

General Notes

1.0 GENERAL

- A. THE STANDARD GENERAL CONDITIONS FOR THE CONSTRUCTION CONTRACT N.S.P.E. DOCUMENT 1910-B SHALL GOVERN THIS WORK AS IF ENTIRELY INCLUDED ON THESE DRAWINGS.
- B. DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AVAILABLE PRIOR TO RELEASE OF CONTRACT DOCUMENTS. ARCHITECTURAL DIMENSIONS WILL GOVERN OVER STRUCTURAL DIMENSIONS. LAYOUT OF BUILDING FOUNDATIONS OR OTHER ITEMS SHALL BE BASED ON THE ARCHITECTURAL, CIVIL, AND STRUCTURAL DRAWINGS. ERRORS AND INCONSISTENCIES IN DIMENSIONS SHALL BE FORWARDED TO THE ARCHITECT FOR RESOLUTION.
- C. THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF FLOORS, WALLS, AND ROOF ACTING TOGETHER. PROVIDE GUYS, BRACES, STRUTS, ETC., TO ACCOMMODATE LIVE, DEAD, AND WIND LOADS UNTIL FINAL CONNECTIONS BETWEEN THESE ELEMENTS ARE MADE.

1.1 DESIGN LOADS

- A. THE STRUCTURE WAS DESIGNED FOR THE LIVE LOADS SHOWN BELOW AND DEAD LOADS AS REQUIRED BY CONSTRUCTION IN ACCORDANCE WITH ISBC 2018. LOADS DUE TO SNOW LOAD BUILD-UP WERE CONSIDERED IN DESIGN OF STRUCTURAL COMPONENTS ADJACENT TO PARAPETS, HIGH BUILDING WALLS, ETC. INCREASE IN THESE LOADINGS, DUE TO CHANGE IN FUNCTION, CONSTRUCTION MATERIALS, ETC., TO HAVE WRITTEN APPROVAL FROM THE DESIGNING STRUCTURAL ENGINEER.
- B. THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF FLOORS, WALLS, AND ROOF ACTING TOGETHER. PROVIDE GUYS, BRACES, STRUTS, ETC., TO ACCOMMODATE LIVE, DEAD, AND WIND LOADS UNTIL FINAL CONNECTIONS BETWEEN THESE ELEMENTS ARE MADE.
- C. MECHANICAL UNITS WITH WEIGHTS SHOWN IN PLAN AND SUPPORTED BY THE STRUCTURE WERE CONSIDERED IN THE DESIGN OF THE STRUCTURE. ADDITIONAL MECHANICAL EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS AND HAVING A WEIGHT IN EXCESS OF 300 POUNDS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- D. LIVE LOADS SHOWN BELOW ARE IN POUNDS PER SQUARE FOOT (PSF).
ROOF LIVE LOAD: 20 FLOOR LIVE LOAD: 40
- E. SNOW LOAD CRITERIA, LOADS SHOWN ARE IN POUNDS PER SQUARE FOOT (PSF):
GROUND SNOW LOAD (Pg): 25 FLAT ROOF SNOW LOAD (Pi): 17.5
SNOW LOAD IMPORTANCE FACTOR (I_s): 1.0
SNOW EXPOSURE FACTOR (Ce): 1.0 THERMAL FACTOR (Ct): 1.0
- F. WIND CRITERIA:
ULTIMATE DESIGN WIND SPEED: 115 MPH (3 SECOND GUST)
NOMINAL DESIGN WIND SPEED: 90 MPH (3 SECOND GUST)
RISK CATEGORY: II
WIND EXPOSURE CATEGORY: B
INTERNAL PRESSURE COEFFICIENT: 0.18 +/-
COMPONENTS & CLADDING (NOMINAL PRESSURE ON 100-SQ.FT. AREA):
ROOF ZONE 1a2b: 10.0x-12.5 WALL ZONE 4: 10.0x-10.9
ROOF ZONE 2h, 2r, 3a: 10.1x-15.6 WALL ZONE 5: 10.0x-12.2
ROOF ZONE 3r: 10.0x-19.6

- G. SEISMIC CRITERIA:
RISK CATEGORY: II
SEISMIC IMPORTANCE FACTOR, I_s: 1.0
SITE CLASS: D
SEISMIC DESIGN CATEGORY: B
S_s = 0.140 S_{ds} = 0.149
S₁ = 0.042 S_{d1} = 0.067
BASIC SEISMIC FORCE-RESISTING SYSTEM: LIGHT FRAME WOOD WALLS WITH STRUCTURAL WOOD SHEAR PANELS
DESIGN BASE SHEAR: 0.023W
SEISMIC RESPONSE COEFFICIENT, C_s: 0.023
RESPONSE MODIFICATION COEFFICIENT, R: 0.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

1.5 SUBMITTALS

- A. BEFORE SUBMISSION OF SHOP DRAWINGS, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS, AND SIMILAR DATA WITH RESPECT THERETO AND REVIEWED OR COORDINATED EACH SHOP DRAWING WITH OTHER SHOP DRAWINGS AND SAMPLES AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
- B. AFTER CHECKING AND VERIFYING COMPLIANCE WITH CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, CONTRACTOR SHALL SUBMIT, FOR REVIEW, SHOP DRAWINGS REFERENCED IN THE INDIVIDUAL MATERIALS SECTIONS. CONTRACTOR SHALL STAMP OR PROVIDE A SIMILAR WRITTEN INDICATION THAT CONTRACTOR HAS REVIEWED THE SUBMISSION AND IS SATISFIED THAT MATERIALS SHOWN ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- C. A REVIEW PERIOD OF 5 WORKING DAYS WILL BE REQUIRED FOR SHOP DRAWING REVIEW, OF EACH UNIT TYPE. SHOP DRAWING SUBMISSION OF MULTIPLE COMPONENT TYPES WILL REQUIRE ADDITIONAL REVIEW TIME. SHOP DRAWINGS WILL BE FORWARDED TO THE ARCHITECT OR CLIENT FOR THEIR REVIEW BEFORE RETURNING TO THE CONTRACTOR.

2.3 FOUNDATIONS

- A. A SOIL BEARING CAPACITY OF 1,500 PSF WAS USED FOR FOOTING DESIGN. ENGAGE THE SERVICES OF A GEOTECHNICAL ENGINEER TO VERIFY EXCAVATIONS AND SOIL BEARING CAPACITY. IF SOIL OF THIS CAPACITY IS NOT ENCOUNTERED AT ELEVATIONS INDICATED, CONTACT THE STRUCTURAL ENGINEER OF RECORD (SER).
- B. INSTALL EXTERIOR FOOTING BOTTOMS 2'-6" MINIMUM BELOW FINISH GRADE.
- C. COMPACT FILL AND BACKFILL TO 95% OF ASTM D-698. PERFORM FILL AND BACKFILL OPERATIONS UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- D. PRIOR TO POURING CONCRETE, ENGAGE THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER (REGISTERED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED), TO PERFORM TESTS, BORINGS, ETC., REQUIRED TO CERTIFY THAT THE SOIL BEARING CAPACITY MEETS OR EXCEEDS THAT SHOWN IN THE GENERAL NOTES ABOVE. GEOTECHNICAL ENGINEER SHALL VERIFY SUBGRADE CAPACITIES PRIOR TO INSTALLATION OF DRAINAGE FILL AND MOISTURE BARRIER.

3.1 CONCRETE

- A. UNLESS GOVERNED BY BUILDING CODE OR LOCAL AMENDMENTS: CONCRETE WORK INCLUDING FORMING, MIXING, PLACING, AND CURING SHALL BE IN ACCORDANCE WITH ACT 301. PLACEMENT OF REINFORCING SHALL BE IN ACCORDANCE WITH ACT 315 AND 318. WHEN THERE IS A CONFLICT, THE MOST STRINGENT IS TO APPLY.
- B. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. REPRINTS OF CONTRACT DRAWINGS ARE NOT ACCEPTABLE. SUBMIT DESIGN MIXES FOR EACH CLASS OF CONCRETE PRIOR TO USE.
- C. CONCRETE REINFORCING: ASTM A-615, GRADE 60.
- D. WELDED WIRE REINFORCEMENT: ASTM A-1064.
- E. PORTLAND CEMENT: ASTM C-150, TYPE I.
- F. BLENDED HYDRAULIC CEMENT: ASTM C-595.
- G. FLY ASH: ASTM C-618, CLASS F (25% MAX.).
- H. AGGREGATE: ASTM C-33. 1" MAXIMUM FOR FOOTINGS, WALLS, AND SLABS ON GRADE, 1/2" MAXIMUM FOR THIN SLABS, AND 3/8" FOR WALL FILL.
- I. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF: 3,000 PSI.
- J. EXTERIOR CONCRETE TO BE AIR-ENTRAINED AND SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF: 3,500 PSI.
- K. WATER CEMENT RATIO NOT TO EXCEED 0.54 FOR 3,000 PSI CONCRETE AND 0.45 FOR AIR ENTRAINED CONCRETE.
- L. INSTALL WELDED WIRE REINFORCEMENT 2" BELOW UPPER SURFACE OF CONCRETE SLAB.
- M. REINFORCING FOR FOOTINGS AND OTHER CONCRETE USING EARTH FORMS SHALL HAVE 3" CONCRETE COVER. REINFORCING FOR CONCRETE EXPOSED TO GROUND OR WEATHER AFTER REMOVAL OF FORMS SHALL HAVE 2" CONCRETE COVER. REINFORCING SHALL HAVE 3/4" CONCRETE COVER FOR SLABS AND WALLS AND 1 1/2" COVER FOR BEAMS, GIRDERS, AND COLUMNS.
- N. LAP CONTINUOUS FOOTING REINFORCING 44 BAR DIAMETERS AT SPLICES.
- O. USE A WATER REDUCING ADMIXTURE IN ALL CONCRETE.
- P. USE A MINIMUM OF 5 1/2 BAGS OF CEMENT AND A MAXIMUM OF 6 1/2 GALLONS OF WATER PER BAG FOR EACH CUBIC YARD OF CONCRETE.
- Q. SLUMP - ACT (211.1), EXCEPT THAT SLABS-ON-GRADE AND THIN-FRAMED SLABS SHALL HAVE A MAXIMUM SLUMP OF 4". SHOULD EXTRA WATER BE REQUIRED BEFORE DEPOSITING CONCRETE, AND WATER/CEMENT RATIO OF ACCEPTED MIX DESIGN HAS NOT BEEN EXCEEDED, GENERAL CONTRACTORS SUPERINTENDENT SHALL HAVE SOLE AUTHORITY TO AUTHORIZE ADDITION OF WATER. ANY ADDITIONAL WATER ADDED TO MIX AFTER LEAVING BATCH PLANT SHALL BE INDICATED ON THE TRUCK TICKET AND SIGNED BY PERSON RESPONSIBLE. SUBMIT COPY OF TRUCK TICKET FOR REVIEW.
- R. AIR ENTRAIN EXTERIOR EXPOSED CONCRETE 5x +/- 1%.
- S. NO CALCIUM CHLORIDE WILL BE PERMITTED IN CONCRETE.
- T. ENGAGE THE SERVICES OF A TESTING AGENCY APPROVED BY THE ARCHITECT TO PERFORM TESTS OF CONCRETE. TAKE A MINIMUM OF 5 CYLINDERS FOR EACH CLASS OF CONCRETE POURED IN ANY ONE DAY. PERFORM 1 SLUMP TEST PER TRUCK LOAD OF CONCRETE.
- U. PROVIDE TWO COMPRESSION TESTS AT 7 DAYS, TWO AT 28 DAYS, AND RETAIN ONE TEST FOR ADDITIONAL TESTING AS NEEDED. COMPRESSIVE STRENGTH OF CONCRETE AT 7 DAYS TO ACHIEVE AT LEAST 65% OF MINIMUM DESIGN STRENGTH.

4.1 MASONRY

- A. UNLESS GOVERNED BY BUILDING CODE OR LOCAL AMENDMENTS: MANUFACTURE AND INSTALL MASONRY IN ACCORDANCE WITH (ACI 530/ASCE 5/TMS 402), (ACI 530.1/ASCE 6/TMS 602). WHEN THERE IS A CONFLICT, THE MOST STRINGENT IS TO APPLY.
- B. BLOCK: CONCRETE MASONRY UNITS: 1,900 PSI COMPRESSIVE STRENGTH (AVERAGE OF THREE UNITS). ASTM C-90 WITH MINIMUM DENSITY OF 125 LBS. PER CU. FT. FOR NORMAL WEIGHT UNITS.
- C. DESIGNED F' (in): 1,500 PSI. AT 28 DAYS.
- D. BLOCK USED IN EXTERIOR WALLS, INTERIOR BEARING WALLS, AND WALLS WITH VERTICAL STEEL REINFORCING SHALL BE MANUFACTURED AND LAID SUCH THAT WEBS ARE IN COMPLETE ALIGNMENT.
- E. MORTAR: ASTM C-270, TYPE S. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO BE 1,800 PSI.
- F. GROUT FOR WALL FILL: ASTM C-478, 3,500 PSI MINIMUM AT 28 DAYS WITH 65% OF STRENGTH AT 7 DAYS. USE FINE AGGREGATE SIZE #1 IN ACCORDANCE WITH ASTM C-484. MIX TO A SLUMP OF 8 TO 11 INCHES UTILIZING WATER REDUCING ADMIXTURES. FLY ASH AND BLAST-FURNACE SLAG (UP TO 25%) MAY BE USED, HOWEVER, FLY ASH AND BLAST-FURNACE SLAG CAN PRODUCE SLOWER INITIAL STRENGTH GAIN, WHICH NEEDS TO BE CONSIDERED IN COLD WEATHER.
- G. GROUT FOR BOLT ENDS AND UNDER BEAM OR BASE PLATES: ASTM C-1187, 5,000 PSI, NON-SHRINK.
- H. REINFORCING: ASTM A-615, GRADE 60.
- I. SINGLE WYTHE 6" THICK OR MORE CONSTRUCTED WITH BRICK, BLOCK, OR ANY COMBINATION THEREOF (EXCEPT 4" VENEERS SEPARATED BY AIR SPACE) SHALL HAVE GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCING AT 16" O/C MAXIMUM WITH PREFABRICATED CORNER AND "T" PIECES UNLESS NOTED. PARAPET WALLS SHALL HAVE HORIZONTAL JOINT REINFORCING AT 8" O/C. LAP SPLICES 6" MIN. PROVIDE AN ADDITIONAL ROW ABOVE AND BELOW OPENINGS AND EXTEND 2'-0" BEYOND JAMBS. STOP HORIZONTAL JOINT REINFORCING EACH SIDE OF CONTROL AND EXPANSION JOINTS.
- J. HORIZONTAL JOINT REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A-951, SHALL BE MANUFACTURED FROM 9 GAGE (0.148) MIN. COLD DRAWN STEEL WIRE CONFORMING TO ASTM A-92, AND SHALL CONSIST OF TWO DEFORMED LONGITUDINAL SIDE RODS WELDED AT 16" PLUS OR MINUS INTERVALS TO A PERPENDICULAR CROSS ROD FORMING A LADDER DESIGN. CROSS ROD AND SIDE RODS SHALL BE LOCATED IN THE SAME PLANE AS THE LONGITUDINAL RODS. OUT-TO-OUT SPACING OF SIDE RODS SHALL BE APPROXIMATELY 2" LESS THAN THE NOMINAL WALL THICKNESS.
- K. JOINT REINFORCEMENT IN EXTERIOR WALLS TO BE HOT DIPPED GALVANIZED, AFTER FABRICATION, IN ACCORDANCE WITH ASTM A-193, CLASS B2 (1.00 OZ./SQ. FT.).
- L. BLOCK SHALL BE LAID IN FULL BED OF MORTAR, INCLUDING CROSSBARS.
- M. WALLS NOTED AS FILLED SOLID AND CELLS CONTAINING VERTICAL REINFORCING SHALL HAVE CORES OF BLOCK FILLED WITH GROUT IN SIX COURSE MAXIMUM LIFTS.
- N. LAP SPLICES IN REINFORCING 48 BAR DIAMETER MINIMUM. UNLESS NOTED OTHERWISE, VERTICAL REINFORCING TO BE FULL HEIGHT OF WALL AND DOWELED INTO FOOTINGS.
- O. SHORE REINFORCED WALLS UNTIL CONCRETE SLABS ARE POURED AND CURED.
- P. (SEE MASONRY INSPECTION NOTES 4.2).
- Q. SUBMIT MATERIAL CERTIFICATION FOR:
1. BLOCK UNITS
 2. MORTAR
 3. GROUT
 4. HORIZONTAL JOINT REINFORCING

4.2 MASONRY INSPECTIONS

- A. ENGAGE THE SERVICES OF A QUALIFIED INDEPENDENT TESTING AND INSPECTION AGENCY TO INSPECT MASONRY MATERIALS AND CONSTRUCTION DURING ERECTION.
- B. LEVEL OF QUALITY ASSURANCE, PER BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5/TMS 402), (ACI 530.1/ASCE 6/TMS 602), SHALL BE:

TABLE 1.14.1 - LEVEL 1

MINIMUM TESTS AND SUBMITTALS
CERTIFICATES FOR MATERIALS USED IN MASONRY CONSTRUCTION INDICATING COMPLIANCE WITH CONTRACT DOCUMENTS.

MINIMUM INSPECTION

VERIFY COMPLIANCE WITH APPROVED SUBMITTALS.

6.1 WOOD FRAMING

- A. WOOD FRAMING AND FASTENERS - COMPLY WITH THE RECOMMENDATIONS OF THE AMERICAN WOOD COUNCIL (AWC).
- B. PLYWOOD: APA - THE ENGINEERED WOOD ASSOCIATION GRADE TRADE MARKED MEETING THE REQUIREMENTS OF THE LATEST EDITION, PER CODE, OF U.S. PRODUCT STANDARD PS-1.
- C. PANEL THICKNESS AND IDENTIFICATION INDEX SHALL BE AT LEAST EQUAL TO THAT SHOWN ON THE DRAWINGS. INSTALL AND CONNECT IN ACCORDANCE WITH THE RECOMMENDATIONS OF APA - THE ENGINEERED WOOD ASSOCIATION.
- D. ATTACH PLYWOOD FLOOR SHEATHING USING GLUE AND NAILS.
- E. NAILS AS OUTLINED IN GENERAL NOTES AND DRAWINGS ARE FOR COMMON NAIL TYPE AND SIZES AND ARE AS FOLLOWS:
8d (0.134 DIA.) 2.5 INCHES 10d (0.148) 3 INCHES
12d (0.148) 3-1/4 INCHES 16d (0.165) 3-1/2 INCHES.
- F. UNLESS OTHERWISE NOTED ON DRAWINGS, ATTACH PLYWOOD TO FRAMING WITH MIN. 8d NAILS AT 6" O/C ON EDGES OF SHEET AND 12" O/C ON EACH INTERIOR SUPPORT.
- G. FOR PLYWOOD 1/2" IN THICKNESS AND LESS, USE H CLIPS AT MIDPOINT FOR SPANS GREATER THAN 16" O/C. FOR PLYWOOD 5/8" AND THICKER, USE TONGUE AND GROOVE EDGES OR H CLIPS AT MIDPOINT FOR SPANS GREATER THAN 16" O/C. FOR 48" SPANS, PROVIDE 2-H CLIPS AT 1/3 POINTS OF SPAN OR PROVIDE TONGUE AND GROOVE PLYWOOD.
- H. STRUCTURAL LUMBER (2"-4" THICK, EXCEPT NONBEARING STUDS AND PLATES) - SPRUCE-PINE-FIR NO. 1/N.O. 2 OR BETTER WITH 19% MAXIMUM MOISTURE CONTENT IN USE AND SHALL HAVE THE FOLLOWING MINIMUM UNFACTORED PROPERTIES:
E = 1,400,000 PSI f_e = 425 PSI
F_b = 875 PSI f_t = 450 PSI
F_c (PARALLEL TO GRAIN) = 1,150 PSI f_v = 135 PSI
- I. LUMBER FOR NONBEARING STUDS & PLATES (2"-4" THICK) - SPRUCE-PINE-FIR STUD OR BETTER WITH 19% MAXIMUM MOISTURE CONTENT IN USE AND SHALL HAVE THE FOLLOWING MINIMUM UNFACTORED PROPERTIES:
E = 1,200,000 PSI f_e = 425 PSI
F_b = 875 PSI f_t = 350 PSI
F_c (PARALLEL TO GRAIN) = 725 PSI f_v = 135 PSI
- J. PRESSURE TREATED LUMBER - SOUTHERN PINE #2 WITH THE FOLLOWING RETENTION LEVELS: FOR ABOVE GROUND USE - 0.4 PCF FOR PROCESSES USING ACQ AND CBA-A, 0.2 FOR PROCESS USING CA-B.
- K. ATTACH MULTIPLE MEMBERS TOGETHER AS FOLLOWS:
2-2x2 2 ROWS 16d NAILS @ 16" O/C
TOP LOADED WITH 3-2x2 2 ROWS 16d NAILS @ 16" O/C
SIDE LOADED 3-2x6 AND 3-2x8: 2 ROWS 16d NAILS @ 12" O/C
SIDE LOADED 3-2x10 AND 3-2x12: 3 ROWS 16d NAILS @ 12" O/C
4-2x12: 2 ROWS - 1/2" BOLTS @ 24" O/C
- L. PROVIDE FLUSH FRAMED JOISTS AND HEADERS WITH A PREFABRICATED GALVANIZED (SADDLE TYPE) METAL CONNECTOR UNLESS NOTED OTHERWISE. HANGERS SHALL BE 18 GAGE MINIMUM THICK AND HAVE CAPACITY TO RESIST 400P MINIMUM FOR EACH 2X MEMBER IN SHEAR FOR ANY SPECIES OF WOOD USED.
- M. EXPOSED STRUCTURAL FRAMING MEMBERS IN ABOVE GROUND USE AND WOOD PLATES IN CONTACT WITH SLABS ON GRADE TO BE PRESSURE TREATED LUMBER. TREAT WOOD WITH A WATERPROOF PRESERVATIVE MATERIAL WITH ONE OF THE FOLLOWING: ALKALINE COPPER QUAT (ACQ) TYPES B OR D, OR COPPER AZOLE (CBA-A, CA-B).
- N. STEEL MATERIALS IN CONTACT WITH PRESSURE TREATED LUMBER TO BE HOT DIPPED GALVANIZED. MINIMUM GALVANIZED COATING FOR PREFABRICATED METAL CONNECTORS TO BE 0.185 PER ASTM A-653. CONNECTORS HOT DIPPED GALVANIZED AFTER FABRICATION TO BE IN ACCORDANCE WITH ASTM A-153. MECHANICALLY GALVANIZED FASTENERS TO BE IN ACCORDANCE WITH ASTM B-695, CLASS 95.
- O. PROVIDE SOLID (CONTINUOUS) BRIDGING AT BEARING POINTS.
- P. CONNECT ROOF JOISTS AT EACH BEARING POINT WITH PREFABRICATED GALVANIZED METAL CONNECTORS UNLESS OTHERWISE NOTED. EACH CONNECTOR SHALL BE 18 GAGE MINIMUM THICK AND SHALL HAVE THE MINIMUM UPLIFT AND SHEAR CAPACITY NOT LESS THAN 350P UPLIFT AND 130P SHEAR (EQUIVALENT TO 2 - H2.5A SIMPSON, INC. ANCHORS) FOR THE SPECIES OF WOOD USED.
- Q. INSTALL DOUBLE STUD EACH END OF WOOD BEAMS, UNLESS NOTED OTHERWISE.
- R. ATTACH WOOD BLOCKING, NAILERS, ETC., TO STEEL OR CONCRETE FRAMING WITH POWER ACTUATED FASTENERS, UNLESS NOTED OTHERWISE. SPACE FASTENERS AT 2'-0" MAXIMUM O/C, STAGGERED. MINIMUM CAPACITY OF EACH FASTENER SHALL BE 100 POUNDS IN SHEAR AND PULLOUT, UNLESS NOTED OTHERWISE.
- S. EXTERIOR WALL SHEATHING - THERMO-PLY INSULATIVE SHEATHING AS MANUFACTURED BY SIMPLEX PRODUCTS DIVISION, ADRIAN, MICHIGAN 49221. USE STRUCTURAL GRADE (RED PRINT) FOR STUD SPACING OF 16" O/C. USE SUPER STRENGTH (BLUE PRINT) FOR STUD SPACING OF 24" O/C.
- T. SHIP AND INSTALL THERMO-PLY SHEATHING IN COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS. INSTALL 48" X 96" SHEETS WITH 1/8" TO 1/16" GAP BETWEEN PANELS. INSTALL 48 3/4" X 96" SHEETS WITH A 3/4" OVERLAP. NAIL THROUGH THERMO-PLY INTO STUDS USING 11 GAUGE X 1 1/8 GALVANIZED ROOFING NAILS. FASTEN RED PRINT THERMO-PLY AT 3' O/C AT PERIMETER (WHERE EDGE OF PANEL IS UNSUPPORTED BETWEEN STUDS, PROVIDE BLOCKING) AND 6' O/C TO INTERMEDIATE STUDS. FASTEN BLUE PRINT THERMO-PLY AT 3' O/C TO BOTH PERIMETER AND INTERMEDIATE STUDS AND TO BLOCKING AT PANEL EDGES.

6.1A WOOD LINTEL SCHEDULE

- A. FOR STUD WALL OPENINGS NOT SPECIFICALLY SHOWN IN PLAN (OPENINGS FOR MECHANICAL TRADES, OPENINGS IN BEARING AND NON BEARING WALLS, ETC.) PROVIDE WL-1, WL-2, OR WL-3 AS DIRECTED BY THE ARCHITECT.
- B. PROVIDE ONE BEARING STUD AND ONE FULL HEIGHT JAMB STUD EACH END OF WOOD LINTELS AND HEADERS, UNLESS NOTED OTHERWISE. FOR OPENINGS OVER 7'-0", PROVIDE TWO BEARING STUDS AND ONE FULL HEIGHT JAMB STUD, UNLESS NOTED OTHERWISE.
- C. LOOSE ANGLE LINTELS SUPPORTING BRICK VENEER AND SPANNING 4'-0" OR MORE SHALL HAVE PRE-PUNCHED HOLES SPACED AT 2'-0" MAXIMUM O/C IN VERTICAL LEG OF ANGLE FOR 16d NAIL ATTACHMENT TO WOOD LINTEL.

MARK	MATERIALS	REMARKS
WL-1	2 - 2 X 6	FOR OPNGS. UP TO 4'-0"
WL-2	2 - 2 X 8	FOR OPNGS. 4'-1" TO 5'-3"
WL-3	2 - 2 X 10	FOR OPNGS. 5'-4" TO 6'-4"
WL-4	3 - 2 X 10	FOR OPNGS. 6'-5" TO 7'-10"

6.3 PREFABRICATED WOOD TRUSSES

- A. DESIGN AND INSTALL TRUSSES, BRACING, AND CONNECTORS FOR TRUSSES IN STRICT ACCORDANCE WITH APPLICABLE BUILDING CODE REQUIREMENTS AS WELL AS THE STRUCTURAL BUILDING COMPONENTS ASSOCIATION (SBCA) AND BY THE TRUSS PLATE INSTITUTE (TPI), UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- B. DESIGN TRUSSES TO RESIST LOADS SHOWN ON THE DRAWINGS. ONLY THE OUTLINES OF THE TRUSSES HAVE BEEN SHOWN. WEB CONFIGURATION SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER.
- C. TRUSSES TO BE DESIGNED FOR DEFLECTIONS AS FOLLOWS:
ROOF: LIVE LOAD L/240, L/360 WITH PLASTER OR STUCCO CEILINGS.
TOTAL LOAD - L/240
ROOF: LIVE LOAD L/480, TOTAL LOAD L/240.
- D. PROVIDE TRUSSES WITH CAMBER IN ACCORDANCE WITH "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES," LATEST EDITION PER CODE, TPI-BSP AND PCT-BS.
- E. INSTALL BRACING OF WOOD TRUSSES IN ACCORDANCE WITH MANUFACTURERS DESIGN, SBCA, AND TPI, UNLESS NOTED OTHERWISE. THE MINIMUM BRACING ELEMENTS NOTED BELOW ARE TO REMAIN IN PLACE IN THE FINISHED STRUCTURE:
1. CONTINUOUS LATERAL BRACING REQUIRED BY TRUSS DESIGN INCLUDING DIAGONAL BRACING AT ENDS OF THE BUILDING AND AT 16'-0" MAXIMUM INTERVALS IN THE LENGTH OF THE BUILDING.
2. WEB MEMBER PLANE BRACING.
3. BOTTOM CHORD PLANE BRACING.
- F. TRUSS SUPPLIER SHALL TAKE SPECIAL CARE TO DESIGN AND SUPPLY LATERAL BRACING FOR COMPRESSION MEMBERS OF TRUSSES SHIPPED IN MULTIPLE PIECES AND FIELD CONNECTED.
- G. LUMBER SHALL CONFORM TO THE RECOMMENDATIONS OF THE "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION," LATEST EDITION PER CODE, AS PUBLISHED BY THE AMERICAN WOOD COUNCIL. EACH PIECE SHALL BE GRADE MARKED.
- H. SUBMIT WRITTEN COPIES OF LOAD TEST DATA FOR ALLOWABLE LOADS ON CONNECTORS TO BE USED WITH FIRST SUBMISSION OF SHOP DRAWINGS.
- I. TRUSS MANUFACTURER SHALL COORDINATE PLATE MATERIAL WITH ANY SPECIFIED TREATMENT PROCESS.
- J. CONNECT ROOF TRUSSES AT EACH BEARING POINT WITH PREFABRICATED GALVANIZED METAL CONNECTORS AT EACH TRUSS, UNLESS OTHERWISE NOTED. EACH CONNECTOR SHALL BE 18 GAGE MINIMUM THICK AND SHALL HAVE THE UPLIFT AND SHEAR CAPACITY AS REQUIRED BY THE TRUSS MANUFACTURER, BUT SHALL NOT BE LESS THAN 350P UPLIFT AND 130P SHEAR (EQUIVALENT TO 2 - H2.5A SIMPSON ANCHORS) FOR THE SPECIES OF WOOD USED.
- K. TRUSS-TO-TRUSS AND TRUSS-TO-HEADER CONNECTIONS SHALL BE DESIGNED BY TRUSS MANUFACTURER.
- L. SUBMIT TO THE ARCHITECT, PRIOR TO FABRICATION, COMPLETE SHOP DRAWINGS OF TRUSSES. SHOP DRAWINGS SHALL INCLUDE MEMBER STRESSES, MEMBER GRADES AND SIZES, SIZE AND LOCATION OF CONNECTOR PLATES, SIZE AND LOCATION OF PERMANENT TRUSS BRIDGING AND MEMBER BRACING, DATA RELATIVE TO PREFABRICATED HANGERS FOR TRUSS-TO-TRUSS AND TRUSS-TO-HEADER CONNECTIONS, DESIGN COMPUTATIONS, AND ERECTION PLANS. REPRINTS OF CONTRACT DRAWINGS ARE NOT ACCEPTABLE. DESIGN COMPUTATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL ENGINEER (REGISTERED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED). ONLY SHOP DRAWINGS BEARING THE STAMP OF THE ARCHITECT SHALL BE USED FOR FABRICATION AND ERECTION.
- M. THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF FLOORS, WALLS, AND ROOF ACTING TOGETHER. CONTRACTOR TO PROVIDE GUYS, BRACES, STRUTS, ETC., TO ACCOMMODATE LIVE, DEAD, AND WIND LOADS UNTIL FINAL CONNECTIONS BETWEEN THESE ELEMENTS ARE MADE. PERMANENT BRIDGING REQUIRED BY TRUSS DESIGN SHALL BE SIZED AND SUPPLIED BY TRUSS MANUFACTURER. SPECIAL CARE SHALL BE TAKEN TO SIZE AND SUPPLY LATERAL BRACING REQUIRED FOR COMPRESSION MEMBERS OF TRUSSES SHIPPED IN TWO PIECES AND FIELD CONNECTED.
- N. BRIDGING, MEMBER BRACING, ETC., SHALL BE BY MANUFACTURERS DESIGN AND SHALL BE INSTALLED BY CONTRACTOR IN STRICT ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
- O. ENGAGE THE SERVICES OF AN INDEPENDENT INSPECTION AGENCY TO VISUALLY INSPECT TRUSSES BEFORE AND AFTER ERECTION. INSPECTION AGENCY SHALL CERTIFY THAT THE TRUSSES, CONNECTIONS, AND BRACING HAVE BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

6.4 LAMINATED VENEER LUMBER

- A. LVL SHALL BE OF WIDTH, DEPTH, AND OF MULTIPLES AS SHOWN ON PLANS.
- B. EACH LVL BEAM SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
E = 1,900,000 PSI
f_b = 2,500 PSI
f_c (PARALLEL TO GRAIN) = 2,500 PSI
f_e = 750 PSI
f_t = 1,550 PSI
f_v = 285 PSI
- C. WRAP EACH LVL BEAM WITH A WATERPROOF COVERING UNTIL AREA WHERE BEAM IS PLACED IS PROTECTED FROM THE ELEMENTS.
- D. ATTACH MULTIPLE MEMBERS TOGETHER AS FOLLOWS:
TOP & SIDE LOADED: 2-LVL UP TO 12" DEEP: 2 ROWS 16d NAILS @ 12" OC
2-LVL 14" TO 18" DEEP: 3 ROWS 16d NAILS @ 12" OC
TOP LOADED: 3-LVL MEMBERS: 2 ROWS 1/2" BOLTS @ 24" O/C
SIDE LOADED: 3-LVL MEMBERS: 2 ROWS 1/2" BOLTS @ 16" O/C
TOP LOADED OR LOADED FROM BOTH SIDES: 4 LVL: 2 ROWS 1/2" BOLTS @ 24" OC
- E. HOLES, NOTCHES, ETC., SHALL BE APPROVED BY THE LVL MANUFACTURER.

SYMBOLS

- A. TYPICAL DETAILS, SECTIONS, AND NOTES ARE GENERAL IN NATURE, AND USAGE IS NOT LIMITED TO WHERE SPECIFICALLY NOTED.

B
S-3
TYPICAL DETAIL LETTER
SHEET WHERE DETAIL IS DRAWN

1
S-3
SECTION NUMBER
DIRECTION OF SECTION
SHEET WHERE SECTION IS DRAWN

1.1
GENERAL NOTE NUMBER

STRUCTURAL ABBREVIATIONS			
MARK	MEANING	MARK	MEANING
#	DIAMETER	FF	FINISHED FLOOR
#	POUND/NUMBER	FND	FOUNDATION
&	AND	FT	FOOT
@	AT	FTG	FOOTING
±	PLUS OR MINUS	GA	GAUGE
AB	ANCHOR BOLTS	GLV	GALVANIZED
ADD	ADDITIONAL	GC	GENERAL CONTRACTOR
ALT	ALTERNATE	GEN	GENERAL
ARCH	ARCHITECT	GLB	GLUE LAMINATED BEAM
BLKG	BLOCKING	GT	GIRDER TRUSS
BN	BEAM	HDR	HEADER
BOTT	BOTTOM	HBR	HANGER
CC	BOTTOM CHORD	HK	HOOK
BRG	BRACING	HT	HEIGHT
BRDG	BRIDGING	HORIZ	HORIZONTAL
BUDG	BUILDING	HSS	TUBE STEEL/PYRE COLUMN
CBR	CAMBER	IN	INCH
CANT	CANTILEVER	INSUL	INSULATION
CL	CENTERLINE	INT	INTERIOR
CL	CLEAR	JST	JOIST
COL	COLUMN	K	KIP
CONC	CONCRETE	L	ANGLE
CJ	CONTROL JOINT	LBS	POUND
CONN	CONNECTION	LLH	LONG LEG HORIZONTAL
CONT	CONTINUOUS	LLV	LONG LEG VERTICAL
COORD	COORDINATE	LVL	LAMINATED VENEER LUMBER
CONST	CONSTRUCTION	LG	LONG
CONTH	CONTRACTOR	LT GA	LIGHT GAUGE
C	PEINT WALL	WAL	WATER
CP	DEEP	WAL	WATER
DET	DETAIL	WTL	METAL
DIAG	DIAGONAL	WDHT	WID HEIGHT
DO	DITTO	WIN	WINDOW
DBL	DOUBLE	MFR	MANUFACTURER
DF	DOUGLAS FIR	NIC	NOT IN CONTRACT
DWG	DRAWING	NIS	NOT TO SCALE
DWELL	DONELL	OC	ON CENTER
EAC	EACH	OPNG	OPENING
EE	EACH END	OPP	OPPOSITE
EF	EACH FACE	OSB	ORIENTED STRAND BOARD
EJ	EXPANSION JOINT	PAF	POWER ACTIVATED FASTENER
EL	ELEVATION	P	PLATE
ELV	ELEVATOR	PSF	POUNDS PER SQUARE FOOT
EARED	EAREMENT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	PSL	PARALLEL STRAND LUMBER
ES	EACH SIDE	PLYD	PLYWOOD
EW	EACH WAY	PT	PRESSURE TREATED
EWB	EACH WAY BOTTOM	RCP	REINFORCED CONCRETE PIPE
EX	EXISTING	REINF	REINFORCING
EXP	EXPANSION	RED'D	REQUIRED
EXT	EXTERIOR	SPTS	SHEATHING
FIN	FINISHED	SIM	SIMILAR

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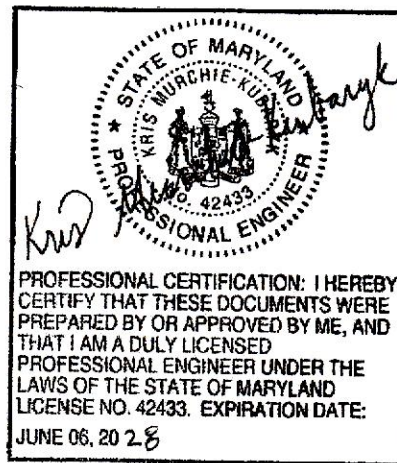
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PROFESSIONAL CERTIFICATION



REVISIONS

04/04/2025 4 Stem Wall
10/11/2024 2 Permit Revision
8/9/2024 1 VE Revision

DRAWING NAME / NO. NO. ISSUE

SUBMISSION

100% Construction Documents

PERMIT SET REISSUE