
Span # 5	5	5.000	-14.36	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*L*L					
Span # 1	1	5.000	20.35	335.75	0.06
Span # 2	2	5.000	-20.04	341.34	0.06
Span # 3	3	5.000	29.37	335.75	0.09
Span # 4	4	5.000	-19.58	341.34	0.06
Span # 5	5	5.000	-9.11	341.34	0.03
Span # 6	6	14.250	-41.45	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	20.20	335.75	0.06
Span # 2	2	5.000	-20.28	341.34	0.06
Span # 3	3	5.000	28.11	335.75	0.08
Span # 4	4	5.000	-23.29	341.34	0.07
Span # 5	5	5.000	-13.53	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	20.21	335.75	0.06
Span # 2	2	5.000	-20.26	341.34	0.06
Span # 3	3	5.000	28.24	335.75	0.08
Span # 4	4	5.000	-22.90	341.34	0.07
Span # 5	5	5.000	-8.28	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	20.20	335.75	0.06
Span # 2	2	5.000	-20.28	341.34	0.06
Span # 3	3	5.000	28.11	335.75	0.08
Span # 4	4	5.000	-23.29	341.34	0.07
Span # 5	5	5.000	-13.53	341.34	0.04
Span # 6	6	14.250	-27.77	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LL*					
Span # 1	1	5.000	20.21	335.75	0.06
Span # 2	2	5.000	-20.26	341.34	0.06
Span # 3	3	5.000	28.24	335.75	0.08
Span # 4	4	5.000	-22.91	341.34	0.07
Span # 5	5	5.000	-8.28	341.34	0.02
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	20.22	335.75	0.06
Span # 2	2	5.000	-20.25	341.34	0.06
Span # 3	3	5.000	28.28	335.75	0.08
Span # 4	4	5.000	-22.81	341.34	0.07
Span # 5	5	5.000	-13.95	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	20.23	335.75	0.06
Span # 2	2	5.000	-20.22	341.34	0.06
Span # 3	3	5.000	28.41	335.75	0.08
Span # 4	4	5.000	-22.42	341.34	0.07
Span # 5	5	5.000	-8.70	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12

Description : GB-J-62R (WITH TYPICAL UNIT FOR GRADE BEAM DESIGN)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	20.22	335.75	0.06
Span # 2	2	5.000	-20.25	341.34	0.06
Span # 3	3	5.000	28.28	335.75	0.08
Span # 4	4	5.000	-22.81	341.34	0.07
Span # 5	5	5.000	-13.95	341.34	0.04
Span # 6	6	14.250	-27.79	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (L*LLL					
Span # 1	1	5.000	20.23	335.75	0.06
Span # 2	2	5.000	-20.22	341.34	0.06
Span # 3	3	5.000	28.41	335.75	0.08
Span # 4	4	5.000	-22.42	341.34	0.07
Span # 5	5	5.000	-8.70	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-20.22	341.34	0.06
Span # 2	2	5.000	-23.67	341.34	0.07
Span # 3	3	5.000	19.85	335.75	0.06
Span # 4	4	5.000	-15.41	341.34	0.05
Span # 5	5	5.000	-13.80	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-20.19	341.34	0.06
Span # 2	2	5.000	-23.65	341.34	0.07
Span # 3	3	5.000	19.98	335.75	0.06
Span # 4	4	5.000	-15.02	341.34	0.04
Span # 5	5	5.000	-8.55	341.34	0.03
Span # 6	6	14.250	-41.43	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-20.22	341.34	0.06
Span # 2	2	5.000	-23.67	341.34	0.07
Span # 3	3	5.000	19.85	335.75	0.06
Span # 4	4	5.000	-15.41	341.34	0.05
Span # 5	5	5.000	-13.80	341.34	0.04
Span # 6	6	14.250	-27.78	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL***					
Span # 1	1	5.000	-20.19	341.34	0.06
Span # 2	2	5.000	-23.65	341.34	0.07
Span # 3	3	5.000	19.98	335.75	0.06
Span # 4	4	5.000	-15.02	341.34	0.04
Span # 5	5	5.000	-8.55	341.34	0.03
Span # 6	6	14.250	-41.42	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-20.19	341.34	0.06
Span # 2	2	5.000	-23.64	341.34	0.07
Span # 3	3	5.000	20.02	335.75	0.06
Span # 4	4	5.000	-14.92	341.34	0.04
Span # 5	5	5.000	-14.22	341.34	0.04
Span # 6	6	14.250	-27.80	341.34	0.08
Span # 7	7	3.250	-31.10	341.34	0.09
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-20.16	341.34	0.06
Span # 2	2	5.000	-23.61	341.34	0.07
Span # 3	3	5.000	20.15	335.75	0.06
Span # 4	4	5.000	-14.53	341.34	0.04
Span # 5	5	5.000	-8.98	341.34	0.03
Span # 6	6	14.250	-41.44	341.34	0.12
Span # 7	7	3.250	-45.19	341.34	0.13
+1.20D+0.50Lr+1.60L+1.60H, LL Comb Run (LL**L					
Span # 1	1	5.000	-20.19	341.34	0.06
Span # 2	2	5.000	-23.64	341.34	0.07
Span # 3	3	5.000	20.02	335.75	0.06

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Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

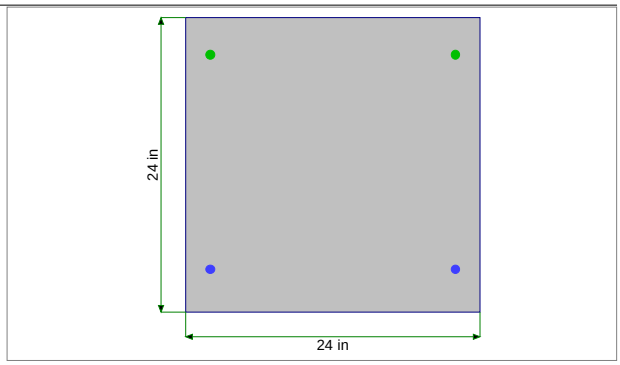
Description : GB-K-62R (at toe of retaining wall J-62R)

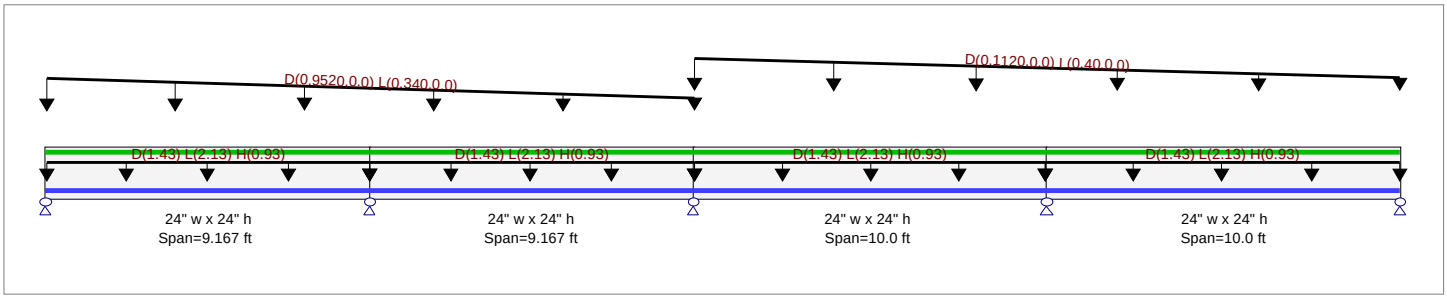
CODE REFERENCES

Calculations per ACI 318-08, IBC 2009, ASCE 7-10
Load Combination Set : IBC 2015

Material Properties

f'c	=	4.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	474.342 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2





Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 24.0 in

Span #1 Reinforcing....
- 2-#6 at 3.50 in from Bottom, from 0.0 to 18.333 ft in this span
- 2-#6 at 3.0 in from Top, from 0.0 to 18.333 ft in this span

Span #2 Reinforcing....
- 5-#6 at 3.50 in from Bottom, from 0.0 to 20.0 ft in this span
- 5-#6 at 3.0 in from Top, from 0.0 to 20.0 ft in this span

Span #3 Reinforcing....
- 5-#6 at 3.50 in from Bottom, from 0.0 to 20.0 ft in this span
- 5-#6 at 3.0 in from Top, from 0.0 to 20.0 ft in this span

Span #4 Reinforcing....
- 5-#6 at 3.50 in from Bottom, from 0.0 to 10.0 ft in this span
- 5-#6 at 3.0 in from Top, from 0.0 to 10.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Loads on all spans...
- Varying Uniform Load : D(S,E) = 0.9520->0.0, Lf(S,E) = 0.340->0.0 k/ft, Extent = 0.0 -->> 18.333 ft
- Varying Uniform Load : D(S,E) = 0.1120->0.0, L(S,E) = 0.40->0.0 k/ft, Extent = 18.333 -->> 38.333 ft

Load for Span Number 1
- Uniform Load : D = 1.430, L = 2.130, H = 0.930 k/ft, Tributary Width = 1.0 ft, (toe force from wall bJ-62R)

Load for Span Number 2
- Uniform Load : D = 1.430, L = 2.130, H = 0.930 k/ft, Tributary Width = 1.0 ft, (toe force from wall bJ-62R)

Load for Span Number 3
- Uniform Load : D = 1.430, L = 2.130, H = 0.930 k/ft, Tributary Width = 1.0 ft, (toe force from wall bJ-62R)

Load for Span Number 4
- Uniform Load : D = 1.430, L = 2.130, H = 0.930 k/ft, Tributary Width = 1.0 ft, (toe force from wall bJ-62R)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.744** : 1	Maximum Deflection			
Section used for this span		**Typical Section**	Max Downward Transient Deflection	0.003 in	Ratio =	44295 >=36
Mu : Applied		-68.405 k-ft	Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Mn * Phi : Allowable		91.895 k-ft	Max Downward Total Deflection	0.006 in	Ratio =	18619 >=24
Location of maximum on span		9.071 ft	Max Upward Total Deflection	0.000 in	Ratio =	999 <240
Span # where maximum occurs		Span # 1				

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Title Block Line 6

Project Title:
Engineer:
Project Descr:

Project ID:

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Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

Description : GB-K-62R (at toe of retaining wall J-62R)

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4	Support 5
Overall MAXimum	22.586	59.722	47.727	61.280	20.001
Overall MINimum	3.364	9.653	8.288	10.705	3.641
+D+H	13.736	35.913	26.868	34.489	11.542
+D+L+H	22.586	59.722	47.727	61.280	20.001
+D+Lr+H	13.736	35.913	26.868	34.489	11.542
+D+S+H	13.736	35.913	26.868	34.489	11.542
+D+0.750Lr+0.750L+H	20.373	53.770	42.512	54.583	17.887
+D+0.750L+0.750S+H	20.373	53.770	42.512	54.583	17.887
+D+0.60W+H	13.736	35.913	26.868	34.489	11.542
+D+0.70E+H	13.736	35.913	26.868	34.489	11.542
+D+0.750Lr+0.750L+0.450W+H	20.373	53.770	42.512	54.583	17.887
+D+0.750L+0.750S+0.450W+H	20.373	53.770	42.512	54.583	17.887
+D+0.750L+0.750S+0.5250E+H	20.373	53.770	42.512	54.583	17.887
+0.60D+0.60W+0.60H	8.241	21.548	16.121	20.694	6.925
+0.60D+0.70E+0.60H	8.241	21.548	16.121	20.694	6.925
D Only	10.371	26.261	18.580	23.785	7.901
Lr Only					
L Only	8.850	23.809	20.858	26.791	8.460
S Only					
W Only					
E Only					
H Only	3.364	9.653	8.288	10.705	3.641

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	0.00	20.50	31.99	31.99	0.00	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.10	20.50	31.12	31.12	3.04	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.19	20.50	30.25	30.25	6.01	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.29	20.50	29.39	29.39	8.88	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.39	20.50	28.52	28.52	11.68	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.48	20.50	27.66	27.66	14.39	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.58	20.50	26.80	26.80	17.02	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.68	20.50	25.93	25.93	19.56	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.77	20.50	25.07	25.07	22.02	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.87	20.50	24.21	24.21	24.40	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	0.96	20.50	23.35	23.35	26.69	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	1.06	20.50	22.49	22.49	28.91	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.16	20.50	21.64	21.64	31.04	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.25	20.50	20.78	20.78	33.08	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.35	20.50	19.92	19.92	35.05	0.97	45.94	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.45	20.50	19.07	19.07	36.93	0.88	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.54	20.50	18.21	18.21	38.73	0.80	45.67	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.64	20.50	17.36	17.36	40.44	0.73	45.55	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.74	20.50	16.51	16.51	42.08	0.67	45.45	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.83	20.50	15.65	15.65	43.63	0.61	45.35	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	1.93	20.50	14.80	14.80	45.10	0.56	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.03	20.50	13.95	13.95	46.48	0.51	45.19	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.12	20.50	13.10	13.10	47.79	0.47	45.11	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.22	20.50	12.25	12.25	49.01	0.43	45.05	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.32	20.50	11.41	11.41	50.15	0.39	44.98	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.41	20.50	10.56	10.56	51.21	0.35	44.92	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.51	20.50	9.71	9.71	52.19	0.32	44.87	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.61	20.50	8.87	8.87	53.09	0.29	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.70	20.50	8.02	8.02	53.90	0.25	44.76	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.80	20.50	7.18	7.18	54.64	0.22	44.71	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	2.89	20.50	6.34	6.34	55.29	0.20	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 — **Licensee : Morton + Associates, LLC**

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	1	2.99	20.50	5.50	5.50	55.86	0.17	44.62	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.09	20.50	4.65	4.65	56.35	0.14	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.18	20.50	3.81	3.81	56.76	0.11	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.28	20.50	2.98	2.98	57.08	0.09	44.49	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.38	20.50	2.14	2.14	57.33	0.06	44.45	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.47	20.50	1.30	1.30	57.50	0.04	44.41	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.57	20.50	0.46	0.46	57.58	0.01	44.36	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.67	20.50	-0.37	0.37	57.59	0.01	44.36	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.76	20.50	-1.21	1.21	57.51	0.04	44.40	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.86	20.50	-2.04	2.04	57.35	0.06	44.44	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	3.96	20.50	-2.88	2.88	57.12	0.09	44.48	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.05	20.50	-3.71	3.71	56.80	0.11	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.15	20.50	-4.54	4.54	56.40	0.14	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.25	20.50	-5.37	5.37	55.92	0.16	44.61	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.34	20.50	-6.20	6.20	55.36	0.19	44.66	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.44	20.50	-7.03	7.03	54.73	0.22	44.70	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.54	20.50	-7.86	7.86	54.01	0.25	44.75	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.63	20.50	-8.68	8.68	53.21	0.28	44.80	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.73	20.50	-9.51	9.51	52.33	0.31	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.82	20.50	-10.34	10.34	51.37	0.34	44.91	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	4.92	20.50	-11.16	11.16	50.34	0.38	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.02	20.50	-11.98	11.98	49.22	0.42	45.03	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.11	20.50	-12.81	12.81	48.02	0.46	45.09	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.21	20.50	-13.63	13.63	46.75	0.50	45.16	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.31	20.50	-14.45	14.45	45.39	0.54	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.40	20.50	-15.27	15.27	43.96	0.59	45.32	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.50	20.50	-16.09	16.09	42.45	0.65	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.60	20.50	-16.91	16.91	40.86	0.71	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.69	20.50	-17.73	17.73	39.18	0.77	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.79	20.50	-18.54	18.54	37.43	0.85	45.74	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.89	20.50	-19.36	19.36	35.61	0.93	45.87	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	5.98	20.50	-20.18	20.18	33.70	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.08	20.50	-20.99	20.99	31.71	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.18	20.50	-21.80	21.80	29.65	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.27	20.50	-22.62	22.62	27.50	1.00	45.99	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	1	6.37	20.50	-23.43	23.43	25.28	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.47	20.50	-24.24	24.24	22.98	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.56	20.50	-25.05	25.05	20.60	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.66	20.50	-25.86	25.86	18.15	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.75	20.50	-26.67	26.67	15.61	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.85	20.50	-27.47	27.47	13.00	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	6.95	20.50	-28.28	28.28	10.31	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.04	20.50	-29.09	29.09	7.54	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.14	20.50	-29.89	29.89	4.70	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.24	20.50	-30.70	30.70	1.78	1.00	45.99	PhiVc/2 < Vu <=	Min 11.5.6	65.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.33	21.00	-31.50	31.50	1.23	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.43	21.00	-32.30	32.30	4.30	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.53	21.00	-33.10	33.10	7.46	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.62	21.00	-33.90	33.90	10.69	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.72	21.00	-34.70	34.70	14.00	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.82	21.00	-35.50	35.50	17.39	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	7.91	21.00	-36.30	36.30	20.85	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.01	21.00	-37.10	37.10	24.39	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.11	21.00	-37.89	37.89	28.01	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0

Concrete Beam

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Suggest
+1.20D+1.60L+0.50S+1.60H	1	8.20	21.00	-38.69	38.69	31.71	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.30	21.00	-39.48	39.48	35.48	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.40	21.00	-40.28	40.28	39.33	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.49	21.00	-41.07	41.07	43.25	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.59	21.00	-41.86	41.86	47.25	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.68	21.00	-42.65	42.65	51.33	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.78	21.00	-43.44	43.44	55.49	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.88	21.00	-44.23	44.23	59.72	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	8.97	21.00	-45.02	45.02	64.02	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	1	9.07	21.00	-45.81	45.81	68.40	1.00	47.07	PhiVc/2 < Vu <=	Min 11.5.6	66.9	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.17	21.00	38.45	38.45	72.86	0.92	49.23	PhiVc/2 < Vu <=	Min 11.5.6	69.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.26	21.00	37.67	37.67	69.19	0.95	49.35	PhiVc/2 < Vu <=	Min 11.5.6	69.2	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.36	21.00	36.88	36.88	65.59	0.98	49.48	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.46	21.00	36.10	36.10	62.07	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.55	21.00	35.31	35.31	58.63	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.65	21.00	34.53	34.53	55.26	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.75	21.00	33.75	33.75	51.96	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.84	21.00	32.97	32.97	48.74	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	9.94	21.00	32.19	32.19	45.60	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.04	21.00	31.41	31.41	42.53	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.13	21.00	30.63	30.63	39.54	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.23	21.00	29.85	29.85	36.62	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.32	21.00	29.08	29.08	33.78	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.42	21.00	28.30	28.30	31.01	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.52	21.00	27.53	27.53	28.32	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.61	21.00	26.75	26.75	25.70	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.71	21.00	25.98	25.98	23.15	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.81	21.00	25.21	25.21	20.68	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	10.90	21.00	24.43	24.43	18.29	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.00	21.00	23.66	23.66	15.97	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.10	21.00	22.89	22.89	13.72	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.19	21.00	22.13	22.13	11.55	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.29	21.00	21.36	21.36	9.45	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.39	21.00	20.59	20.59	7.43	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.48	21.00	19.82	19.82	5.48	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.58	21.00	19.06	19.06	3.60	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.68	21.00	18.29	18.29	1.80	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.77	21.00	17.53	17.53	0.07	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.87	20.50	16.77	16.77	1.58	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	11.97	20.50	16.00	16.00	3.16	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.06	20.50	15.24	15.24	4.67	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.16	20.50	14.48	14.48	6.11	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.25	20.50	13.72	13.72	7.47	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.35	20.50	12.96	12.96	8.76	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.45	20.50	12.21	12.21	9.97	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.54	20.50	11.45	11.45	11.11	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.64	20.50	10.69	10.69	12.18	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.74	20.50	9.94	9.94	13.17	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.83	20.50	9.18	9.18	14.10	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	12.93	20.50	8.43	8.43	14.95	0.96	48.32	Vu < PhiVc/2	Not Reqd 1	48.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.03	20.50	7.68	7.68	15.72	0.83	47.78	Vu < PhiVc/2	Not Reqd 1	47.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.12	20.50	6.93	6.93	16.43	0.72	47.31	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.22	20.50	6.17	6.17	17.06	0.62	46.89	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.32	20.50	5.42	5.42	17.62	0.53	46.51	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0

Concrete Beam

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	2	13.41	20.50	4.67	4.67	18.11	0.44	46.16	Vu < PhiVc/2	Not Reqd 1	46.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.51	20.50	3.93	3.93	18.52	0.36	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.61	20.50	3.18	3.18	18.87	0.29	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.70	20.50	2.43	2.43	19.14	0.22	45.24	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.80	20.50	1.69	1.69	19.33	0.15	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	13.90	20.50	0.94	0.94	19.46	0.08	44.68	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.40D+1.60H	2	13.99	20.50	0.39	0.39	12.00	0.06	44.57	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.09	20.50	-0.55	0.55	19.50	0.05	44.54	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.18	20.50	-1.29	1.29	19.41	0.11	44.81	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.28	20.50	-2.03	2.03	19.25	0.18	45.08	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.38	20.50	-2.77	2.77	19.02	0.25	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.47	20.50	-3.51	3.51	18.72	0.32	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.57	20.50	-4.25	4.25	18.34	0.40	45.97	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.67	20.50	-4.99	4.99	17.90	0.48	46.31	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.76	20.50	-5.73	5.73	17.38	0.56	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.86	20.50	-6.46	6.46	16.79	0.66	47.05	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	14.96	20.50	-7.20	7.20	16.13	0.76	47.49	Vu < PhiVc/2	Not Reqd 1	47.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.05	20.50	-7.93	7.93	15.40	0.88	47.97	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.15	20.50	-8.67	8.67	14.60	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.25	20.50	-9.40	9.40	13.73	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.34	20.50	-10.13	10.13	12.79	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.44	20.50	-10.86	10.86	11.77	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.54	20.50	-11.59	11.59	10.69	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.63	20.50	-12.32	12.32	9.54	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.73	20.50	-13.05	13.05	8.31	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.83	20.50	-13.78	13.78	7.02	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	15.92	20.50	-14.51	14.51	5.65	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.02	20.50	-15.23	15.23	4.22	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.11	20.50	-15.96	15.96	2.71	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.21	20.50	-16.68	16.68	1.14	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.31	21.00	-17.41	17.41	0.51	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.40	21.00	-18.13	18.13	2.22	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.50	21.00	-18.85	18.85	4.00	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.60	21.00	-19.57	19.57	5.86	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.69	21.00	-20.29	20.29	7.78	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.79	21.00	-21.01	21.01	9.77	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.89	21.00	-21.73	21.73	11.84	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	16.98	21.00	-22.45	22.45	13.97	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	17.08	21.00	-23.16	23.16	16.17	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	17.18	21.00	-23.88	23.88	18.44	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	17.27	21.00	-24.59	24.59	20.78	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	2	17.37	21.00	-25.31	25.31	23.18	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.47	21.00	-26.02	26.02	25.66	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.56	21.00	-26.73	26.73	28.21	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.66	21.00	-27.45	27.45	30.82	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.76	21.00	-28.16	28.16	33.50	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.85	21.00	-28.87	28.87	36.25	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	17.95	21.00	-29.58	29.58	39.07	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	18.04	21.00	-30.28	30.28	41.96	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	18.14	21.00	-30.99	30.99	44.92	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	2	18.24	21.00	-31.70	31.70	47.94	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.33	21.00	36.53	36.53	51.03	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.44	21.00	35.68	35.68	47.23	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.54	21.00	34.83	34.83	43.52	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0

Concrete Beam

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	3	18.65	21.00	33.98	33.98	39.90	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.76	21.00	33.13	33.13	36.37	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.86	21.00	32.28	32.28	32.93	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	18.97	21.00	31.43	31.43	29.58	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.07	21.00	30.58	30.58	26.31	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.18	21.00	29.73	29.73	23.14	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.28	21.00	28.89	28.89	20.05	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.39	21.00	28.04	28.04	17.06	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.49	21.00	27.19	27.19	14.15	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.60	21.00	26.35	26.35	11.33	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.70	21.00	25.50	25.50	8.60	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	19.81	21.00	24.66	24.66	5.96	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	19.91	21.00	23.81	23.81	3.41	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.02	21.00	22.97	22.97	0.95	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.12	20.50	22.13	22.13	1.43	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.23	20.50	21.28	21.28	3.71	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.33	20.50	20.44	20.44	5.91	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.44	20.50	19.60	19.60	8.01	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.54	20.50	18.76	18.76	10.03	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.65	20.50	17.91	17.91	11.96	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.76	20.50	17.07	17.07	13.80	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.86	20.50	16.23	16.23	15.56	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	20.97	20.50	15.39	15.39	17.22	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.07	20.50	14.55	14.55	18.80	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.18	20.50	13.71	13.71	20.28	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.28	20.50	12.87	12.87	21.68	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.39	20.50	12.03	12.03	22.99	0.89	48.03	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.49	20.50	11.20	11.20	24.22	0.79	47.60	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.60	20.50	10.36	10.36	25.35	0.70	47.22	Vu < PhiVc/2	Not Reqd 1	47.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.70	20.50	9.52	9.52	26.40	0.62	46.88	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.81	20.50	8.68	8.68	27.36	0.54	46.58	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	21.91	20.50	7.85	7.85	28.23	0.48	46.30	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.02	20.50	7.01	7.01	29.01	0.41	46.04	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.12	20.50	6.18	6.18	29.70	0.36	45.81	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.23	20.50	5.34	5.34	30.31	0.30	45.58	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.33	20.50	4.51	4.51	30.83	0.25	45.37	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.44	20.50	3.67	3.67	31.26	0.20	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.54	20.50	2.84	2.84	31.60	0.15	44.97	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.65	20.50	2.01	2.01	31.86	0.11	44.79	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.76	20.50	1.17	1.17	32.02	0.06	44.60	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.86	20.50	0.34	0.34	32.10	0.02	44.42	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	22.97	20.50	-0.49	0.49	32.09	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.07	20.50	-1.32	1.32	32.00	0.07	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.18	20.50	-2.15	2.15	31.82	0.12	44.82	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.28	20.50	-2.99	2.99	31.54	0.16	45.01	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.39	20.50	-3.82	3.82	31.19	0.21	45.20	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.49	20.50	-4.65	4.65	30.74	0.26	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.60	20.50	-5.48	5.48	30.21	0.31	45.62	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.70	20.50	-6.30	6.30	29.59	0.36	45.84	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.81	20.50	-7.13	7.13	28.88	0.42	46.08	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	23.91	20.50	-7.96	7.96	28.09	0.48	46.34	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.02	20.50	-8.79	8.79	27.21	0.55	46.62	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.12	20.50	-9.62	9.62	26.24	0.63	46.92	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.23	20.50	-10.44	10.44	25.18	0.71	47.26	Vu < PhiVc/2	Not Reqd 1	47.3	0.0	0.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	3	24.33	20.50	-11.27	11.27	24.04	0.80	47.65	Vu < PhiVc/2	Not Reqd 1	47.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.44	20.50	-12.10	12.10	22.81	0.91	48.08	Vu < PhiVc/2	Not Reqd 1	48.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.54	20.50	-12.92	12.92	21.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.65	20.50	-13.75	13.75	20.09	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.76	20.50	-14.57	14.57	18.60	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.86	20.50	-15.40	15.40	17.02	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	24.97	20.50	-16.22	16.22	15.36	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.07	20.50	-17.04	17.04	13.61	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.18	20.50	-17.87	17.87	11.77	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.28	20.50	-18.69	18.69	9.84	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.39	20.50	-19.51	19.51	7.83	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.49	20.50	-20.33	20.33	5.74	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.60	20.50	-21.16	21.16	3.55	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.70	20.50	-21.98	21.98	1.28	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.81	21.00	-22.80	22.80	1.07	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	25.91	21.00	-23.62	23.62	3.52	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	26.02	21.00	-24.44	24.44	6.05	1.00	49.55	Vu < PhiVc/2	Not Reqd 1	49.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	3	26.12	21.00	-25.26	25.26	8.66	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.23	21.00	-26.07	26.07	11.36	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.33	21.00	-26.89	26.89	14.15	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.44	21.00	-27.71	27.71	17.03	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.54	21.00	-28.53	28.53	19.99	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.65	21.00	-29.35	29.35	23.03	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.76	21.00	-30.16	30.16	26.16	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.86	21.00	-30.98	30.98	29.38	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	26.97	21.00	-31.79	31.79	32.68	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.07	21.00	-32.61	32.61	36.07	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.18	21.00	-33.42	33.42	39.55	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.28	21.00	-34.24	34.24	43.11	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.39	21.00	-35.05	35.05	46.76	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.49	21.00	-35.87	35.87	50.49	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.60	21.00	-36.68	36.68	54.31	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.70	21.00	-37.49	37.49	58.21	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.81	21.00	-38.31	38.31	62.20	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	27.91	21.00	-39.12	39.12	66.28	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	28.02	21.00	-39.93	39.93	70.44	0.99	49.52	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	28.12	21.00	-40.74	40.74	74.68	0.95	49.36	PhiVc/2 < Vu <=	Min 11.5.6	69.2	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	3	28.23	21.00	-41.55	41.55	79.01	0.92	49.22	PhiVc/2 < Vu <=	Min 11.5.6	69.0	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.33	21.00	46.17	46.17	83.43	0.97	49.42	PhiVc/2 < Vu <=	Min 11.5.6	69.2	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.44	21.00	45.36	45.36	78.61	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.54	21.00	44.55	44.55	73.88	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.65	21.00	43.75	43.75	69.23	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.76	21.00	42.94	42.94	64.67	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.86	21.00	42.13	42.13	60.19	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	28.97	21.00	41.32	41.32	55.80	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.07	21.00	40.51	40.51	51.49	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.18	21.00	39.71	39.71	47.27	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.28	21.00	38.90	38.90	43.14	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.39	21.00	38.09	38.09	39.08	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.49	21.00	37.29	37.29	35.12	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.60	21.00	36.48	36.48	31.23	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.70	21.00	35.68	35.68	27.43	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.81	21.00	34.88	34.88	23.72	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	29.91	21.00	34.07	34.07	20.09	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048
Licensee : Morton + Associates, LLC

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	4	30.02	21.00	33.27	33.27	16.55	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.12	21.00	32.47	32.47	13.09	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.23	21.00	31.66	31.66	9.71	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.33	21.00	30.86	30.86	6.42	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.44	21.00	30.06	30.06	3.22	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.54	21.00	29.26	29.26	0.09	1.00	49.55	PhiVc/2 < Vu <=	Min 11.5.6	69.3	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.65	20.50	28.46	28.46	2.94	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.76	20.50	27.66	27.66	5.90	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.86	20.50	26.86	26.86	8.77	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	30.97	20.50	26.06	26.06	11.55	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	31.07	20.50	25.26	25.26	14.25	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	31.18	20.50	24.46	24.46	16.87	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	31.28	20.50	23.66	23.66	19.40	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.39	20.50	22.86	22.86	21.85	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.49	20.50	22.07	22.07	24.21	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.60	20.50	21.27	21.27	26.50	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.70	20.50	20.47	20.47	28.69	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.81	20.50	19.68	19.68	30.81	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	31.91	20.50	18.88	18.88	32.83	0.98	48.39	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.02	20.50	18.09	18.09	34.78	0.89	48.01	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.12	20.50	17.29	17.29	36.64	0.81	47.67	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.23	20.50	16.50	16.50	38.42	0.73	47.37	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.33	20.50	15.70	15.70	40.12	0.67	47.10	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.44	20.50	14.91	14.91	41.73	0.61	46.86	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.54	20.50	14.12	14.12	43.25	0.56	46.64	Vu < PhiVc/2	Not Reqd 1	46.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.65	20.50	13.32	13.32	44.70	0.51	46.44	Vu < PhiVc/2	Not Reqd 1	46.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.76	20.50	12.53	12.53	46.06	0.46	46.26	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.86	20.50	11.74	11.74	47.34	0.42	46.09	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	32.97	20.50	10.95	10.95	48.53	0.39	45.93	Vu < PhiVc/2	Not Reqd 1	45.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.07	20.50	10.16	10.16	49.64	0.35	45.78	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.18	20.50	9.37	9.37	50.67	0.32	45.64	Vu < PhiVc/2	Not Reqd 1	45.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.28	20.50	8.58	8.58	51.61	0.28	45.51	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.39	20.50	7.79	7.79	52.47	0.25	45.39	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.49	20.50	7.00	7.00	53.25	0.22	45.27	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.60	20.50	6.21	6.21	53.95	0.20	45.15	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.70	20.50	5.42	5.42	54.56	0.17	45.04	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.81	20.50	4.63	4.63	55.09	0.14	44.93	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	33.91	20.50	3.85	3.85	55.53	0.12	44.83	Vu < PhiVc/2	Not Reqd 1	44.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.02	20.50	3.06	3.06	55.90	0.09	44.73	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.12	20.50	2.27	2.27	56.18	0.07	44.63	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.23	20.50	1.49	1.49	56.38	0.05	44.53	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.33	20.50	0.70	0.70	56.49	0.02	44.43	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.44	20.50	-0.09	0.09	56.52	0.00	44.35	Vu < PhiVc/2	Not Reqd 1	44.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.54	20.50	-0.87	0.87	56.47	0.03	44.45	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.65	20.50	-1.66	1.66	56.34	0.05	44.55	Vu < PhiVc/2	Not Reqd 1	44.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.76	20.50	-2.44	2.44	56.12	0.07	44.65	Vu < PhiVc/2	Not Reqd 1	44.6	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.86	20.50	-3.22	3.22	55.83	0.10	44.75	Vu < PhiVc/2	Not Reqd 1	44.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	34.97	20.50	-4.01	4.01	55.45	0.12	44.85	Vu < PhiVc/2	Not Reqd 1	44.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.07	20.50	-4.79	4.79	54.98	0.15	44.96	Vu < PhiVc/2	Not Reqd 1	45.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.18	20.50	-5.57	5.57	54.44	0.17	45.06	Vu < PhiVc/2	Not Reqd 1	45.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.28	20.50	-6.35	6.35	53.81	0.20	45.17	Vu < PhiVc/2	Not Reqd 1	45.2	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.39	20.50	-7.13	7.13	53.10	0.23	45.29	Vu < PhiVc/2	Not Reqd 1	45.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.49	20.50	-7.92	7.92	52.31	0.26	45.41	Vu < PhiVc/2	Not Reqd 1	45.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.60	20.50	-8.70	8.70	51.43	0.29	45.53	Vu < PhiVc/2	Not Reqd 1	45.5	0.0	0.0

Concrete Beam

Description : GB-K-62R (at toe of retaining wall J-62R)

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd	Spacing (in) Suggest
+1.20D+1.60L+0.50S+1.60H	4	35.70	20.50	-9.48	9.48	50.48	0.32	45.66	Vu < PhiVc/2	Not Reqd 1	45.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.81	20.50	-10.26	10.26	49.44	0.35	45.80	Vu < PhiVc/2	Not Reqd 1	45.8	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	35.91	20.50	-11.04	11.04	48.32	0.39	45.95	Vu < PhiVc/2	Not Reqd 1	46.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.02	20.50	-11.81	11.81	47.12	0.43	46.11	Vu < PhiVc/2	Not Reqd 1	46.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.12	20.50	-12.59	12.59	45.83	0.47	46.28	Vu < PhiVc/2	Not Reqd 1	46.3	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.23	20.50	-13.37	13.37	44.46	0.51	46.46	Vu < PhiVc/2	Not Reqd 1	46.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.33	20.50	-14.15	14.15	43.02	0.56	46.66	Vu < PhiVc/2	Not Reqd 1	46.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.44	20.50	-14.93	14.93	41.49	0.61	46.88	Vu < PhiVc/2	Not Reqd 1	46.9	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.54	20.50	-15.70	15.70	39.87	0.67	47.12	Vu < PhiVc/2	Not Reqd 1	47.1	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.65	20.50	-16.48	16.48	38.18	0.74	47.38	Vu < PhiVc/2	Not Reqd 1	47.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.76	20.50	-17.25	17.25	36.41	0.81	47.68	Vu < PhiVc/2	Not Reqd 1	47.7	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.86	20.50	-18.03	18.03	34.55	0.89	48.02	Vu < PhiVc/2	Not Reqd 1	48.0	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	36.97	20.50	-18.81	18.81	32.61	0.99	48.41	Vu < PhiVc/2	Not Reqd 1	48.4	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.07	20.50	-19.58	19.58	30.59	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.18	20.50	-20.35	20.35	28.49	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.28	20.50	-21.13	21.13	26.30	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.39	20.50	-21.90	21.90	24.04	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.49	20.50	-22.67	22.67	21.69	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.60	20.50	-23.45	23.45	19.27	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.70	20.50	-24.22	24.22	16.76	1.00	48.47	Vu < PhiVc/2	Not Reqd 1	48.5	0.0	0.0
+1.20D+1.60L+0.50S+1.60H	4	37.81	20.50	-24.99	24.99	14.17	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	37.91	20.50	-25.76	25.76	11.50	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	38.02	20.50	-26.53	26.53	8.74	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	38.12	20.50	-27.30	27.30	5.91	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	38.23	20.50	-28.07	28.07	3.00	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0
+1.20D+1.60L+0.50S+1.60H	4	38.33	20.50	-28.84	28.84	0.00	1.00	48.47	PhiVc/2 < Vu <=	Min 11.5.6	67.8	7.3	7.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	9.167	-68.40	91.90	0.74
Span # 2	2	9.167	-72.86	206.35	0.35
Span # 3	3	10.000	-79.01	206.35	0.38
Span # 4	4	10.000	-83.43	206.35	0.40
+1.40D+1.60H					
Span # 1	1	9.167	-42.23	91.90	0.46
Span # 2	2	9.167	-44.97	206.35	0.22
Span # 3	3	10.000	-45.05	206.35	0.22
Span # 4	4	10.000	-47.54	206.35	0.23
+1.20D+0.50Lr+1.60L+1.60H					
Span # 1	1	9.167	-68.40	91.90	0.74
Span # 2	2	9.167	-72.86	206.35	0.35
Span # 3	3	10.000	-79.01	206.35	0.38
Span # 4	4	10.000	-83.43	206.35	0.40
+1.20D+1.60L+0.50S+1.60H					
Span # 1	1	9.167	-68.40	91.90	0.74
Span # 2	2	9.167	-72.86	206.35	0.35
Span # 3	3	10.000	-79.01	206.35	0.38
Span # 4	4	10.000	-83.43	206.35	0.40
+1.20D+1.60Lr+0.50L+1.60H					
Span # 1	1	9.167	-47.48	91.90	0.52
Span # 2	2	9.167	-50.57	206.35	0.25
Span # 3	3	10.000	-52.74	206.35	0.26
Span # 4	4	10.000	-55.67	206.35	0.27
+1.20D+1.60Lr+0.50W+1.60H					
Span # 1	1	9.167	-37.97	91.90	0.41
Span # 2	2	9.167	-40.43	206.35	0.20
Span # 3	3	10.000	-40.80	206.35	0.20
Span # 4	4	10.000	-43.06	206.35	0.21
+1.20D+0.50L+1.60S+1.60H					

Concrete Beam

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ENERCALC, INC. 1983-2016, Build:6.16.10.31, Ver:6.16.12.31

Lic. # : KW-06010048 **Licensee : Morton + Associates, LLC**

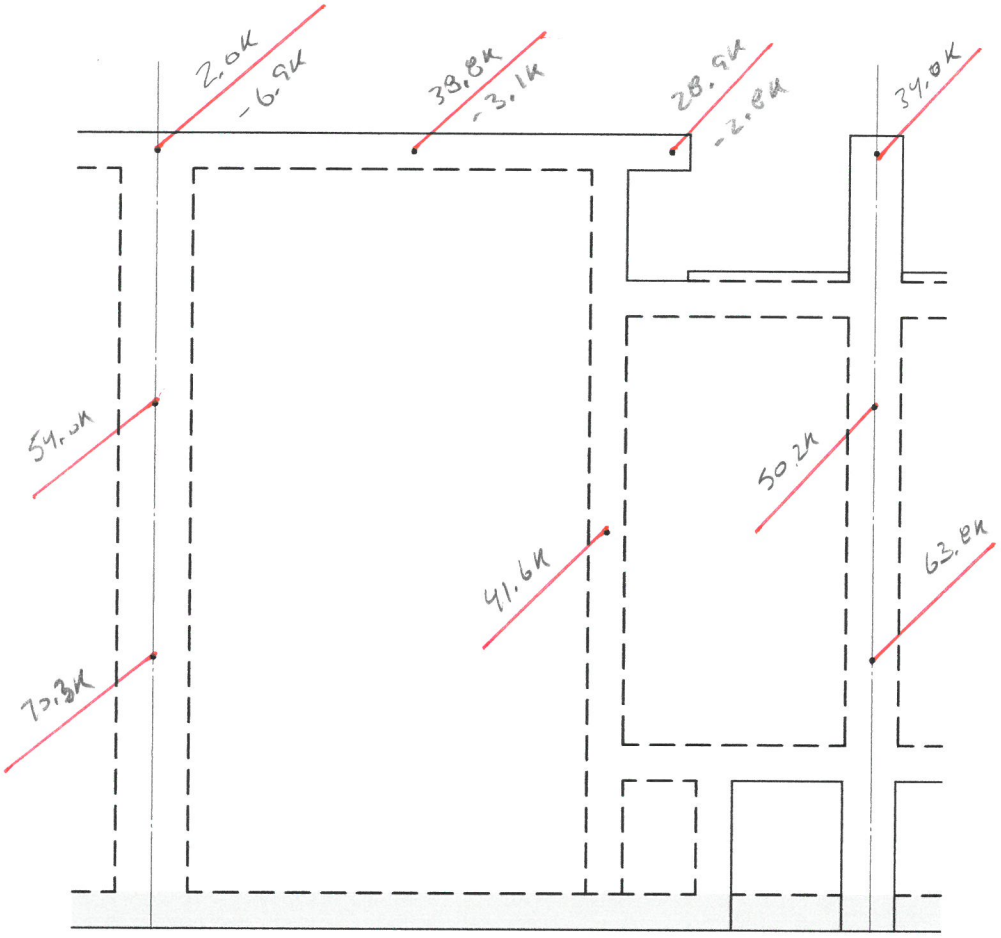
Description : GB-K-62R (at toe of retaining wall J-62R)

Load Combination / Segment Length	Span #	Location (ft) in Span	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
Span # 1	1	9.167	-47.48	91.90	0.52
Span # 2	2	9.167	-50.57	206.35	0.25
Span # 3	3	10.000	-52.74	206.35	0.26
Span # 4	4	10.000	-55.67	206.35	0.27
+1.20D+1.60S+0.50W+1.60H					
Span # 1	1	9.167	-37.97	91.90	0.41
Span # 2	2	9.167	-40.43	206.35	0.20
Span # 3	3	10.000	-40.80	206.35	0.20
Span # 4	4	10.000	-43.06	206.35	0.21
+1.20D+0.50Lr+0.50L+W+1.60H					
Span # 1	1	9.167	-47.48	91.90	0.52
Span # 2	2	9.167	-50.57	206.35	0.25
Span # 3	3	10.000	-52.74	206.35	0.26
Span # 4	4	10.000	-55.67	206.35	0.27
+1.20D+0.50L+0.50S+W+1.60H					
Span # 1	1	9.167	-47.48	91.90	0.52
Span # 2	2	9.167	-50.57	206.35	0.25
Span # 3	3	10.000	-52.74	206.35	0.26
Span # 4	4	10.000	-55.67	206.35	0.27
+1.20D+0.50L+0.70S+E+1.60H					
Span # 1	1	9.167	-47.48	91.90	0.52
Span # 2	2	9.167	-50.57	206.35	0.25
Span # 3	3	10.000	-52.74	206.35	0.26
Span # 4	4	10.000	-55.67	206.35	0.27
+0.90D+W+0.90H					
Span # 1	1	9.167	-26.15	91.90	0.28
Span # 2	2	9.167	-27.85	206.35	0.13
Span # 3	3	10.000	-27.73	206.35	0.13
Span # 4	4	10.000	-29.26	206.35	0.14
+0.90D+E+0.90H					
Span # 1	1	9.167	-26.15	91.90	0.28
Span # 2	2	9.167	-27.85	206.35	0.13
Span # 3	3	10.000	-27.73	206.35	0.13
Span # 4	4	10.000	-29.26	206.35	0.14

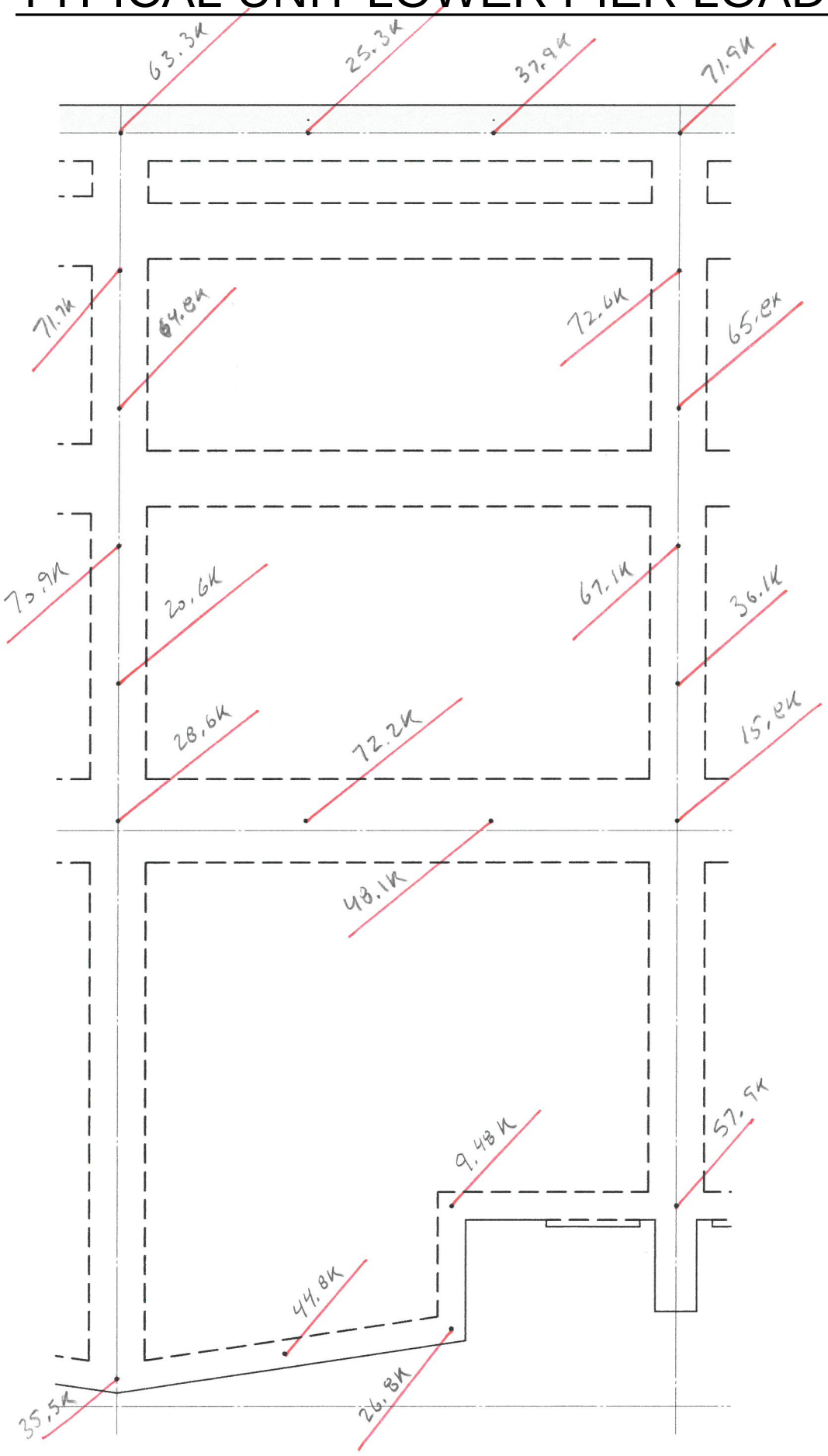
Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L+H	1	0.0058	4.101	+D+L+H	-0.0001	9.408
+D+L+H	2	0.0008	5.066	+D+L+H	-0.0003	0.724
+D+L+H	3	0.0026	4.474	+D+L+H	-0.0001	9.737
+D+L+H	4	0.0064	5.526		0.0000	9.737

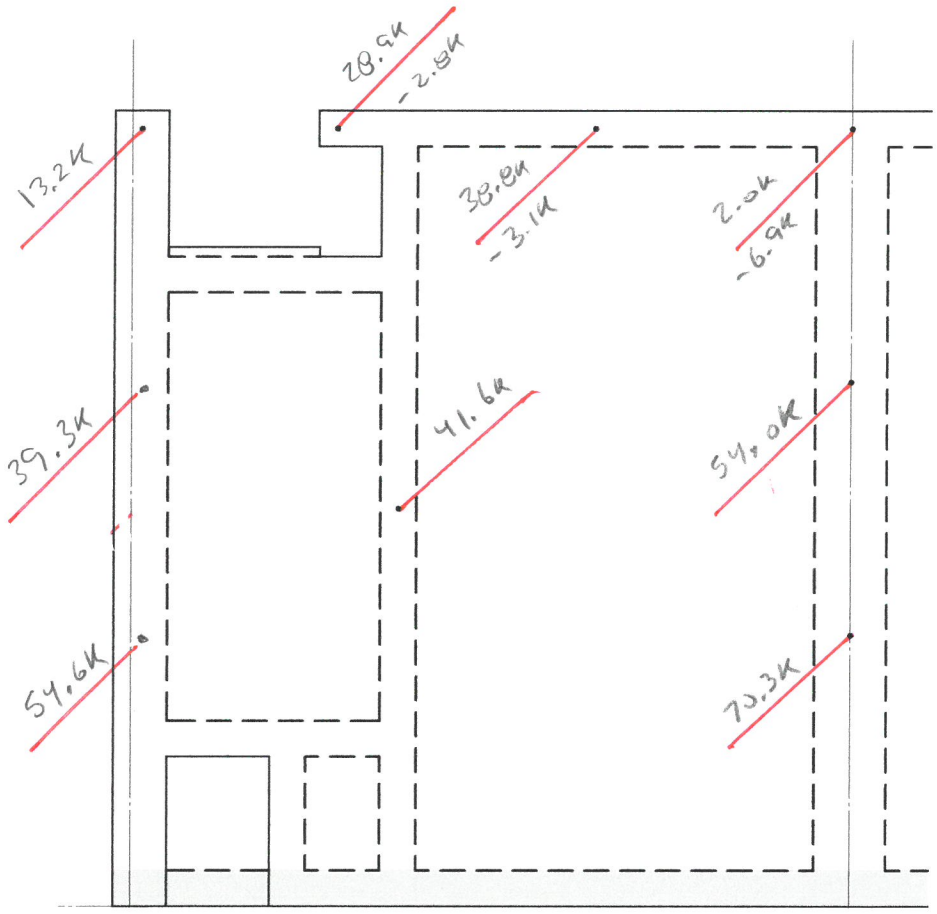
TYPICAL UNIT UPPER PIER LOADS



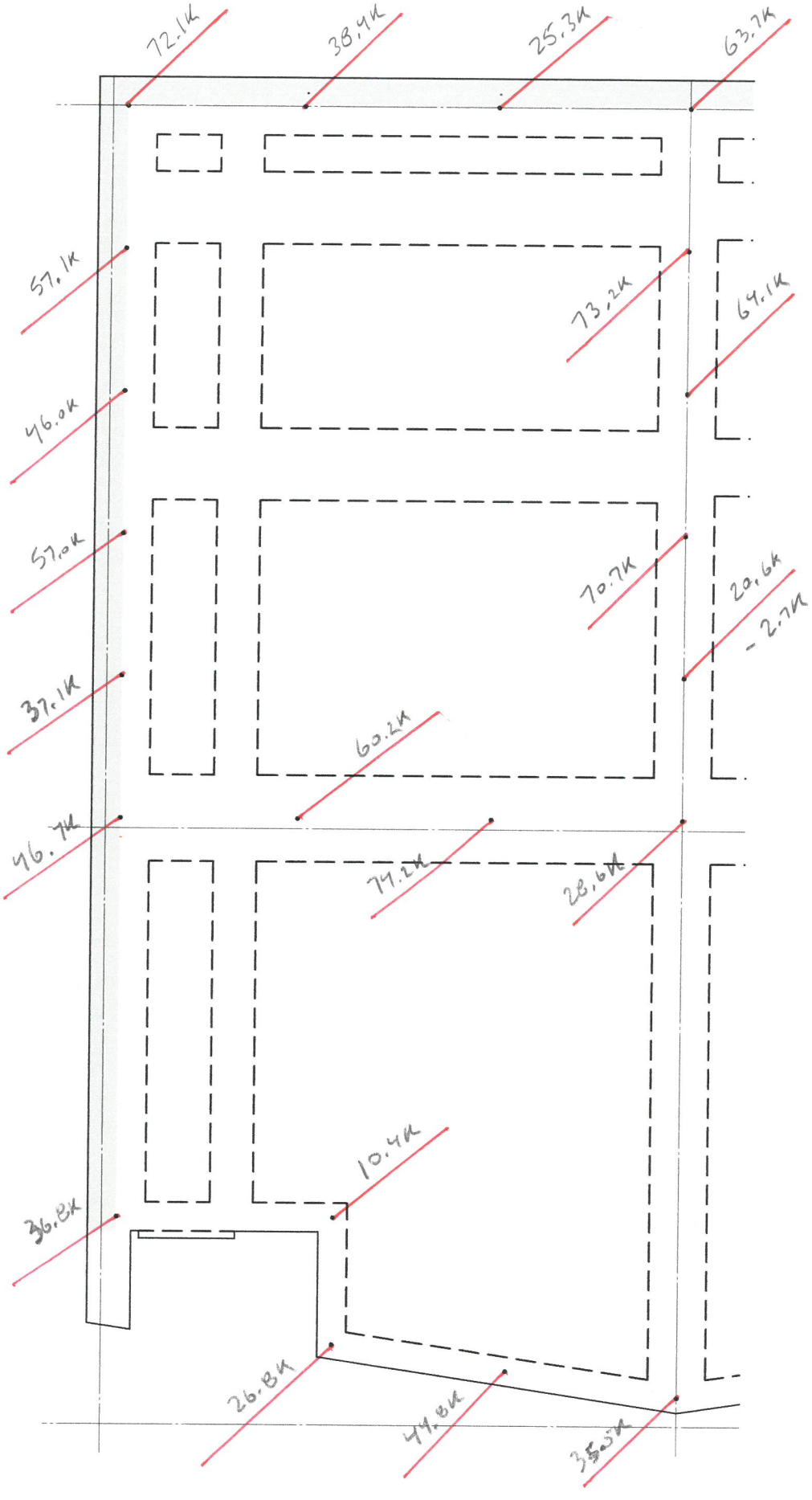
TYPICAL UNIT LOWER PIER LOADS



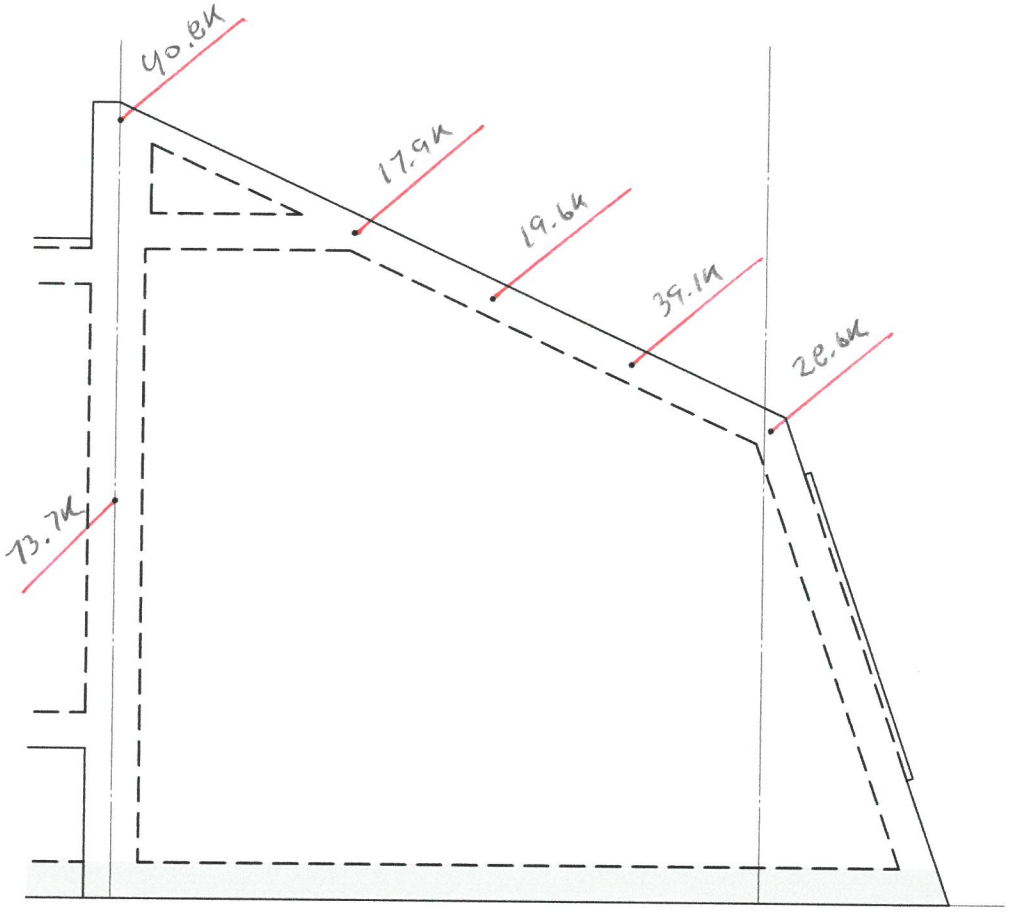
END UNIT UPPER PIER LOADS



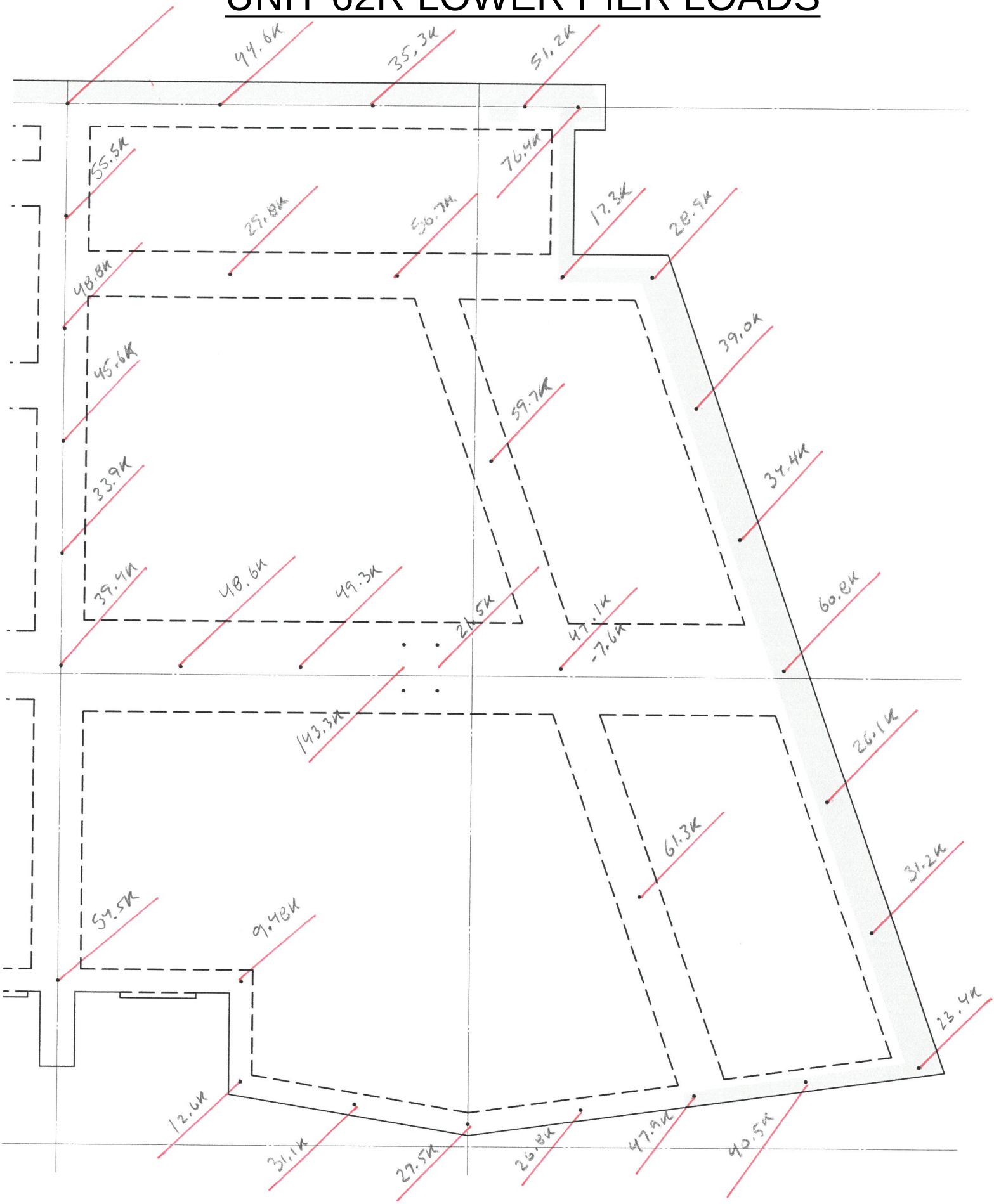
END UNIT LOWER PIER LOADS



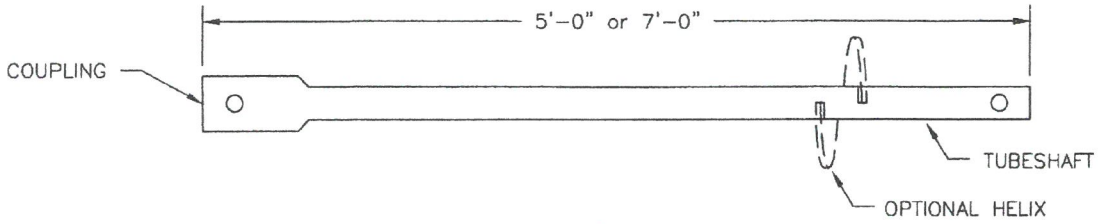
UNIT 62R UPPER PIER LOADS



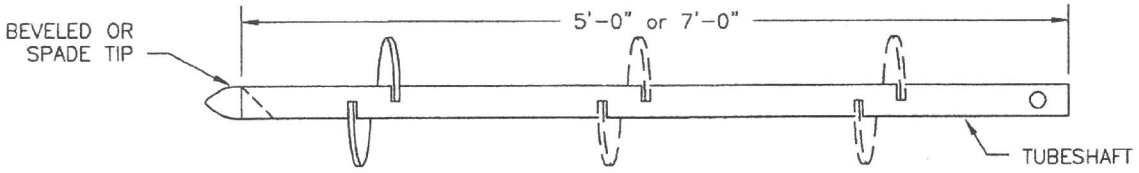
UNIT 62R LOWER PIER LOADS



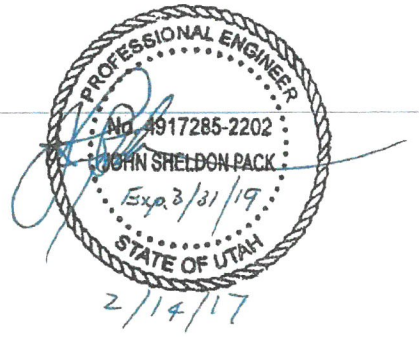
HPFT25



EXTENSION
NO SCALE



LEAD SECTION
SINGLE OR MULTIPLE HELIX
NO SCALE



NOTES:

1. THIS DRAWING COVERS 2.5" (1/4" WALL) TUBULAR HELICAL PILE MATERIAL MANUFACTURED BY IMR.
2. HPFT25: 2.5"x2.5" STRUCTURAL TUBING, 0.25" WALL THICKNESS. THE CONNECTION BOLT IS 0.75" DIAMETER SAE J429 Gr 5 STEEL (Fy=120 KSI) OR EQUIVALENT. MAX. TORQUE CAPACITY IS 7,000 FT-LBS.
3. ALL STRUCTURAL TUBING IS PER ASTM A500 Gr B, FOR 2" TO 3" Fy=60 KSI Fu=69 KSI, 4" AND LARGER Fy=60 KSI Fu=70 KSI BY SPECIAL ORDER.
4. ALL HELIX MATERIAL IS 0.5" THICK AND IS PER ASTM A656 Gr 80 TYPE 7.
5. ULTIMATE HELIX MECHANICAL CAPACITY: (UNLESS FULL-SCALE LOAD TEST SHOWS OTHERWISE)
   6" THROUGH 12" DIAMATER = 70,000 LBS
   14" DIAMETER = 56,000 LBS
6. ALL WELDS ARE 0.25" FILLET MINIMUM WITH ER70S ELECTRODE.
7. ALL STEEL MATERIAL IS GALVANIZED PER ASTM A153, A123, OR B633 FE/ZN 5, TYPE III. (LATEST REVISION)
8. ULTIMATE AXIAL CAPACITY: 70,000 LBS. COMPRESSION, 60,000 LBS TENSION.

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SPECIFICATION SHEET

HPFT25
TUBULAR
HELICAL PILES

HPFT25.dwg SHEET 1 OF 1

DRAWN BY:	ENGINEER:	DATE:	REVISION:
JGM	JSP	06/30/16	1

62K Tork

Mechanical Capacity Calculations
HELI-PILE® HPFT25 (2 1/2 inch x ¼ inch wall) Tubular Steel Square Shaft Helical Pile
February 14, 2017

See the attached HELI-PILE® Specification Sheet Dwg. HPFT25, Rev. 1, dated 06/30/16. Shaft and coupler steel is ASTM A500 Grade B with minimum F_y = 60 ksi and F_u = 69 ksi by special order. Factory rated ultimate compression capacity = 70 kips, ultimate tension capacity = 60 kips.

Shaft Steel
The shaft is 2 1/2 inch tubular steel square with wall thickness = 0.220 in (after corrosion per ICC AC358, both sides). The area of this shaft, A_s = 1.86 in^2 (after corrosion per ICC AC358).
Ultimate shaft mechanical compression capacity = F_u A_s = 69 ksi x 1.86 in^2 = 128 kips
Ultimate shaft mechanical tension capacity is 60 kips due to bolt hole elongation determined by full-scale load testing.

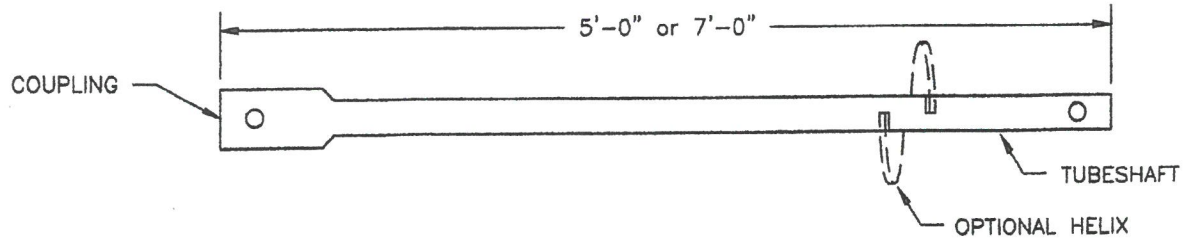
Coupler Steel
The coupler is a 3 inch tubular square steel tube with wall thickness = 0.220 in., slightly swedged to fit over the 2 1/2 inch shaft. Coupler steel cross-sectional area = 2.30 in^2 (after corrosion per ICC AC358).
Ultimate coupler mechanical tension capacity = 69 ksi x 2.30 in^2 = 159 kips. Ultimate mechanical tension capacity = 60 kips due to bolt hole elongation determined by full-scale load testing.
Coupler is fillet welded to the shaft.
Weld to shaft is a minimum 0.25 inch fillet (throat = 0.164 inch after corrosion per ICC AC358) using an ER80S electrode (Fy = 80 ksi).
Ultimate weld tension capacity = 2.49 inch (after corrosion per ICC AC358) x 4 sides x 0.164 inch x 80 ksi = 131 kips. However, through full-scale tension testing, due to bolt hole elongation, it is determined that ultimate mechanical tension capacity should be 60 kips. Elongation does not occur in compression.

Bolt
Bolt is 0.75 inch diameter (0.724 inch after corrosion per ICC AC358, area = 0.412 in^2) per SAE J429 Gr 5 (Fy = 120 ksi), or equivalent, with threads outside the shear zone. The bolt is in double shear.
Ultimate bolt shear capacity = 0.412 in^2 x 120 ksi x 2 (double shear) = 98.9 kips

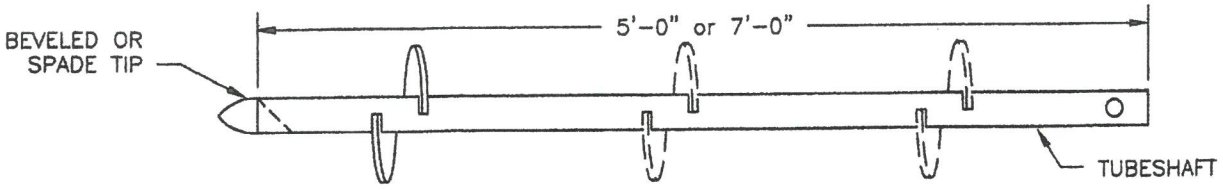
Helices
Each helix is welded top and bottom to the shaft with a minimum 0.25 inch fillet weld (throat = 0.164 inch after corrosion per ICC AC358) using an ER80S electrode. Each helix is ASTM A656 Gr 80 Type 7.
Ultimate weld tension capacity = 2.49 inch x 4 sides x 2 (top & bottom) x 0.164 inch x 80 ksi = 261 kips.
Helix Ultimate Shear: Shaft perimeter, 2.49 in., x 4 sides x 0.487 inch (after corrosion per ICC AC358), x 80 ksi steel = 388 kips

Conclusion
The HELI-PILE® HPFT25 (2 1/2 inch x ¼ inch wall) tubular steel square shaft helical pile has a rated ultimate mechanical compression capacity of 70 kips and an ultimate mechanical tension capacity of 60 kips.

HPFT3



EXTENSION
NO SCALE



LEAD SECTION
SINGLE OR MULTIPLE HELIX
NO SCALE

NOTES:

1. THIS DRAWING COVERS 3" (1/4" WALL) TUBULAR HELICAL PILE MATERIAL MANUFACTURED BY IMR.
2. HPFT3: 3"x3" STRUCTURAL TUBING, 0.25" WALL THICKNESS. THE CONNECTION BOLT IS 0.875" DIAMETER SAE J429 Gr 5 STEEL (Fy=120 KSI) OR EQUIVALENT. MAX. TORQUE CAPACITY IS 11,000 FT-LBS.
3. ALL STRUCTURAL TUBING IS PER ASTM A500 Gr B, FOR 2" TO 3" Fy=60 KSI Fu=69 KSI, 4" AND LARGER Fy=60 KSI Fu=70 KSI BY SPECIAL ORDER.
4. ALL HELIX MATERIAL IS 0.5" THICK AND IS PER ASTM A656 Gr 80 TYPE 7.
5. ULTIMATE HELIX MECHANICAL CAPACITY: (UNLESS FULL-SCALE LOAD TEST SHOWS OTHERWISE)
   6" THROUGH 12" DIAMATER = 70,000 LBS
   14" DIAMETER = 56,000 LBS
6. ALL WELDS ARE 0.25" FILLET MINIMUM WITH ER70S ELECTRODE.
7. ALL STEEL MATERIAL IS GALVANIZED PER ASTM A153, A123, OR B633 FE/ZN 5, TYPE III. (LATEST REVISION)
8. ULTIMATE AXIAL CAPACITY: 110,000 LBS. COMPRESSION, 62,000 LBS TENSION.

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SPECIFICATION SHEET

HPFT3
TUBULAR
HELICAL PILES

HPFT3.dwg SHEET 1 OF 1

DRAWN BY:	ENGINEER:	DATE:	REVISION:
JGM	JSP	06/30/16	1

INTERNATIONAL MARKETING & RESEARCH, INC.

Mechanical Capacity Calculations
HELI-PILE® HPFT-3 (3 inch) Tubular Steel Square Bar Helical Pile
April 19, 2010

See the attached HELI-PILE® Specification Sheet Dwg. HPFT, Rev. 2, dated 02/17/10.

Shaft Steel
The shaft is a 3 inch tubular steel square bar with Fy = 50 ksi, wall thickness = 0.25 in. The area of this bar is 2.59 sq. in.
Ultimate shaft tension capacity = 2.59 sq. in. x 50 ksi = 130 kips > 110 kips OK
Ultimate shaft compression capacity is the same.

Coupler Steel
The coupler is a 3.5 inch tubular square steel bar with Fy = 50 ksi, wall thickness = 0.25 in., slightly swedged to fit over the 3 inch shaft. Coupler steel cross-sectional area = 3.09 sq. in. less the bolt hole area = 3.09 sq. in. – 2 x 1.0 sq. in. x 0.25 in. = 2.59 sq. in. Ultimate coupler tension capacity = 2.59 sq. in. x 50 ksi = 130 kips > 110 kips OK

Coupler is fillet welded to the shaft.
Weld to shaft is a minimum 0.25 inch fillet (throat = 0.177 inch) using an ER80S electrode (Fy = 80 ksi).
Ultimate weld tension capacity = 3 inch x 4 sides x 0.177 inch x 80 ksi = 170 kips > 110 kips OK

Through full-scale tension testing, due to bolt hole elongation, it is determined that ultimate mechanical tension capacity should be 62 kips. Elongation does not occur in compression.

Bolt
Bolt is 0.875 inch diameter (area = 0.601 sq. in.) per SAE J429 Gr 5 (Fy = 120 ksi) with threads outside the shear zone. The bolt is in double shear.
Ultimate bolt shear capacity = 0.601 sq. in. x 120 ksi x 2 (double shear) = 144 kips > 110 kips OK

Helices
Each helix is welded top and bottom to the shaft with a minimum 0.25 inch fillet weld (throat = 0.177 inch) using an ER80S electrode.
Ultimate weld tension capacity = 3 inch x 4 sides x 2 (top & bottom) x 0.177 inch x 80 ksi = 340 kips > 110 kips OK

Helix Shear: use shaft perimeter, 3 in x 4 = 12 in, times thickness, 0.5 in, x 80 ksi steel: 12 in x 0.5 in x 80 ksi = 480 kips > 110 kips OK

Conclusion
The HELI-PILE® HPFT-3 (3 inch) tubular steel square bar helical pile has a rated ultimate mechanical compression capacity of 110 kips and ultimate mechanical tension capacity of 62 kips.

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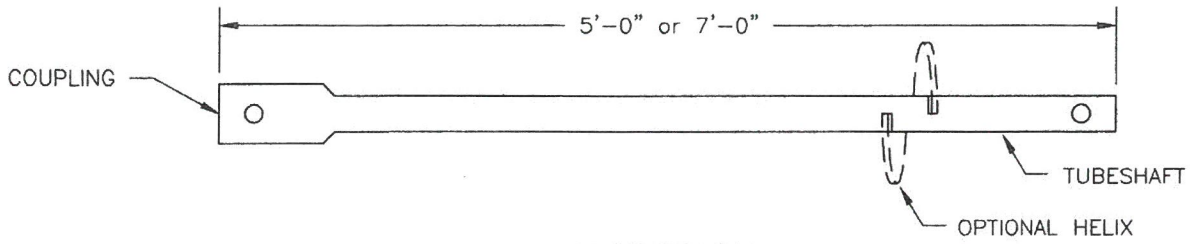
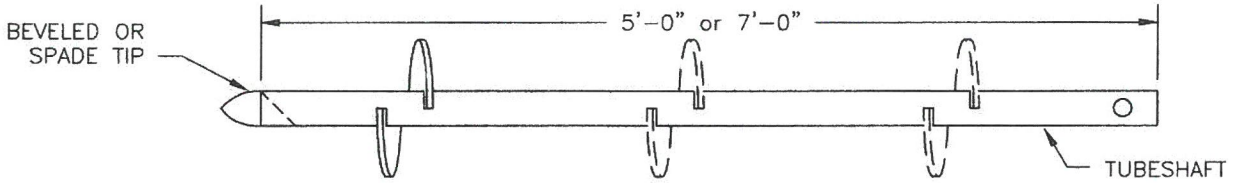
Fax: (303) 423-9155

HPFT331



EXTENSION
NO SCALE



LEAD SECTION
SINGLE OR MULTIPLE HELIX
NO SCALE

NOTES:

1. THIS DRAWING COVERS 3" (5/16" WALL) TUBULAR HELICAL PILE MATERIAL MANUFACTURED BY IMR.
2. HPFT331: 3"x3" STRUCTURAL TUBING, 0.313" WALL THICKNESS. THE CONNECTION BOLT IS 0.875" DIAMETER ASTM A193 Gr B7 STEEL (Fy=120 KSI) OR EQUIVALENT. MAX. TORQUE CAPACITY IS 15,000 FT-LBS.
3. ALL STRUCTURAL TUBING IS PER ASTM A500 Gr B, FOR 2" TO 3" Fy=60 KSI Fu=69 KSI, 4" AND LARGER Fy=60 KSI Fu=70 KSI BY SPECIAL ORDER.
4. ALL HELIX MATERIAL IS 0.5" THICK AND IS PER ASTM A656 Gr 80 TYPE 7.
5. ULTIMATE HELIX MECHANICAL CAPACITY: (UNLESS FULL-SCALE LOAD TEST SHOWS OTHERWISE)
   6" THROUGH 12" DIAMATER = 70,000 LBS
   14" DIAMETER = 56,000 LBS
6. ALL WELDS ARE 0.25" FILLET MINIMUM WITH ER70S ELECTRODE.
7. ALL STEEL MATERIAL IS GALVANIZED PER ASTM A153, A123, OR B633 FE/ZN 5, TYPE III. (LATEST REVISION)
8. ULTIMATE AXIAL CAPACITY: 150,000 LBS. COMPRESSION, 62,000 LBS TENSION.

HELI-PILE®
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SPECIFICATION SHEET

HPFT331
TUBULAR
HELICAL PILES

HPFT331.dwg SHEET 1 OF 1

DRAWN BY:	ENGINEER:	DATE:	REVISION:
JGM	JSP	06/30/16	1

INTERNATIONAL MARKETING & RESEARCH, INC.

Mechanical Capacity Calculations
HELI-PILE® HPFT-331 (3 inch, 5/16 in wall) Tubular Steel Square Bar Helical Pile
September 1, 2011

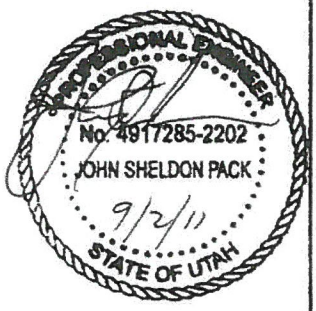
See the attached HELI-PILE® Specification Sheet Dwg. HPFT, Rev. 5, dated 09/01/11.

Shaft Steel
The shaft is a 3 inch steel square tube with Fy = 50 ksi, wall thickness = 0.300 in (after corrosion per ICC AC358). The area of this tube is 2.98 in^2 (after corrosion per ICC AC358).
Ultimate shaft tension capacity = 2.98 in^2 x 50 ksi ≈ 150 kips OK
Ultimate shaft compression capacity is the same.

Coupler Steel
The coupler is a 3.5 inch tubular square steel bar with Fy = 50 ksi, wall thickness = 0.237 in., slightly swedged to fit over the 3 inch shaft. Coupler steel cross-sectional area = 2.93 in^2 (after corrosion per ICC AC358) less the bolt hole area = 2.93 in^2 – (2 x 1.0 sq. in. x 0.237 in. = 2.46 in^2. Ultimate coupler tension capacity = 2.46 in^2 x 50 ksi = 123 kips

Coupler is fillet welded to the shaft.
Weld to shaft is a minimum 0.25 inch fillet (throat = 0.177 inch) using an ER80S electrode.
Ultimate weld tension capacity = 3 inch x 4 sides x 0.177 inch x 80 ksi = 170 kips

Through full-scale tension testing, due to bolt hole elongation, it is determined that ultimate mechanical tension capacity should be 62 kips. Elongation does not occur in compression. Coupler steel and bolt are not involved in compression load transfer because the tube ends abut to one another inside the coupler. Thus, ultimate compression capacity is still 150 kips.



Bolt
Bolt is only utilized in tension. Bolt is 0.875 inch diameter (area = 0.601 sq. in.) per SAE J429 Gr 5 (Fy = 120 ksi) with threads outside the shear zone. The bolt is in double shear.
Ultimate bolt shear capacity = 0.601 sq. in. x 120 ksi x 2 (dbl shear) = 144 k > 62 k OK

Helices
Each helix is welded top and bottom to the shaft with a minimum 0.25 inch fillet weld (throat = 0.177 inch) using an ER80S electrode.
Ultimate weld tension capacity = 3 inch x 4 sides x 2 (top & bottom) x 0.177 inch x 80 ksi = 340 kips > 150 kips OK

Helix Shear: use shaft perimeter, 3 in x 4 = 12 in, times thickness, 0.5 in, x 80 ksi steel: 12 in x 0.5 in x 80 ksi = 480 kips > 150 kips OK

Conclusion
The HELI-PILE® HPFT-331 (3 inch, 5/16 in wall) tubular steel square bar helical pile has a rated ultimate mechanical compression capacity of 150 kips and ultimate mechanical tension capacity of 62 kips.

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2875 So Decker Lake Drive, Ste 275 SLC, Ut 84119
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j m w a . c o m / a e u r b i a . c o m

Project:	
Date:	Sheet Of
Designed by:	Job No.

PIER CAP

HPFT25 → ULTIMATE CAPACITY = 70K (COMP) + 60K (TENS)

COMPRESSION → $A_{REQ} = \frac{70k}{4ksi} = 17.5\ in^2$

$d_{REQ} = \sqrt{\frac{4(17.5in^2)}{3.14}} = 4.72\ in$

∴ USE 6" ϕ CAP ($28.26\ in^2$)

PUNCHING
—SEE COMP OUTPUT—

(5.3×5.3 SQUARE EQUIVALENT)

∴ NEED 12" FOR PUNCHING ok

TENSION → DESIGN FOR 62K TENSION FOR ALL PIERS

NEED 11½" MIN CONC COVER BELOW CAP PLATE (FOR FULL CAPACITY)

HPFT3 → ULTIMATE CAPACITY = 110K (COMP) + 62K (TENS)

COMPRESSION → $A_{REQ} = \frac{110k}{4ksi} = 27.5\ in^2$

$d_{REQ} = \sqrt{\frac{4(27.5in^2)}{3.14}} = 5.92\ in$

∴ USE 6" ϕ CAP ($28.26\ in^2$)

PUNCHING
—SEE COMP OUTPUT—

∴ NEED 15" FOR PUNCHING ok

TORSION → SEE HPFT25

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Project:	
Date:	Sheet Of
Designed by:	Job No.

PIER CAP (CONT)

HP FT331 → ULTIMATE CAPACITY = 150K (COMP) & 62 K (TEN)

COMPRESSION → $AREA = \frac{150K}{4KSI} = 37.5 \, in^2$

$d_{REQ} = \sqrt{\frac{(37.5 in^2)(4)}{3.14}} = 6.9 \, in$

∴ USE 8" Φ CAP (50.24 in²)

(7×7 SQUARE EQUIVALENT)

PUNCHING

– SEE COMP OUTPUT –

∴ NEED 17" FOR PUNCHING OK

TENSION → DESIGN FOR 62K TENSION

NEED 11" MIN CONC COVER BELOW CAP PLATE
(FOR FULL CAPACITY)

General Footing

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : HPFT331 TENSION (FOR PIER CAP ON CONCRETE)

Code References

Calculations per ACI 318-08, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : IBC 2015

General Information

Material Properties

f'c : Concrete 28 day strength	=	4.0 ksi
fy : Rebar Yield	=	60.0 ksi
Ec : Concrete Elastic Modulus	=	3,122.0 ksi
Concrete Density	=	145.0 pcf
φ Values Flexure	=	0.90
Shear	=	0.750

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	
Min. Overturning Safety Factor	=	1.0 : 1
Min. Sliding Safety Factor	=	1.0 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Soil Design Values

Allowable Soil Bearing	=	1.0 ksf
Increase Bearing By Footing Weight	=	No
Soil Passive Resistance (for Sliding)	=	250.0 pcf
Soil/Concrete Friction Coeff.	=	0.30

Increases based on footing Depth

Footing base depth below soil surface	=	0.0 ft
Allow press. increase per foot of depth	=	0.0 ksf
when footing base is below	=	0.0 ft

Increases based on footing plan dimension

Allowable pressure increase per foot of depth	=	0.0 ksf
when max. length or width is greater than	=	0.0 ft

Dimensions

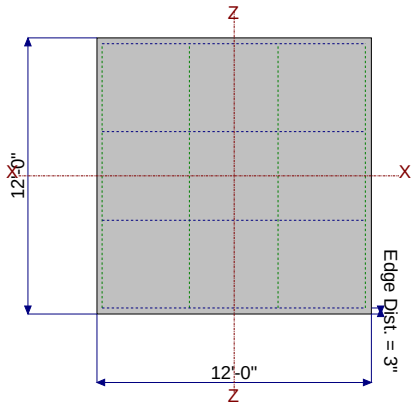
Width parallel to X-X Axis	=	12.0 ft
Length parallel to Z-Z Axis	=	12.0 ft
Footing Thickness	=	11.0 in

Pedestal dimensions...

px : parallel to X-X Axis	=	7.0 in
pz : parallel to Z-Z Axis	=	7.0 in
Height	=	0.0 in

Rebar Centerline to Edge of Concrete...

at Bottom of footing	=	3.0 in



Reinforcing

Bars parallel to X-X Axis			
Number of Bars	=		4.0
Reinforcing Bar Size	=	#	4
Bars parallel to Z-Z Axis			
Number of Bars	=		4.0
Reinforcing Bar Size	=	#	4

Bandwidth Distribution Check (ACI 15.4.4.2)

Direction Requiring Closer Separation	n/a
# Bars required within zone	n/a
# Bars required on each side of zone	n/a

Applied Loads

		D	Lr	L	S	W	E	H
P : Column Load	=	62.0	0.0	0.0	0.0	0.0	0.0	0.0 k
OB : Overburden	=	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ksf
M-xx	=	0.0	0.0	0.0	0.0	0.0	0.0	0.0 k-ft
M-zz	=	0.0	0.0	0.0	0.0	0.0	0.0	0.0 k-ft
V-x	=	0.0	0.0	0.0	0.0	0.0	0.0	0.0 k
V-z	=	0.0	0.0	0.0	0.0	0.0	0.0	0.0 k

General Footing

File = F:\Job\2017\2017~1.028\1_ENGI~1\NINEBA~1.EC6
ENERCALC, INC. 1983-2017, Build:6.17.3.29, Ver:6.17.3.29

Lic. # : KW-06007096 — **Licensee : JM WILLIAMS & ASSOCIATES INC**

Description : HPFT331 TENSION (FOR PIER CAP ON CONCRETE)

DESIGN SUMMARY

Design N.G.

	Min. Ratio	Item	Applied	Capacity	Governing Load Combination
PASS	0.5635	Soil Bearing	0.5635 ksf	1.0 ksf	+D+0.750L+0.750S+0.5250E+H about Z-
PASS	n/a	Overturning - X-X	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Overturning - Z-Z	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0 k	0.0 k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0 k	0.0 k	No Sliding
PASS	n/a	Uplift	0.0 k	0.0 k	No Uplift
FAIL	As < Min	Z Flexure (+X)	9.818 k-ft	2.385 k-ft	+1.40D+1.60H
FAIL	As < Min	Z Flexure (-X)	9.818 k-ft	2.385 k-ft	+1.40D+1.60H
FAIL	As < Min	X Flexure (+Z)	9.818 k-ft	2.385 k-ft	+1.40D+1.60H
FAIL	As < Min	X Flexure (-Z)	9.818 k-ft	2.385 k-ft	+1.40D+1.60H
PASS	0.3309	1-way Shear (+X)	31.395 psi	94.868 psi	+1.40D+1.60H
PASS	0.3309	1-way Shear (-X)	31.395 psi	94.868 psi	+1.40D+1.60H
PASS	0.3309	1-way Shear (+Z)	31.395 psi	94.868 psi	+1.40D+1.60H
PASS	0.3309	1-way Shear (-Z)	31.395 psi	94.868 psi	+1.40D+1.60H
PASS	0.9435	2-way Punching	179.025 psi	189.737 psi	+1.40D+1.60H

Detailed Results

Soil Bearing

Rotation Axis & Load Combination...	Gross Allowable	Xecc (in)	Zecc (in)	Actual Soil Bearing Stress @ Location Bottom, -Z	Top, +Z	Left, -X	Right, +X	Actual / Allow Ratio
X-X, +D+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+L+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+Lr+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+S+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.750Lr+0.750L+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.750L+0.750S+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.60W+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.70E+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.750Lr+0.750L+0.450W+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.750L+0.750S+0.450W+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +D+0.750L+0.750S+0.5250E+H	1.0	n/a	0.0	0.5635	0.5635	n/a	n/a	0.564
X-X, +0.60D+0.60W+0.60H	1.0	n/a	0.0	0.3381	0.3381	n/a	n/a	0.338
X-X, +0.60D+0.70E+0.60H	1.0	n/a	0.0	0.3381	0.3381	n/a	n/a	0.338
Z-Z, +D+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+L+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+Lr+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+S+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.750Lr+0.750L+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.750L+0.750S+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.60W+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.70E+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.750Lr+0.750L+0.450W+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.750L+0.750S+0.450W+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +D+0.750L+0.750S+0.5250E+H	1.0	0.0	n/a	n/a	n/a	0.5635	0.5635	0.564
Z-Z, +0.60D+0.60W+0.60H	1.0	0.0	n/a	n/a	n/a	0.3381	0.3381	0.338
Z-Z, +0.60D+0.70E+0.60H	1.0	0.0	n/a	n/a	n/a	0.3381	0.3381	0.338

Overturning Stability

Rotation Axis & Load Combination...	Overturning Moment	Resisting Moment	Stability Ratio	Status
Footing Has NO Overturning				

All units k

Sliding Stability

Force Application Axis Load Combination...	Sliding Force	Resisting Force	Stability Ratio	Status
Footing Has NO Sliding				

General Footing

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : HPFT331 TENSION (FOR PIER CAP ON CONCRETE)

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
X-X, +1.40D+1.60H	9.818	+Z	Bottom	0.2799313894247	Min for Bending	0.06667	2.385	No Good!

General Footing

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : HPFT331 TENSION (FOR PIER CAP ON CONCRETE)

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
X-X, +1.40D+1.60H	9.818	-Z	Bottom	0.2799313894247	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50Lr+1.60L+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50Lr+1.60L+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60L+0.50S+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60L+0.50S+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60Lr+0.50L+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60Lr+0.50L+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60Lr+0.50W+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60Lr+0.50W+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+1.60S+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+1.60S+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60S+0.50W+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+1.60S+0.50W+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50Lr+0.50L+W+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50Lr+0.50L+W+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+0.50S+W+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+0.50S+W+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+0.70S+E+1.60H	8.416	+Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +1.20D+0.50L+0.70S+E+1.60H	8.416	-Z	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
X-X, +0.90D+W+0.90H	6.312	+Z	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
X-X, +0.90D+W+0.90H	6.312	-Z	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
X-X, +0.90D+E+0.90H	6.312	+Z	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
X-X, +0.90D+E+0.90H	6.312	-Z	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.40D+1.60H	9.818	-X	Bottom	0.2799313894247	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.40D+1.60H	9.818	+X	Bottom	0.2799313894247	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50Lr+1.60L+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50Lr+1.60L+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60L+0.50S+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60L+0.50S+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60Lr+0.50L+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60Lr+0.50L+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60Lr+0.50W+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60Lr+0.50W+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+1.60S+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+1.60S+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60S+0.50W+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+1.60S+0.50W+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50Lr+0.50L+W+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50Lr+0.50L+W+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+0.50S+W+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+0.50S+W+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+0.70S+E+1.60H	8.416	-X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +1.20D+0.50L+0.70S+E+1.60H	8.416	+X	Bottom	0.2390186586010	Min for Bending	0.06667	2.385	No Good!
Z-Z, +0.90D+W+0.90H	6.312	-X	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
Z-Z, +0.90D+W+0.90H	6.312	+X	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
Z-Z, +0.90D+E+0.90H	6.312	-X	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!
Z-Z, +0.90D+E+0.90H	6.312	+X	Bottom	0.1782459972757	Min for Bending	0.06667	2.385	No Good!

One Way Shear

Load Combination...	Vu @ -X	Vu @ +X	Vu @ -Z	Vu @ +Z	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D+1.60H	31.40 psi	31.40 psi	31.40 psi	31.40 psi	31.40 psi	94.87 psi	0.33	0.00
+1.20D+0.50Lr+1.60L+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+1.60L+0.50S+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+1.60Lr+0.50L+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+1.60Lr+0.50W+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+0.50L+1.60S+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+1.60S+0.50W+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+0.50Lr+0.50L+W+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+0.50L+0.50S+W+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+1.20D+0.50L+0.70S+E+1.60H	26.91 psi	26.91 psi	26.91 psi	26.91 psi	26.91 psi	94.87 psi	0.28	0.00
+0.90D+W+0.90H	20.18 psi	20.18 psi	20.18 psi	20.18 psi	20.18 psi	94.87 psi	0.21	0.00
+0.90D+E+0.90H	20.18 psi	20.18 psi	20.18 psi	20.18 psi	20.18 psi	94.87 psi	0.21	0.00

General Footing

Lic. # : KW-06007096
Licensee : JM WILLIAMS & ASSOCIATES INC

Description : HPFT331 TENSION (FOR PIER CAP ON CONCRETE)

Two-Way "Punching" Shear

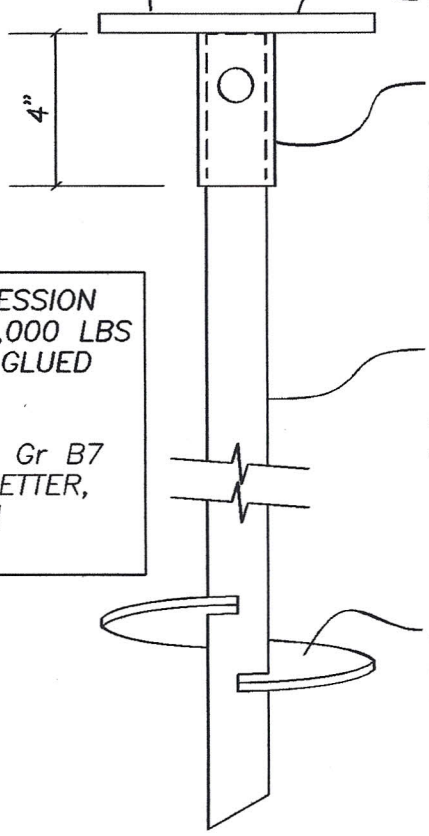
All units k

Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+1.40D+1.60H	179.03 psi	189.74 psi	0.9435	OK
+1.20D+0.50Lr+1.60L+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+1.60L+0.50S+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+1.60Lr+0.50L+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+1.60Lr+0.50W+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+0.50L+1.60S+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+1.60S+0.50W+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+0.50Lr+0.50L+W+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+0.50L+0.50S+W+1.60H	153.45 psi	189.74 psi	0.8088	OK
+1.20D+0.50L+0.70S+E+1.60H	153.45 psi	189.74 psi	0.8088	OK
+0.90D+W+0.90H	115.09 psi	189.74 psi	0.6066	OK
+0.90D+E+0.90H	115.09 psi	189.74 psi	0.6066	OK

3" TUBULAR HPT–3–PC

PROFESSIONAL ENGINEER
No. 4917285-2202
JOHN SHELDON PACK
2/7/11
STATE OF UTAH

NEW CONSTRUCTION FLAT PLATE BRACKET FOR COMPRESSION APPLICATIONS FOR IMR 3" TUBULAR HELICAL PILES.



6"x6"x1/2" A36 STEEL PLATE, WELD TO TOP OF BOX (1/4" FILLET).

3.5"x3.5"x3/16" A500 GrB STEEL STRUCTURAL TUBE FASTENED TO TOP OF STEEL PIER SHAFT WITH WELD, BOLT OR EPOXY GLUE.

THE ULTILMATE MECHANICAL COMPRESSION CAPACITY OF THIS BRACKET IS 110,000 LBS WHEN BOLTED, WELDED OR EPOXY GLUED TO THE STEEL PIER SHAFT.

WHEN BOLTED WITH AN ASTM A193 Gr B7 7/8" DIAMETER BOLT, EQUAL OR BETTER, THE ULTIMATE MECHANICAL TENSION CAPACITY IS 50,000 LBS.

NEW IMR 3" TUBULAR HELICAL PIER.
PIER DEPTH DEPENDS ON PIER LOAD AND SOIL CONDITIONS.

SINGLE OR MULTIPLE HELIX, NUMBER AND DIAMETER OF HELICES DEPENDS ON PIER LOAD AND SOIL CONDITIONS.

NEW CONSTRUCTION FLAT PLATE COMPRESSION BRACKET SQUARE COUPLER – FOR IMR 3" TUBULAR HELICAL PILE

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	HPT–3–PC.DWG	SHEET 1 OF 1

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JSP	RLJ	08/24/09	0