

**1. MINIMUM DESIGN LOADS**

2. ALL DESIGN LOADS ARE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE (W/ GEORGIA AMENDMENTS).

3. DEAD LOADS

3.1. ROOF 15 PSF

4. LIVE LOADS

4.1. MAIN FLOORS @ PUBLIC AREAS 100 PSF

4.2. ROOF 20 PSF

5. SNOW LOAD

5.1. GROUND SNOW LOAD 0 PSF

6. WIND LOADS

6.1. BASIC WIND SPEED - 3 SECOND GUST (AS) 115 MPH

6.2. IMPORTANCE FACTOR 1.0

6.3. WIND EXPOSURE CATEGORY B

6.4. INTERNAL PRESSURE COEFFICIENT,  $C_{pi}$  ±0.18

6.5. ULTIMATE DESIGN WIND PRESSURE FOR COMPONENTS & CLADDING (PSF):

6.5.1. ROOF +8.3/22.4 PSF

6.5.2. WALL +21.3/23.3 PSF

7. SEISMIC LOADS

7.1. SEISMIC IMPORTANCE FACTOR 1.0

7.2. MAPPED SPECTRAL RESPONSE  $S_s$  0.093 g

7.3. MAPPED SPECTRAL RESPONSE  $S_1$  0.057 g

7.4. SOIL SITE CLASS (ASSUMED) B

7.5. SPECTRAL RESPONSE COEFFICIENT  $S_{DS}$  0.209 g

7.6. SPECTRAL RESPONSE COEFFICIENT  $S_1$  0.091 g

7.7. SEISMIC DESIGN CATEGORY B

7.8. BASIC SEISMIC FORCE RESISTING SYSTEM ORDINARY CMU SHEAR WALL/STEEL MOMENT FRAME

7.8.1. SEISMIC BASE SHEAR  $C_w$  0.7

7.8.2. SEISMIC RESPONSE COEFFICIENT,  $C_s$  0.000

7.8.3. RESPONSE MODIFICATION FACTOR,  $R$  2.0

7.8.4. ANALYSIS PROCEDURE USED EQUIV. LATERAL FORCE PROCEDURE

**GENERAL STRUCTURAL NOTES**

- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
- THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES, AND SEQUENCES OF THE PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
- ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE SUPPLIER'S INSTRUCTIONS AND REQUIREMENTS.
- LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADING USED IN THE DESIGN OF THIS STRUCTURE ARE INDICATED IN THE 'DESIGN CRITERIA NOTES'. DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
- ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS OF THESE STANDARDS, UNLESS NOTED OTHERWISE.
- SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSIONS. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR THE ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
- PROVIDE ADEQUATE AND PROPER FLASHING WHEREVER REQUIRED AGAINST WATER INTRUSION.
- THE DESIGNS HEREIN BELONG TO THE STRUCTURAL ENGINEER OF RECORD. A LICENSE TO CONSTRUCT THIS BUILDING FROM THESE PLANS IS GRANTED TO THE CONTRACTED CLIENT. LICENSEE LIMITS LIABILITY OF THE STRUCTURAL ENGINEER OF RECORD TO THE TOTAL FEE PAID FOR WORK HEREIN. LICENSEE IS NON-TRANSFERABLE. ANY BREACH OF THIS LICENSE SHALL ENTITLE THE STRUCTURAL ENGINEER OF RECORD TO PURSUE ANY AND ALL REMEDIES, AT LAW OR EQUITY, INCLUDING WITHOUT LIMITATION, INJUNCTIVE RELIEF TO PREVENT OR CEASE SUCH BREACH.
- IT IS THE RESPONSIBILITY OF PURCHASER OF PLANS TO ENSURE THE FOLLOWING BEFORE CONSTRUCTION:
  - CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
  - CONTRACTOR MUST VERIFY COMPLIANCE WITH ALL LOCAL BUILDING CODES IN THE AREA THE PROJECT IS TO BE BUILT.
  - ENGINEERING CONSULTANTS MUST INCORPORATE ACTUAL SITE CONDITIONS.
  - ANY MODIFICATIONS TO THESE DOCUMENTS MUST BE MADE BY THE STRUCTURAL ENGINEER OF RECORD.
  - PLANS INDICATE LOCATION ONLY. SITE CONDITIONS MUST BE VERIFIED BY OTHERS AND ACTUAL SITE CONDITION MUST BE INCORPORATED INTO ENGINEERING ASPECTS.
- FOR ANY REASON, IF ANY PART OF THIS STRUCTURE (i.e. FLOORS, CEILING, ... ETC.) IS DESIGNED BY OTHER PARTIES, THE STRUCTURAL ENGINEER OF RECORD CLAIMS NO RESPONSIBILITY FOR, BUT NOT LIMITED TO, THE LATERAL RESISTANCE, STABILITY OF THE STRUCTURE, PROPER TRANSFER OF DESIGN LOADS, ANCHORAGE, HOLD DOWN, AND ANY OTHER ATTACHMENTS OR CONNECTION METHODS.
- COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE DESIGN TEAM OF RECORD AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED BY THE STATE OF GEORGIA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION.
- DESIGN OF SPECIAL CONNECTIONS BETWEEN STEEL FRAMING COMPONENTS BY OTHER THAN STRUCTURAL ENGINEER OF RECORD SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA, INCLUDING BUT NOT LIMITED TO BRACE END CONNECTIONS, MOMENT RESISTING CONNECTIONS, MODIFIED BEAM SEAT CONNECTIONS, AND MEMBER SPlice CONNECTIONS.

**FOUNDATION NOTES**

- ALL FOOTINGS SHALL BEAR ON UNDISTURBED, FIRM, NATURAL SOIL OR ENGINEERED SOIL CAPABLE OF SUPPORTING A MINIMUM DESIGN BEARING PRESSURE OF 2,000 PSF UNLESS DATA TO SUBSTANTIATE THE USE OF A HIGHER VALUE ARE SUBMITTED AND APPROVED. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER'S TESTING AGENCY PRIOR TO POURING FOUNDATION CONCRETE.
- ALL FOUNDATION CONCRETE SHALL OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.
- UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 7.7.1.
- REINFORCING STEEL, INCLUDING HOOKS AND BENDS, SHALL BE DETAILED IN ACCORDANCE WITH LATEST EDITION OF THE ACI 318. ALL REINFORCED STEEL INDICATED AS BEING CONTINUOUS FROM JOINT TO JOINT SHALL HAVE MINIMUM LAP OF 1/4" TYPE (ACI 318-11) AT SPLICES UNLESS NOTED OTHERWISE.
- NO UNBALANCED BACK FILLING SHALL BE DONE AGAINST FOUNDATION WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.
- PRIOR TO COMMENCING ANY FOUNDATION WORK, COORDINATE WORK WITH ANY EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES.
- PROVIDE CONSTRUCTION JOINTS IN ALL CONCRETE WORK AS REQUIRED BY THE ACI CODE OR AS SHOWN ON THE INDIVIDUAL DETAILS.
- PROVIDE PROPER AND ADEQUATE DRAINAGE BEHIND ANY TYPE OF RETAINING AND/OR BASEMENT WALLS AS THE SITE CONDITIONS REQUIRE IN THE FIELD.
- ALL FOOTINGS AND FOUNDATIONS SHALL BE PLACED BELOW THE "FROST" - DEPTH OF THE GEOGRAPHIC AREA OF THE PROJECT.
- IN THE PRESENCE OF THE GROUND WATER TABLE ABOVE ANY FOOTING OR FOUNDATION, THE GENERAL CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD FOR ANY DESIGN REVISION.
- ALL STEEL EXPOSED TO WATER, MOISTURE, AND / OR CORROSIVES SHALL BE COVERED WITH APPROPRIATE PROTECTIVE APPROVED COATING MATERIALS.

**STRUCTURAL STEEL NOTES**

- ALL STRUCTURAL STEEL SHALL CONFORM TO THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC.
- UNLESS NOTED OTHERWISE, ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING ASTM SPECIFICATIONS:

MEMBER	ASTM	MIN. STRENGTH
STRUCTURAL TUBING	A-500 (GRADE B)	46 KSI
ROLLED SHAPES	A-992	50 KSI
PLATES	A-36	58 KSI
CONNECTION BOLTS	A-325 (MIN. TYPE II)	58 KSI
ANCHOR BOLTS	F1554	36 KSI
THREADED RODS	A-36	26 KSI
MESH/PIPER GROUT	C-1107	8,000 PSI

- UNLESS NOTED OTHERWISE, ALL CONNECTIONS SHALL BE SHEAR-TYPE CONNECTIONS EXCEPT AS NOTED OTHERWISE AND DESIGNED BY THE FABRICATOR FOR THE FACTORED SHEAR FORCES INDICATED ON PLANS IN ACCORDANCE WITH THE AISC SPECIFICATIONS FOR LOAD AND RESISTANCE FACTOR DESIGN. MINIMUM BOLT DIAMETER SHALL BE 3/4" UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE SHEAR-BREAKING TYPE BOLTS AND BE "SNUG-TIGHT".
- ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES. UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER AWS REQUIREMENTS. ALL FILLER MATERIAL SHALL HAVE A MINIMUM YIELD STRENGTH OF 58.1 KSI. PROOF OF WELDER. CONNECTION DETAIL SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.
- HOLES IN STEEL SHALL BE DRILLED OR PULVED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.
- UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL BE SHOP PAINTED WITH ONE COAT OF SSPC (5-68 TYPE 1) (RED OXIDE) PAINT.
- THE STRUCTURAL STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING (SEE GENERAL STRUCTURAL NOTES).
- COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC., HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADING EXCEEDED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC. FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- PROTECTIVE COATINGS DAMAGED DURING THE TRANSPORTING, ERECTING, AND FIELD WELDING PROCESSES SHALL BE REPAIRED IN THE FIELD TO MATCH THE SHOP APPLIED COATING.
- UNLESS NOTED OTHERWISE, ALL BEAM CONNECTIONS SHALL BE STANDARD FRAMED OR SEATED CONNECTIONS AS SHOWN IN THE AISC MANUAL OF STEEL CONSTRUCTION. UNLESS GREATER REACTIONS ARE INDICATED ON THE DRAWINGS, THE CONNECTIONS SHALL DEVELOP AT LEAST ONE HALF OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE TABLES OF THE MANUAL FOR THE GIVEN SIZE AND SPAN OF THE BEAM IN QUESTION. NO CASE SHALL THE LENGTH OF THE FRAME CONNECTIONS BE LESS THAN ONE HALF OF THE "L" DISTANCE OF THE BEAM WEB.
- PROVIDE STIFFENER PLATES ON EACH SIDE OF THE WEB OF BEAM OR GIRDER AT POINTS OF CONCENTRATED LOADS OR SEATED BEAM BEARING LOCATIONS. MINIMUM STIFFENER THICKNESS SHALL BE 1/2" UNLESS NOTED OTHERWISE.
- ALL STEEL COMPONENTS IN CONTACT WITH EACH OTHER TO BE WELDED WITH THE LARGER OF 1/4" WELD OR MIN. SIZED WELDS PER ALSO REQUIREMENTS. WELD ALL AROUND EDGES AND PERIMETERS OF ALL AFFECTED MEMBERS, UNLESS NOTED OTHERWISE ON THE INDIVIDUAL DETAILS.
- ALL STEEL EXPOSED TO WATER, MOISTURE, AND / OR CORROSIVES SHALL BE COVERED WITH APPROPRIATE PROTECTIVE APPROVED COATING MATERIALS.
- ALL SHOP DRAWINGS SUBMITTED FOR APPROVAL (IF INCLUDED IN THE CONTRACT) NEED TO BE SEALED, SIGNED, AND DATED BY A REGISTERED ENGINEER IN THE STATE THE PROJECT IS TO BE BUILT.

**MASONRY NOTES**

- MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530 PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE).
- HOLLOW LOAD BEARING MASONRY UNITS SHALL CONFORM TO ASTM REQUIREMENTS. THE MINIMUM FRESH COMPRESSIVE STRENGTH  $f_m$  SHALL BE 1,550 PSI AT AN AGE OF 28 DAYS, AS DETERMINED BY THE UNIT STRENGTH METHOD OF ACI 530.
- FILL ALL BOND BEAMS AND REINFORCED CELLS SOLIDLY WITH GROUT. GROUT SHALL CONFORM TO ASTM REQUIREMENTS AND SHALL OBTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM REQUIREMENTS. GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE HOOKED OR BENT. PROVIDE A MINIMUM LAP OF 48 TIMES THE BAR DIAMETERS AT ALL SPLICES, UNLESS NOTED OTHERWISE.
- THE USE OF MASONRY-CEMENT MORTAR IS STRICTLY PROHIBITED. MORTAR SHALL CONFORM TO ASTM REQUIREMENTS. ALL MORTAR SHALL MEET THE PROVISION SPECIFICATIONS OF ASTM REQUIREMENTS AND BE MADE WITH PORTLAND CEMENT LIME (NON AIR ENTRAINMENT).
- UNLESS NOTED OTHERWISE, ALL WALLS SHALL BE LAID IN RUNNING BOND. BOND CORNERS AND INTERSECTIONS OF LOAD BEARING WALLS.
- VERTICAL REINFORCEMENT OF AT LEAST (1) #4 BAR SHALL BE PROVIDED AT CORNERS, WITHIN 16" OF EACH SIDE OPENING, WITHIN 8" OF THE ENDS OF WALLS, AND AT A MAXIMUM SPACING OF 1.0' ON CENTER. PROVIDE BARS AT ALL WALL CORNERS, INTERSECTIONS, AND OPENING EDGES.
- PROVIDE REBAR DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90 DEGREE HOOKS AND LAP WITH THE FIRST LIFT OF REINFORCING.
- PROVIDE HORIZONTAL BOND WITH CONTINUOUS REINFORCING AS INDICATED. BOND BEAM REINFORCEMENT SHALL BE AT LEAST (1) #4 BAR SPACED NO MORE THAN 16" O.C. DISCONTINUE HORIZONTAL REINFORCING AT CORNER JOINTS EXCEPT FOR THE BOND BEAMS AT BEARING ELEVATIONS. INTERMEDIATE BOND BEAMS SHALL BE PROVIDED AS REQUIRED.
- PROVIDE STANDARD 9 GAUGE HORIZONTAL JOINT REINFORCING AT 16 INCHES CENTER IN WALLS. PROVIDE PRESS-TYPE JOINT REINFORCING FOR ALL CONCRETE MASONRY. PROVIDE REBAR TO THE BACK REQUIREMENTS WITH THE ARCHITECTURAL DRAWINGS. UNLESS NOTED OTHERWISE, 5/8" HORIZONTAL JOINT REINFORCING AT CONTROL JOINTS.
- PROVIDE BOND BEAM UNITS AND REINFORCING ANGLES TO PROVIDE MAXIMUM STRENGTH AT TYPICAL DETAILS. SEE ARCHITECTURAL DETAILS FOR LOCATION OF WALL AND WINDOW OPENINGS.
- PROVIDE STEEL JOIST AND BOND BEAM FULL PENETRATION AND OTHER DETAILS AS INDICATED. PROVIDE THREE COURSES OF SOLIDLY GROUT UNDER ALL BEAM JOINTS OVER THE WIDTH OF 2'-0", CENTERED ON THE WALL, UNLESS NOTED OTHERWISE.
- PROVIDE CMU CONTROL JOINTS AS INDICATED WITH ADDITIONAL JOINTS SO THAT THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 8' x THE WALL HEIGHT (35 FEET MAXIMUM). WHERE BEAMS OR LINERS BREAK AT CMU CONTROL JOINTS, OFFSET AND LAP THE VERTICAL REINFORCING AS INDICATED.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING THE CONSTRUCTION (SEE GENERAL STRUCTURAL NOTES).
- THE CONTRACTOR SHALL PROVIDE ALL IN ALL MASONRY WORK AS REQUIRED BY THE ACI CODE OR AS SHOWN ON THE INDIVIDUAL DETAILS.
- ALL STEEL EXPOSED TO WATER, MOISTURE, AND / OR CORROSIVES SHALL BE COVERED WITH APPROPRIATE PROTECTIVE APPROVED COATING MATERIALS.

**BRICK VENEER NOTES**

- BRICK VENEER ANCHORED TO STUD WALLS SHALL UTILIZE WIRE ANCHORS AT 16" O.C. VERTICALLY AND HORIZONTALLY. WIRE ANCHORS SHALL BE AT LEAST WIRE SIZE #17 AND HAVE ENDS BENT TO FORM AN EXTENSION FROM THE BEND AT LEAST 2" LONG. WIRE ANCHORS SHALL BE WITHOUT DRIPS. WIRE ANCHORS SHALL BE PLACED AS FOLLOWS: A) WITH SOLID UNITS, EMBED ANCHORS IN THE MORTAR JOINT AND EXTEND INTO THE VENEER A MINIMUM OF 1/2" WITH AT LEAST 3/8" MORTAR COVER TO THE OUTSIDE FACE. B) WITH HOLLOW UNITS, EMBED ANCHORS IN MORTAR OR GROUT AND EXTEND INTO THE VENEER A MINIMUM OF 1/2" WITH AT LEAST 3/8" MORTAR OR GROUT COVER TO THE OUTSIDE FACE.

**ALL HARDWARE AND FASTENERS USED FOR PRESSURE TREATED WOOD, TIMBER, AND LUMBER SHALL BE MADE FROM APPROVED CORROSION-RESISTANT MATERIALS.**

- ALL EXTERIOR WALLS TO BE CONSIDERED SHEAR WALLS, THEREFORE, ALL EXTERIOR WALLS TO BE FLUJY SHEATHED AND FULLY BLOCKED USING 2" NOMINAL BLOCKING MINIMUM AT ALL EDGES. ALL COLUMNS TO BE BRACED AT THE TOP AND BOTTOM. ALL CONTINUOUS COLUMNS TO BE BRACED AT EACH FLOOR LEVEL, UNLESS NOTED OTHERWISE.
- ALL WOOD COLUMNS TO BE BRACED AT THE TOP AND THE BOTTOM. THEREFORE, ON ALL WOOD COLUMNS, USE THE APPLICABLE SIMPSON A30 POST BASE AND C40C2 OR FC6P2 POST CAP.

**CAST-IN-PLACE CONCRETE NOTES**

- DESIGN OF CONCRETE STRUCTURAL ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318-11 (BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE)
- CONCRETE MIXES SHALL BE DESIGNED PER ACI 301 USING PORTLAND CEMENT, AGGREGATES AND ADMIXTURES CONFORMING TO ASTM REQUIREMENTS. CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM REQUIREMENTS.
- CONCRETE SHALL CONFORM TO THE FOLLOWING COMPRESSIVE STRENGTH, SLUMP AND WATER/CEMENT RATIO REQUIREMENTS:

CONCRETE	MIN. $f_c$ (28 DAYS)	SLUMP*	W/C RATIO
COLUMNS	4,000 PSI	2" TO 4"	.46
ELEVATED SLABS	4,000 PSI	2" TO 4"	.46
CONCRETE NOT NOTED	3,000 PSI	2" TO 4"	.50
FOUNDATION	3,000 PSI	2" TO 4"	.50
SLABS-ON-GRADE	3,000 PSI	2" TO 4"	.50

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE."
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM REQUIREMENTS GRADE 60. ALL WELDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH AWS REQUIREMENTS. EPOXY COATED REINFORCING SHALL CONFORM TO ASTM REQUIREMENTS.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 GRADE 60.
- ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR TO POURING OF CONCRETE, EXCEPT THAT VERTICAL DOWELS FOR MASONRY WALL REINFORCING MAY BE PLACED IN PLACE. DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR APPROVED BY THE ENGINEER.
- REINFORCING STEEL, INCLUDING HOOKS AND BENDS, SHALL BE DETAILED IN ACCORDANCE WITH LATEST EDITION OF THE ACI 318. ALL REINFORCED STEEL INDICATED AS BEING CONTINUOUS FROM JOINT TO JOINT SHALL HAVE MINIMUM LAP OF 1/4" TYPE (ACI 318-11) AT SPLICES UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318-11.
- BAR SUPPORTS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO INSURE MINIMUM SUPPORT AND HOLDING BARS SHALL BE PER CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC TYPED OR STAINLESS STEEL.
- UNLESS OTHERWISE NOTED ON THE INDIVIDUAL DETAILS, ALL CONCRETE WALLS (OTHER THAN RETAINING WALLS AND BASEMENT WALLS) SHALL HAVE MINIMUM REINFORCEMENT AS FOLLOWS:

WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
4" TO 6"	#4 @ 16" O.C.	#4 @ 16" O.C.	CORNER
8"	#4 @ 12" O.C.	#4 @ 12" O.C.	CORNER
10"	#4 @ 12" O.C.	#4 @ 12" O.C.	EACH FACE
12"	#4 @ 12" O.C.	#4 @ 12" O.C.	EACH FACE

- THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THAT ALL MATERIALS CONFORM TO THE QUALITY STANDARDS SPECIFIED IN THE APPLICABLE BUILDING CODE.
- IN ORDER TO AVOID CONCRETE SHRINKAGE OR CRACKING, PLACE CONCRETE SLABS IN ALTERNATING LAKE PATTERN. THE MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS CURVE SHALL BE LIMITED TO 80 FEET.
- FORM WORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RE-SHORING.
- PROVIDE CONSTRUCTION JOINTS IN ALL CONCRETE WORK AS REQUIRED BY THE ACI CODE OR AS SHOWN ON THE INDIVIDUAL DETAILS.
- ALL STEEL EXPOSED TO WATER, MOISTURE, AND / OR CORROSIVES SHALL BE COVERED WITH APPROPRIATE PROTECTIVE APPROVED COATING MATERIALS.
- RESULTS FOR ALL CONCRETE COMPRESSIVE STRENGTH TESTS SHALL BE AVAILABLE ON THE JOB SITE FOR REVIEW BY THE INSPECTOR.

**WOOD FRAMING NOTES**

- ALL WOOD FRAMING MATERIAL SHALL BE SURFACED DRY AND LAMINATED AT 19% MAXIMUM MOISTURE CONTENT.
- ALL STUD AND WALL FRAMING SHALL BE EITHER NO. 1 OR SOUTHERN YELLOW PINE (SYP) OR NO. 2 GRADE SPLY/PLY-FIR (SPPF).
- ALL JOIST, RAFTER, AND MISCELLANEOUS BRACING SHALL BE MADE SOUTHERN YELLOW PINE. PROVIDE FULL DEPTH (OR METAL) BRIDGING AT ALL BEARINGS AND AT A MINIMUM SPACING OF 8'-0" O.C. IN BETWEEN.
- ALL FRAMING EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURIZED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION SPECIFICATIONS. WHERE POSSIBLE, ALL CUTS AND HOLES SHOULD BE COMPLETED BEFORE THE PRESERVATIVE IS APPLIED. TO OIL-SITE FABRICATION SHALL BE BRUSHED WITH 2 COATS OF COPPER NAPHTHYLENE SOLUTION CONTAINING A MINIMUM OF 2% METAL COPPER IN SOLUTION (PER EPA STD. 1).
- IF CANTONED WORK SHALL BE SELECT LUMBER TO BE USED IN LOAD BEARING APPLICATIONS. THE LENGTH OF CANTONED LUMBER SHALL BE LIMITED TO THE LENGTH OF THE CANTONED LUMBER. THE MINIMUM SPACING OF 8'-0" O.C. IN BETWEEN.
- ALL NAILING (NAILS) AS INDICATED SHALL BE IN ACCORDANCE WITH SCHEDULE 2304.9.1 OF THE 2012 IBC. NAILING SHALL NOT BE OVERDRIVEN.
- PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS THAT RUN PARALLEL WITH JOISTS AND UNDER ALL CONCENTRATED LOADS FROM FRAMING ABOVE.
- PROVIDE HEADER BEAMS OF THE SAME SIZE AS JOISTS OR RAFTERS TO FRAME AROUND OPENINGS IN THE PLYWOOD DECK UNLESS NOTED OTHERWISE.
- STRUCTURAL STEEL PLATE CONNECTORS SHALL CONFORM TO ASTM A-36 SPECIFICATIONS AND BE 1/4" THICK UNLESS OTHERWISE INDICATED. PROVIDE WASHERS 5/8" DIAMETER UNLESS OTHERWISE INDICATED. PROVIDE WASHERS FOR ALL BOLT HEADS AND NUTS IN CONTACT WITH WOOD SURFACES.
- BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUG - TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.
- PRE-FABRICATED STRUCTURAL COMPOSITE LUMBER (LVL, PSJ, LVL) HEADERS, BEAMS, & COLUMNS SHALL BE MANUFACTURED BY NEVEL BY WEYERHAEUSER (BOISE, IDAHO TEL: 866-453-8558) OR APPROVED EQUAL. DO NOT CUT OR NOTCH MATERIAL WITHOUT THE MANUFACTURERS APPROVAL. ALL PSJ COLUMNS SHALL HAVE THE FOLLOWING MINIMUM DESIGN STRESS PROPERTIES:
  - MODULUS OF ELASTICITY ( $E$ ) = 1,200,000 PSI
  - FLEXURAL STRESS ( $F_b$ ) = 2,400 PSI
  - SHEAR STRESS ( $F_v$ ) = 190 PSI
- PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS, AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, TEL: (800-999-5099), OR APPROVED EQUAL. INSTALL ALL ACCESSORIES PER THE MANUFACTURERS REQUIREMENTS. ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES PER ASTM A-446, GRADE A) AND BE GALVANIZED COATING (G60).

**SCHEDULE OF SPECIAL INSPECTION SERVICES**

ITEM NO.	DESCRIPTION	DATE	TIME	LOCATION	STATUS
1	FOUNDATION	04/10/2019	08:00	1000	COMPLETED
2	CONCRETE	04/10/2019	08:00	1000	COMPLETED
3	STEEL	04/10/2019	08:00	1000	COMPLETED
4	WOOD	04/10/2019	08:00	1000	COMPLETED
5	MASONRY	04/10/2019	08:00	1000	COMPLETED
6	MECHANICAL	04/10/2019	08:00	1000	COMPLETED
7	ELECTRICAL	04/10/2019	08:00	1000	COMPLETED
8	PLUMBING	04/10/2019	08:00	1000	COMPLETED
9	PAINT	04/10/2019	08:00	1000	COMPLETED
10	FINAL	04/10/2019	08:00	1000	COMPLETED

**FASTENER SCHEDULE FOR STRUCTURAL MEMBERS**

CONNECTION	FASTENER <sup>AS</sup>	LOCATION
1. JOIST TO SILL OR GIRDER	3-8d COMMON (2" x 0.131") 3-3" 14 GAGE STAPLES	TOE NAIL
2. BRIDGING TO JOIST	2-8d COMMON (2" x 0.131") 2-3" 14 GAGE STAPLES	TOE NAIL EACH END
3. 1/2" SPLY/PLY OR LESS TO EACH JOIST	2-8d COMMON (2" x 0.131") 2-3" 14 GAGE STAPLES	FACE NAIL
4. WIDER THAN 1/2" SPLY/PLY TO EACH JOIST	3-8d COMMON (2" x 0.131") 3-3" 14 GAGE STAPLES	FACE NAIL
5. 2" SPLY/PLY TO JOIST OR GIRDER	2-16d COMMON (2" x 0.162") 2-3" 14 GAGE STAPLES	BLIND & FACE NAIL
6. SOLE PLATE TO JOIST OR BRIDGING	16d COMMON (2" x 0.162") @ 12" O.C. 3" x 0.131" NAIL @ 8" O.C. 3" 14 GAGE STAPLE @ 16" O.C.	TYPICAL FACE NAIL
SOLE PLATE TO JOIST OR SLOTTING AT BRACED WALL PANELS	3-16d COMMON (2" x 0.162") @ 12" O.C. 3-3" 14 GAGE STAPLES	BRACED WALL PANELS
7. TOP PLATE TO STUD	2-16d COMMON (2" x 0.162") 2-3" 14 GAGE STAPLES	FACE NAIL
8. STUD TO SOLE PLATE	3-16d COMMON (2" x 0.162") @ 12" O.C. 3-3" 14 GAGE STAPLES	TOE
9. DOUBLE STUDS	2-16d COMMON (2" x 0.162") @ 24" O.C. 2-3" 14 GAGE STAPLES	FACE NAIL
10. DOUBLE TOP PLATES	16d COMMON (2" x 0.162") @ 12" O.C. 3" 14 GAGE STAPLE @ 12" O.C.	TYPICAL FACE NAIL
DOUBLE TOP PLATES	2-16d COMMON (2" x 0.162") 2-3" 14 GAGE STAPLES	LAF SPACE
11. DOUBLE TOP PLATES TO RAFTERS TO TOP	3-8d COMMON (2" x 0.131") 3-3" 14 GAGE STAPLES	TOE NAIL
12. RAIL TO TOP	2d 16d COMMON (2" x 0.162") @ 12" O.C. 3" 14 GAGE STAPLE @ 6" O.C.	TOE NAIL
13. CONTINUOUS HEADER, TWO PIECES	16d COMMON (2" x 0.162")	16" O.C. ALONG EDGE
15. CEILING JOISTS TO PLATE	3-8d COMMON (2" x 0.131") 3-3" 14 GAGE STAPLES	TOE NAIL
16. CONTINUOUS HEADER TO STUD	4-8d COMMON (2" x 0.131")	TOE NAIL
17. CEILING JOISTS, LAPS OVER PARTITIONS (SEE SECTION 2303.10.4.1, TABLE 2303.10.4.1)	3-16d COMMON (2" x 0.162") MIN. TABLE 2303.10.4.1 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES	FACE NAIL
18. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2303.10.4.1, TABLE 2303.10.4.1)	3-16d COMMON (2" x 0.162") MIN. TABLE 2303.10.4.1 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES	FACE NAIL
19. RAFTER TO PLATE (SEE SECTION 2303.10.1)	3-8d COMMON (2" x 0.131") MIN. TABLE 2303.10.1 3-3" 14 GAGE STAPLES	TOE NAIL
20. 1" DIAGONAL BRACE TO EACH STUD & PLATE	2-8d COMMON (2" x 0.131") 2-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES	FACE NAIL
21. 1/2" SHEATHING TO EACH BEARING	3-8d COMMON (2" x 0.131")	FACE NAIL
22. WIDER THAN 1/2" SHEATHING TO EACH BEARING	3-8d COMMON (2" x 0.131")	FACE NAIL
23. BUILT-UP CORNER STUDS	16d COMMON (2" x 0.162") 3" x 0.131" NAIL @ 12" O.C. 3" 14 GAGE STAPLES	24" O.C. 12" O.C.
24. BUILT UP GIRDERS AND BEAMS	10d COMMON (2" x 0.125") @ 32" O.C. 3" x 0.131" NAIL @ 24" O.C. 3" 14 GAGE STAPLE @ 24" O.C.	FACE NAIL AT TOP & BOTTOM, STAPLED ON OPPOSITE SIDES
25. 2" FRAMES	2-20d COMMON (2" x 0.192") 3-3" x 0.131" NAIL 3-3" 14 GAGE STAPLES	FACE NAIL AT ENDS AND AT EACH SPLICE
26. COLLAR TIE TO RAFTER	16d COMMON (2" x 0.162")	AT EACH BEARING
27. JACK RAFTER TO HP	3-10d COMMON (2" x 0.149") 4-3" 14 GAGE STAPLES	TOE NAIL
28. ROOF RAFTER TO 2" TOP EDGE BEAM	2-16d COMMON (2" x 0.162") 2-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES	FACE NAIL
29. JOIST TO BAND JOIST	3-16d COMMON (2" x 0.162") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES	FACE NAIL
30. LEDGER STRIP	3-16d COMMON (2" x 0.162") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES	FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD SUBFLOOR, ROOF & WALL SHEATHING (TO FRAMING)	2 AND LESS: 6d x 1 1/2" 16d x 0.113" NAIL 16" GAGE 16d x 0.113" NAIL 16" GAGE 16d x 0.113" NAIL 16" GAGE 16d x 0.113" NAIL 16" GAGE	COMMON, ROOF OR CASING
SINGLE FLOOR COMBINATION SUBFLOOR - UNDERLAYER TO FRAMING	2 AND LESS: 6d x 1 1/2" 16d x 0.113" NAIL 16" GAGE 16d x 0.113" NAIL 16" GAGE 16d x 0.113" NAIL 16" GAGE	COMMON, ROOF OR CASING
32. PANEL BRIDGE (TO FRAMING)	2 AND LESS: 6d x 1 1	