Plan Review Comments Response

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Date: **2017.08.14**

Project Name: **Summit Horizon Neighborhood Unit 4**

Total pages: **1 of 2**

The following is a formal response to the Plan Review Comments completed by Jason vonWeller (Code), Joe Bingham (Structural), and checked by DeAnn Wilde. August 2, 2017. (Received August 2, 2017)

CODE REVIEW COMMENTS:

A1. See Geotechnical Report prepared by IGES Geotechnical Engineers.

A2.

A. See revised Keynote 1 on Sheet 2.0. See 'Rockery Construction Guidelines' prepared by IGES Geotechnical Engineers.

A3. See revised cover sheet.

A4. See sheets A200 and A201 with exterior wall assemblies noted.

A5. See sheet A100 for revised note with drawing sheet location.

A6. See sheet A101 for removal of reference to International Building Code.

A7.

A. See A900 for window schedule, callouts indicating emergency escape operators and locations of tempered glazing.

B. See A900 for window/door schedule.

C. Windows #6,8 and 10 are covered with 'operable wood screens'. See keynote 13 on A301 and plan details 3 and 4 on A500 for further information.

D. Ramp is connected to building with a bolted connection to knife plate which is attached to steel columns. See detail 12/S4.1 for more information.

A8. See attached venting and makeup air specifications/cut sheets for use with the Verona Model VCLFSGE365SS range:

- Cattura D49M Downdraft Vent.
- Best Model PF6 Flex Blower (600CFM).
- Broane MD8T 8" Makeup Air Kit.

PLUMBING REVIEW COMMENTS:

P1.

A. A single water heater serves both the radiant floor heat and domestic hot water systems.

ELECTRICAL REVIEW COMMENTS:

E1. See Electrical Response.

ENERGY REVIEW COMMENTS:

N1.

A. See sheets A001, A500, A510 and A511 for revised assemblies list.

B. See sheets A001, A500, A510 and A511 for revised assemblies list.

C. See revised square footage on Rescheck submittal.

N2. See sheet A900 Notes 1-7 for U-factors and Note 21 for testing and labelling.

N3. See Sheet A001 for note of postage of permanent certificate.

N4. See sheets A001, A500, A510 and A511 for revised assemblies list with clarification on air and vapor barrier.

STRUCTURAL REVIEW COMMENTS:

S1. See Structural Response.

END OF RESPONSE

D49M

BUILT-IN

VERTEX™ Complete Capture Design technology ventilates as well as an island hood.

Up to 35% quieter operation than any other downdraft.

Chimney raises 18" off the counter surface for optimal capture on all burners.

Long-lasting LED lighting technology means lamps may never need replacement.

Heat Sentry™ detects excessive heat and adjusts speed to high automatically.

10-minute time-delay shut-off feature and reminder light for filter maintenance.

Remote control to activate downdraft from another location.

Works with optional Automatic Make-Up Air Dampers.

Model Numbers:

D49M30SB D49M36SB D49M48SB

Our *VERTEX*™ Complete Capture Design technology performs as well as an island hood.

An LED light bar evenly illuminates the entire cooking surface.

A touch of a button raises or lowers the 18" downdraft.

Sleek, easy-to-clean touch-control panel.

An optional remote control button raises or lowers the downdraft as needed.

Hood Sizes

Widths	**30", 36", 48"**
Depth	**2-1/4"**

Finish

Stocked	Brushed Stainless Steel
Special Order	Not Available

Features

Lighting Type	LED, 7W (30"); 14W (36"); 18W (48")
Lighting Levels	2
Lighting Lamps Included	Yes
Control Type	4-speed Capacitive Glass
Control Features	Heat Sentry™, Delay Off, Filter Timer
Remote Control	Optional ACRD
Filter Type	Mesh Grease Filter
Non-ducted Capability	Yes

Hood Blower Options (Must choose one blower sold separately)

Internal	**PF6**			
FlexBlower CFM	600			
Sones	8.8			
External In-Line	**ILB3**	**ILB6**	**ILB9**	**ILB11**
Max CFM	280	600	800	1100
Sone levels are typically half of comparable CFM internal blowers.				
External Exterior	**EB6**	**EB9**	**EB12**	**EB15**
Max CFM	600	900	1200	1500
Sone levels are typically half of comparable CFM internal blowers.				

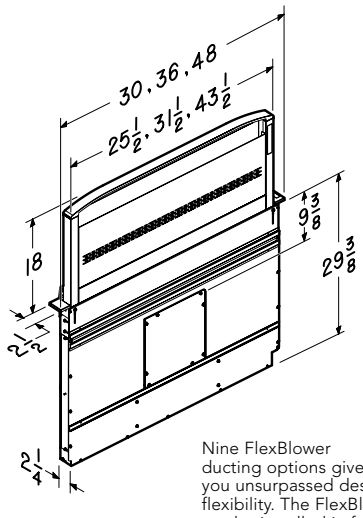
Accessories*

Non-ducted Recirculating Kit	ANKD
Transition to 8" Round	AVDKD8
Transition to 10" Round	AVDKD10
Charcoal Filter	AFCD
Range Trim Kit	ATKD30SB, ATKD36SB, ATKD48SB
Automatic MUA Damper	MD6T, MD8T, MD10T (Requires Fresh Air Inlet)
Fresh Air Inlet	641FA, 643FA, 610FA

*Visit BESTRangeHoods.com to access the Cattura Downdraft Installation Parts Guide for information on parts and accessories.

Installation Requirements

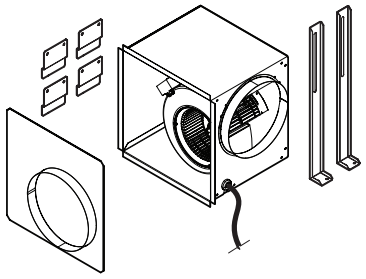
Amps @ 120V: Internal Blower	6.0 Max
Electrical	Plug In
Duct Size: Internal Blower	8"
Duct Size: External Blower	10" at hood
Duct Direction	Front, Left, Right, Rear or Down
Backdraft Damper	Not Included



Nine FlexBlower ducting options give you unsurpassed design flexibility. The FlexBlower can be installed in front, to the left, right or rear of the downdraft.

SPECIFICATION SHEET

MODEL PF6
FLEX BLOWER
for D49 Series Downdraft

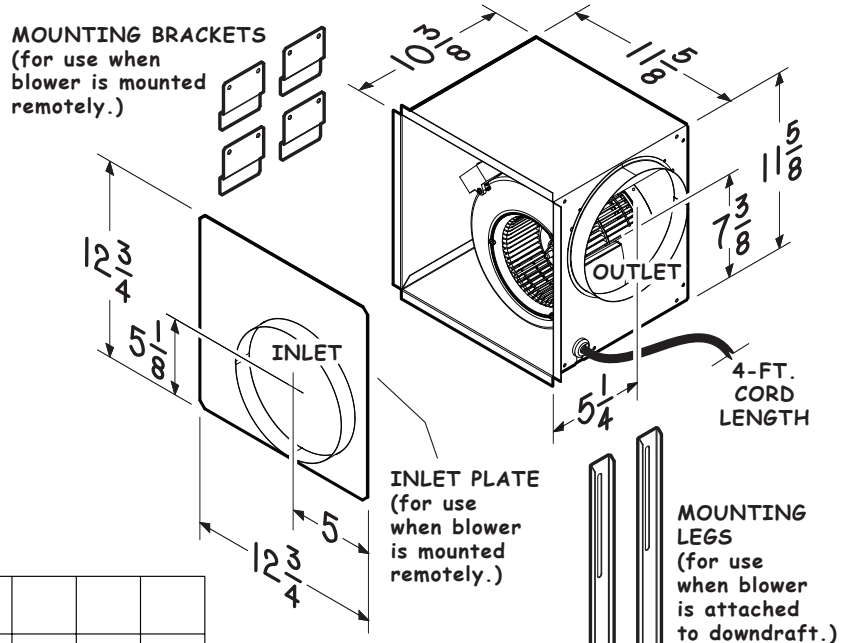


Flex Blower System enables multiple positioning option when used with D49 Series Downdraft. Opens up a whole new way to look at kitchen design.

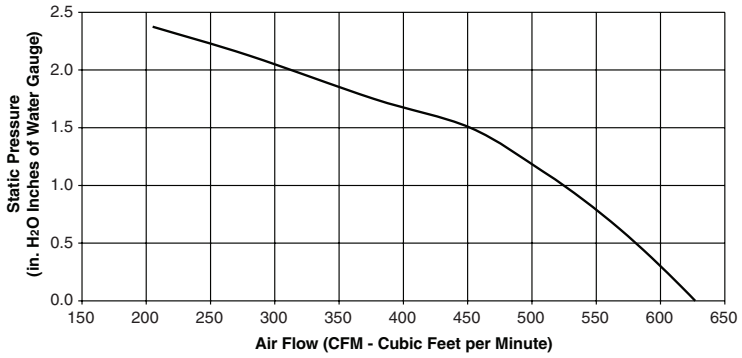
FEATURES

- 600 cfm, 120VAC, 60Hz, 3.0A
- Galvanized steel construction
- Designed for direct or remote mounting to D49 Series Downdraft
- Includes 8” round inlet adapter plate for remote, in-line operation
- Built-in 8” round outlet duct connection
- Thermally-protected motor with ball bearing shaft for long life and quiet operation
- Includes mounting legs and brackets to secure blower

DIMENSIONS



PF6 BLOWER



This product was tested by Broan-NuTone for airflow performance using the ANSI/AMCA 210 Standard, which is equivalent to the Home Ventilating Institute HVI 916 - Procedure for Air Flow Testing, and tested for sound performance using the ANSI S12.51 Standard, which is equivalent to the Home Ventilation Institute HVI 915 - Procedure for Loudness Rating of Residential Fan Products.

c UL us

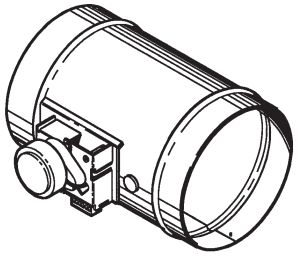
BEST Hartford, Wisconsin www.BestRangeHoods.com 800-558-1711
BEST Drummondville, QC, Canada www.BestRangeHoods.com 866-737-7770

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

BROAN®

SPECIFICATION SHEET

AUTOMATIC MAKE-UP AIR DAMPER



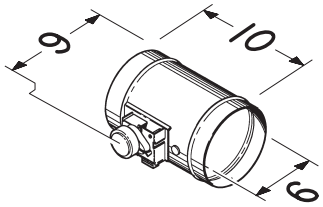
Broan's Automatic Make-up Air Damper provides interlocked damper operation so outside air is only allowed to enter the house when a connected fan or hood is operating.

Model MD6T (for 6" round duct)
Model MD8T (for 8" round duct)
Model MD10T (for 10" round duct)

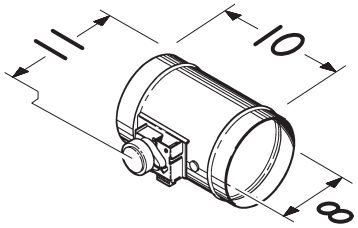
- 24 Volt, 60 Hz AC motor
- Normally closed damper
- Automatically opens when exhaust fans are activated
- Foam seals minimize air leakage
- 24 gauge galvanized steel construction
- Damper adjustment screw for balancing adjustments
- Compatible with select Broan and BEST range hoods
- Use with Fresh Air Inlet Model 641FA for 6" dampers, Fresh Air Inlet Model 643FA for 8" dampers or Fresh Air Inlet Model 610FA for 10" dampers (sold separately)
- Includes 24 Volt 20VA transformer

Model SMD6 (for 6" round duct)
Model SMD8 (for 8" round duct)

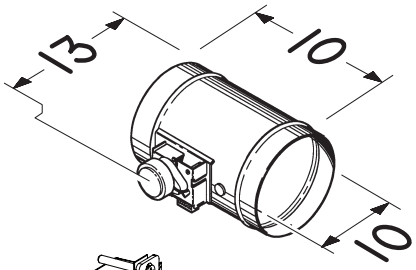
- Same features as Model MD6T and Model MD8T except includes LinkLogic® relay
- Compatible with Broan fans and BEST range hoods equipped with LinkLogic® devices
- Requires no special wiring to range hoods or fan enabled with LinkLogic®. Communicates over existing power lines
- LinkLogic® relay fits single-gang box



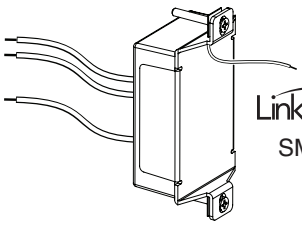
Model MD6T
Model SMD6



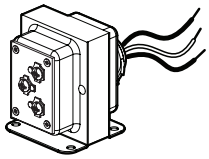
Model MD8T
Model SMD8



Model MD10T



LinkLogic® **Relay**
SMD6 & SMD8 only



Transformer
Included with all models

Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

DYNAMIC STRUCTURES

1887 North 1120 West, Provo, Utah 84604 – (ph) 801.356.1140, (fax) 801.356.0001

August 14, 2017

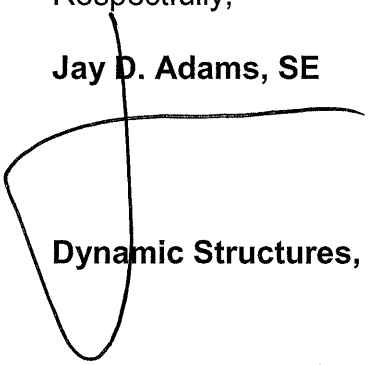
Mike Molyneux
Plan Reviewer

Re: Summit Horizon (Powder Mountain)
2500 sq. ft. plan (Unit 4)

The following responses are to plan review comments from the structural portions of the plan review dated August 2, 2017.

S1	The detail callout has been revised from 7/S4.3 to 7/S4.2.
S2, A, B	Straps and blocking have been added to details 7 and 8/S4.1.
S3	An additional A34 has been added to the back side of each block.
S4A	In detail 2/S5.1, the label for the 2-ply truss has been revised to read "header truss".
S4-B, C	The floor framing shown in details 7 and 8/S5.2 is for a very small loft generating minimal forces. To avoid cross grain bending in the ledgers, however, positive tension attachments have been added.
S5	See attached sheets showing that the main floor diaphragm where the offset occurs has capacity with the required 25% increase included. Also see attached sheet showing 1FB1 is still adequate with the holdown force applied multiplied by an omega factor of 3.
S6	See attached calculation for 1FB7 showing the same results for AISC 360-10 analysis.
S7	See attached wind analysis. We have visited the site and there is enough forest and up and down hills around the site to qualify for an Exposure B. The attached calculations, however, show that seismic governs for both Exposure B and C wind. As clarification to architectural comment A7-D, detail 12/S4.1, referenced on S2.2, shows how the bridge structure connects to the building structure.

Respectfully,



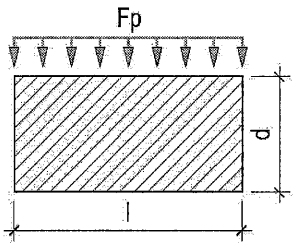
Jay D. Adams, SE

Dynamic Structures, Inc.

MAIN LEVEL DIAPHRAGM WHERE LATERAL SYSTEMS ARE OFFSET AT GRID LINES 1' TO 1 AND 5' TO 5

ITEM 55

$$F_{psl_x} := \begin{cases} F_{pslmin_x} & \text{if } F_{psl_x} < F_{pslmin_x} \\ F_{pslmax_x} & \text{if } F_{psl_x} > F_{pslmax_x} \\ F_{psl_x} & \text{otherwise} \end{cases}$$



$F_{psl_4} = \blacksquare \cdot plf$ (Story 4)

$F_{psl_3} = 308.5 \cdot plf$ (Story 3)

$F_{psl_2} = 216.5 \cdot plf$ (Story 2)

→ $F_{psl_1} = 198.1 \cdot plf$ (Story 1)

$v = \frac{0.7\,(198.1\ PLF)(63')}{2\,(26')} = 168\ PLF$

25% INCREASE = $1.25\,(168\ PLF) = 210\ PLF.$

UNBLOCKED FLOOR DIAPHRAGM W/ 6" NAILING INCLUDING ATTACHMENT INTO PERIMETER NAILING, S.F. 285PLF O.K.

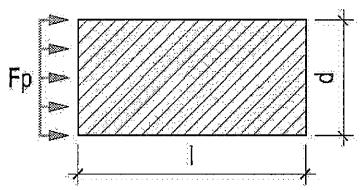
Calculate the Diaphragm Design Force (perpendicular to D) per Section 12.10.1.1:

$$F_{psd_x} := \frac{\sum_{i=x}^{N} F_{s_i}}{\sum_{i=x}^{N} w_i} \cdot \left(\frac{wd_x}{d_x} + 2 \cdot ww_x \right)$$ (Equation 12.10-1)

$$F_{psdmin_x} := 0.2 \cdot S_{ds} \cdot I_e \cdot \left(\frac{wd_x}{d_x} + 2 \cdot ww_x \right)$$ (Section 12.10.1.1)

$$F_{psdmax_x} := 0.4 \cdot S_{ds} \cdot I_e \cdot \left(\frac{wd_x}{d_x} + 2 \cdot ww_x \right)$$ (Section 12.10.1.1)

$$F_{psd_x} := \begin{cases} F_{psdmin_x} & \text{if } F_{psd_x} < F_{psdmin_x} \\ F_{psdmax_x} & \text{if } F_{psd_x} > F_{psdmax_x} \\ F_{psd_x} & \text{otherwise} \end{cases}$$



$F_{psd_4} = \blacksquare \cdot plf$ (Story 4)

$F_{psd_3} = 718.5 \cdot plf$ (Story 3)

$F_{psd_2} = 469.2 \cdot plf$ (Story 2)

$F_{psd_1} = 450.8 \cdot plf$ (Story 1)

Item 55

Project:
Engineer:
Descrip: 1FB1 WITH OMEGA

ASDIP Steel 4.1.2

STEEL BEAM DESIGN

www.asdipsoft.com

GEOMETRY

Beam Designation	W12X30		
Steel Yield Strength Fy ...	50.0	ksi	OK
Modulus of Elasticity Es ..	29000	ksi	
Member Length L	26.00	ft	
Left Cantilever	0.00	ft	
Right Cantilever	0.00	ft	
Unbraced Length Lb top ..	16.00	ft	
Unbraced Length Lb bot ..	26.00	ft	

PROPERTIES

Area ..	8.8	in²	Sx ...	38.6	in³
Depth	12.3	in	Zx ...	43.1	in³
bf	6.5	in	rx	5.21	in
tw	0.26	in	Iy	20.3	in⁴
tf	0.44	in	Sy ...	6.2	in³
k des .	0.74	in	Zy ...	9.6	in³
Ix	238.0	in⁴	ry	1.52	in
Cw	720.0	in⁶	J	0.46	in⁴

UNFACTORED LOADS (Selfweight calculated internally)

	Uniform (k/ft)		Concentrated (kip)						Moments (k-ft)	
SPAN 1	w1	w2	P1	P2	P3	P4	P5	P6	ML	MR
Const. Dead Load .	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Const. Live Load ...	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dead Load	0.35	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Live Load	0.35	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roof Live Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Snow Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wind Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seismic Load	0.00	0.00	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Start Distance (ft) ..	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00		
End Distance (ft) ...	26.00	0.00								

From 1257 lb ASD Hold down uplift force

$$1.4\,(1257\text{ lbs})\,(3)\,\Omega = 5300\text{ lbs.}$$

ASDIP Steel 4.1.2 **STEEL BEAM DESIGN** *www.asdipsoft.com*

FLEXURE DESIGN (STEEL)

L. T. Buckling Cb-factor	1.24	
Max. Bending Moment M ..	99.5	k-ft
Limit States	Nominal Mn	
Yielding	179.6	k-ft
Lateral Torsional Buckling	134.4	k-ft
Flange Local Buckling	N.A.	k-ft
Web Local Buckling	N.A.	k-ft
Nominal Strength Mn	120.9	k-ft
Resistance Factor ϕ	0.90	
Design Strength ϕMn	120.9	k-ft
M / ϕMn Design Ratio	0.82	OK

FLEXURE DESIGN (COMPOSITE)

Overall Slab Thickness	N.A	
Interior Beam. Spacing = 5.0 ft		
Effective Slab Width	N.A	
Concrete Strength f'c	N.A	
Concrete Density	N.A	
Metal Deck Type	None	None
Deck Ribs Height hr	N.A	
Deck Ribs Avg. Width wr ..	N.A	
No Metal Deck specified for this Beam		
Max. Bending Moment M	N.A	
Limit States	Nominal Mn	
Plastic Yielding	N.A	
Elastic Yielding	N.A.	
Nominal Strength Mn	N.A	
Resistance Factor ϕ	0.90	
Design Strength ϕMn	N.A	
M / ϕMn Design Ratio	N.A	

DEFLECTIONS

Stiffness factor	1.0	
Required Camber	0.00	in
Long-term Deflection	N.A.	

Loading	δ (in)	L/δ	L/δ Min	Ratio	
CL	0.00	9999	360	0.04	OK
CD+CL .	0.04	6981	240	0.03	OK
L	0.52	598	360	0.60	OK
D+L	1.09	287	240	0.84	OK

DESIGN FOR SHEAR

Shear Coefficient Cv	1.00	
Maximum Shear Force V ...	13.2	kip
Limit States	Nominal Vn	
Shear Yielding	95.9	kip
Shear Buckling	95.9	kip
Nominal Strength Vn	95.9	kip
Resistance Factor ϕ	1.00	
Design Strength ϕVn	95.9	kip
V / ϕVn Design Ratio	0.14	OK

LOCAL BUCKLING

Flanges in Flexure	Compact
Flanges in Compression	Non-compact
Web in Flexure	Compact
Web in Compression	Non-compact

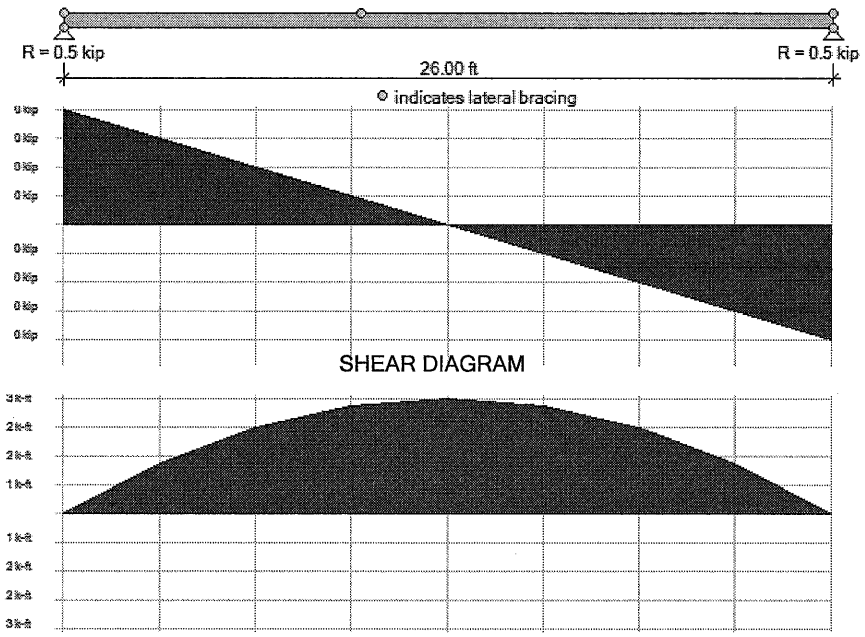
SHEAR CONNECTORS

Shear Stud Diameter	N.A
Shear Stud Length	N.A
Tensile Strength Fu	N.A
Nominal Strength Qn	N.A
Horizontal Shear Force	N.A
# of Studs for Full Composite	N.A
# of Studs for Partial Composite ..	N.A
Partial Composite Action %	N.A
Minimum Spacing Allowed	N.A
# of Studs at Any Section	N.A
Max. Spacing Required	N.A

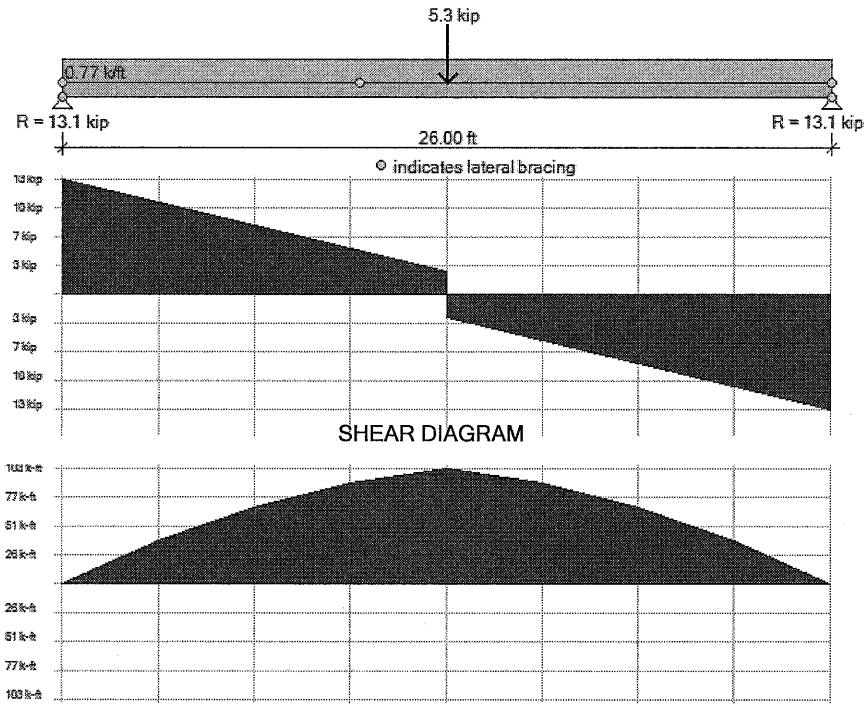
DESIGN CODES

Steel Design	AISC 360-10 (14th Ed.)
Load Combinations ...	ASCE 7-10

ALL STILL O.K.



(Comb: 1.2CD+1.6CL)



(Comb: 1.2D+1.0L+0.2S+1.0E)

Item S6

Project:
Engineer:
Descrip: 1FB7

Page # ___
8/14/2017

ASDIP Steel 4.1.2 **STEEL BEAM DESIGN** *www.asdipsoft.com*

GEOMETRY

Beam Designation	W12X26		
Steel Yield Strength Fy ...	50.0	ksi	OK
Modulus of Elasticity Es ..	29000	ksi	
Member Length L	14.00	ft	
Left Cantilever	0.00	ft	
Right Cantilever	4.00	ft	
Unbraced Length Lb top ..	0.00	ft	
Unbraced Length Lb bot ..	14.00	ft	

PROPERTIES

Area ..	7.7	in^2	Sx ...	33.4	in^3
Depth	12.2	in	Zx ...	37.2	in^3
bf	6.5	in	rx	5.17	in
tw	0.23	in	Iy	17.3	in^4
tf	0.38	in	Sy ...	5.3	in^3
k des .	0.68	in	Zy ...	8.2	in^3
Ix	204.0	in^4	ry	1.51	in
Cw	607.0	in^6	J	0.30	in^4

UNFACTORED LOADS (Selfweight calculated internally)

	Uniform (k/ft)		Concentrated (kip)						Moments (k-ft)	
SPAN 1	w1	w2	P1	P2	P3	P4	P5	P6	ML	MR
Const. Dead Load .	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Const. Live Load ...	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dead Load	0.70	0.00	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Live Load	2.60	0.00	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roof Live Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Snow Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wind Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seismic Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Start Distance (ft) ..	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00		
End Distance (ft) ...	14.00	0.00								

R CANT	w1	w2	P1	P2	P3	P4	P5	P6
Const. Dead Load .	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Const. Live Load ...	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Dead Load	0.70	0.00	1.8	0.0	0.0	0.0	0.0	0.0
Live Load	2.60	0.00	11.9	0.0	0.0	0.0	0.0	0.0
Roof Live Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Snow Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Wind Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Seismic Load	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Start Distance (ft) ..	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00
End Distance (ft) ...	4.00	0.00						

ASDIP Steel 4.1.2 **STEEL BEAM DESIGN** *www.asdipsoft.com*

FLEXURE DESIGN (STEEL)

L. T. Buckling Cb-factor	1.87	
Max. Bending Moment M ..	-125.1	k-ft
Limit States	Nominal Mn	
Yielding	155.0	k-ft
Lateral Torsional Buckling	155.0	k-ft
Flange Local Buckling	N.A.	k-ft
Web Local Buckling	N.A.	k-ft
Nominal Strength Mn	139.5	k-ft
Resistance Factor ϕ	0.90	
Design Strength ϕMn	139.5	k-ft
M / ϕMn Design Ratio	0.90	OK

FLEXURE DESIGN (COMPOSITE)

Overall Slab Thickness	N.A	
Interior Beam. Spacing = 5.0 ft		
Effective Slab Width	N.A	
Concrete Strength f'c	N.A	
Concrete Density	N.A	
Metal Deck Type	None None	
Deck Ribs Height hr	N.A	
Deck Ribs Avg. Width wr ..	N.A	
No Metal Deck specified for this Beam		
Max. Bending Moment M	N.A	
Limit States	Nominal Mn	
Plastic Yielding	N.A	
Elastic Yielding	N.A.	
Nominal Strength Mn	N.A	
Resistance Factor ϕ	0.90	
Design Strength ϕMn	N.A	
M / ϕMn Design Ratio	N.A	

DEFLECTIONS

Stiffness factor	1.0	
Required Camber	0.00	in
Long-term Deflection	N.A.	

Loading	δ (in)	L/δ	L/δ Min	Ratio	
CL	0.00	4800	180	0.04	OK
CD+CL .	0.00	4800	120	0.02	OK
L	0.17	985	360	0.37	OK
D+L	0.23	720	240	0.33	OK

DESIGN FOR SHEAR

Shear Coefficient Cv	1.00	
Maximum Shear Force V ...	62.6	kip
Limit States	Nominal Vn	
Shear Yielding	84.2	kip
Shear Buckling	84.2	kip
Nominal Strength Vn	84.2	kip
Resistance Factor ϕ	1.00	
Design Strength ϕVn	84.2	kip
V / ϕVn Design Ratio	0.74	OK

LOCAL BUCKLING

Flanges in Flexure	Compact
Flanges in Compression	Non-compact
Web in Flexure	Compact
Web in Compression	Non-compact

SHEAR CONNECTORS

Shear Stud Diameter	N.A
Shear Stud Length	N.A
Tensile Strength Fu	N.A
Nominal Strength Qn	N.A
Horizontal Shear Force	N.A
# of Studs for Full Composite	N.A
# of Studs for Partial Composite ..	N.A
Partial Composite Action %	N.A
Minimum Spacing Allowed	N.A
# of Studs at Any Section	N.A
Max. Spacing Required	N.A

DESIGN CODES

Steel Design	AISC 360-10 (14th Ed.)
Load Combinations ...	ASCE 7-10

ITEM S7

DYNAMIC STRUCTURES

1887 North 1120 West
Provo, UT 84604
Tel: (801) 356-1140

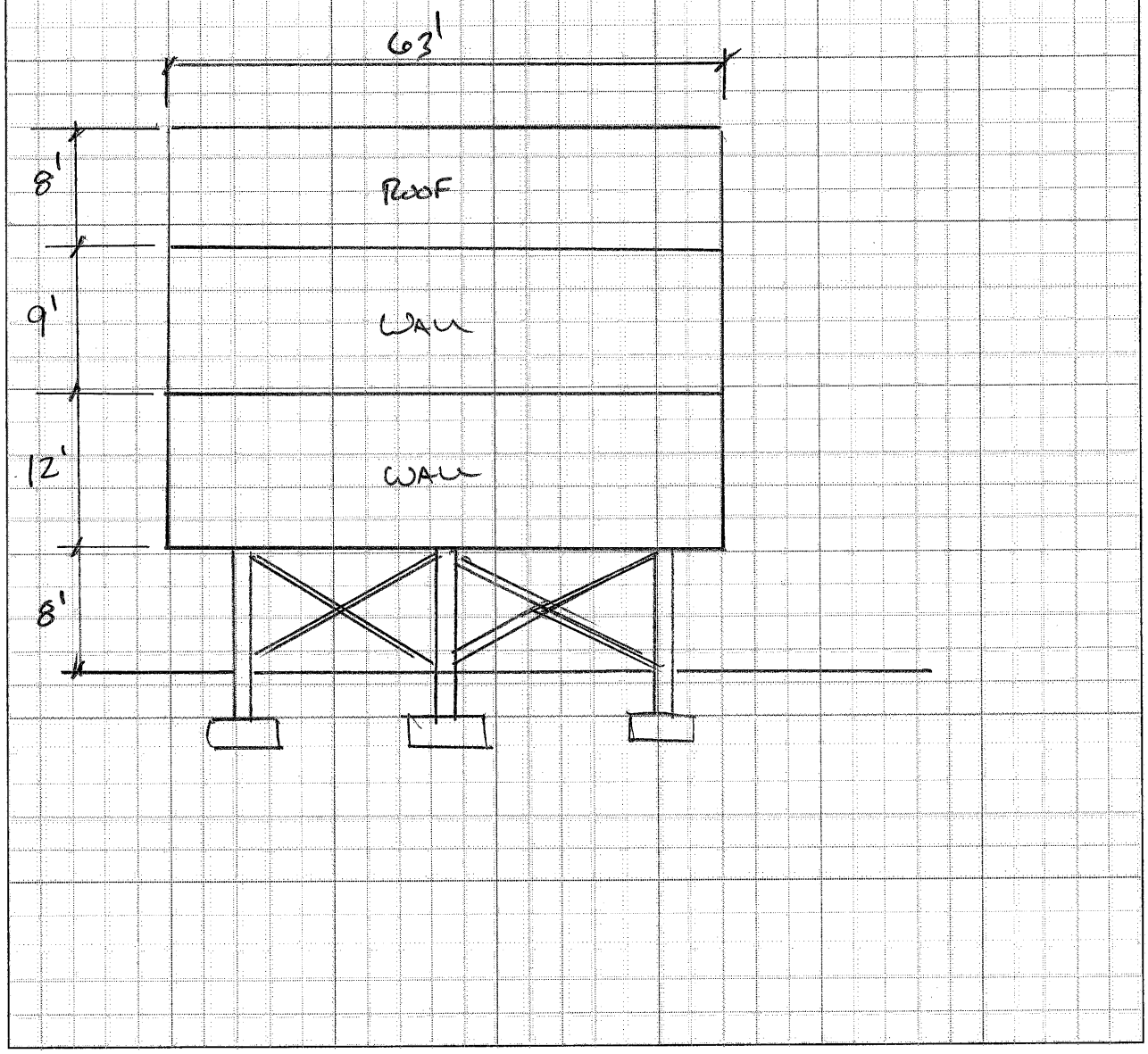
JOB _____

SHEET NO _____ OF _____

CALCULATED BY _____ DATE _____

ASCE 7-10 WIND PRESSURE

CHAPTER 28, PART 2



DYNAMIC STRUCTURES
1887 North 1120 West
Provo, UT 84604
Tel: (801) 356-1140

JOB _____

SHEET NO _____ OF _____

CALCULATED BY _____ DATE _____

115 MPH, EXP B

$K_{zt} = 1.0$ NOT ON AN ISOLATED HILL OR ESCARPMENT, MANY HILLS AROUND SITE.

ROOF SLOPE = 7:12 = 30°

USE $\lambda = 1.0$ FOR EXP B

FROM FIGURE 28.6-1

WALL PRESSURE = 18.8 PSF (16PSF MIN.)

ROOF PRESSURE = 12.9 PSF (8 PSF MIN.)

DYNAMIC STRUCTURES
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Provo, UT 84604
Tel: (801) 356-1140

JOB _____

SHEET NO _____ OF _____

CALCULATED BY _____ DATE _____

UPPER LEVEL BASE SHEAR (ASD)

4' OF ROOF AND 4.5' OF WALL

$V_{TOP} = 0.6\left[(4')(12.9\,PSF) + 4.5'(18.8\,PSF)\right] 63'$

$= 5148$ LBS (12,500 LBS SEISMIC)

LOWER LEVEL BASE SHEAR (ASD)

4.5' + 6' OF WALL

$V_{LOW} = 0.6\left[10.5'(18.8\,PSF)\right] 63'$

$= 7462$ LBS (5300 LBS SEISMIC)

TOTAL SHEAR ON LOWER LEVEL SHEAR WALLS:

WIND = 5148 + 7462 = 12,610 LBS.

SEISMIC = 12,500 + 5300 = 17,800 LBS.

DYNAMIC STRUCTURES
1887 North 1120 West
Provo, UT 84604
Tel: (801) 356-1140

JOB _____

SHEET NO _____ OF _____

CALCULATED BY _____ DATE _____

· ADDED BASE SHEAR TO BRACED FRAMES (ASD)

ADDITIONAL 6' OF WALL

$V_{ADD} = 0.6\,(6')(18.8\,PSF)(63') = 4264\ LBS.$

- TOTAL BASE SHEAR ON BRACED FRAMES

EXP. C CHECKED

WIND = 12,610 + 4264 = 16874 LBS

(WIND LOAD × 1.35 = 22,781 LBS FOR EXP C, STILL NOT CONTROLING)

SEISMIC = 25,100 LBS.

30% OF 192PSF SNOW + 3" CONCRETE ON EACH FLOOR DRIVES SEISMIC TO CONTROL OVER WIND

BNACONSULTING

Memorandum

To: Dave Grandstaff
Salmon Electric

CC:

From: Calvin De St. Jeor

Date: August 15, 2017

Re: Powder Mountain 2500 Cabin - County Review Response

E1. Sheet E303:

A. Have added dimension to all floor box next to the walls, to show that they will be installed within 18" of the walls.

B. Ensured that devices in laundry area are being shown as GFCI devices.

C. Have added combo smoke/carbon monoxide as needed.

D. Have added combo smoke/carbon monoxide as needed.

E. Added a General Sheet note addressing the required tamper-resistant devices.

SALT LAKE ST. GEORGE

BNA Consulting
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