3. SEISMIC DESIGN:

LATERAL SYSTEM SHEAR WALL PORTION OF SNOW LOAD INCLUDED ... PER CALCULATIONS 4. WIND DESIGN: 115 MPH

1.0 5. SOILS: SOIL BEARING PRESSURE (ASSUMED PRESSURE, REFERENCE CALC BOOK FOR

#### GENERAL

1. THE GENERAL CONTRACTOR SHALL: A. BECOME FAMILIAR WITH ALL PORTIONS OF THE CONTRACT DOCUMENTS AND INSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE PORTIONS PERTAINING TO THEIR AREA OF WORK. NO DEVIATIONS WILL BE ALLOWED UNLESS AGREED UPON BY

ALL PARTIES IN WRITING PRIOR TO CONSTRUCTION OR FABRICATION. B. VERIFY ALL DIMENSIONS AND ELEVATIONS. COORDINATE ALL DOORS. WINDOWS. NON-BEARING INTERIOR AND EXTERIOR WALLS, ELEVATIONS, SLOPES, STAIRS, CURBS, DRAINS, RECESSES, DEPRESSIONS, RAILINGS, WATER PROOFING, FINISHES, CHAMFERS,

C. FIELD VERIFY ALL SIDE CONDITIONS AND IMMEDIATELY NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER REGARDING ACTUAL CONDITIONS AT THE SITE WHICH ARE NOT PER THE DRAWINGS.

D. COORDINATE ALL WORK BETWEEN THE VARIOUS TRADES AND SUBCONTRACTORS. REPORT ANY MODIFICATIONS TO THE STRUCTURAL PORTION OF THE BUILDING BY OTHER TRADES TO THE ARCHITECT AND STRUCTURAL ENGINEER.

E. BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND.OR ADJACENT PROPERTIES.

#### 2. CONTRACT DOCUMENTS:

A. REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE DRAWINGS.

B. DETAILS, SECTIONS AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OR SHOWN OTHERWISE

C. THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTES OTHERWISE. D. INFORMATION ON DRAWINGS INDICATING EXISTING CONDITIONS IS BASED ON BEST

PRESENT KNOWLEDGE, BUT MAY NOT BE ENTIRELY ACCURATE AND MUST BE FIELD

# 3. BUILDING CODE COMPLIANCE:

A. INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND STANDARDS. ASTM AND IBC DESIGNATIONS SHALL BE AS AMENDED TO LATEST DATE UNLESS NOTED OTHERWISE

#### 4. COORDINATION:

A. COORDINATE AND VERIFY ROOF, FLOOR, AND WALL OPENINGS REQUIRED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND/OR OTHER DRAWINGS PRIOR TO CONSTRUCTION. REPORT OPENINGS REQUIRED WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.

B. COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ARCHITECT AND STRUCTURAL ENGINEER.

## 5. CONSTRUCTION SEQUENCE, SHORING, AND BRACING REQUIREMENTS:

A. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD, MEANS AND SEQUENCE OF ALL STRUCTURAL ERECTION EXCEPT WHEN TEMPORARY SHORING AND BRACING AS HIS METHOD OF ERECTION REQUIRES TO PROVIDE ADEQUATE VERTICAL AND LATERAL SUPPORT DURING ERECTION. THIS SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE PLACE AND ALL FINAL CONNECTIONS ARE COMPLETED, INCLUDING ALL ROOF AND FLOOR ATTACHMENTS.

MATERIAL SHALL REMAIN IN PLACE AND SHALL NOT BE REMOVED UNTIL THE STRUCTURAL MEMBERS HAVE ACQUIRED SUFFICIENT STRENGTH TO SAFELY SUPPORT THEIR OWN WEIGHT AND ANY ADDITIONAL CONSTRUCTION, STORAGE, AND/OR OTHER LOADS TO WHICH THEY MAY BE SUBJECTED. IN NO CASE SHALL THEY BE REMOVED PRIOR TO 7 DAYS. RE-SHORING SHALL BE IMMEDIATELY INSTALLED UPON REMOVAL OF SUCH FORMS AND SHALL REMAIN IN PLACE UNTIL 28 DAYS AFTER PLACING OF MATERIAL OR UNTIL MATERIAL HAS REACHED ITS 28 DAY DESIGN STRENGTH. WHICHEVER IS LONGER. DO NOT REMOVE LARGE AREAS OF SHORING BEFORE STARTING RE-SHORING PROCEDURES.

B. SHORING AND SUPPORTING FORM WORK FOR SUSPENDED CONCRETE OR MASONRY

C. NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.

D. BUILDING WALLS WHICH RETAIN EARTH MUST BE BRACED AT THE TOP. DO NOT BACKFILL UNLESS BRACING IS PROVIDED OR UNTIL THE COMPLETE FLOOR OR ROOF SYSTEM IS IN PLACE, TYPICAL, UNLESS NOTED OTHERWISE.

## 6. OMISSIONS AND/OR CONFLICTS:

A. OMISSIONS IN AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER AND SHALL BE RESOLVED BY THE SAME BEFORE PROCEEDING WITH ANY WORK INVOLVED.

B. IN CASE OF CONFLICTS IN THE STRUCTURAL WORK, THE MOST STRINGENT REQUIREMENTS, AS DIRECTED BY THE ARCHITECT AND STRUCTURAL ENGINEER, SHALL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE OWNER.

## 7. MISCELLANEOUS:

A. DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND/OR OWNER SHALL KEEP

THE LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN. B. OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS INSPECTION NOR APPROVAL

OF CONSTRUCTION.

A. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION, ERECTION, INSTALLATION, OR OTHERWISE BEING INCORPORATED INTO THE WORK. REINFORCING STEEL SHOP DRAWINGS.

STRUCTURAL STEEL SHOP DRAWINGS.

\* THESE SUBMITTALS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF UTAH.

B. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE REVIEW OF ALL SUBMITTALS BY THE ARCHITECT AND STRUCTURAL ENGINEER.

C. REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER IN WRITING. REASON(S) FOR THE REQUEST AND COST DIFFERENTIALS SHALL BE INCLUDED IN THE REQURESTS, SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED IN WRITING BY THE ARCHITECT AND STRUCTURAL ENGINEER.

## SITE PREPARATION

1. REQUIREMENTS A. DO NOT PLACE FOOTINGS OR FOUNDATIONS ON DISTURBED SOILS, UNDOCUMENTED

FILL, DEBRIS, FROZEN SOIL, OR IN PONDED WATER. B. ALL UNSUITABLE SOILS AND VEGETATION, SUCH AS TOPSOIL, ORGANIC SOILS,

SHALL BE REMOVED FROM BELOW FOOTINGS, FOUNDATIONS, AND FLOOR SLABS. C. CONTRACTOR SHALL VERIFY SOIL BEARING CAPACITY AND ALL SITE PREPARATION REQUIREMENTS WITH GEOTECHNICAL REPORT. IN THE ABSENCE OF A GEOTECHNICAL REPORT INDUSTRY STANDARDS SHALL BE FOLLOWED FOR BEARING AND COMPACTION.

UNDOCUMENTED FILL, DISTURBED NATIVE SOILS, AND OTHER DELETERIOUS MATERIALS,

#### CONCRETE

1. CODES AND STANDARDS:

A. CONCRETE WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI)

I. ACI 301. "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

II. ACI 318, "BUILDING CODE REQUIREMENTS REQUIRED FOR REINFORCED CONCRETE". III. ACI 347, "RECOMMENDED PRACTIVE FOR CONCRETE FORM WORK".

#### 2. MATERIALS:

A. CEMENT SHALL CONFORM TO ASTM C150, TYPE II, PORTLAND CEMENT

B. HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATES SHALL CONFORM TO ASTM C330.

C. WATER SHALL BE POTABLE.

D. AIR ENTERTAINMENT SHALL CONFORM TO ASTM C260.

E. FLY ASH SHALL CONFORM TO ASTM C618. F. CALCIUM CHLORIDE SHALL NOT BE USED.

A. ONLY ONE TYPE OF CONCRETE SHALL BE PLACED AT THE SITE AT ANY GIVEN TIME. B. A MIX DESIGN THAT PRODUCES THE LOWEST SLUMP COMPATIBLE WITH PROPER PLACEMENT SHALL BE USED, 4" MAXIMUM.

C. CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING:

TYPE OF CONCRETE MEMBER	MINIMUM STRENGTH AT 28 DAYS (PSI)	MAX. W/C (RATIO)	DRY WEIGHT (PCF)	MAX AGGREGATE SIZE (INCHES)	AIR ENTERTAIN- MENT (%)	MIN. CEMENT PER YARD (LBS)
FOOTINGS:	3000	0.50	145	0'-0 3/4"	3 ±−1	517
FOUNDATION WALLS:	3000	0.45	145	0'-0 3/4"	3 ±-1	564
SLAB ON GRADE:						
INTERIOR	3000	0.45	145	0'-0 3/4"	3 ±−1	564
EXTERIOR	3000	0.45	145	0'-0 3/4"	6 ±-1	564
SLABS ON DECK						
LT. WT.*	3000	0.53	110	0'-0 3/4"	6 ±-1	564
COLUMNS:	3000	0.45	145	0'-0 3/4"	3 ±-1	564
BEAMS:	3000	0.45	145	0'-0 3/4"	3 ±-1	564

\* LT. WT. CONCRETE SHALL HAVE A MIN. SPLITTING TENSILE STRENGTH OF 450 PSL. D. LIMIT FLY ASH TO 15% OF THE TOTAL CEMENTITIOUS MATERIAL. E. PEA GRAVEL AGGREGATE AND/OR PLASTICIZER MAY BE USED IN CONGESTED AREAS WHEN REQUIRED TO PROPERLY FILL ALL VOIDS AND/OR FOR WORKABILITY

## 4. CONSTRUCTION:

(CONTRACTOR'S OPINION)

A. CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT. B. PRIOR TO PLACING CONCRETE CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF OPENINGS, BLOCKOUTS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, EMBEDS, DOWELS, ECT. ANCHOR BOLTS AND DOWELS SHALL BE PLACED PRIOR TO

CASTING CONCRETE. C. CONSTRUCTION JOINTS AND BULKHEADS SHALL BE FORMED WITH A KEY WAY. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED PRIOR TO CASTING ADJACENT POUR.

D. OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES OF THE OPENING EQUIVALENT TO THE BARS CUT BY THE OPENING WITH HALF ON EACH SIDE OF THE OPENING WITH HALF ON EACH SIDE OF THE OPENING OR 2-#5 BARS, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE. BARS PARALLEL TO THE PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF THE SPAN. BARS IN THE OTHER DIRECTION SHALL RUN 24 INCHES BEYOND THE EDGE OF THE OPENING OR END WITH A STANDARD HOOK. ALSO PROVIDE 2-#5x4'-0" DIAGONAL BARS AT

EACH CORNER OF EACH OPENING. E. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.

## FOOTINGS:

A. FOOTINGS SHALL BEAR ON PROPERLY PREPARED MATERIAL. SEE THE SITE

B. FOOTINGS SHALL BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYPICAL UNLESS NOTED OTHERWISE.

C. EXTERIOR FOOTINGS SHALL BEAR BELOW THE EFFECTS OF FROST.

D. PROVIDE 2x4 BEVELED KEY WAYS IN ALL CONTINUOUS WALL FOOTINGS.

E. STAGGER FOOTING CONSTRUCTION JOINTS FROM WALL CONSTRUCTION JOINTS ABOVE BY AT LEAST 6 FEET.

F. REINFORCING IN CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND/OR

INTERSECTIONS BY PROVIDING PROPER LAP LENGTHS AND/OR CORNER BARS. G. NO PENETRATIONS SHALL BE ALLOW THROUGH ANY CONCRETE FOOTING. WHEN CONFLICTS ARISE BETWEEN UNDERGROUND PLUMBING, UTILITIES, ETC., THE FOOTING SHALL BE STEPPED DOWN BELOW THE CONFLICT AND A CONCRETE WALL, PIER,

COLUMN, ETC., SHALL BE EXTENDED TO THE FOOTING AS REQUIRED. H. BEARING SURFACES FOR FOOTINGS WHICH ARE, OR BECOME, UNDERMINED DURING CONSTRUCTION SHALL BE BACK FILLED WITH A LEAN-MIX CONCRETE (1000 PSI MIN).

A. INTERIOR SLABS ON GRADE SHALL BE A MINIMUM OF 4 INCHES THICK, SHALL BEAR ON A 4 INCH MINIMUM LAYER OF FREE-DRAINING GRAVEL, AND SHALL BE REINFORCED WITH #4 BARS AT 24" O.C. BOTH WAYS, TYPICAL UNLESS NOTED OTHERWISE. PROVIDE CHAIRS WITH SAND PLATES FOR PROPER PLACEMENT.

B. LARGE AREAS OF INTERIOR SLABS ON GRADE SHALL BE PLACED IN STRIPS NOT TO EXCEED 120 FEET IN LENGTH NOR 30 FEET IN WIDTH WHICH ARE SUBDIVIDED BY CONSTRUCTION AND/OR CONTRACTION (CONTROL) JOINTS INTO ROUGHLY SQUARES WHO SIDES SHALL NOT EXCEED 15 FEET IN EITHER DIRECTION.

C. SEE ARCHITECTURAL FOR EXTERIOR SLABS ON GRADE, TYPICAL, UNLESS NOTED OTHERWISE.

#### REINFORCING STEEL

1. CODES AND STANDARDS: REINFORCING STEEL SHALL COMPLY WITH: I. AMERICAN CONCRETE INSTITUTE BUILDING CODE & COMMENTARY ACI 318. II. AMERICAN CONCRETE INSTITUTE "DETAILING MANUAL", ACI 315 (OR SP-66).

2. MATERIALS: A. REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS AND SHALL CONFORM TO ASTM A615, GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI EXCEPT AS

NOTED BELOW I.DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A615, GRADE 40 OR ASTM A706, GRADE 60, "LOW ALLOW STEEL". II.REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60, "LOW ALLOY

B. MASONRY JOINT REINFORCING SHALL BE MANUFACTURED FROM WIRE WHICH

CONFORMS TO ASTM A82. 3. CONSTRUCTION:

A. REINFORCING SHALL BE DETAILED, BOLSTERED, AND SUPPORTED PER ACI315. B. REINFORCING STEEL SHALL BE FREE OF LOOSE, FLAKY RUST, SCALE, GREASE, OIL,

DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND. C. REINFORCING SHALL BE CONTINUOUS IN WALLS, BEAMS, COLUMNS, SLABS, FOOTINGS,

D. SPLICES IN CONTINUOUS REINFORCING SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT POINTS OF MINIMUM STRESS, TYPICAL UNLESS NOTED OTHERWISE. LAP SPLICES SHALL BE 40 BAR DIAMETERS LONG IN CONCRETE AND 48 BAR DIAMETERS LONG IN MASONRY. MINIMUM LAP SHALL BE 24 INCHES LONG. DOWELS SHALL HAVE A MINIMUM OF 30 BAR DIAMETERS EMBEDMENT. TENSION SPLICES SHALL BE USED IN CONCRETE WHEN SPECIFICALLY NOTED, USE A CLASS B SPLICE. SPLICES IN TOP BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT SUPPORTS. E. BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND

OR RE-BEND A PREVIOUSLY BENT BAR. F. REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE AND SHALL BE POSITIONED WITH THE FOLLOWING MINIMUM CONCRETE COVER:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 AND LARGER	
#5 AND SMALLER	
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:	
SLABS AND WALLS, #11 AND SMALLER	
REAMS AND COLUMNS MAIN REINFORCING OF TIES	

. CENTER OF SLAB SLAB ON GRADE . G. REINFORCING STEEL IN MASONRY SHALL BE PLACED PRIOR TO GROUTING AND SHALL BE PLACED, POSITIONED, AND LOCATED ACCORDING TO THE STRUCTURAL DRAWINGS. IT SHALL BE SECURED AGAINST DISPLACEMENT AT INTERVALS NOT TO EXCEED 200

BAR DIAMETERS OR 10 FEET. H. NO REINFORCING STEEL SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE E90XX ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AWS

I. EPOXY COATED REINFORCING BARS SHALL BE USED WHEN SPECIFICALLY NOTED. INCREASE LAP SPLICE LENGTHS AS REQUIRED BY THE IBC.

## MASONRY VENEER ANCHOR TIES

1. PRODUCTS:

A. MASONRY VENEER ANCHOR TIES SHALL BE ONE OF THE FOLLOWING: I.DOVETAIL ANCHORS.

II.DX-10 SEISMIC CLIP INTERLOCK SYSTEM BY HOHMANN & BARNARD. III.ARCHITECT AND STRUCTURAL ENGINEER APPROVED TWO PIECE ADJUSTABLE HOT-DIPPED GALVANIZED TIES.

2. INSTALLATION:

A. MAXIMUM SPACING SHALL BE 16" O.C. HORIZONTAL AND VERTICAL. B. PROVIDE CONTINUOUS HORIZONTAL GALVANIZED #9 WIRE IN CENTER THIRD OF MORTAR JOINTS AT 16" O.C. ENGAGE #9 WIRE WITH ALL ANCHOR TIES. C. CONSTRUCTION JOINTS IN MASONRY VENEER WALLS SHALL BE PROVIDED AS PER THE ARCHITECTURAL DRAWINGS, AND SHALL BE SPACED AT A MAXIMUM OF 15'-0" O.C. FOR MASONRY BLOCK VENEER.

# GENERAL FRAMING NOTES

1. ALL JOISTS, RAFTERS, POSTS AND HEADER SHALL BE DOUGLAS FIR LARCH NO. 2 OR EQUAL U.N.O. IF TJI'S OR EQUAL ARE USED. THEY MUST BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. ALSO PROVIDE BRIDGING @ 8" O.C. FOR TIMBER FLOOR JOISTS.

2. ALL JOISTS AND RAFTERS SHALL HAVE SOLID BLOCKING AT THEIR BEARING POINTS. ROOF JOISTS TO HAVE HURRICANE CLIPS @ 24" O.C. MIN.

3. ALL WOOD/LUMBER PLACED ONTO CONCRETE SHALL BE PRESSURE TREATED OR REDWOOD. FASTENERS INCLUDING NUTS AND WASHERS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE PROTECTED ACCORDING TO IBC 2304.10.5.1

4. ALL WOOD CONNECTIONS MUST CARRY THE CAPACITY OF THE MEMBER, CONTRACTOR IS RESPONSIBLE FOR CONNECTIONS. IF OTHER THAN STANDARD CONNECTIONS ARE REQUIRED, SEE PROJECT ENGINEER FOR ADDITIONAL ASSISTANCE. USE SIMPSON OR EQUAL CONNECTIONS FOR WOOD TO WOOD.

5. ALL COLUMNS SHALL EXTEND DOWN THROUGH THE STRUCTURE TO THE FOUNDATION. ALL COLUMNS SHALL BE BRACED AT ALL FLOOR LEVELS. COLUMNS SHALL BE AS WIDE AS THE MEMBER THEY SUPPORT.

6. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH  $7_{16}$ " THICK EXP 1 SHEATHING OR EQUAL WITH 8d NAILS @ 6" O.C. EDGES AND 12" O.C. IN THE FIELD - BLOCKED, UNLESS OTHERWISE NOTED.

7. ALL FLOOR SHEATHING TO BE ¾" THICK T&G SHEATHING GLUED AND NAILED WITH 10d COMMON NAILS OR EQUAL @ 6" O.C. EDGES AND @ 10" O.C. IN THE FIELD.

8. VERIFY ALL BEAM SIZES WITH ENGINEERING SPECIFICATIONS.

9. ALL BEAMS AND HEADERS OVER 48" SHALL BE SUPPORTED BY DOUBLE TRIMMERS UNLESS NOTED OTHERWISE.

10. TRUSS MANUFACTURER SHALL PROVIDE ENGINEERING SPECS. FOR ALL TRUSSES.

11. USE  $\frac{7}{6}$  O.S.B. OR CDX PLYWOOD WITH (USE  $\frac{5}{6}$  IN HEBER) 8d NAILS @ 6" O.C. AT EDGES OF ROOF 10d NAILS @ 4" O.C. AT GABLE ENDS SPACE NAILS 12" O.C. ON INTERMEDIATE MEMBERS STAGGER SHEATHING JOINTS PLYWOOD PERPENDICULAR TO RAFTERS AND TRUSSES

12. SOLID BLOCK BETWEEN TRUSSES. HOLD DOWN EVERY 3RD BLOCK FOR ATTIC VENTILATION.

13. ALL OVER FRAME AREAS TO HAVE FULL ROOF SHEATHING BELOW.

14. PROVIDE SQUASH BLOCKING AT RIM JOIST BELOW ALL POSTS FROM ROOF, HEADER OR

#### BEAM POINT LOADS.

15. PROVIDE DOUBLE FLOOR JOISTS BELOW ALL PARALLEL BEARING WALLS

16. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR OR BETTER UNLESS A HIGHER GRADE IS

NOTED OTHERWISE. 17. GLULAM BEAMS SHALL BE 24F-V4 DF/DF FOR SINGLE SPANS AND 24F-V8 DF/DF FOR

MULTIPLE SPANS, AND CANTILEVERED SPANS. 18. ALL RAFTERS AND JOISTS OVER THREE FEET LONG SHALL BE HANGERED IF NOT SUPPORTED BY BOTTOM BEARING. ALL HANGERS AND OTHER WOOD CONNECTIONS MUST

BE DESIGNED TO CARRY THE CAPACITY OF THE MEMBER THAT THEY ARE SUPPORTING.

19. FRAMING CONNECTIONS NOTED ON THE DRAWINGS ARE SIMPSON STRONG TIE OR EQUAL. INSTALL WITH THE CATALOG DESIGNATED CONNECTOR IN EACH HOLE.

20. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY ENGINEER.

21. LAG SCREWS SHALL BE INSERTED IN A DRILLED PILOT HOLE 60%-75% OF THE SHANK DIAMETER BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. ALL NUTS, BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH AN OVERSIZED WASHER.

22. NAILS TO BE COMMON WIRE UNLESS OTHERWISE NOTED.

23. ALL BOLT HOLES SHALL BE DRILLED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.

24. ALL JOINTS IN WALL SHEATHING SHALL OCCUR IN THE MIDDLE OF A PLATE OR BLOCK AND NAILED ON EACH SIDE OF THE JOINT WITH EDGE NAILING PER SHEAR WALL

25. ALL OVER BUILT ROOF RAFTERS SHALL BE BRACED VERTICALLY TO THE TRUSSES BELOW AT 4'-0" O.C. MAXIMUM IN ORDER TO SPREAD THE LOAD EVENLY OVER THE TRUSSES.

26. PROVIDE ½" MINIMUM CLEARANCE BETWEEN TOP PLATE OF INTERIOR PARTITIONS AND BOTTOM CHORD OF TRUSSES (TO ENSURE THAT LOADING WILL BE AS DESIGNED).

27. DOUBLE TOP PLATE WITH MINIMUM 48" LAP SPLICE.

28. COLUMNS AND POSTS LOCATED ON CONCRETE OR MASONRY FLOORS OR DECKS EXPOSED TO THE WEATHER OR TO WATER SPLASH OR IN BASEMENTS, AND WHICH SUPPORT PERMANENT STRUCTURES, SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING ABOVE FLOORS UNLESS APPROVED WOOD OF NATURAL RESISTANCE BO DECAY OR TREATED WOOD IS USED. THE PEDESTALS SHALL PROJECT AT LEAST 6" ABOVE EXPOSED EARTH AND AT LEAST 6" ABOVE EXPOSED EARTH AND AT LEAST 1" ABOVE SUCH FLOORS.

29. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE IBC, AND LOCAL ORDINANCES.

30. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.

### WOOD TRUSS NOTES

1. BOTTOM CHORDS OF TRUSSES ACTING AS CEILING MEMBERS MUST BE ABLE TO SUPPORT A 10 PSF LIVE LOAD PER CURRENT IRC REQUIREMENTS.

2. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES, AND SHALL DESIGN THE TRUSSES PER ATTACHED ENGINEERING SPECIFICATIONS.

3. THE TRUSSES SHALL B E DESIGNED TO CARY ANY ADDITIONAL LOADS DUE TO MECHANICAL UNITS, OVERHEAD DOORS, ROOF OVERBUILDS, ETC.

4. THE TRUSSES SHALL ALSO BE DESIGNED PER THE CURRENT IRC, AND LOCAL

5. ALL MEMBERS SHALL BE DESIGNED FOR COMBINED STRESSES, BASED ON THE WORST LOADING CONDITION.

6. THE TRUSS MANUFACTURER SHALL INDICATE PROPER BRACING OF COMPRESSION CHORD MEMBERS @ 6'-0" LONG (OR LONGER), AS WELL AS BRACING FOR TRUSS ERECTION.

7. ALL DIMENSIONS SHALL BE FILED VERIFIED PRIOR TO FABRICATION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES PER THE TRUSS MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. NO WEB OR CHORD MEMBERS SHALL BE MODIFIED IN THE FIELD.

9. THE PROJECT ENGINEER, OR ENGINEER OF RECORD, IS NOT RESPONSIBLE FOR THE PRE-ENGINEERED TRUSSES, NOR FOR THE INSTALLATION ETC. OF THE TRUSSES. TRUSS PLANT SHALL PROVIDE LICENSED ENGINEERED PLAN. (CONTRACTOR TO VERIFY TRUSS LAYOUT IS CONSISTENT WITH THESE PLANS. ENGINEER SHOULD BE NOTIFIED OF ANY

10. FABRICATION OF TRUSSES SHALL BE AS APPROVED BY ICBO EXCEPT THAT THIS SPECIFICATION SHALL GOVERN WHEN IT EXCEEDS ICBO REQUIREMENTS.

11. FABRICATE TRUSSES FROM APPROVED SHOP DRAWINGS.

12. FABRICATE TRUSSES IN JIGS WITH MEMBERS ACCURATELY CUT TO PROVIDE GOOD BEARING AT JOINTS. JOINTS SHALL BE ACCEPTABLE IF THE AVERAGE OPENING BETWEEN ENDS OF MEMBERS IMMEDIATELY AFTER FABRICATION IS LESS THAN 1/6", EXCEPT THAT TRUSS COMPRESSION CHORD JOINTS AT SPLICES AND RIDGES SHALL HAVE FULL CONTACT BETWEEN MEMBERS.

13. EACH CHORD SECTION SHALL BE INVOLVED IN TWO PANEL POINTS BEFORE BEING SPLICED.

14. PROVIDE 1/8" CAMBER FOR EACH 6 FEET OF TRUSS UNLESS OTHERWISE INDICATED.

15. TRUSS FABRICATORS USING METAL PLATES SHALL HAVE PLANT INSPECTED FOUR TIMES PER YEAR BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH TPI REGULATIONS AND COPIES OF INSPECTIONS MAD AVAILABLE TO OWNER UPON REQUEST.

MINIMUM N	AILING SCHEDULE
CONNECTION	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL	(3) 8d
2. BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
3. 1"x6" (25mm x 152mm) SUB FLOOR OR LESS TO EACH JOIST, FACE NAIL	(2) 8d
4. WIDER 1"x6" (25mm x 152mm) SUB FLOOR TO EACH JOIST, FACE NAIL	(3) 8d
5. 2" (51mm) SUB FLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	(2) 16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d @ 16" (406mm) 0.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	(3) 16d PER 16" (406mm)
7. TOP PLATE TO STUD, END NAIL	(2) 16d
8. STUD TO SOLE PLATE	(4) 8d, TOENAIL OR (2) 16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d @ 24" (610mm) O.C.
10. DOUBLE TOP PLATES, TYPICAL FACE NAIL	16d @ 16" (406mm) O.C.
DOUBLE TOP PLATES, LAP SPLICE	(8) 16d
11. BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOENAIL	(3) 8d
12. RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" (152mm) 0.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	(2) 16d
14. CONTINUOUS HEADER, TWO PIECES	6d <b>②</b> 16" (406mm) O.C. ALONG EACH EDGE
15. CEILING JOIST TO PLATE, TOENAIL	(3) 8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
17. CEILING JOIST LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
18. CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
19. RAFTERS TO PLATE, TOENAIL	(3) 16d
20. 1" (25mm) BRACE TO EACH STUD AND PLATE, FACE NAIL	(2) 8d
21. 1"x8" (25mm x 203 mm) SHEATHING OR LESS TO EACH BEARING, FACE NAIL	(2) 8d
22. WIDER THAN 1"x8" (25mm x 203mm) SHEATHING TO EACH BEARING, FACE NAIL	(3) 8d
23. BUILT-UP CORNER STUDS	16d <b>②</b> 24" (610mm) 0.C.
24. BUILT-UP GIRDER AND BEAMS	20d @ 32" (813mm) O.C. AT TOP & BOTTOM & STAGGERED, (2) 20d AT ENDS & AT EACH SPLICE
25. 2" (51mm) PLANKS	(2) 16d AT EACH BEARING
26. WOOD STRUCTURAL PANELS AND PARTICLEBOARD: 2	(a) 100 iii mion pantaro
SUBFLOOR AND WALL SHEATHING (TO FRAMING):	
1/2" (12.7mm) AND LESS	6d 3
19/32" - 3/4" (15mm-19mm)	8d <sup>4</sup> 0R 6d <sup>5</sup>
7/8" - 1" (22mm-25mm)	8d 3
1 1/8" - 1 1/4" (29mm-32mm)	10d <sup>4</sup> OR 8d <sup>5</sup>
COMBINATION SUBFLOOR-UNDERLAYMENT (TO FRAMING):	104 011 04
3/4" (19mm) AND LESS	6d <sup>5</sup>
7/8" - 1" (22mm-25mm)	8d 5
1 1/8" - 1 1/4" (29mm-32mm)	10d <sup>4</sup> OR 8d <sup>5</sup>
27. PANEL SIDING (TO FRAMING) 2:	104 01/04
1/2" (12.7mm) OR LESS	6d 5
	8d 5
5/8" (16mm)	ou -
28. FIBERBOARD SHEATHING: 7	No. 11 GA <sup>4</sup> 6d No. 16 GA <sup>9</sup>
1/2" (12.7mm)	NO. 11 GA OU NO. 10 GA
25/32" (20mm)	No. 11 GA <sup>4</sup> 8d No. 16 GA <sup>9</sup>
29. INTERIOR PANELING	4d 10
1/4" (6.4mm)	
3/8" (9.5mm)	6d 11
1. COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.  2. NAILS SPACED AT 6 INCHES (152mm) ON CENTER AT EDGES 12 INCHES (305mm) AT	'INTERMEDIATE SUPPORTS EXCEPT 6 INCHES (152mm) AT ALL SUPPORTS WHERE SPANS ARE

2. NAILS SPACED AT 6 INCHES (152mm) ON CENTER AT EDGES, 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES (152mm) AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES (1219mm) OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305 NAILS FOR WALL SHEATHING MAY BE COMMON, BOX OR CASING. 3. COMMON OR DEFORMED SHANK.

5. DEFORMED SHANK. 6. CORROSION-RESISTANT SIDING OR CASING NAILS.

4. COMMON

7. FASTENERS SPACED 3 INCHES (76mm) ON CENTER AT EXTERIOR EDGES AND 6 INCHES (152mm) ON CENTER AT INTERMEDIATE SUPPORTS.

8. CORROSION-RESISTANT ROOFING NAILS WITH 7/16 INCH DIAMETER (11mm) HEAD AND 1 1/2 INCH (38mm) LENGTH FOR 1/2 INCH (12.7mm) SHEATHING AND 1 3/4 INCH (44mm) LENGTH FOR 25/32 INCH (20mm) SHEATHING 9. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16 INCH (11mm) CROWN AND 1 1/8 INCH (29mm) LENGTH FOR 1/2 INCH (12.7mm) SHEATHING AND 1 1/2 INCH (38mm) LENGTH FOR 25/32 INCH (20mm) SHEATHING.

10. PANEL SUPPORTS AT 16 INCHES (406mm) [20 INCHES (508mm) IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED]. CASING OR FINISH NAILS SPACED 6 INCHES (152mm) ON PANEL EDGES. 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS.

11. PANEL SUPPORTS AT 24 INCHES (610mm). CASING OR FINISH NAILS SPACED 6 INCHES (152mm) ON PANEL EDGES, 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS.

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STRUCTURAL ELEMENTS ONLY

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**DIMENSIONS SHOWN ON THE** STRUCTURAL PLANS ARE FOR **CONVENIENCE ONLY. VERIFY ALL** DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO

CONSTRUCTION.

REVISIONS

LEI PROJECT #: 2017-2259 DRAWN BY: KGW

CHECKED BY: **EBM** SCALE: NTS

DATE:

05/24/2017

### STRUCTURAL STEEL 1. CODES AND STANDARDS: A. STRUCTURAL STEEL WORK SHALL COMPLY WITH: I. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY". II. AISC "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 1.51, 3.3 (1ST SENTENCE), 4.2, 7.5.4, AND 7.11.5. III. AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE", EXCLUDING ITEMS CONFLICTING WITH AISC REQUIREMENTS. 2. MATERIALS: A. STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A572 GRADE 50 ENHANCED STEEL. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36. B. STRUCTURAL TUBE STEEL SHALL CONFORM TO ASTM A500, GRADE B, WITH A MINIMUM YIELD STRENGTH Fy=46 KSI. C. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, WITH A MINIMUM YIELD STRENGTH Fy=36 KSI. D. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325. ALL OTHER BOLTS SHALL CONFORM TO ASTM A307 OR BETTER. E. WELDED ANCHOR STUDS AND DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS. 3. CONSTRUCTION: A. FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S B. CAMBER IN BEAMS SHALL BE AS INDICATED ON PLANS. C. PROVIDE A SHOP COAT OF PAINT ON ALL STEEL ITEMS, EXCEPT AT AREAS OF WELDING AND/OR BOLTING. D. USE HIGH STRENGTH (8000 PSI MINIMUM AT 28 DAYS), NON-SHRINK, LIQUID EPOXY GROUT BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED. E. WHERE STRUCTURAL STEEL WIDE FLANGE, PIPE, OR TUBE SECTIONS ARE EMBEDDED IN CONCRETE OR MASONRY AND REINFORCING BARS BUTT TO IT, DEFORMED BAR ANCHORS OR REINFORCING BARS WITH THE SAME SIZE AND SPACING AS THE ADJACENT REINFORCING BARS, 48 BAR DIAMETERS LONG, SHALL BE WELDED TO THE STRUCTURAL STEEL. THE MANUFACTURER'S WELDING PROCEDURES SHALL BE ADHERED TO. 4. BOLTED CONNECTIONS: THREE (3) RADIAL LINES. D. ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH OTHERWISE, INCLUDING ANCHOR BOLTS. E. BOLTED CONNECTIONS SHALL BE TIGHTENED AND SHALL HAVE WASHERS AS REQUIRED BY AISC UNLESS NOTED

A. BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE. B. BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED

C. STEEL TO STEEL BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A325 HIGH STRENGTH BOLTS AND NUTS, UNLESS NOTED OTHERWISE. BOLTS SHALL CARRY THE IDENTIFYING MARK OF

BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED

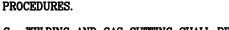
F. ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF REAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.

## 5. WELDED CONNECTIONS:

A. WELDED CONNECTIONS SHALL BE MADE USING LOW HYDROGEN MATCHING FILLER MATERIAL ELECTRODES, UNLESS NOTED OTHERWISE.

B. WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING

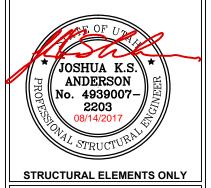
C. WELDING AND GAS CUTTING SHALL BE DONE PER AWS. D. WELDS SHALL HAVE THE SLAG REMOVED.



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