STRUCTURAL NOTES

- 1.1. ANY DISCREPANCY FOUND AMONG THE DRAWINGS, SPECIFICATIONS, THESE NOTES, AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND THE STRUCTURAL ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION BRACING, FORMWORK AND TEMPORARY CONSTRUCTION SHORING.
- 1.2. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE CONTRACTOR WARRANTS THAT:
 - THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE (INCLUDING AGENTS AND SUPPLIERS) HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS AND STRUCTURAL NOTES AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED.
- THE CONTRACTOR HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND FROM THEIR OWN INVESTIGATIONS, THEY HAVE SATISFIED THEMSELF AS TO THE NATURE AND LOCATION OF THE WORK, AS TO THE CHARACTER, QUALITY, AND QUANTITIES OF MATERIAL AND DIFFICULTIES TO BE ENCOUNTERED, AS TO THE EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK AND AS TO THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY IN ANY WAY AFFECT THE WORK OR ITS PERFORMANCE.
- THE CONTRACTOR AND ALL WORKERS THEY INTEND TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE DRAWINGS AND DOCUMENTS BID UPON.
- NEITHER THE CONTRACTOR NOR ANY OF THEIR EMPLOYEES, AGENTS, INTENDED SUPPLIERS, OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER OR THEIR EMPLOYEES OR AGENTS, INCLUDING THE ARCHITECT OR ENGINEERS, IN ASSEMBLING THE BID FIGURES.
- THE REQUIREMENTS CONTAINED WITHIN THIS SECTION SUPERSEDE REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES", AS WELL AS CASE DOCUMENT 962-D "A GUIDELINE ADDRESSING COORDINATION AND COMPLETENESS OF STRUCTURAL CONSTRUCTION DOCUMENTS"
- THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE ARE AWARE OF AND ACKNOWLEDGE THAT CLOSE COORDINATION AMONG ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER TRADE DRAWINGS IS REQUIRED.
- THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE SHALL RECOGNIZE THAT THE PROJECT CONTRACT DOCUMENTS INCLUDE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL AND OTHER TRADE DRAWINGS AND SPECIFICATIONS
- CONTRACTOR AND ALL SUBCONTRACTORS ACKNOWLEDGE THAT CLOSE COORDINATION BETWEEN DISCIPLINES INCLUDED WITHIN THE CONTRACT DOCUMENTS IS NECESSARY. ELEMENTS THAT WILL REQUIRE CLOSE COORDINATION BY THE CONTRACTOR INCLUDE (BUT ARE NOT LIMITED TO):
 - A. VERIFICATION OF ALL DIMENSIONS INDICATED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS
 - B. DETERMINATION OF ALL COLUMN LOCATIONS
 - C. DETERMINATION OF TOP OF FLOOR, TOP OF STEEL, WALL PLATE AND/OR TOP OF BEAM ELEVATIONS
 - D. DETERMINATION OF TOP OF FOOTING ELEVATIONS AND FOOTING STEP LOCATIONS
 - E. MECHANICAL/ELECTRICAL EQUIPMENT LOCATIONS AND WEIGHTS
 - F. LOCATION AND SIZE OF ALL MECHANICAL/ ELECTRICAL PENETRATIONS THROUGH WALLS AND FLOORS/ ROOFS
 - G. COORDINATION WITH DESIGNERS/ SUPPLIERS OF PRE-ENGINEERED COMPONENTS (JOISTS, TRUSSES, STAIRS, ETC.)
- THE CONTRACTOR ACKNOWLEDGES THAT TEMPORARY SHORING AND/OR BRACING MAY BE REQUIRED TO COMPLETE THE PROJECT DESIGN AND IMPLEMENTATION OF TEMPORARY SHORING AND/OR BRACING DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 1.2.10. THE CONTRACTOR AND ALL SUBCONTRACTORS THEY INTEND TO USE SHALL MAKE CONSIDERATION FOR, AND INCLUDE MONIES FOR THE ABOVE IN THE PREPARATION OF THEIR BIDS.
- 1.2.11. THE CONTRACTOR SHALL NOT SCALE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF ELEMENTS NOTED
- 1.2.12. ELECTRONIC COPIES OF THE STRUCTURAL DRAWINGS (PDF'S, CAD DRAWINGS OR BIM MODELS) MAY BE PROVIDED TO THE CONTRACTOR FOR THEIR USE. THESE FILES MAY BE PROVIDED AT THE REQUEST OF THE CONTRACTOR FOR THEIR CONVENIENCE ONLY. THE CONTRACTOR AGREES THAT THESE FILES SHALL NOT SUPERSEDE INFORMATION SHOWN ON THE ORIGINAL BID/ CONSTRUCTION DOCUMENTS. THE CONTRACTOR AGREES TO HOLD THE STRUCTURAL ENGINEER HARMLESS FOR ANY ERRORS OR DISCREPANCIES CONTAINED WITHIN THESE ELECTRONIC FILES.
- THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN OR VERBAL REPRESENTATIONS.

1.3. CODES

- ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING AUTHORITY.
- ALL REFERENCES TO OTHER CODES, STANDARDS AND SPECIFICATIONS, (ACI, ASTM, ETC.), SHALL BE FOR THE EDITION CURRENTLY REFERENCED BY IBC AS AMENDED AND ADOPTED BY THE LOCAL BUILDING AUTHORITY.

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1.4. DESIGN CRITERIA

1.4.1. UNIFORM LOADS:

LOCATION	LIVE LOAD	DEAD LOAD
ROOF	25 PSF (SNOW*)	ACTUAL
ROOF (SOLAR READINESS ZON		ACTUAL +4 PSF 5 PSF (INVERT
OFFICE (WITH PARTITIONS)	50 PSF + 15 PSF (PARTITIONS)	ACTUAL
CORRIDORS	100 PSF	ACTUAL
STAIRS AND EXITS	100 PSF	ACTUAL
MECHANICAL ROOMS	50 PSF	ACTUAL
SLAB ON GRADE	125 PSF OR 2000# CONCENTRATED	ACTUAL LOAD
HANDRAILS AND GUARDS	50 PLF OR 200# CONCENTRATED	LOAD
* THIS IS NOT A GROUND	SNOW LOAD	

** SOLAR READINESS ZONE PER WA STATE ENERGY CODE, COMMERCIAL PROVISIONS, CHAPTER 51-11C WAC.

WHERE LIVE LOADS OF COMMERCIAL OR INDUSTRIAL BUILDINGS EXCEED 50 PSF, SUCH DESIGN LOADS SHALL BE POSTED IN THAT PART OF EACH STORY IN WHICH THEY APPLY

1.4.2. SNOW LOADS PER IBC SECTION 1608 AND CHAPTER 7 OF ASCE 7: GROUND SNOW LOAD (Pg): 18 PSF FLAT ROOF SNOW LOAD (P_f) 11.35 PSF SNOW EXPOSURE FACTOR (C_e): 0.9 SNOW IMPORTANCE FACTOR (I_s): THERMAL FACTOR (C_t):

- 1.4.3. CONCENTRATED LOADS: ALL MANUFACTURERS OF PRE-ENGINEERED COMPONENTS OR SYSTEMS SHALL LOCATE, COORDINATE, VERIFY WEIGHTS, ETC., OF MECHANICAL UNITS OR OTHER CONCENTRATED LOADS AND DESIGN THEIR SYSTEM FOR THESE LOADS.
- 1.4.4. WIND LOADS (PER IBC SECTION 1609 AND ASCE 7 CHAPTERS 26 THRU

BASIC WIND SPEED (V):	97 MPH
RISK CATEGORY	II
WIND EXPOSURE:	В
APPLICABLE INTERNAL PRESSURE COEFFICIENT:	+/-0.18
TOPOGRAPHIC FACTOR (K_{zt})	1.0

COMPONENTS AND CLADDING: ULTIMATE DESIGN WIND PRESSURES TO BE USED FOR THE DESIGN OF EXTERIOR COMPONENT AND CLADDING MATERIALS IS AS FOLLOWS:

ZO	NE:1	+14.13/-43.05 PSF (10 SQ FT)
ZO	NE:2e	+14.13/-43.05 PSF (10 SQ FT)
ZO	NE:2n	+14.13/-62.88 PSF (10 SQ FT)
ZO	NE:2r	+14.13/-62.88 PSF (10 SQ FT)
ZO	NE:3e	+14.13/-62.88 PSF (10 SQ FT)
ZO	NE:3r	+14.13/-74.68 PSF (10 SQ FT)
ZO	NE:4	+23.34/-25.29 PSF (10 SQ FT)
ZO	NE:5	+23.34/-31.25 PSF (10 SQ FT)
SEISMI	C LOADS	(PER IBC SECTION 1613 AND ASCE 7

SEISMIC LOADS (PER IBC SECTION 1613 AND ASCE 7 CHAPTERS 11

RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I _e):	1.0
S _s :	1.239
S ₁ :	0.431
SITE CLASS:	D – PER GEOTECH *
S _{DS} :	0.830
S _{D1} :	N/A
SEISMIC DESIGN CATEGORY:	D
DESIGN BASE SHEAR:	V = Cs x W
SEISMIC RESPONSE COEFFICIENT (C _s):	0.128
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORO PROCEDURE

* SITE CLASS D IS SELECTED AS THE DEFAULT SITE CLASS PER ASCE 7 SECTION 11.4.3 AND THE VALUE OF $F_a = 1.2$

SEISMIC FORCE- RESISTING SYSTEM	RESPONSE MODIFICATION COEFFICIENT, R	OVERSTRENGTH FACTOR, Ω_0

A. BEARING WALL SYSTEMS:

15. LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE

NOTE: TABULATED OVERSTRENGTH FACTOR HAS BEEN REDUCED IN ACCORDANCE WITH ASCE 7 TABLE 12.2-1 FOOTNOTE B FOR STRUCTURES WITH FLEXIBLE DIAPHRAGMS.

1.5. STATEMENT OF SPECIAL INSPECTIONS

SEE STATEMENT OF SPECIAL INSPECTION AND TESTING SHEET S0.21.

1.6. SHOP DRAWINGS

- SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR THE FOLLOWING:
- A. CONCRETE MIX DESIGN SUBMITTALS
- B. REINFORCING STEEL
- C. STRUCTURAL AND MISCELLANEOUS STEEL INCLUDING WELD INSERTS AND ANCHORS
- D. GLUED-LAMINATED/PARALLAM/LSL MEMBERS
- E. PRE-ENGINEERED WOOD I JOISTS*
- F. PRE-ENGINEERED STEEL STAIRS, GUARDRAILS, AND CANOPIES* * DEFERRED SUBMITTALS: PRE-ENGINEERED ITEMS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AFTER REVIEW BY THE ENGINEER OR RECORD AS A DEFERRED SUBMITTAL.
- 1.6.2. SHOP DRAWING REVIEW NOTES
 - A. ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMANCE WITH THE PROJECT CONSTRUCTION DOCUMENTS (PLANS AND SPECIFICATIONS).
 - B. ENGINEER OF RECORD REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE GENERAL CONTRACTOR OF THEIR RESPONSIBILITY FOR REVIEW OF THE SHOP DRAWINGS FOR COMPLIANCE WITH THE PROJECT REQUIREMENTS.
 - C. APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER OF RECORD SHALL NOT BE CONSIDERED AS A GUARANTEE BY THE ENGINEER THAT THE SHOP DRAWINGS COMPLY WITH ALL PROJECT REQUIREMENTS.
 - D. CONCURRENT SHOP DRAWING REVIEW SHALL ONLY BE PERMITTED IF APPROVED BY THE ARCHITECT/ENGINEER OF RECORD PRIOR TO THE START OF SHOP DRAWING REVIEW.

1.7. MISCELLANEOUS

- VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
- VERIFY SIZE AND LOCATION OF ALL OPENINGS IN THE FLOORS, ROOF AND WALLS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL
- 1.7.3. CONSTRUCTION DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS OF SECTIONS OF THIS PROJECT AS APPROVED BY THE ARCHITECT/ ENGINEER.
- 1.7.4. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF OPENINGS NOT DIMENSIONED OR SHOWN ON STRUCTURAL PLANS.
- SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND WEIGHTS OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING HOUSEKEEPING PADS.
- 1.7.6. FOR PIPES, CONDUITS, DUCTS AND MECHANICAL EQUIPMENT SUPPORTED OR BRACED FROM STRUCTURE: CONFORM TO SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC., PUBLICATION "APPENDIX E: SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS." ALL BRACING AND SUPPORTS SHALL BE DESIGNED FOR SEISMIC HAZARD LEVEL (SHL) B. SPRINKLER LINE ATTACHMENTS SHALL CONFORM TO NFPA
- 1.7.7. THE STRUCTURE HAS BEEN DESIGNED TO RESIST CODE REQUIRED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF AL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO JOB SITE SAFETY: ERECTION MEANS, METHODS, AND SEQUENCES; TEMPORARY SHORING, FORMWORK, AND BRACING; USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

2. SITE PREPARATION/SOIL REMEDIATION

PAMPHLET 13.

2.1. SOIL DATA

ALLOWABLE SOIL PRESSURE 3000 PSF. ALLOW 33-1/3% INCREASE FOR LOADS FROM WIND OR SEISMIC ORIGIN. SEE GEOTECHNICAL ENGINEERING REPORT BY SOUTH SOUND GEOTECHNICAL CONSULTING DATED 10/28/2023. SEE GEOTECH REPORT FOR ALL SUBGRADE PREPARATION REQUIREMENTS AS WELL AS CAPILLARY BREAK AND VAPOR BARRIER RECOMMENDATIONS.

2.1.1. RETAINING WALL DESIGN CRITERIA:

A.	ACTIVE EARTH PRESSURE:	35 PCF
B.	AT-REST EARTH PRESSURE:	50 PCF
C.	SEISMIC EARTH PRESSURE:	9 x "H" PSF (ACTIVE)
		14 x "H" PSF (AT-REST)
D.	PASSIVE EARTH PRESSURE:	325 PCF *
E.	FRICTION COEFFICIENT:	0.40 *
	* INCLUDES FACTOR OF SAFETY OF 1.	.5

2.2. EXCAVATION

EXCAVATE TO DEPTH SHOWN AND TO FIRM UNDISTURBED MATERIAL. OVER-EXCAVATIONS SHALL BE BACKFILLED WITH LEAN CONCRETE (f'c=500-1200 PSI) OR STRUCTURAL FILL AT THE CONTRACTOR'S EXPENSE. EXERCISE EXTREME CARE DURING EXCAVATION TO AVOID DAMAGE TO BURIED LINES, TANKS, AND OTHER CONCEALED ITEMS. UPON DISCOVERY, DO NOT PROCEED WITH WORK UNTIL RECEIVING WRITTEN INSTRUCTIONS FROM THE ARCHITECT. A COMPETENT REPRESENTATIVE OF THE OWNER SHALL INSPECT ALL FOOTING EXCAVATIONS FOR SUITABILITY OF BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL. PROVIDE DRAINAGE AS NECESSARY TO AVOID WATER-SOFTENED SUBGRADE.

2.3. FILL, BACKFILL AND COMPACTION

BACKFILL AGAINST WALLS SHALL NOT BE PLACED UNTIL AFTER THE REMOVAL OF ALL MATERIAL SUBJECT TO ROT OR CORROSION. ALL FILL PLACED AGAINST RETAINING WALLS OR BASEMENT WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. STRUCTURAL FILL OTHER THAN PEA GRAVEL SHALL BE GRANULAR PLACED IN 10-INCH LOOSE LIFTS AND COMPACTED TO 90-92% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MOD PROCTOR) WITHIN 3-FEET BEHIND BACK OF WALL. PEA GRAVEL FILL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/8" DIAMETER. AT A DISTANCE GREATER THAN 3-FEET BEHIND BACK OF WALL, BACKFILL CAN COMPACTED USING CONVETIONAL ROLLERS, WITH BACKFILL COMPACTED TO AT LEAST 92 PERCENT OF THE MDD (ASTM D1557)

3. STRUCTURAL CONCRETE

3.1. GENERAL

ALL CONCRETE SHALL BE HARD ROCK CONCRETE MEETING THE REQUIREMENTS OF ACI-301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." PROPORTIONING OF INGREDIENTS FOR EACH CONCRETE MIX SHALL BE BY METHOD 2 OR THE ALTERNATE PROCEDURE GIVEN IN ACI-301. PLACE CONCRETE PER ACI-304 AND CONFORM TO ACI-604 (306) FOR WINTER CONCRETING AND ACI-605 (305) FOR HOT WEATHER CONCRETING. USE INTERIOR MECHANICAL VIBRATORS WITH 7,000 RPM MINIMUM FREQUENCY. DO NOT OVER-VIBRATE. CONCRETE SHALL BE PLACED MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL CONCRETE FROM PREMATURE DRYING, EXCESSIVE HOT OR COLD TEMPERATURE FOR SEVEN DAYS AFTER PLACING.

3.2. STRENGTH

TWENTY-EIGHT DAY COMPRESSIVE STRENGTHS (f'c) SHALL BE AS FOLLOWS WITH EXPOSURE CATEGORY AND CLASS PER ACI TABLE 19.3.1.1 GIVEN IN PARENTHESIS:

> SLABS ON GRADE (F0/S0/W0/C0) 4000 PSI NON-STRUCTURAL TOPPING SLAB (FO/SO/WO/CO/) 3000 PSI FOOTINGS (F0/S0/W0/C1) 4000 PSI * VERTICALLY FORMED WALLS (F1/S0/W0/C0)

CONCRETE SUPPLIER TO PROVIDE TEST RECORDS PER SECTION 26.4 OF ACI 318. WHEN NO PRIOR EXPERIENCE OR TRIAL MIXTURE DATA ARE AVAILABLE, THE WATER/CEMENT RATIO FROM THE TABLE BELOW MAY BE USED, BUT ONLY WHEN SPECIAL PERMISSION IS GIVEN BY ENGINEER.

* MAXIMUM W/C RATIO SHALL BE 0.55

MAXIMUM ABSOLUTE WATER/CEMENT RATIO BY WEIGHT FOR CONCRETE MIXES WITHOUT TEST RECORDS SHALL BE AS FOLLOWS:

SPECI COMP STREI	RESSIVE	NON-AIR ENTRAINED CONCRETE	AIR- ENTRAINED CONCRETE
3000 F	PSI	0.58	0.46
4000 F	PSI	0.44	0.35

3.3. MATERIALS

- CEMENT: ASTM C150, TYPE I OR TYPE II. ENGINEER'S APPROVAL IS NEEDED FOR USE OF TYPE III CEMENT.
- COARSE AND FINE AGGREGATE: ASTM C33.
- WATER SHALL BE CLEAN AND POTABLE.
- FLYASH: ASTM C618 CLASS C (CLASS F MAY BE ALLOWED IF APPROVED BY THE STRUCTURAL ENGINEER)
- GROUND GRANULATED BLAST FURNACE SLAG (GGBFS): ASTM C989 GRADE 100 OR 120. GGBFS SHALL NOT BE PERMITTED UNLESS REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. MIX DESIGNS SUBMITTED INCLUDING GGBFS SHALL INCLUDE SHRINKAGE TEST RESULTS AT 28 DAYS.

3.4. ADMIXTURES

- 3.4.1. WATER REDUCING ADMIXTURE: ASTM C494. ADMIXTURES SHALL BE USED IN EXACT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- WATER REDUCING ADMIXTURES SHALL BE USED AT ALL HEAVILY CONGESTED AREAS (I.E. CONCRETE BEAMS, COLUMNS AND WALLS WITH REINFORCING SPACING OF 4" OR LESS)

CONCRETE USING ADMIXTURES TO PRODUCE FLOWABLE CONCRETE

- MAY BE USED SUBJECT TO ENGINEER'S APPROVAL AIR ENTRAINMENT: ASTM C260 AND ASTM C494 ENTRAIN 5%
- PLUS/MINUS 1.5% BY VOLUME IN ALL CONCRETE EXPOSED TO NO OTHER ADMIXTURES PERMITTED UNLESS APPROVED BY THE

3.5. FORMWORK AND SHORING

ENGINEER.

- FOLLOW RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI-347).
- RESHORING FOR EARLY REMOVAL OF ORIGINAL SUPPORTS WILL NOT BE PERMITTED.
- WHILE RESHORING OPERATIONS ARE UNDERWAY, NO CONSTRUCTION LOADS WILL BE PERMITTED ON THE NEW CONSTRUCTION.
- ALL SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMWORK SUPPORTS AND SHORING SHALL BE DESIGNED TO PROVIDE FINISHED CONCRETE SURFACES AT ALL FACES LEVEL PLUMB AND TRUE TO THE DIMENSIONS AND ELEVATIONS SHOWN. TOLERANCES AND VARIATIONS SHALL BE AS SPECIFIED.

3.6. REINFORCING STEEL

- DETAIL, FABRICATE, AND PLACE PER ACI-315 AND ACI-318. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.
- DEFORMED BAR REINFORCEMENT: ASTM A615 GR 60
- WELDABLE DEFORMED BAR REINFORCEMENT: ASTM A706 GR 60
- WHERE NOTED ON STRUCTURAL DRAWINGS
- DEFORMED BAR ANCHORS: ASTM A496
- HEADED SHEAR STUD REINFORCEMENT: ASTM A1044

WELDED WIRE FABRIC: ASTM 1064 GR 65

- EXCEPT AS NOTED SPECIFICALLY ON THE DRAWINGS, ALL CONCRETE REINFORCEMENT SHALL BE LAP-SPLICED AS INDICATED ON THE REINFORCING BAR DEVELOPMENT AND SPLICE LENGTH SCHEDULE PROVIDED ON THE STRUCTURAL DRAWINGS. NO MORE THAN 50% OF HORIZONTAL OR VERTICAL REINFORCING BARS SHALL BE SPLICED AT ANY ONE LOCATION.
- EXCEPT AS NOTED SPECIFICALLY ON THE DRAWINGS, PROVIDE CORNER BARS TO MATCH QUANTITY AND DIAMETER OF HORIZONTAL REINFORCEMENT AND LAP WITH SPECIFIED HORIZONTAL REINFORCEMENT FOR "L₀" PER REINFORCING BAR DEVELOPMENT AND SPLICE LENGTH TABLES PROVIDED ON THE STRUCTURAL DRAWINGS. THESE CORNER BARS SHALL BE PLACED AT ALL CORNERS AND INTERSECTIONS IN CONCRETE FOOTINGS AND WALLS.
- LAP WELDED WIRE FABRIC 12" OR ONE SPACING PLUS 2", WHICHEVER
- 3.7. CONCRETE COVER ON REINFORCING SHALL BE AS FOLLOWS (UNLESS SHOWN

viol).	
BOTTOM OF FOOTINGS	3"
FORMED EARTH FACE AND SLAB ON GRADE	2"
WALLS, WEATHER FACE	1-1/2"
WALLS, INSIDE FACE	1"
COLUMN TO TIES	1 ½"
BEAMS TO STIRRUPS	1 ½"
BOTTOM OF ELEVATED STRUCTURAL SLAB	3/4"

3.8. CONSTRUCTION OR CONTROL JOINTS 3.8.1. UNLESS NOTED OTHERWISE, LOCATION OF THE CONSTRUCTION OR CONTROL JOINTS IN SLAB ON GRADE SHALL NOT EXCEED THE DISTANCES NOTED BELOW. JOINTS SHALL BE LOCATED ON COLUMN GRIDS OR UNDER PERMANENT PARTITIONS TO THE GREATEST EXTENT POSSIBLE. ADDITIONAL JOINTS SHALL BE REQUIRED AT

REENTRANT CORNERS AND CORNERS OF SLAB DEPRESSIONS OR PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR JOINT LAYOUT AT EXPOSED CONCRETE CONDITIONS. PROVIDE JOINT SEALANT PER SPECIFICATIONS - INSTALL PER MANUFACTURER

4" SLAB ON GRADE 12'-0" OC 6" SLAB ON GRADE 18'-0" OC

CONSTRUCTION OR CONTROL JOINT SPACING IN WALLS SHALL NOT EXCEED 50' ON CENTER EXCEPT AS DIRECTED BY THE ARCHITECT/ENGINEER.

3.9. CONDUIT AND PIPING EMBEDDED IN CONCRETE

RECOMMENDATIONS.

- ELECTRICAL CONDUIT SHALL NOT BE PLACED WITHIN A SLAB ON GRADE BUT PLACED BELOW THE SLAB IN THE SUB-BASE.
- NO JOISTS, BEAMS OR GIRDERS SHALL BE SLEEVED FOR PIPING OR CONDUIT EXCEPT AS NOTED ON THE STRUCTURAL DRAWINGS OR AS APPROVED BY THE ARCHITECT/ENGINEER.

3.10. GROUT FOR BEARING PLATES

THE NON-SHRINK GROUT SHALL MEET ASTM C1107 GRADE B OR EQUIVALENT (MASTERFLOW 928 BY BASF OR APPROVED EQUIVALENT). GROUT SHALL BE A PRE-PACKAGED HYDRAULIC CEMENT BASED MINERAL AGGREGATE GROUT, MIXED, PLACED AND CURED AS RECOMMENDED BY THE MANUFACTURER. COMPRESSIVE STRENGTH SHALL EXCEED 6000 PSI AT 28 DAYS.

3.11. ADHESIVE EXPANSIVE WATERSTOPS

ADHESIVE EXPANSIVE WATERSTOP SHALL BE VOLCLAY WATERSTOP-RX (AS MANUFACTURED BY CETCO), SWELLSTOP OR HYDROTIGHT (GREENSTREAK), OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

4. ADHERED MASONRY VENEER

ADHERED UNITS SHALL NOT EXCEED 2-5/8" IN SPECIFIED THICKNESS, 36" IN ANY FACE DIMENSION, OR MORE THAN 5 SQUARE FEET OF FACE DIMENSION AND SHALL NOT WEIGH MORE THAN 15 PSF. ADHERED MASONRY VENEER SHALL CONSIST OF A FULLY ENGINEERED SYSTEM (BACKING BOARD, GROUT AND LATHE/REINFORCING) COMPLYING WITH SEISMIC DESIGN CATEGORY NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES. THE ADHERED MASONRY VENEER SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

METALS

5.1. STRUCTURAL STEEL GENERAL REQUIREMENTS

WT, MT AND ST SHAPES.

5.1.1. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 341-16 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" AND AISC 303-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCEPT AS AMENDED BY THESE STRUCTURAL NOTES.

5.2. STRUCTURAL STEEL

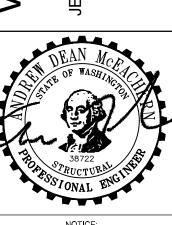
- 5.2.1. STEEL W SHAPES AND C & MC SHAPES 8" OR LARGER SHALL BE ASTM A992 (F_v =50 KSI).
- STEEL M, S, HP AND L SHAPES SHALL BE ASTM A572 Gr. 50 (F_v=50 KSI).
- STEEL PLATES THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM SHALL BE ASTM A572 Gr. 50 (F_v=50 KSI).
- OTHER STEEL PLATES AND C & MC SHAPES SMALLER THAN 8" SHALL BE ASTM A36 (F_v =36 KSI).
- STEEL PIPE SECTIONS (PIPE) SHALL BE ASTM A53 Gr. B (F_v =35 KSI).
- RECTANGULAR AND ROUND HOLLOW STEEL SECTIONS (HSS) OR TUBE STEEL SECTIONS (TS) SHALL BE ASTM A500, GR. C (F_v =50 KSI). STRUCTURAL TEES SHALL BE CUT FROM W, M OR S SHAPES TO MAKE

NOTES CONTINUE ON SHEET SO.:



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SHEET NO.

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- A. MACHINE BOLTS NOT SPECIFIED AS HIGH STRENGTH SHALL BE ASTM A307 GRADE A.
- B. HIGH STRENGTH BOLTS SHALL BE ASTM F3125 GRADE A325 OR GRADE A490 AS INDICATED ON STRUCTURAL DRAWINGS. ALL BOLTS SHALL BE CONSIDERED BEARING TYPE WITH THREADS INCLUDED IN SHEAR PLANE (CONNECTION TYPE N) UNLESS NOTED OTHERWISE. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED WITH NUTS CONFORMING TO ASTM A563 AND HARDENED WASHERS CONFORMING TO ASTM
- C. ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED PER THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS (LATEST EDITION) BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (WWW.BOLTCOUNCIL.ORG).
- 5.2.9. STEEL ANCHORAGE ELEMENTS:
 - A. THREADED RODS SHALL BE ALL-THREAD ASTM A36 (F_v=36 KSI) UNLESS NOTED OTHERWISE.
 - B. WELDED HEADED STUDS: "NELSON STUDS" SHALL BE BY NELSON STUD WELDING, INC. OR APPROVED EQUIVALENT COMPLYING WITH ASTM A108. STUDS SHALL HAVE A MINIMUM F, OF 65 KSI.
 - C. ANCHOR RODS: ANCHOR RODS SHALL BE ASTM F1554, F₂=36 KSI WITH HOOKED, HEADED OR THREADED AND NUTTED ENDS AS INDICATED. AT COLUMN LOCATIONS ANCHOR RODS SHALL BE ASTM F1554, F_v=36 KSI WITH HEADED OR THREADED/NUTTED END. TACK WELD NUT TO ANCHOR ROD UNLESS NOTED OTHERWISE. WHERE NOTED, HIGH STRENGTH ANCHOR RODS SHALL BE ASTM F1554, F_v =105 KSI WITH DOUBLE NUTTED PLATE
 - D. EXPANSION ANCHORS SHALL BE CARBON STEEL AS NOTED IN THE FOLLOWING TABLE. ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND/OR ICC-ES AC193 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. ANCHORS SHALL HAVE A CURRENT CODE REPORT THAT COMPLIES WITH THE CURRENT EDITION OF THE IBC AND SHALL BE RATED FOR USE IN THE SEISMIC DESIGN CATEGORY NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES.

EXPANSION ANCHORS IN CONCRETE	CODE REPORT
HILTI KWIK BOLT TZ	ICC ESR-1917
SIMPSON STRONG-BOLT 2	ICC ESR-3037
DEWALT POWER-STUD+ SD2	ICC ESR-2502

E. HEAVY DUTY CONCRETE/MASONRY SCREW ANCHORS SHALL BE USED IN DRY INTERIOR CONDITIONS AND SHALL BE AS NOTED IN THE FOLLOWING TABLE:

HEAVY DUTY CONCRETE/

CODE REPORT

MASONRY SCREW ANCHORS		
HILTI KWIK HUS-EZ	ICC ESR-3027(CONC) ICC ESR-3056 (CMU)	
SIMPSON TITEN HD	ICC ESR-2713 (CONC) ICC ESR-1056 (CMU)	
DEWALT SCREW BOLT+	ICC ESR-3889 (CONC) ICC ESR-4042 (CMU)	

F. ADHESIVE ANCHORS SHALL BE THREADED ANCHOR RODS OR REBAR DOWELS USING AN INJECTABLE ADHESIVE AS NOTED IN THE FOLLOWING TABLE. ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND/OR ICC-ES AC-308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. ANCHORS SHALL HAVE A CURRENT CODE REPORT THAT COMPLIES WITH THE CURRENT EDITION OF THE IBC AND SHALL BE RATED FOR USE IN THE SEISMIC DESIGN CATEGORY NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES.

ADHESIVE ANCHORS IN CONCRETE (1) (2)	CODE REPORT
HILTI HIT HY-200 SAFE SET	ICC ESR-3187
SIMPSON AT-XP (3)	IAPMO ER-263
DEWALT AC200+ DUST-X	ICC ESR-4027

(1) ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI, OR AN APPROVED ALTERNATE WHEN SUBMITTED AND APPROVED BY THE ENGINEER. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.

(2) ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.

(3) SIMPSON SET-XP MAY BE USED WHERE BASE MATERIAL TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT OR FOR EMBEDMENT GREATER THAN 12-INCHES FOR LONGER GEL TIME. SEE ICC ESR-2508 (CONC) AND IAPMO ER-265 (MASONRY).

G. POWDER ACTUATED FASTENERS: PDF'S OR PAF'S SHALL BE A MINIMUM 0.157" DIA KNURLED SHANK FASTENER AS NOTED IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. FASTENERS DRIVEN INTO STEEL SHALL BE DRIVEN SO THAT THE POINT OF THE FASTENER COMPLETELY PENETRATES THE STEEL BASE MATERIAL. AT TOPPING SLABS, PT SLABS OR SLABS WITH RADIANT HEAT TUBES EMBEDDED WITHIN THE SLAB, LIMIT THE PDF PENETRATION TO 3/4" MAXIMUM AND COORDINATE WITH TENDON/TUBE PLACEMENT AND COVER.

POWDER ACTUATED FASTENERS	CODE REPORT
HILTI X-U	ICC ESR-2269
SIMPSON PDPA	ICC ESR-2138
DEWALT CSI PIN	ICC ESR-2024

METAL PROTECTION: ALL STEEL EXPOSED TO WEATHER, MOISTURE, SOIL, OR AS NOTED SHALL BE GALVANIZED PER ASTM A123 OR A153 AS APPLICABLE. ALL OTHER STEEL SURFACES SHALL BE SHOP PRIMED AFTER FABRICATION.

> REPAIR ALL DAMAGED AREAS OF GALVANIZED PARTS SUCH AS FIELD WELDS, ETC. APPLY REPAIR COATING THICKNESS GREATER THAN OR EQUAL TO ORIGINAL ZINC COATING THICKNESS.

- 5.2.11. STEEL COLUMNS: ALL VERTICAL LOAD CARRYING MEMBERS HAVE BEEN NOTED AS "COLUMNS" ON THE STRUCTURAL DRAWINGS. THIS NOTATION DOES NOT IDENTIFY THESE MEMBERS AS "POSTS" OR "COLUMNS" AS DEFINED BY THE LATEST OSHA RULES REGARDING COLUMN ANCHORAGE REQUIREMENTS (OSHA 29 CFR PARTS 1926.751 AND 1926.755). THE GENERAL CONTRACTOR, STEEL DETAILER, AND STEEL ERECTOR SHALL BE RESPONSIBLE TO DETERMINE THE CORRECT OSHA DESIGNATION OF EACH MEMBER REGARDLESS OF THE NOTATION SHOWN ON THE STRUCTURAL DRAWINGS.
- 5.2.12. PRE-ENGINEERED STEEL STAIRS, GUARDRAILS, AND CANOPIES: THE STEEL COMPONENT STAIR MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- 5.3. WELDING
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE," AWS D1.1, AWS D1.4 AND AWS D1.8 AS
- 5.3.2. ALL WELDING SHALL BE BY CERTIFIED WELDERS; USE 70 KSI LOW HYDROGEN FILLER METAL AND SHALL BE PROTECTED PER AWS D1.1 UNTIL USE. FOR ALL FULL PENETRATION WELDS, FILLER METAL SHALL BE NOTCH TOUGH TO MEET CHARPY V-NOTCH OF 20 FOOT-POUND AT -20°F.
- NO WELDING OF REINFORCING STEEL SHALL BE ALLOWED EXCEPT WHERE SHOWN. ALL WELDING OF REINFORCEMENT SHALL BE PER ANSI/AWS D1.4. THE FOLLOWING FILLER METAL SHALL BE USED WHEN WELDING REINFORCEMENT:
 - A. FOR WELDING OF ASTM A706 GR 60 REBAR, 80 KSI FILLER METAL
 - B. FOR WELDING OF ASTM A615 GR 60 REBAR, NOT PERMITTED. C. FOR WELDING OF ASTM A615 GR 40 REBAR, NOT PERMITTED
- ALL FULL PENETRATION FIELD AND SHOP WELDS SHALL BE FULL TIME INSPECTED AND TESTED BY NON-DESTRUCTIVE PROCEDURES. RESULTS OF TESTS SHALL BE SUBMITTED FOR REVIEW BY THE
- 5.4. WELDING PROCEDURE SPECIFICATION (WPS)

STRUCTURAL ENGINEER.

- 5.4.1. FOR ALL WELDING OF REINFORCING STEEL, NON-PREQUALIFIED WELDS AND ALL WELDING OF COMPONENTS WHICH ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM, CONTRACTOR SHALL SUBMIT A WELDING PROCEDURE SPECIFICATION (WPS) TO ENGINEER FOR APPROVAL, PRIOR TO WELDING, EACH WPS SHALL INCLUDE ALL NECESSARY INFORMATION REQUIRED BY AWS D1.1, AWS D1.4 AND AWS D1.8 AND AS FOLLOWS:
 - A. APPLICABLE BASE METAL TYPES AND THICKNESSES.
 - B. SKETCH OF JOINT INDICATING APPLICABLE DIMENSIONS INDIVIDUAL PASSES SHALL BE IDENTIFIED AND NUMBERED TO IDENTIFY THE SEQUENCE. THE SKETCH SHALL IDENTIFY THE MAXIMUM THICKNESS AND BEAD WIDTH. IN NO CASE SHALL THE LAYER THICKNESS EXCEED 1/4" NOR THE BEAD WIDTH EXCEED
 - C. PREHEAT REQUIREMENTS.
 - D. ELECTRICAL CHARACTERISTICS (I.E., CURRENT, VOLTAGE, TRAVEL SPEED, ETC.).
 - E. ELECTRODE REQUIREMENTS SHALL MEET THE REQUIREMENTS OF AWS A5.1, AWS A5.5, AWS A5.17, AWS A5.23, AWS A5.18, AWS A5.20. AWS A5.28. AND AWS A5.29. AS APPLICABLE FOR WELDING METHOD USED.
- CARPENTRY
- DIMENSION LUMBER SHALL BE DF No. 2 UNO. SAWN LUMBER BEAMS, HEADERS AND COLUMNS SHALL BE DF No.2 OR AS SHOWN ON THE DRAWINGS. ALL 2" NOMINAL LUMBER SHALL BE KILN DRIED (KD). EACH PIECE OF LUMBER SHALL BEAR STAMP OF WEST COAST LUMBER INSPECTION BUREAU (WCLIB) AND/OR WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) SHOWING GRADE MARK.
- 6.1. PRESSURE-PRESERVATIVE TREATMENT IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1, LATEST EDITION TO THE USE CATEGORY AS FOLLOWS:
 - TREAT ALL WOOD IN CONTACT WITH CONCRETE, MORTAR, GROUT, MASONRY AND WITHIN 12" OF EARTH TO THE REQUIREMENTS OF USE CATEGORY UC2 (INTERIOR/DAMP).
 - TREAT ALL WOOD EXPOSED TO WEATHER BUT PROTECTED BY PAINT OR COVER TO THE REQUIREMENTS OF USE CATEGORY UC3A (ABOVE GROUND PROTECTED).
- TREAT ALL WOOD EXPOSED TO WEATHER SUCH AS EXTERIOR DECKING, JOISTS, BEAMS, RAILINGS, ETC TO THE REQUIREMENTS OF USE CATEGORY UC3B (ABOVE GROUND EXPOSED).
- TREAT ALL WOOD IN CONTACT WITH THE GROUND, SOIL OR FRESH WATER TO THE REQUIREMENTS OF USE CATEGORY UC4A (GROUND CONTACT GENERAL USE).

- 6.1.5. TREAT ALL LUMBER NOTED AS FIRE TREATED TO THE REQUIREMENTS OF USE CATEGORY UCFA (FIRE RETARDANT
- 6.1.6. WHERE POSSIBLE, PRECUT MATERIAL PRIOR TO TREATMENT. ALL FIELD CUTS AND DRILLED HOLES SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
- 6.2. CARPENTRY HARDWARE
- 6.2.1. MACHINE BOLTS SHALL BE ASTM A307.
- PROVIDE MALLEABLE IRON WASHERS (MIW) OR HEAVY PLATE CUT WASHERS WHERE BOLT HEADS, NUTS OR LAG SCREWS BEAR ON
- NAILS SHALL BE COMMON, AMERICAN OR CANADIAN MANUFACTURER ONLY WITH MIN. DIAMETERS AS FOLLOWS:

NAIL SIZE	MINIMUM NAIL SHANK DIAMETER	MINIMUM NAIL LENGTH
8d	0.131"	2 1/2"
10d	0.148"	3"
12d	0.148"	3 1/4"
16d SINKER	0.148"	3 1/4"
16d	0.162"	3 1/2"
20d	0.192"	4"

- LAG SCREWS SHALL MEET THE REQUIREMENTS OF ANSI/ASME B18.2.1. WOOD SCREWS SHALL MEET THE REQUIREMENTS OF ANSI/ASME B18.6.1.
- ANCHORS AND CONNECTIONS SHALL BE SIMPSON, USP, OR ICC (INTERNATIONAL CODE COUNCIL) APPROVED. ALL FASTENERS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE SHOWN. SUBSTITUTED CONNECTIONS SHALL HAVE A TABULATED CAPACITY EQUAL TO OR GREATER THAN THE SPECIFIED CONNECTOR.
- 6.2.6. CORROSION RESISTANT HARDWARE AND FASTENERS:
 - A. FASTENERS AND HARDWARE EXPOSED TO WEATHER OR IN UNHEATED PORTIONS OF THE BUILDING SHALL BE MECHANICALLY OR HOT DIPPED GALVANIZED PER ASTM B695 CLASS 55 OR ASTM A153 - CLASS D. HARDWARE IN CONTACT WITH TREATED WOOD SHALL CONFORM TO A MINIMUM GALVANIZED COATING OF G185 OR AS NOTED BELOW.
 - B. IF PRESERVATIVE TREATMENT USED IS ACZA (AMMONIACAL COPPER ZINC ARSENATE), IF THE CHEMICAL RETENTION LEVEL IS AWPA USE CATEGORY UC4A OR GREATER, OR IF THE PRESERVATIVE TREATMENT USED IS NOT KNOWN, HARDWARE SHALL BE TYPE 316L STAINLESS STEEL. FASTENERS SHALL BE TYPE 304 OR 305 STAINLESS STEEL.
 - C. HARDWARE IN MARINE ENVIRONMENT SHALL BE TYPE 316L STAINLESS STEEL. FASTENERS SHALL BE TYPE 316 STAINLESS STEEL, HOT DIPPED GALVANIZED TO ASTM A153 - CLASS C, SILICON BRONZE, OR COPPER.
 - D. IN THE EVENT OF A CONFLICT BETWEEN THE HARDWARE MANUFACTURER'S RECOMMENDATIONS FOR SELECTING CORROSION-RESISTANT HARDWARE AND FASTENERS. THESE NOTES, AND THE SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL BE USED UNLESS APPROVED BY THE ENGINEER.
- 6.3. MINIMUM NAILING: PER IBC TABLE 2304.10.1 FASTENING SCHEDULE.
- 6.4. COORDINATION AT HOLES IN WOOD STUD WALLS
 - PIPES IN INTERIOR NONBEARING WALLS: STUD PARTITIONS CONTAINING PIPES SHALL BE FRAMED, AND THE JOISTS SHALL BE SPACED, SO AS TO GIVE PROPER CLEARANCE FOR THE PIPING. WHERE A PARTITION CONTAINING PIPING RUNS PARALLEL TO THE JOISTS, THE JOISTS SHALL BE DOUBLED AND SPACED SO AS TO PERMIT THE PASSAGE OF SUCH PIPING AND SHALL BE BRIDGED. WHERE PIPES ARE PLACED IN, OR PARTIALLY IN, A PARTITION NECESSITATING THE CUTTING OF THE SOLES OR PLATES, A SIMPSON RPS STRAP SHALL BE FASTENED TO EACH PLATE ACROSS AND TO EACH SIDE OF THE OPENING WITH NOT LESS THAN SIX 16d NAILS.
- 6.4.2. CUTTING AND NOTCHING SAWN LUMBER: IN EXTERIOR WALLS AND BEARING PARTITIONS. ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 15 PERCENT OF ITS WIDTH. CUTTING OR NOTCHING OF STUDS TO A DEPTH NOT GREATER THAN 40 PERCENT OF THE WIDTH OF THE STUD IS PERMITTED IN NONBEARING PARTITIONS SUPPORTING NO LOADS OTHER THAN THE WEIGHT OF THE PARTITION.
- CUTTING AND NOTCHING ENGINEERED LUMBER: CUTTING AND NOTCHING SHALL NOT BE PERMITTED IN ENGINEERED LUMBER (LSL) STUDS WITHOUT APPROVAL FROM THE ENGINEER OF RECORD.
- BORED HOLES IN SAWN LUMBER: A HOLE NOT GREATER IN DIAMETER THAN 33 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD WITHOUT ENGINEERING VERIFICATION. BORED HOLES NOT GREATER THAN 60 PERCENT OF THE WIDTH OF THE STUD ARE PERMITTED IN NONBEARING PARTITIONS, PROVIDED NOT MORE THAN ANY TWO ADJACENT STUDS ARE SO BORED. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8-INCH FROM THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A NOTCH OR CUT AND SHALL NOT BE LOCATED WITHIN 8-INCHES OF THE END OF THE STUD.
- 6.4.5. BORED HOLES IN ENGINEERED LUMBER: BORED HOLES SHALL NOT BE PERMITTED IN ENGINEERED LUMBER (LSL) STUDS WITHOUT APPROVAL FROM THE ENGINEER OF RECORD.

6.5. SHEATHING (PLYWOOD/ORIENTED STRAND BOARD)

EACH SHEET SHALL BEAR THE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION; ALL SHEATHING SHALL CONFORM TO STANDARD PS 2 OR PRP-108. THICKNESS, NUMBER OF PLIES AND LAY-UP AS SHOWN. ALL PLYWOOD SHALL BE C-D INTERIOR WITH EXTERIOR GLUE OR AS NOTED ON THE DRAWINGS AND SHALL BE GROUP I OR II SPECIES. EXCEPT AS OTHERWISE SHOWN, PROVIDE THE FOLLOWING MINIMUM NAILING: PANEL EDGES 10d AT 6" ON CENTER, INTERMEDIATE SUPPORT 10d AT 12" ON CENTER. GAP SHEETS 1/8" FOR 4'x8' SHEETS AND 1/4" FOR 8'x8' AND LARGER SHEETS. THE MOISTURE CONTENT SHALL NOT BE GREATER THAN 15% AT TIME OF ROOFING.

6.6. GLUED-LAMINATED TIMBER

MATERIALS, MANUFACTURE AND QUALITY CONTROL PER ANSI/AITC A190 "STRUCTURAL GLUED LAMINATED TIMBER." CAMBER 1-1/2 TIMES DEAD LOAD DEFLECTION WHERE NOT INDICATED ON DRAWINGS. ALL BEAM MEMBERS SHALL BE COMBINATION 24F-V4 FOR SIMPLE SPANS AND 24F-V8 FOR CONTINUOUS OR CANTILEVERED SPANS AND HAVE EXTERIOR GLUE. ALL COLUMN MEMBERS SHALL BE 24F-V8 UNLESS NOTED OTHERWISE. ALL MEMBERS EXPOSED TO VIEW SHALL BE ARCHITECTURAL APPEARANCE GRADE UNLESS NOTED OTHERWISE. ALL MEMBERS CONCEALED FROM VIEW SHALL BE INDUSTRIAL APPEARANCE UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

- 6.6.1. ADHESIVES SHALL MEET THE REQUIREMENTS FOR WET CONDITIONS OF SERVICE.
- MEMBERS SHALL BE MARKED INDICATING CONFORMANCE WITH ANSI/AITC 190.1. IN ADDITION, A CERTIFICATE OF SUCH CONFORMANCE SHALL BE PROVIDED TO THE BUYER.
- 6.7. MANUFACTURED STRUCTURAL WOOD MEMBERS
- 6.7.1. PARALLAM PSL POSTS AND COLUMNS SHALL BE PARALLAM 1.8E AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUIVALENT. PARALLAM PSL BEAMS SHALL BE PARALLAM 2.0E AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUIVALENT.
- TIMBERSTRAND LSL STUDS SHALL BE TIMBERSTRAND 1.5E AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUIVALENT.
- MICROLLAM LVL MEMBERS SHALL BE MICROLLAM 1.9E AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUIVALENT.
- 6.8. PRE-ENGINEERED WOOD I-JOISTS
- 6.8.1. OPEN-WEB JOISTS AND WOOD I-JOISTS SHALL BE AS MANUFACTURED BY REDBUILT, LLC OR APPROVED EQUAL.
- GEOMETRY AND SPACING SHALL BE AS SHOWN. THE MANUFACTURER SHALL PROVIDE ADDITIONAL FRAMING MEMBERS AS SHOWN OR AS NECESSARY TO SUPPORT MECHANICAL EQUIPMENT, WALLS AND/OR PARTITIONS, SNOW DRIFT LOADS, ETC.
- WHERE NOTED, PRECUT BLOCKING, BRIDGING, BRACING AND/OR FILLER PIECES SHALL BE FURNISHED BY THE MANUFACTURER. WHERE APPLICABLE, WIND UPLIFT BRACING SHALL BE PROVIDED BY
- DESIGN LOADS SHALL BE AS STATED IN DESIGN CRITERIA SECTION OF THESE NOTES PLUS ANY SPECIAL LOADS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE NOTED, MINIMUM DESIGN LOADS SHALL INCLUDE:
 - A. TOTAL DEAD LOAD OF 18 PSF AT ROOF AND 35 PSF AT FLOOR (INCLUDING TRUSS/JOIST SYSTEM DEAD LOADS).
 - B. BOTTOM CHORD SUPERIMPOSED DEAD LOAD OF 8.0 PSF (INCLUDED IN TOTAL DEAD LOAD NOTED ABOVE).
 - C. MINIMUM NET UPLIFT LOAD OF 10.0 PSF OR AS DETERMINED USING SITE SPECIFIC "COMPONENTS AND CLADDING" WIND FORCES IN ACCORDANCE WITH THE CRITERIA NOTED IN THE DESIGN CRITERIA SECTION OF THESE NOTES, WHICHEVER IS
- 6.8.5. PROPRIETARY COMPONENTS SHALL HAVE ICC (INTERNATIONAL CODE COUNCIL) APPROVAL.
- SHOP DRAWINGS SHALL INDICATE ALL REQUIRED PERMANENT BRACING (INCLUDING BOTTOM CHORD AND WEB BRACING SYSTEM TO RESIST WIND UPLIFT FORCES).
- SHOP CALCULATIONS SHALL INDICATE MEMBER STRESSES, SPECIES/ GRADES AND APPLICABLE ICC APPROVAL. CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
- UNLESS NOTED OTHERWISE, THE JOIST MANUFACTURER SHALL SPECIFY AND FURNISH CONNECTION HARDWARE NECESSARY FOR INSTALLATION OF THEIR SYSTEM.
- 6.8.9. OPEN WEB JOISTS AND I-JOISTS THAT SPAN GREATER THAN 25-FEET SHALL BE CAMBERED.
- 6.8.10. DELIVERED COMPONENTS SHALL BE ACCOMPANIED BY FABRICATOR'S CERTIFICATE OF CONFORMANCE TO THE REFERENCED STANDARDS.





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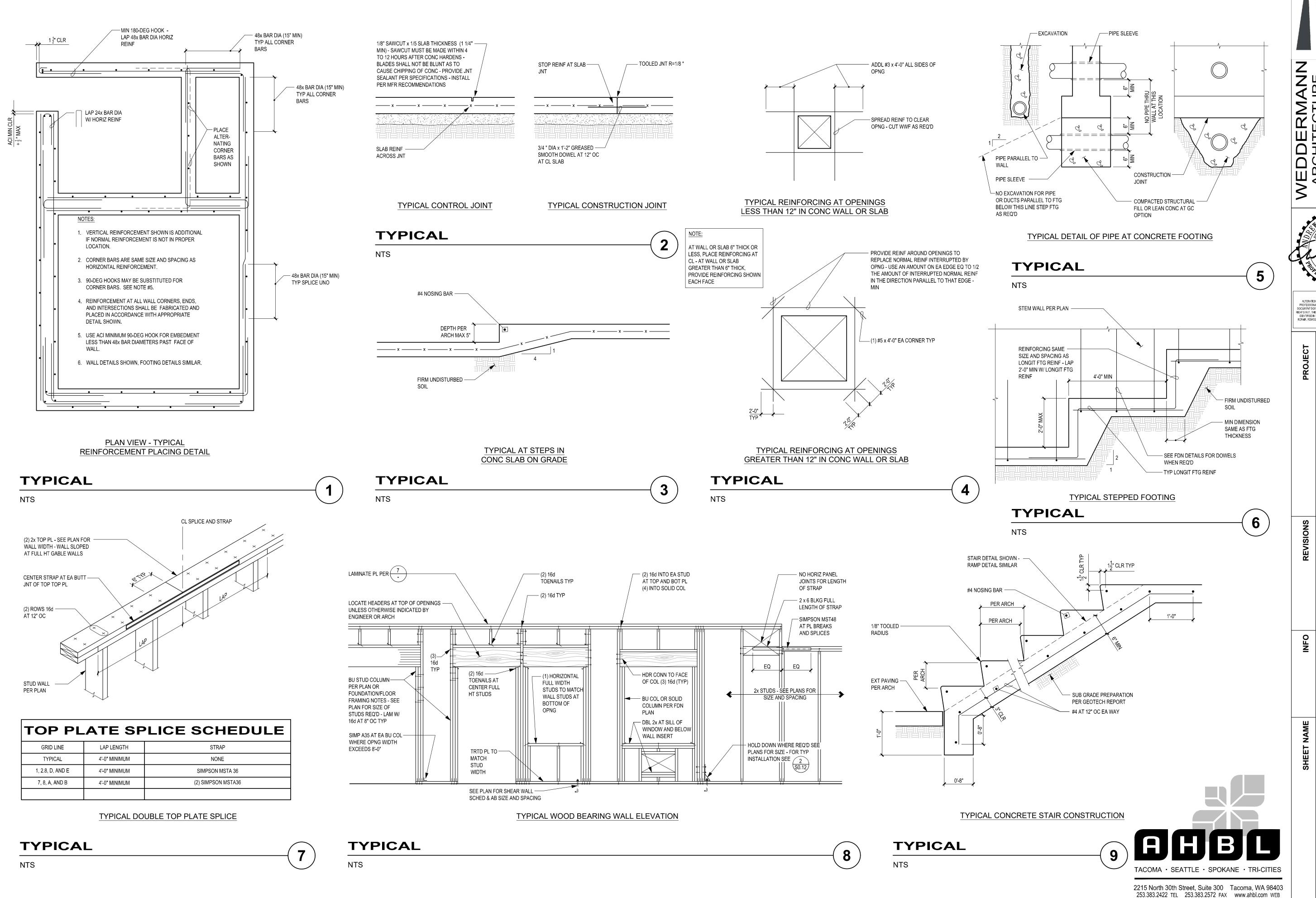
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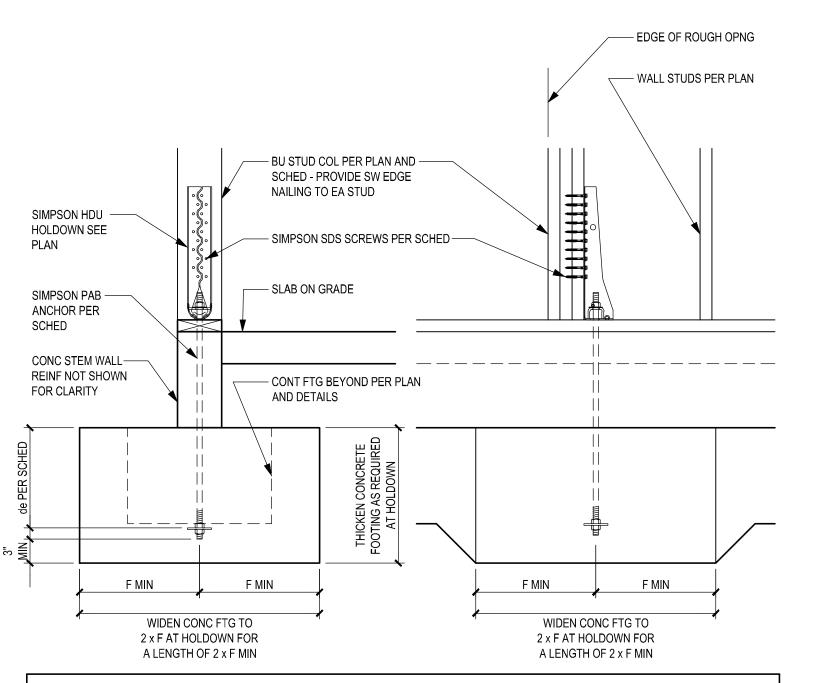
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SHEET NO.

S0.11



HOL	HOLDOWN SCHEDULE												
HOLDOWN	FOUNDATION ANCHOR	de	F	FASTENERS	MINIMUM WOOD MEMBER THICKNESS	ALLOWABLE TENSION LOAD							
SIMP HDU2	SIMP PAB5	6"	9"	(6) SIMP SDS 1/4" x 2 1/2"	3"	3075#							
SIMP HDU4	SIMP PAB5	6"	9"	(10) SIMP SDS 1/4" x 2 1/2"	3"	4565#							
SIMP HDU5	SIMP PAB5	6"	9"	(14) SIMP SDS 1/4" x 2 1/2"	3"	5645#							
SIMP HDU8	SIMP PAB7	10"	15"	(20) SIMP SDS 1/4" x 2 1/2"	4 1/2"	7870#							
SIMP HDU11	SIMP PAB8	12"	18"	(30) SIMP SDS 1/4" x 2 1/2"	5 1/2"	9535#							
SIMP HDU14	SIMP PAB8	12"	18"	(36) SIMP SDS 1/4" x 2 1/2"	6x6	14445#							

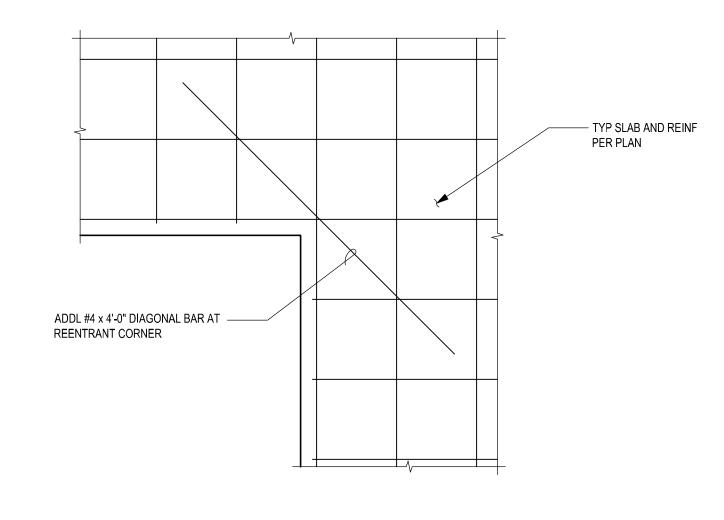
HOLDOWN SCHEDULE NOTES:

TYPICAL

NTS

- 1. ALLOWABLE LOADS ARE VALID FOR HOLDOWNS FLUSH OR RAISED OFF SILL PLATE.
- 2. TABULATED LOADS MAY BE DOUBLED WHEN THE HDU IS INSTALLED ON OPPOSITE SIDES OF THE WOOD MEMBER PROVIDED EITHER THE POST IS LARGE ENOUGH TO PREVENT OPPOSING HOLDOWN SCREW INTERFERENCE, OR THE HOLDOWNS ARE OFFSET TO ELIMINATE SCREW INTERFERENCE.
- 3. SIMPSON PAB8 SHALL USE A HEAVY HEX ANCHOR NUT.

TYPICAL HOLDOWN REQUIREMENTS

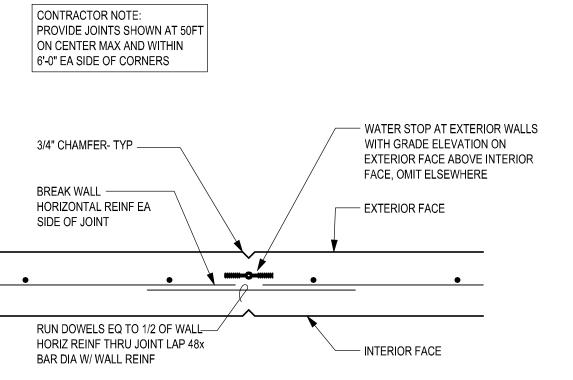


TYPICAL SLAB REENTRANT CORNER

SECTION

1" = 1'-0"

SECTION NTS

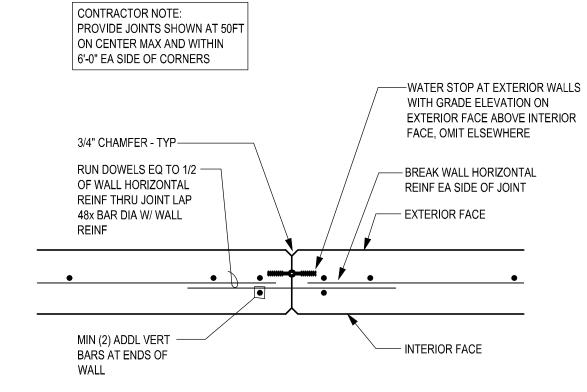


PROVIDE JOINTS SHOWN AT 50FT ON CENTER MAX AND WITHIN 6'-0" EA SIDE OF CORNERS WITH GRADE ELEVATION ON FACE, OMIT ELSEWHERE 3/4" CHAMFER - TYP-----RUN DOWELS EQ TO 1/2 — – BREAK WALL HORIZONTAL OF WALL HORIZONTAL REINF EA SIDE OF JOINT REINF THRU JOINT LAP 48x BAR DIA W/ WALL EXTERIOR FACE MIN (2) ADDL VERT - INTERIOR FACE BARS AT ENDS OF WALL

TYPICAL WALL CONSTRUCTION JOINT

TYPICAL

NTS



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TYPICAL WALL CONTROL JOINT

11. STATEMENT OF SPECIAL INSPECTIONS SO TITLE 1705.2 STEEL CONSTRUCTION (SEE TABLES 15A, 15B) N/R 1705.3 N/R CONCRETE CONSTRUCTION (SEE TABLE 13) MASONRY CONSTRUCTION (SEE TABLE 14A) 1705.4 N/R 1705.6 SOILS (SEE TABLE 12A) 1705.12.2 N/R STRUCTURAL WOOD - SEISMIC FORCE RESISTING SYSTEM (SEE TABLE 18)

- SI = SPECIAL INSPECTION
- SO = STRUCTURAL OBSERVATION
- ✓ = ITEM IS REQUIRED
- N/R = ITEM IS NOT REQUIRED

SPECIAL INSPECTIONS INDICATED ARE FOR STRUCTURAL ELEMENTS ONLY. SEE ARCH, MECH AND ELEC DRAWINGS FOR ADDITIONAL SPECIAL INSPECTIONS.

11.

11.1. INSPECTION/TESTING REQUIREMENTS:

SEE DRAWINGS, SPECIFICATIONS, AND IBC SECTIONS 110, AND CHAPTER 17.

11.2. INSPECTIONS BY THE BUILDING OFFICIAL (IBC SECTION 110):

- 11.2.1. FOOTING AND FOUNDATION INSPECTIONS SHALL BE MADE AFTER EXCAVATIONS ARE COMPLETE AND ANY REQUIRED REINFORCING IS IN PLACE. ANY REQUIRED FORMS SHALL BE IN PLACE PRIOR TO INSPECTION.
- 11.2.2. CONCRETE SLAB AND UNDER FLOOR INSPECTIONS SHALL BE MADE AFTER ALL IN SLAB OR UNDER FLOOR REINFORCING, CONDUIT, PIPING AND OTHER ANCILLARY EQUIPMENT ITEMS AND ACCESSORIES ARE IN PLACE BUT PRIOR TO CONCRETE PLACEMENT OR FLOOR SHEATHING INSTALLATION.
- 11.2.3. FRAMING INSPECTIONS SHALL BE MADE AFTER ALL SHEATHING, FRAMING, BLOCKING AND BRACING ARE COMPLETE AND ALL PIPES, DUCTS, ELECTRICAL, PLUMBING, ETC., ARE INSTALLED AND APPROVED PRIOR TO COVER.
- 11.2.4. IN ADDITION TO THE INSPECTIONS SPECIFIED ABOVE, THE BUILDING OFFICIAL IS AUTHORIZED TO MAKE OR REQUIRE OTHER INSPECTIONS OF ANY CONSTRUCTION WORK TO ASCERTAIN COMPLIANCE WITH THE PROVISIONS OF THE IBC OR OTHER LAWS ENFORCED BY THE BUILDING OFFICIAL.

11.3. STRUCTURAL TESTS AND SPECIAL INSPECTIONS (IBC CHAPTER 17):

- 11.3.1. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 11.3.2. STRUCTURAL TESTS AND SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC AS WELL AS ANY ADDITIONAL REQUIREMENTS OF THE BUILDING OFFICIAL. OMISSION FROM THE LIST BELOW OF TESTING AND INSPECTION REQUIREMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING TESTING AND INSPECTION REQUIRED BY THE SPECIFICATIONS, THE IBC AND THE BUILDING OFFICIAL.
- 11.3.3. TESTING AND SPECIAL INSPECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC FOR THE ITEMS LISTED IN THIS SECTION.

11.4. STRUCTURAL OBSERVATION

- 11.4.1. STRUCTURAL OBSERVATION MAY BE PERFORMED DURING CONSTRUCTION IN A MANNER AS REQUIRED TO BECOME GENERALLY FAMILIAR WITH THE IN-PLACE CONSTRUCTION.
- 11.4.2. STRUCTURAL OBSERVATION EXTENT SHALL BE AS INDICATED ABOVE. TIMING AND DURATION OF OBSERVATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR DURING CONSTRUCTION.
- 11.4.3. CONSTRUCTION OBSERVATION REPORTS AND FINDINGS SHALL NOT BE VIEWED AS A WARRANTY OR GUARANTEE BY THE STRUCTURAL ENGINEER.

11.5. SPECIAL INSPECTOR: SHALL BE CURRENTLY WABO CERTIFIED

- 11.5.1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- 11.5.2. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, ENGINEER OF RECORD, ARCHITECT OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION, THEN, IF NOT IN CONFORMANCE, TO THE PROPER DESIGN AUTHORITY AND BUILDING OFFICIAL.
- 11.5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

12	2A. REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS											
	IBC TABLE 1705.6											
	SPECIAL INSPECTION OR TEST TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION									
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	N/R	✓									
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	N/R	✓									
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIAL	N/R	✓									
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	✓	N/R									
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	N/R	√									

12.

- 12.1. SPECIAL INSPECTIONS AND TESTS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD-BEARING REQUIREMENTS PER IBC 1705.6., AS NOTED IN TABLE 12A.
- 12.1.1. THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE.

	<u></u>	ONSTRUCTION				
		IBC T	ABLE 1705.3			
		SPECIAL INSPECTION OR TEST TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1.		INSPECT REINFORCEMENT, AND VERIFY PLACEMENT	N/R	1	ACI 318: CH. 20, 25.2, 25.3, 26.6.1- 26.6.3	1908.4
2.		REINFORCING BAR WELDING:				
	A.	VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	N/R	✓	AWS D1.4 ACI 318:26.6.4	
	В.	INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	N/R	✓		
	C.	INSPECT ALL OTHER WELDS	✓	N/R		
3.		INSPECT ANCHORS CAST IN CONCRETE	N/R		ACI 318: 17.8.2	
4.	Α.	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	✓	N/R	ACI 318: 17.8.2.4	
	В.	MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4A	N/R	✓	ACI 318: 17.8.2	
5.		VERIFY USE OF REQUIRED DESIGN MIX	N/R	✓	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2 1908.2, 1908.3
6.		PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	✓	N/R	ASTM C 172 ASTM C 31 ACI318:26.4, 26.12	1908.10
7.		INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	✓	N/R	ACI 318: 26.5	1908.6, 1908.7 1908.8
8.		VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	N/R	✓	ACI 318: 26.5.3- 26.5.5	1908.9
9.		INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	N/R	✓	ACI 318: 26.11.1.2(b)	

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- 13.1. CONCRETE: SPECIAL INSPECTION AND TESTING PER IBC TABLE 1705.3 AS NOTED IN TABLE 13, INCLUDING:
- 13.1.1. CONTINUOUS SPECIAL INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.
- 13.1.2. CONTINUOUS SPECIAL INSPECTION OF BOLTS INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.
- 13.1.3. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE SHALL BE AS DESCRIBED IN THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE (ICC, IAPMO, ETC.).
- 13.2. SPECIAL INSPECTIONS AND TESTS SHALL NOT BE REQUIRED FOR THE FOLLOWING:
- 13.2.1. NON-STRUCTURAL CONCRETE SLABS ON GRADE.

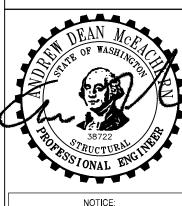
	SPECIAL INSPECTION OR TEST TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCE STANDARD
	AISC TABLE N5.4-1	1	, ==1.1011	1
1.	PRIOR TO WELDING, VERIFY AND INSPECT THE FOLLOWING:	N/R	 	
Α.	WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	√	N/R	
В.	WELDING PROCEDURE SPECIFICATIONS (WPS)	√	N/R	
C.	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES	√	N/R	AISC 360 A3.
C.	MATERIAL IDENTIFICATION OF STRUCTURAL STEEL MEMBERS	N/R	✓	AISC 360 A3.
E.	WELDER IDENTIFICATION SYSTEM	N/R	✓	
F.	FIT-UP OF GROOVE WELDS, INCLUDING JOINT GEOMETRY	ST42201 W 20		
	1) JOINT PREPARATION	N/R	✓	
	2) DIMENSIONS: ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL	N/R	✓	
	3) CLEANLINESS: CONDITION OF STEEL SURFACES	N/R	√	
	4) TACKING: TACK WELD QUALITY AND LOCATION	N/R	√	
	5) BACKING TYPE AND FIT (IF APPLICABLE)	N/R	√	
G.	FIT-UP OF CJP GROOVE WELDS OF HSS T-,Y- AND K-JOINTS WITHOUT BACKING, INCLUDING JOINT GEOMETRY.			
	1) JOINT PREPARATION	✓	N/R	
	2) DIMENSIONS: ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL	✓	N/R	
	3) CLEANLINESS: CONDITION OF STEEL SURFACES	✓	N/R	
	4) TACKING: TACK WELD QUALITY AND LOCATION	✓	N/R	
H.	CONFIGURATION AND FINISH OF ACCESS HOLES	N/R	✓	
H.	FIT-UP OF FILLET WELDS		~~	
	1) DIMENSIONS: ALIGNMENT, GAPS AT ROOT	N/R	✓	
	2) CLEANLINESS: CONDITION OF STEEL SURFACES	N/R	√	
	3) TACKING: TACK WELD QUALITY AND LOCATION	N/R	√	
<u>l</u> .	CHECK WELDING EQUIPMENT	N/R	✓	
	AISC 360 TABLE N5.4-2			
2.	DURING WELDING, VERIFY AND INSPECT THE FOLLOWING:			
A.	USE OF QUALIFIED WELDERS	N/R	✓	
B.	CONTROL AND HANDLING OF WELDING CONSUMABLES			
	1) PACKAGING	N/R	✓	
C.	2) EXPOSURE CONTROL NO WELDING OVER CRACKED TACK WELDS	N/R	✓	
D.	ENVIRONMENTAL CONDITIONS	N/R	V	
D.	1) WIND SPEED WITHIN LIMITS	N/R	✓	
	2) PRECIPITATION AND TEMPERATURE	N/R	✓	
E.	WELDING PROCEDURE SPECIFICATIONS FOLLOWED	(6) s		
	1) SETTINGS ON WELDING EQUIPMENT	N/R	✓	
	2) TRAVEL SPEED	N/R	✓	
	3) SELECTED WELDING MATERIALS	N/R	✓	
	4) SHIELDING GAS TYPE AND FLOW RATE	N/R	√	
	5) PREHEAT APPLIED	N/R	√	
	6) INTERPASS TEMPERATURE MAINTAINED	N/R	√	
	7) PROPER POSITION	N/R	√	
F.	WELDING TECHNIQUES 1) INTERPASS AND FINAL CLEANING	N/R	1	
	2) EACH PASS WITHIN PROFILE LIMITATIONS	N/R N/R	\ \frac{1}{\sqrt{2}}	
	3) EACH PASS MEETS QUALITY REQUIREMENTS	N/R	· /	
G.	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS		N/R	
	AISC 360 TABLE N5.4-3	1 *		I
3.	AFTER WELDING, VERIFY AND INSPECT THE FOLLOWING:	T	1	1
3. A.	WELDS CLEANED	N/R	✓	
 В.	SIZE, LENGTH, AND LOCATION OF WELDS	N/IX ✓	N/R	
C.	WELDS MEET VISUAL ACCEPTANCE CRITERIA	,	19/13	
٥,	1) CRACK PROHIBITION	✓	N/R	
	2) WELD TO BASE METAL FUSION	✓	N/R	
	3) CRATER CROSS SECTION	✓	N/R	
	4) WELD PROFILES	✓	N/R	
	5) WELD SIZE	✓	N/R	
	6) UNDERCUT	√	N/R	
	7) POROSITY	√	N/R	
D.	ARC STRIKES	√	N/R	
E.	k-AREA	✓	N/R	
F.	BACKING REMOVED AND WELD TABS REMOVED, IF REQUIRED	√	N/R	
G.	REPAIR ACTIVITIES	✓	N/R	
H.	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR	✓	N/R	
l.	MEMBER NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE			
6.5	APPROVAL OF THE ENGINEER OF RECORD	N/R	✓	1

NOTES CONTINUE ON SHEET S0.22



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02/01/2024 Rev# 2230769.20

Start Date:
Project Number:
File Name:

AND

TESTING AND INSPECTION

SHEET NO. **S0.21**

15.B	REQUIRED SPECIAL INSPECTION AND TES CONSTRUCTION – INSPECTION OF BOLTIN		RUCTURAL	STEEL
	SPECIAL INSPECTION OR TEST TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD
	AISC 360 TABLE N5.6-1			
1.	PRIOR TO BOLTING, VERIFY AND INSPECT THE FOLLOWING:			
A.	MANUFACTURER'S CERTIFICATIONS FOR FASTENER MATERIALS	✓	N/R	
В.	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	N/R	✓	
C.	PROPER FASTENER SELECTED FOR JOINT DETAIL	N/R	✓	AISC 360 A3.1
D.	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	N/R	✓	
E.	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITIONS AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	N/R	✓	
F.	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	✓	N/R	
G.	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	N/R	✓	
	AISC 360 TABLE N5.6-2			
2.	DURING BOLTING, VERIFY AND INSPECT THE FOLLOWING:			
A.	FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	N/R	✓	
B.	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	N/R	✓	
C.	PREVENTED FROM ROTATING	N/R	✓	
D.	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	N/R	✓	
	AISC 360 TABLE N5.6-3			
3.	AFTER BOLTING, VERIFY AND INSPECT THE FOLLOWING:			
A.	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	✓	N/R	

15

15.1. STRUCTURAL STEEL CONSTRUCTION:

SPECIAL INSPECTION AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH THE QUALITY CONTROL AND QUALITY ASSURANCE REQUIREMENTS OF AISC 360, AS NOTED IN TABLES 15A, 15B, AND AWS D1.1, INCLUDING:

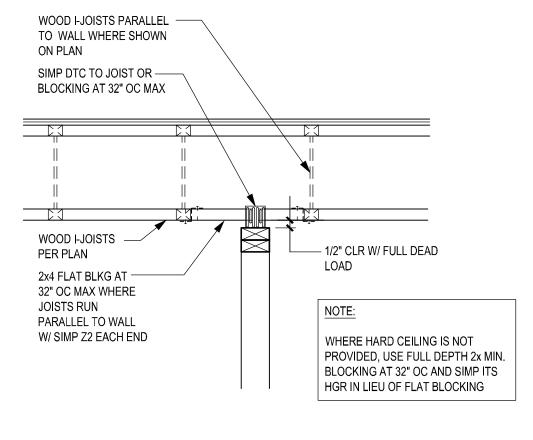
- 15.1.1. INSPECTION OF ERECTED STEEL SYSTEM.
- 15.1.2. REVIEW OF MATERIAL TEST REPORTS AND CERTIFICATIONS FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS
- 15.1.3. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE AS FOLLOWS:
 - A. VERIFY THAT WELD FILLER MATERIAL AND MANUFACTURER'S CERTIFICATE OF COMPLIANCE CONFORM TO AWS SPECIFICATION SPECIFIED. VERIFY WELDERS ARE CERTIFIED BY WABO, THAT PROPER ELECTRODES IN OVEN DRY CONDITIONS ARE USED, AND THAT PROPER METHODS AND PREPARATIONS ARE USED.
 - B. PERIODIC SPECIAL INSPECTION OF WELDING SHALL BE PERFORMED FOR SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16" AND FLOOR AND DECK WELDS.
 - C. CONTINUOUS SPECIAL INSPECTION OF WELDING SHALL BE PERFORMED ON COMPLETE AND PARTIAL PENETRATION GROOVE WELDS AND FILLET WELDS GREATER THAN 5/16".
 - D. ALL WELDS SHALL BE CHECKED VISUALLY.
 - E. ALL SHOP AND FIELD WELDING SHALL BE SUBJECT TO INSPECTION BY A WABO CERTIFIED WELDING INSPECTOR EMPLOYED BY THE OWNER. THE INSPECTOR SHALL UTILIZE RADIOGRAPHIC, ULTRASONIC, OR MAGNETIC PARTICLE TESTING AND ANY OTHER AID TO VISUAL INSPECTION THAT MAY BE DEEMED NECESSARY TO ASSURE THE ADEQUACY OF WELDING. THE OWNER SHALL CARRY OUT TESTING AND INTERPRETATION AT ANY STAGE AFTER WELDING.
 - F. 10% OF ALL FILLET WELDS SHALL BE CHECKED BY MAGNETIC PARTICLE TESTING.
 - G. 100% OF ALL COMPLETE PENETRATION WELDS SHALL BE CHECKED BY ULTRASONIC TESTING.
 - H. ALL WELDS FOUND DEFECTIVE AND REPAIRED SHALL BE REINSPECTED BY THE SAME METHOD ORIGINALLY USED. THE COST OF REPAIR AND REINSPECTION SHALL BE BORNE BY THE CONTRACTOR.
 - I. STANDARDS FOR ACCEPTANCE SHALL BE AS GIVEN IN AWS D1.1.
- 15.1.4. OBSERVATION OF BOLTING OPERATIONS.
- 15.1.5. WHERE CONTINUOUS SPECIAL INSPECTION IS NOTED, IT SHALL BE PERFORMED FOR EACH JOINT OR MEMBER. WHERE PERIODIC SPECIAL INSPECTION IS NOTED, IT SHALL BE PERFORMED ON ITEMS ON A RANDOM BASIS. PERIODIC SPECIAL INSPECTION NEED NOT DELAY FABRICATION OR ERECTION OPERATIONS.
- 15.1.6. EPOXY ANCHORS: SPECIFIC REQUIREMENTS FOR INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE OR MASONRY SHALL BE AS DESCRIBED IN THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE (ICC, IAPMO, ETC.).
- 15.1.7. EXPANSION ANCHORS: SPECIFIC REQUIREMENTS FOR INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE OR MASONRY SHALL BE AS DESCRIBED IN THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE (ICC, IAPMO, ETC.).

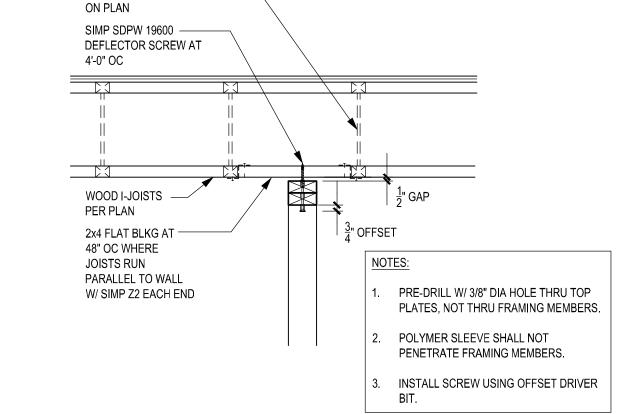
18. REQUIRED SPECIAL INSPECTION AND TESTS FOR SEISMIC RESISTANCE										
S	PECIAL INSPECTION OR TEST TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION							
	IN SEISMIC DESIGN CATEGORY C, D, E OR F: ATIONS OF ELEMENTS OF THE SEISMIC FORCE-RESISTING	✓	N/R							
THE MAIN SEISMIC F	NCHORING AND OTHER FASTENING OF COMPONENTS WITHIN ORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, BRAGES AND HOLDOWNS.	N/R	✓							

18.

- 18.1. SPECIAL INSPECTIONS AND TESTING FOR SEISMIC RESISTANCE:
- 18.1.1. SPECIAL INSPECTION IS NOT REQUIRED FOR THE FOLLOWING:
 - A. STRUCTURAL WOOD WHERE THE FASTENER SPACING OF THE SHEATHING IS GREATER THAN 4 INCHES ON CENTER
 - B. SPECIAL INSPECTION IS NOT REQUIRED FOR ARCHITECTURAL COMPONENTS WHERE:
 - a. EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR AND EXTERIOR VENEER ARE 30 FEET OR LESS IN HEIGHT ABOVE GRADE OR WALKING SURFACE.
 - b. EXTERIOR CLADDING AND INTERIOR AND EXTERIOR VENEERS WEIGHTING 5 PSF OR LESS.

	KEY TO AB	BREVIATIONS	
AB	ANCHOR BOLT	L	ANGLE
ABV	ABOVE	LLH	LONG LEG HORIZONTAL
ADDL	ADDITIONAL	LLV	LONG LEG VERTICAL
ADJ	ADJACENT	LOC	LOCATION
AFF	ABOVE FINISH FLOOR	LONGIT	LONGITUDINAL
ALT ARCH	ALTERNATE ARCHITECTURAL, ARCHITECT	MAX MB	MAXIMUM MACHINE BOLT
ASD	ALLOWABLE STRESS DESIGN	MECH	MECHANICAL
BEL	BELOW BELOW	MFR	MANUFACTURER
BLKG	BLOCKING	MIN	MINIMUM
BM	BEAM	MIW	MALLEABLE IRON WASHER
BNDY	BOUNDARY	NS	NEAR SIDE
BOT	BOTTOM	NTS	NOT TO SCALE
BRG	BEARING	NWT	NORMAL WEIGHT
BS	BOTH SIDES	0/	OVER
BTWN	BETWEEN	OC .	ON CENTER OUTSIDE FACE
BU CIP	BUILT UP CAST IN PLACE	O.F. OPP	OPPOSITE HAND
CJ	CONSTRUCTION/CONTROL JOINT	OPNG	OPENING
CL	CENTERLINE	OSB	ORIENTED STRAND BOARD
CLG	CEILING	PC	PRE-CAST
CLR	CLEAR	PDF	POWER DRIVEN FASTENERS, PAF
CMU	CONCRETE MASONRY UNIT	PAF	POWER ACTUATED FASTENERS, PDF
COL	COLUMN	PERP	PERPENDICULAR
CONC	CONCRETE	PL	PLATE
CONN	CONNECT, CONNECTION	PLF	POUNDS PER LINEAR FOOT
CONT	CONTINUOUS	PNL PDF FNCD	PANEL
COORD	COORDINATE COUNTERSINK	PRE-ENGR PROV	PRE-ENGINEERED PROVIDE
CTR	CENTER	PT	POST TENSIONED
CVR	COVER	PW	PLYWOOD
DEG	DEGREE	REF	REFERENCE
DIA	DIAMETER	REINF	REINFORCE, REINFORCEMENT
DBL	DOUBLE	REQ'D	REQUIRED
EA	EACH	RF	ROOF
EF ELEV	EACH FACE	SCHED	SCHEDULE
ELEV EMB	ELEVATION, ELEVATOR EMBEDMENT	SFRS SHTG	SEISMIC FORCE RESISTING SYSTEM SHEATHING
ENGR	ENGINEER	SIM	SIMILAR
EQ	EQUAL/EQUIVALENT	SIMP	SIMPSON STRONG-TIE
EQUIV	EQUIVALENT	SOG	SLAB ON GRADE
ES	EACH SIDE	SPCG	SPACING
EW	EACH WAY	SQ	SQUARE
(E)	EXISTING	STD	STANDARD
EXP	EXPANSION	STIFF	STIFFENER
EXT FDN	EXTERIOR FOUNDATION	SW T&G	SHEARWALL TONGUE AND GROOVE
FF	FINISH FLOOR	THK	THICK
FFE	FINISH FLOOR ELEVATION	THRD	THREADED
FOC	FACE OF CONCRETE	T.O.	TOP OF
FOM	FACE OF MASONRY	TOC	TOP OF CONCRETE
FOS	FACE OF STUD	TOF	TOP OF FOOTING
FS	FAR SIDE	TOPL	TOP OF PLATE
FTG	FOOTING	TOS	TOP OF STEEL
GALV	GALVANIZED	T.O.W. TRANSV	TOP OF WALL
GALV GC	GALVANIZED GENERAL CONTRACTOR	TRTD	TRANSVERSE TREATED
GL	GLUE LAMINATED	TYP	TYPICAL
GWB	GYPSUM WALL BOARD	UNO	UNLESS NOTED OTHERWISE
HGR	HANGER	VFY	VERIFY
HORIZ	HORIZONTAL	VERT	VERTICAL
HSS	HOLLOW STEEL SECTION	W/	WITH
HT	HEIGHT	W/O	WITHOUT
I.F.	INSIDE FACE	WF	WIDE FLANGE
INT JNT	INTERIOR	WHS WP	WELDED HEADED STUD
JST	JOINT JOIST	WTS	WORK POINT WELDED THREADED STUD
K, KIPS	KIPS=1000 LBS	WWF	WELDED TIREADED STOD WELDED WIRE FABRIC
<u> </u>			





WOOD I-JOISTS PARALLEL -

TO WALL WHERE SHOWN

INTERIOR NON-LOAD BEARING PARTITION WALL CONNECTION TO FLOOR JOISTS

ALTERNATE SCREW CONNECTION

SECTION

1" = 1'-0"



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CONSEJO GRAHAM OFFICE

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TESTING ANI INSPECTION NOTES

SHEET NO. **S0.22**

SHEARWALL SCHEDULE STUD SIZE AT 2x BOTTOM PLATE ASD ALLOWABLE | ASD ALLOWABLE BLOCKING FOUNDATION SILL LAMINATED STUDS AT ATTACHMENT TO SHEATHING UNIT SHEAR -MARK ADJOINING UNIT SHEAR -SIZE PL ATTACHMENT 'ERTICAL PANEL JOIN' PANEL EDGES SIZE SPACING WOOD BELOW SEISMIC WIND 15/32" APA RATED 10d COMMON 6" OC EDGES 16d AT 6" OC 16d AT 6" OC 3/4" DIA AT 48" OC 310 PLF 435 PLF .148" DIA x 2 1/4" MIN) STAGGERED SHEATHING 12" OC FIELD STAGGERED 10d COMMON 2x FLAT OR 15/32" APA RATED 4" OC EDGES (2) ROWS 16d AT 8" OC 2) ROWS 16d AT 8" OC 3x (12) 3/4" DIA AT 48" OC 645 PLF SHEATHING .148" DIA x 2 1/4" MIN) 12" OC FIELD 3x (12) STAGGERED STAGGERED 10d COMMON 15/32" APA RATED 3" OC EDGES (2) ROWS 16d AT 6" OC 2) ROWS 16d AT 6" OC 3x (12) 3/4" DIA AT 32" OC).148" DIA x 2 1/4" MIN SHEATHING 12" OC FIELD 3x (12) STAGGERED STAGGERED 15/32" APA RATED 2" OC EDGES ROWS 16d AT 8" OC 3) ROWS 16d AT 8" OC 3x (12) SHEATHING).148" DIA x 2 1/4" MIN 12" OC FIELD 3x (12) STAGGERED STAGGERED 5/32" APA RATED SHT 6" OC EDGES 2x FLAT OR (2) ROWS 16d AT 6" OC 16d AT 6" OC 3/4" DIA AT 32" OC 620 PLF 870 PLF TWO SIDES OF WALL .148" DIA x 2 1/4" MIN 12" OC FIELD STAGGERED 5/32" APA RATED SHT ROWS 16d AT 6" OC 2) ROWS 16d AT 8" OC 4" OC EDGES 3x (12) 3/4" DIA AT 16" OC 1290 PLF TWO SIDES OF WALL .148" DIA x 2 1/4" MIN 12" OC FIELD 3x (12) STAGGERED STAGGERED 10d COMMON 2x FLAT OR 2) ROWS 16d AT 6" OC 5/32" APA RATED SH1 3" OC EDGES 3/4" DIA THRU BOLT 3x (12) 1200 PLF 3/4" DIA AT 16" OC 1680 PLF .148" DIA x 2 1/4" MIN 3x (12) TWO SIDES OF WALL 12" OC FIELD AT 8" OC STAGGERED 10d COMMON 2x FLAT OR 15/32" APA RATED SHT0 2" OC EDGES 3/4" DIA THRU BOLT 3) ROWS 16d AT 8" OC 3x (12) 3/4" DIA AT 8" OC 2155 PLF).148" DIA x 2 1/4" MIN) TWO SIDES OF WALL 3x (12) 12" OC FIELD AT 8" OC STAGGERED

APA RATED SHEATHING SHEARWALL NOTES:

- 1. NAILS SHALL BE COMMON FROM AN AMERICAN OR CANADIAN MFR ONLY. MINIMUM NAIL PENETRATION INTO WOOD FRAMING SHALL BE 1 1/2" FOR 10d NAILS. UNLESS NOTED OTHERWISE, NAIL DIAMETERS AND LENGTHS SHALL BE AS NOTED IN THE CARPENTRY HARDWARE SECTION OF THE STRUCTURAL NOTES. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.
- 2. APA RATED SHEATHING MATERIAL MAY BE EITHER PLYWOOD OR ORIENTED STRAND BOARD CONFORMING TO DOC PS 1 OR PS 2. SHEATHING MAY BE ORIENTED EITHER HORIZONTALLY OR VERTICALLY.
- 3. SHEATHING PANELS SHALL NOT BE LESS THAN 4' x 8' EXCEPT AT SHEARWALL BOUNDARIES AND CHANGES IN FRAMING. ALL PANELS EDGES SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.
- 4. ALL INTERIOR SHEAR WALLS HAVE BEEN DESIGNATED. ALL EXTERIOR WALLS WITHOUT DESIGNATION SHALL BE TYPE W6. WHERE THE SHEARWALL HAS BEEN DESIGNATED ON THE PLANS TO EXTEND ALONG LENGTHS OF WALLS WITH PENETRATIONS, SHEATHING AND NAILING OF THAT TYPE SHALL BE REQUIRED ABOVE AND BELOW WALL OPENINGS. OTHERWISE, SHEATHING AND NAILING ABOVE AND BELOW OPENINGS
- 5. UNLESS NOTED OTHERWISE, THE SHEARWALL DESIGNATION APPLIES TO FULL EXTENT OF WALL BETWEEN CORNERS OF WALLS
- 6. SHEARWALLS SHALL RUN CONTINUOUS THROUGH BREAKS CAUSED BY INTERSECTING WALLS.
- 7. WHEN SHEATHING IS REQUIRED ON ONE SIDE ONLY, PLACE ON THE SIDE OF THE SYMBOL. WHERE THE SHEATHING IS NOTED ON TWO SIDES OF THE WALL, STAGGER VERTICAL PANEL JOINTS SUCH THAT JOINTS ON OPPOSITE SIDES OF THE WALL DO NOT FALL ON THE SAME FRAMING MEMBER.
- 8. NAIL SPACING INDICATED ON SCHEDULE APPLIES TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING. NAIL SPACINGS OF 3" ON CENTER OR LESS AT ADJOINING PANEL EDGES SHALL BE STAGGERED. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
- 9. PROVIDE SHEATHING EDGE NAILING TO ALL COLUMNS WITH HOLDOWNS AND STUDS ATTACHED TO STEEL TUBE COLUMNS.
- 10. HOT DIPPED GALVANIZED FASTENERS SHALL BE USED TO ATTACH TO ALL TREATED WOOD MEMBERS. ELECTROPLATED FASTENERS ARE NOT ACCEPTABLE
- 11. SPACING OF WALL STUDS SHALL BE AS NOTED ON THE PLANS. SPACING OF STUDS SHALL NOT EXCEED 24" OC.
- 12. WHERE NOTED, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL. TWO 2" NOMINAL FRAMING MEMBERS SHALL BE PERMITTED TO BE USED IN LIEU OF A SINGLE 3" NOMINAL MEMBER PROVIDED THE 2" NOMINAL MEMBERS ARE NAILED TOGETHER PER "LAMINATED STUDS AT VERTICAL PANEL JOINT" IN THE SCHEDULE ABOVE.
- 13. ANCHOR BOLTS SHALL NOT BE SPACED GREATER THAN 48" OC, AND SHALL HAVE 7" MIN. EMBED. EXPANSION BOLTS SHALL HAVE 5" MIN EMBED. SEE DETAILS FOR TYPE OF CONNECTION REQUIRED. PROVIDE A OC MAX, UNLESS NOTED OTHERWISE.
- 14. FOUNDATION ANCHOR BOLTS SHALL HAVE A STEEL PLATE WASHER AT EA ANCHOR BOLT NO LESS THAN 0.229" x 3" x 3" IN SIZE. THE HOLE IN THE PLATE WASHER SHALL BE PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE FOUNDATION SILL PLATE. SLOTTED PLATE WASHERS SHALL BE A MINIMUM 3" x 4" FOR 2x6 WALLS, AND 3" x 6" FOR 2x8 WALLS.
- 15. STANDARD CUT WASHERS MAY BE SUBSTITUTED IN LIEU OF PLATE WASHERS FOR ALL TYPE W6 WALLS LONGER THAN 10 FEET.
- 16. FOR SHEAR WALLS FRAMED WITH ENGINEERED WOOD STUDS (LSL OR LVL), DF No.2 2x FRAMING THAT MATCHES THE DEPTH OF THE STUDS MAY BE SUBSTITUTED FOR ENGINEERED WOOD AT ALL WALL FOUNDATION SILLS AND WALL TOP PLATES, AS WELL AS BLOCKING.

SHEARWALL SHEAR SCHEDULE

1" = 1'-0"

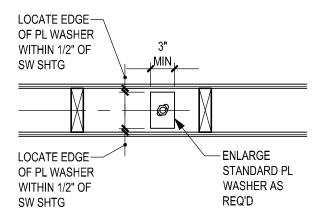
FOOTING SCHEDULE												
MARK	SIZE	REINFORCING	REMARKS									
F3.0	3'-0" x 3'-0" x 1'-0"	(4) #4 EACH WAY AT BOTTOM OF FOOTING										
F4.0	4'-0" x 4'-0" x 1'-0"	(4) #5 EACH WAY AT BOTTOM OF FOOTING										
F5.0	5'-0" x 5'-0" x 1'-2"	(5) #5 EACH WAY AT BOTTOM OF FOOTING										

FOOTINGS SCHEDULE NOTES:

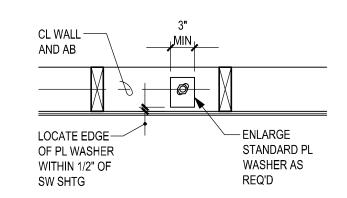
- 1. TOP OF FOOTING ELEVATION = -1'-0" UNLESS NOTED OTHERWISE ON PLAN.
- 2. FOOTING DESIGN BASED ON 3000 PSF ALLOWABLE SOIL BEARING PRESSURE
- 3. EQUALLY SPACE REINFORCING IN EACH DIRECTION.
- 4. PROVIDE 3" CLEAR TO REINFORCING AT BOTTOM OF FOOTING.
- 5. AT HOLDOWN LOCATIONS THICKEN AND WIDEN TYPICAL CONTINUOUS OR THICKENED SLAB FOOTING AS NOTED IN THE HOLDOWN SCHEDULE 2 / S0.12.

FOOTING SCHEDULE

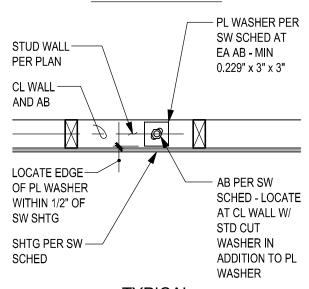
NTS



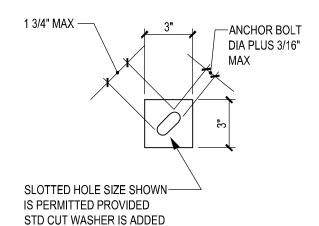
CONDITION AT WALLS SHEATHED BOTH SIDES



CONDITION AT 2x6 AND LARGER WALLS



TYPICAL CONDITION



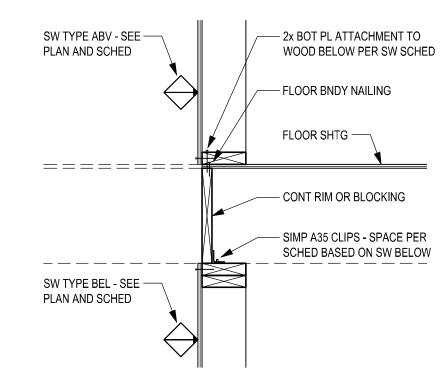
ABV SLOTTED HOLE STANDARD (MINIMUM) PL

WOOD SHEARWALL SHEAR TRANSFER SCHEDULE

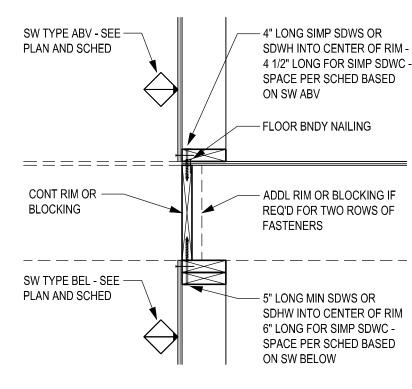
SHEARWALL TYPE MARK	RIM BOARD TO 2x TOP PLATE CONNECTION	RIM BOARD TO 2x TOP OR BOTTOM PLATE	RIM BOARD TO 2x TOP OR BOTTOM PLATE
₩ 6	SIMPSON A35 AT 24" OC	SIMPSON SDWS AT 16" OC	SIMPSON SDWH OR SDWC AT 15" OC
₩ 4	SIMPSON A35 AT 16" OC	SIMPSON SDWS AT 11" OC	SIMPSON SDWH OR SDWC AT 10" OC
₩ 3	SIMPSON A35 AT 12" OC	SIMPSON SDWS AT 8" OC	SIMPSON SDWH OR SDWC AT 8" OC
₩ 2	SIMPSON A35 AT 10" OC	SIMPSON SDWS AT 6" OC	SIMPSON SDWH OR SDWC AT 6" OC
2W 6	(2) SIMPSON A35 AT 24" OC	SIMPSON SDWS AT 8" OC	SIMPSON SDWH OR SDWC AT 7" OC
2W 4	(2) SIMPSON A35 AT 16" OC	SIMPSON SDWS (2) ROWS AT 11" OC	SIMPSON SDWH OR SDWC (2) ROWS AT 10" OC
2W 3	(2) SIMPSON A35 AT 12" OC	SIMPSON SDWS (2) ROWS AT 8" OC	SIMPSON SDWH OR SDWC (2) ROWS AT 8" OC
2 <u>W</u>	(2) SIMPSON A35 AT 10" OC	SIMPSON SDWS (2) ROWS AT 6" OC	SIMPSON SDWH OR SDWC (2) ROWS AT 6" OC

WOOD SHEARWALL SHEAR TRANSFER SCHEDULE NOTES:

- 1. CONNECTOR SPACINGS ARE BASED ON SEISMIC LOAD CAPACITIES OF NDS SDPWS.
- AT EXTERIOR CONDITIONS WHERE HORIZONTAL PANEL JOINTS IN THE SHEATHING ARE LOCATED A MINIMUM OF 4" AWAY FROM THE TOP OR BOTTOM PLATE AND SHEARWALL EDGE NAILING FROM SHEARWALL ABOVE AND BELOW IS MADE INTO THE RIM BOARD, CLIPS OR SCREWS SHOWN MAY BE OMITTED.
- WHERE REQUIRED NAIL, SCREW OR CLIP SPACING IS TOO CLOSE ON CENTER TO PREVENT SPLITTING OF THE RIM OR BLOCKING PROVIDE ADDITIONAL RIM BOARD OR BLOCKING.
- 4. GC MAY USE FRAMING SCREW OPTION TO ATTACH BOTTOM PLATE COMBINED WITH A35 CLIP OPTION TO ATTACH TOP PLATE.
- FRAMING SCREWS SHALL BE SCREWED THROUGH THE CENTER OF THE RIM OR BLOCKING MATERIAL
- 6. BLOCKING CONDITIONS ARE SIMILAR TO RIM CONDITIONS SHOWN



SIMPSON A35 CLIP OPTION



SIMPSON FRAMING SCREW OPTION

WOOD SHEARWALL SHEAR TRANSFER SCHEDULE

1" = 1'-0"

2

ALTERATION OF THIS DOCUMENT SHALL INVALIDATE THE PROFESSIONAL SEAL AND SIGNATURE, PUBLICATION OF TH OCUMENT DOES NOT DEROGATE FROM RESERVED OWNER

SHEET NO.

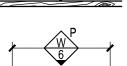
S0.31

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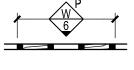
DATE: January 30, 2024 FILENAME: Q:\2022\2220769\20_STR\CAD\2220769S-000.dwg

 \langle 1 angle KEYNOTE - REFER TO KEYNOTES ON THIS SHEET.

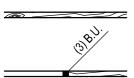
STEP FOOTING LOCATION - SEE DETAIL 6 / S0.11



SHEARWALL - REFER TO SHEARWALL SCHEDULE 1 / S0.31.



PERFORATED SHEARWALL - SHEATHING, NAILING AND BLOCKING SPECIFIED IN THE SHEARWALL SCHEDULE SHALL BE PROVIDED ABOVE AND BELOW OPENINGS FOR LENGTH INDICATED.



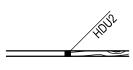
WOOD STUD FRAMED WALL ORIGINATING ON FOUNDATION OR FLOOR FRAMING PLAN ON WHICH IT IS NOTED.

WALL BELOW FLOOR OR ROOF FRAMING PLAN ON WHICH IT IS ===== NOTED - SEE PLAN BELOW FOR REQUIREMENTS.

COLUMN ORIGINATING ON FOUNDATION OR FLOOR FRAMING

PLAN ON WHICH IT IS NOTED.

COLUMN BELOW WITH HEADER SUPPORTING FLOOR OR ROOF FRAMING ON THE LEVEL ON WHICH IT IS NOTED - SEE PLAN BELOW FOR COLUMN REQUIREMENTS.



INDICATES COLUMN WITH HOLDOWN - PROVIDE SIMPSON HOLDOWN INDICATED AND SEE DETAIL 2 / S0.12 FOR REQUIREMENTS.



OF THE STRUCTURAL NOTES AND PROJECT SPECIFICATIONS FOR VENEER ATTACHMENT REQUIREMENTS.

CAST IN PLACE CONCRETE WALL. SEE PLAN AND

DETAILS FOR REINFORCING REQUIREMENTS.

WOOD STRUCTURAL WALL WITH BRICK VENEER. SEE SECTION 4

STEP IN SLAB.

FOUNDATION NOTES

- 1. SEE SHEET S0.01 FOR STRUCTURAL NOTES. SEE SHEET S0.11 THRU S0.12 FOR TYPICAL DETAILS. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES. SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND FOOTING SCHEDULE.
- 2. SEE GEOTECHNICAL ENGINEERING REPORT FOR ALL FOUNDATION AND SLAB SUPPORT REQUIREMENTS. THIS INCLUDES ALL EXCAVATION, FILL AND FILL PLACEMENT REQUIREMENTS.
- 3. SEE ARCHITECTURAL/MECHANICAL DRAWINGS FOR DRAINS, SLOPES, AND OTHER FLOOR DEPRESSIONS NOT SHOWN.
- 4. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS, AND WALLS NOT SHOWN.
- 5. VERIFY ALL WINDOW AND DOOR WIDTHS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- 6. LOCATIONS OF COLUMNS LOCATED IN WALLS ARE SHOWN SCHEMATICALLY ON STRUCTURAL DRAWINGS. THE CONTRACTOR IS TO COORDINATE LOCATION OF COLUMNS WITH ARCHITECTURAL DRAWINGS.
- 7. COLUMNS NOT SPECIFICALLY LOCATED BY DIMENSIONS SHALL BE LOCATED ADJACENT TO OPENINGS AS DIMENSIONED BY THE ARCHITECT. SEE ARCHITECTURAL DRAWINGS FOR DETAILS AT ALL WINDOW AND DOOR JAMBS.
- 8. SEE ARCHITECTURAL DRAWINGS FOR STUD SIZE, SPACING, AND CALLOUTS AT NON-STRUCTURAL WALLS.
- 9. FOR TYPICAL CONNECTION OF NON-LOAD BEARING WALLS TO SLAB, USE POWDER ACTUATED FASTENERS AT 16" OC.
- 10. SEE THE SHEARWALL SCHEDULE FOR SHEATHING, NAILING AND ANCHOR BOLT REQUIREMENTS AT ALL WALLS INDICATED AS SHEARWALLS. EXTENT OF THE SHEARWALL REQUIREMENTS INCLUDE THE TOTAL LENGTH OF THE WALL INCLUDING ABOVE AND BELOW WINDOWS AND DOORS UNLESS NOTED OTHERWISE.
- 11. ALL LOAD BEARING WALL STUDS SHALL BE COVERED WITH A MIN OF 1/2" SHEATHING (EITHER GWB, OR WOOD SHEATHING AS APPLICABLE) ONE SIDE OF STUDS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL COVERING REQUIREMENTS. SEE SHEARWALL SCHEDULE FOR SHEATHING. ATTACHMENT AT SHEARWALLS.
- 12. ALL 2X STUDS SHALL BE CONTINUOUS BETWEEN DETAIL CUTS. POSITION BUILT-UP STUDS TO ALIGN WITH THE TRUSSES ABOVE.
- 13. UNLESS NOTED OTHERWISE ON PLAN, COLUMNS INDICATED EACH SIDE OF WALL OPENINGS ARE (3) 2x BUILT-UP STUD COLUMN INCLUDING ONE TRIMMER STUD FOR OPENINGS UP TO 4'-0" WIDE, (4) 2x BUILT-UP STUD COLUMN INCLUDING ONE TRIMMER STUD FOR OPENINGS UP TO 6'-8" WIDE, (5) 2x BUILT-UP STUD COLUMN INCLUDING ONE TRIMMER STUD FOR OPENINGS TP TO 9'-4" WIDE, (7) 2x BUILT-UP STUD COLUMN INCLUDING TWO TRIMMER STUDS FOR OPENINGS UP TO 12'-0" WIDE. PROVIDE MIN (2) 2x BU AT HDU2-HDU4, (3) 2x BU AT HDU8 AND HDU11, OR 6 x 6 POST AT HDU14.

FLOOR FRAMING NOTES:

- 1. SEE SHEET S0.01 FOR STRUCTURAL NOTES. SEE SHEET S0.11 THRU S0.12 FOR TYPICAL DETAILS. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES. SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND FOOTING SCHEDULE.
- 2. ALL BEAMS SHALL HAVE 0" CAMBER UNLESS NOTED OTHERWISE.
- ALIGN JOISTS WITH STUDS BELOW WHERE SPACINGS ARE EQUAL.
- 4. VERIFY ALL TOP OF BEAM AND TOP OF WALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5. VERIFY ALL DOOR AND WINDOW WIDTHS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- 6. VERIFY SIZE AND LOCATION OF ALL MECHANICAL PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
- 7. ALL SAWN HEADERS SHOWN SHALL BE DF No.1 UNLESS NOTED OTHERWISE.
- 8. ALL PRE-ENGINEERED JOIST SPACINGS SHALL BE 2'-0" OC EXCEPT AS SHOWN OR NOTED.
- 9. FLOOR JOIST TYPES AND NUMBER SHOWN ARE SCHEMATIC ONLY. JOIST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS. ALL DRAWINGS AND CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. JOIST MANUFACTURER SHALL SUPPLY ALL ENGINEERING AND CONNECTION DETAILS. ALL ENGINEERING DETAILS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- 10. SCHEMATIC FLOOR SYSTEM SHOWN HAS BEEN DESIGNED TO MEET OR EXCEED AN REDBUILT FLOOR CHOICE PERFORMANCE RATING OF 8 OR BETTER. JOIST MANUFACTURER SHALL SUBMIT CERTIFICATION THAT JOISTS DESIGNED AND INSTALLED AS INDICATED IN THE ARCHITECTURAL, STRUCTURAL, AND SHOP DRAWINGS RESULT IN A FLOOR SYSTEM WITH A VIBRATION PERCEPTIBILITY PERFORMANCE EQUAL TO OR EXCEEDING A REDBUILT FLOOR CHOICE PERFORMANCE RATING OF 8 OR BETTER.
- 11. JOIST MANUFACTURER SHALL PROVIDE DOUBLE JOISTS BELOW ALL PARTITION WALLS PARALLEL TO JOISTS AS INDICATED ON THE PLANS.
- 12. ATTACH NON STRUCTURAL WALLS TO FLOOR PER DETAIL 1 / S0.22.
- 13. UNLESS NOTED OTHERWISE, SHEATHING SHALL BE UNBLOCKED AND ORIENTED WITH LONG EDGE OF PANEL (OR FACE GRAIN IF PLYWOOD IS USED) PERPENDICULAR TO SUPPORTS. PANELS SHALL BE STAGGERED WITH OFFSET JOINTS OCCURRING OVER SUPPORTS. MINIMUM SHEATHING DIMENSION PERPENDICULAR TO SUPPORTS SHALL BE 24" UNLESS EDGES OF PANEL ARE BLOCKED.
- 14. NWT CONCRETE (OR EQUIVALENT) TOPPING IS A NON-STRUCTURAL FLOOR FINISH PRODUCT, AND HAS NOT BEEN SPECIFIED OR DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD. THE MATERIAL IS SHOWN ON THESE DRAWINGS SOLELY FOR THE PURPOSE OF ITS INCLUSION IN THE DESIGN OF FLOOR JOISTS. THE ENGINEER OF RECORD ACCEPTS NO RESPONSIBILITY FOR THE APPROPRIATENESS, DESIGN, OR PROPER INSTALLATION OF THE TOPPING.

ROOF FRAMING NOTES:

- 1. SEE SHEET S0.01 FOR STRUCTURAL NOTES. SEE SHEET S0.11 THRU S0.12 FOR TYPICAL DETAILS. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES. SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND FOOTING SCHEDULE.
- 2. ALL BEAMS SHALL HAVE 0" CAMBER UNLESS NOTED OTHERWISE.
- 3. VERIFY ALL TOP OF BEAM AND TOP OF WALL ELEVATIONS WITH ARCHITECTURAL
- VERIFY ALL DOOR AND WINDOW WIDTHS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- 5. VERIFY SIZE AND LOCATION OF ALL MECHANICAL PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
- 6. ALL SHADED AREAS ARE SHALL BE OVERFRAMING AT 24" OC BY TRUSS MANUFACTURER.
- 7. BOTTOM CHORD ELEVATIONS MAY VARY. SEE ARCHITECTURAL DRAWINGS.
- 8. ALL SAWN HEADERS SHOWN SHALL BE DF No.1 UNLESS NOTED OTHERWISE.
- 9. ALIGN WOOD TRUSSES AND JOISTS WITH STUDS BELOW WHERE SPACINGS ARE EQUAL.
- 10. ATTACH NON STRUCTURAL WALLS TO ROOF PER DETAIL 1 / S0.22.
- 11. UNLESS NOTED OTHERWISE, SHEATHING SHALL BE UNBLOCKED AND ORIENTED WITH LONG EDGE OF PANEL (OR FACE GRAIN IF PLYWOOD IS USED) PERPENDICULAR TO SUPPORTS. PANELS SHALL BE STAGGERED WITH OFFSET JOINTS OCCURRING OVER SUPPORTS. MINIMUM SHEATHING DIMENSION PERPENDICULAR TO SUPPORTS SHALL BE 24" UNLESS EDGES OF PANEL ARE BLOCKED.
- 12. ALL PRE-ENGINEERED WOOD TRUSS SPACINGS SHALL BE 2'-0" OC UNLESS NOTED
- 13. ROOF JOIST TYPES AND NUMBER SHOWN SCHEMATIC ONLY JOIST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS. ALL DRAWINGS AND CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. JOIST MANUFACTURER SHALL SUPPLY ALL ENGINEERING AND CONNECTION DETAILS. ALL ENGINEERING DETAILS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

REINFORCING DEVELOPMENT AND SPLICE LENGTH SCHEDULE

					1						1	1										i						i					
	F'c	c = 3000 P	SI				F'	c = 4000 P	SI				F'	c = 5000 P	SI			F	c = 6000 P	'SI				F'	c = 8000 P	SI				ALL CON	CRETE ST	RENGTHS	;
BAR SIZE	Ld	Lt	Lsb	Lsbt		BAR SIZE	Ld	Lt	Lsb	Lsbt		BAR SIZE	Ld	Lt	Lsb	Lsbt	BAR SIZE	Ld	Lt	Lsb	Lsbt		BAR SIZE	Ld	Lt	Lsb	Lsbt		BAR SIZE	Lb	Lc	Lcs	-
#3	17	22	22	28	1	#3	15	19	19	25	1	#3	13	17	17	22	#3	12	16	16	20		#3	11	14	14	18		#3	9	12	12	
#4	22	29	29	38		#4	19	25	25	33		#4	17	23	23	29	#4	16	21	21	27		#4	14	18	18	23		#4	11	15	12	
#5	28	36	36	47		#5	24	31	31	41		#5	22	28	28	36	#5	20	26	26	33		#5	17	22	22	29		#5	14	19	15	
#6	33	43	43	56		#6	29	37	37	49		#6	26	34	34	44	#6	24	31	31	40		#6	21	27	27	35		#6	17	23	17	
#7	48	63	63	81		#7	42	54	54	71		#7	38	49	49	63	#7	34	45	45	58		#7	30	39	39	50		#7	20	27	20	
#8	55	72	72	93		#8	48	62	62	81		#8	43	56	56	72	#8	39	51	51	66		#8	34	44	44	57		#8	22	30	23	
#9	62	81	81	105		#9	54	70	70	91		#9	48	63	63	81	#9	44	57	57	74		#9	38	50	50	64		#9	25	34	26	
#10	70	91	91	118		#10	61	79	79	102		#10	54	71	71	92	#10	50	64	64	84		#10	43	56	56	72		#10	28	39	29	
#11	78	101	101	131		#11	67	87	87	114		#11	60	78	78	102	#11	55	71	71	93		#11	48	62	62	80		#11	31	43	32	
#14	93	121	-	-		#14	81	105	-	-		#14	72	94	-	-	#14	66	86	-			#14	57	74	-	-		#14	38	-	-	
#18	124	161	-	-		#18	108	140	-	-		#18	96	125	-	-	#18	88	114	-	-		#18	76	99	-	-		#18	50	-	-	
					1]					

REINFORCING DEVELOPMENT AND SPLICE LENGTH SCHEDULE NOTES:

- 1. REINFORCEMENT DEVELOPMENT AND SPLICE LENGTHS ARE IN ACCORDANCE WITH ACI 318.
- NOTATIONS:
- db: NOMINAL BAR DIAMETER (IN)
- Ld: TENSION DEVELOPMENT LENGTH (IN) FOR REINFORCEMENT SATISFYING THE FOLLOWING REQUIREMENTS: SLABS AND WALLS: CLEAR SPACING GREATER THAN 2db, AND CONCRETE CLEAR COVER GREATER THAN db BEAMS AND COLUMNS: CLEAR SPACING GREATER THAN db, AND CONCRETE CLEAR COVER GREATER THAN db
- Lt: DEVELOPMENT LENGTH OF TOP BARS IN TENSION = 1.3 X Ld (IN)
- Lb: DEVELOPMENT LENGTH OF BARS OR DOWELS IN COMPRESSION = 22 X db (IN)
- Lc: TIED COLUMN LAP SPLICE IN COMPRESSION = 30 X db (IN)
- Lcs: SPIRAL COLUMN LAP SPLICE IN COMPRESSION = 22.5 X db (IN)
- Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS = 1.3 X Ld (IN)
- Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS = 1.69 X Ld (IN)
- 3. MULTIPLY VALUES IN THE TABLE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET THE REQUIREMENTS FOR Ld IN NOTE 2.
- 5. THE DEVELOPMENT AND SPLICE LENGTHS ARE BASED ON REINFORCEMENT STRENGTH Fy = 60 KSI

4. TOP BARS: HORIZONTAL BEAM REINFORCING WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW.

6. #14 AND #18 BARS SHALL NOT BE LAP SPLICED. SEE GENERAL NOTES.

SCHEDULE

NTS

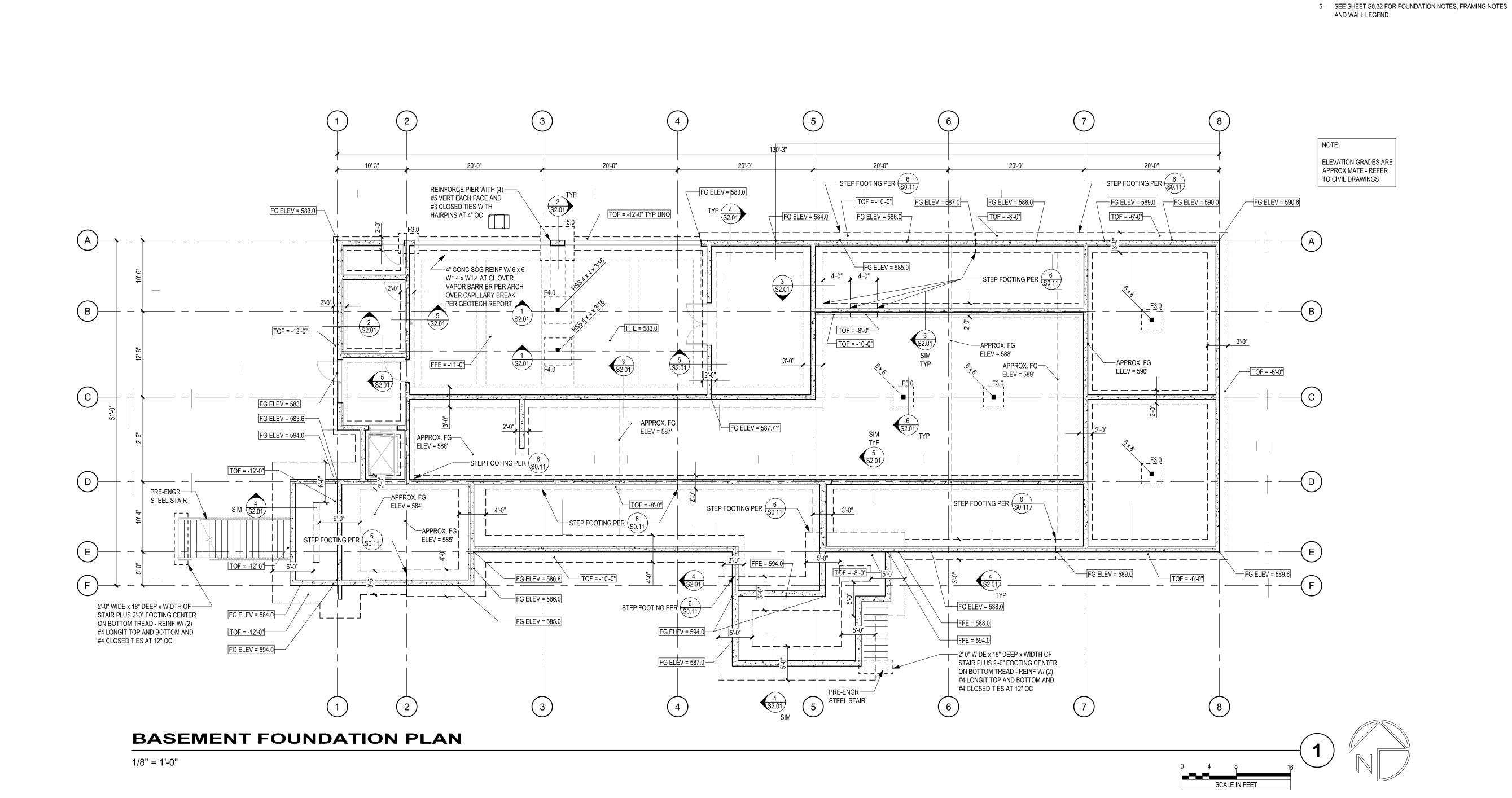


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S0.32

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GENERAL PLAN NOTES:

FOOTINGSCHEDULE.

1. SEE SHEET S0.01 FOR STRUCTURAL NOTES.

2. SEE SHEETS S0.11 AND S0.12 FOR TYPICAL DETAILS.

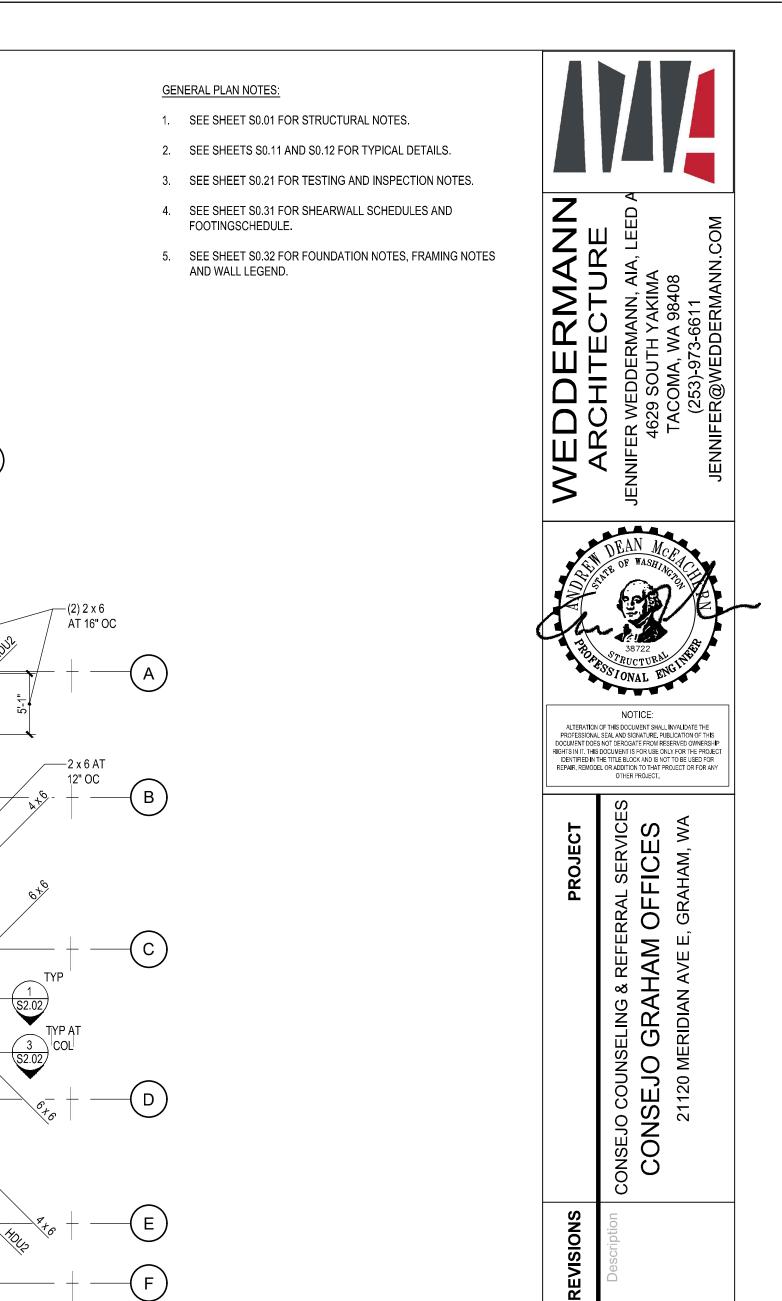
3. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES.

4. SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND

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SHEET NO.

S1.01





2 x 6 AT-16" OC



SHEET NO. **S1.11**

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B

D

1/8" = 1'-0"

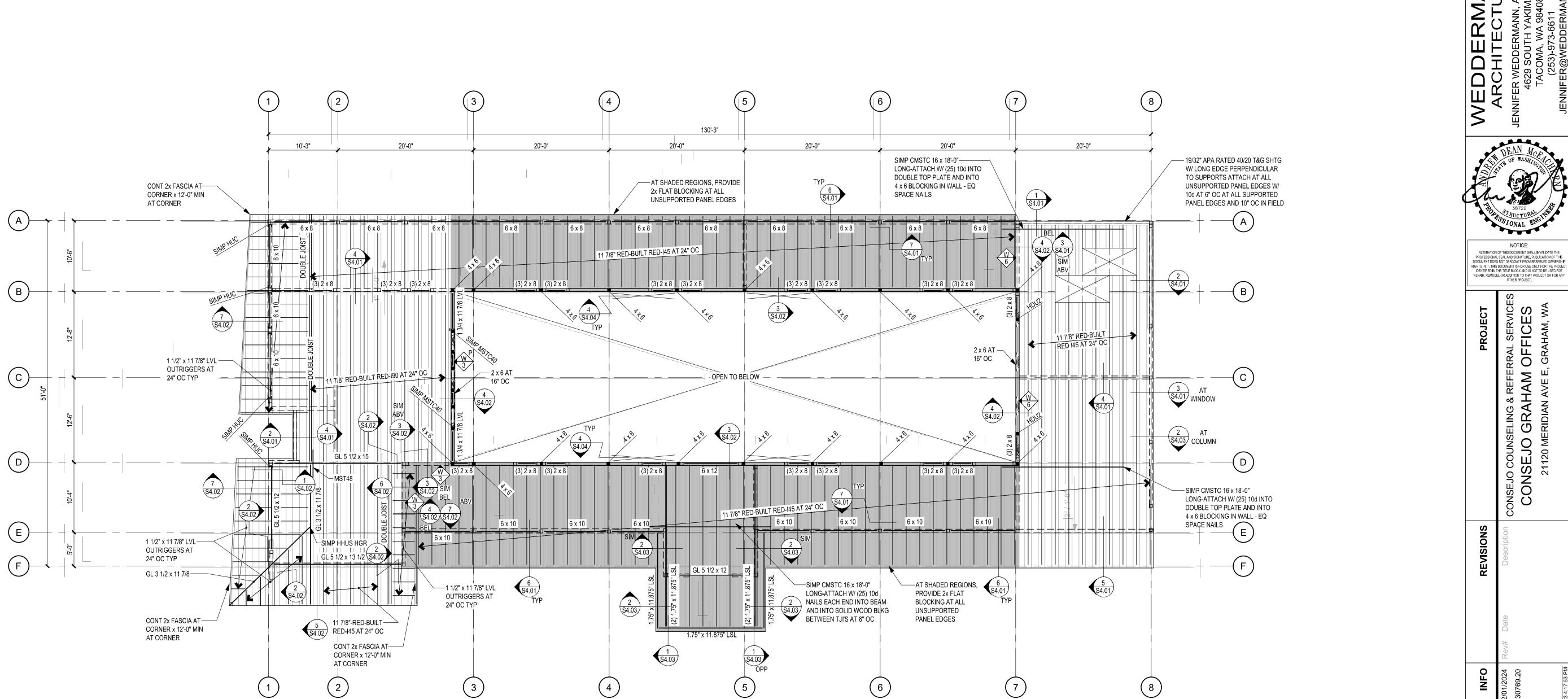
9 1/2" RED-BUILT RED-I45 AT 16" OC

1 1/2" NWT CONC TOPPING OVER 3/4" APA
RATED 48/24 T&G SHEATHING WITH LONG
EDGE PERPENDICULAR TO SUPPPORTS ATTACH W/ 10d AT 6" OC AT SUPPORTED
EDGES AND 12" OC IN FIELD

130'-3"

TYP AT COL

2 x 6 AT ----16" OC



ROOF FRAMING PLAN

1/8" = 1'-0"

DATE: January 30, 2024 FILENAME: Q:\2022\2220769\20_STR\CAD\2220769S-100.dwg



SCALE IN FEET

GENERAL PLAN NOTES:

FOOTINGSCHEDULE.

1. SEE SHEET S0.01 FOR STRUCTURAL NOTES.

2. SEE SHEETS S0.11 AND S0.12 FOR TYPICAL DETAILS.

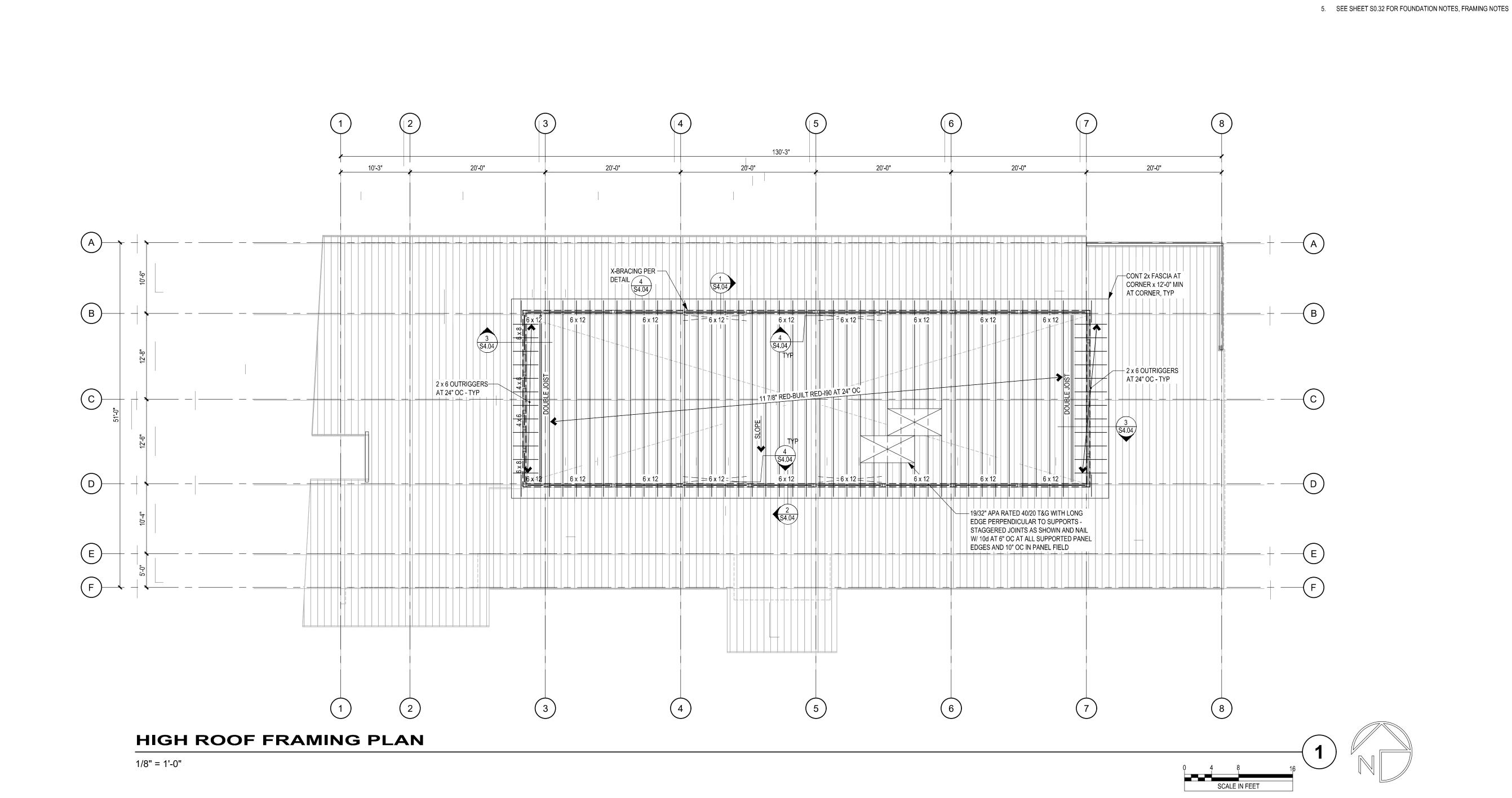
3. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES.

5. SEE SHEET S0.32 FOR FOUNDATION NOTES, FRAMING NOTES

4. SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND

S1.12

SHEET NO.







GENERAL PLAN NOTES:

1. SEE SHEET S0.01 FOR STRUCTURAL NOTES.

2. SEE SHEETS S0.11 AND S0.12 FOR TYPICAL DETAILS.

3. SEE SHEET S0.21 FOR TESTING AND INSPECTION NOTES.

 SEE SHEET S0.31 FOR SHEARWALL SCHEDULES AND FOOTINGSCHEDULE.

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DIAN AVE E, GRAHAM, WA

CONSEJO COUNSELING & REFE
CONSEJO GRAHAM
21120 MERIDIAN AVE E

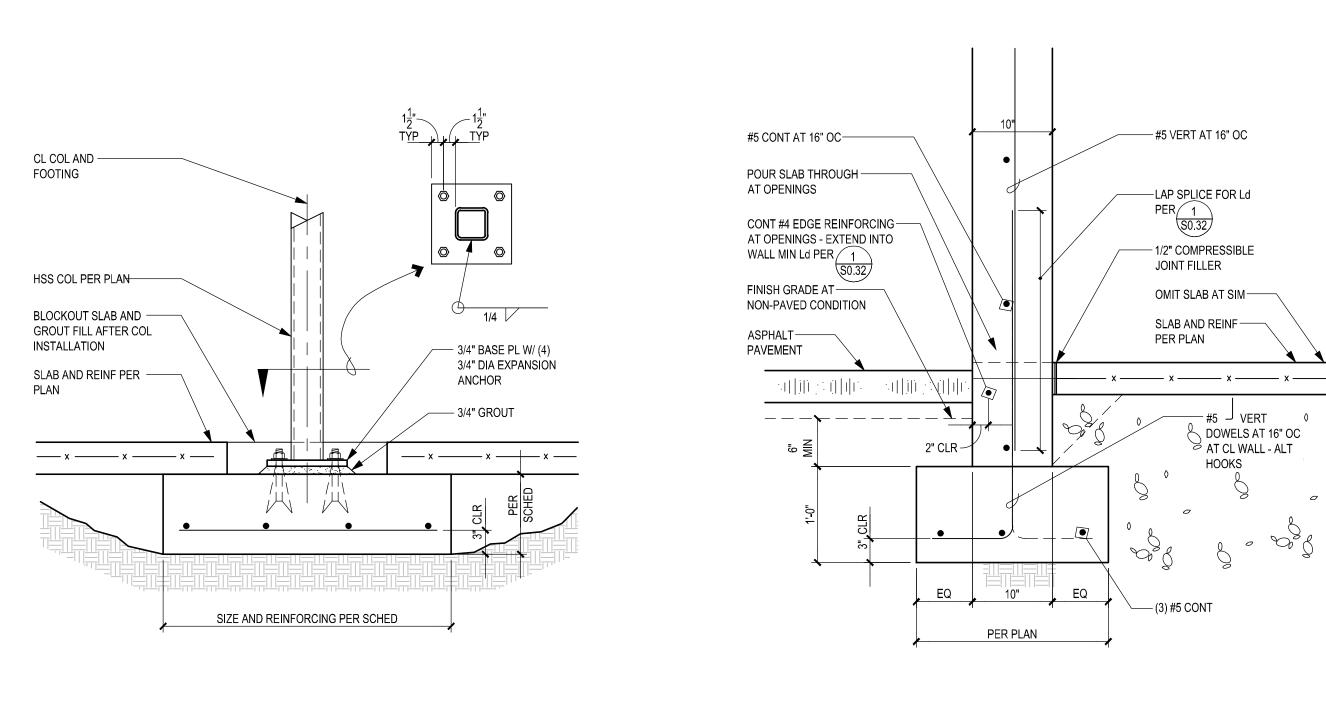
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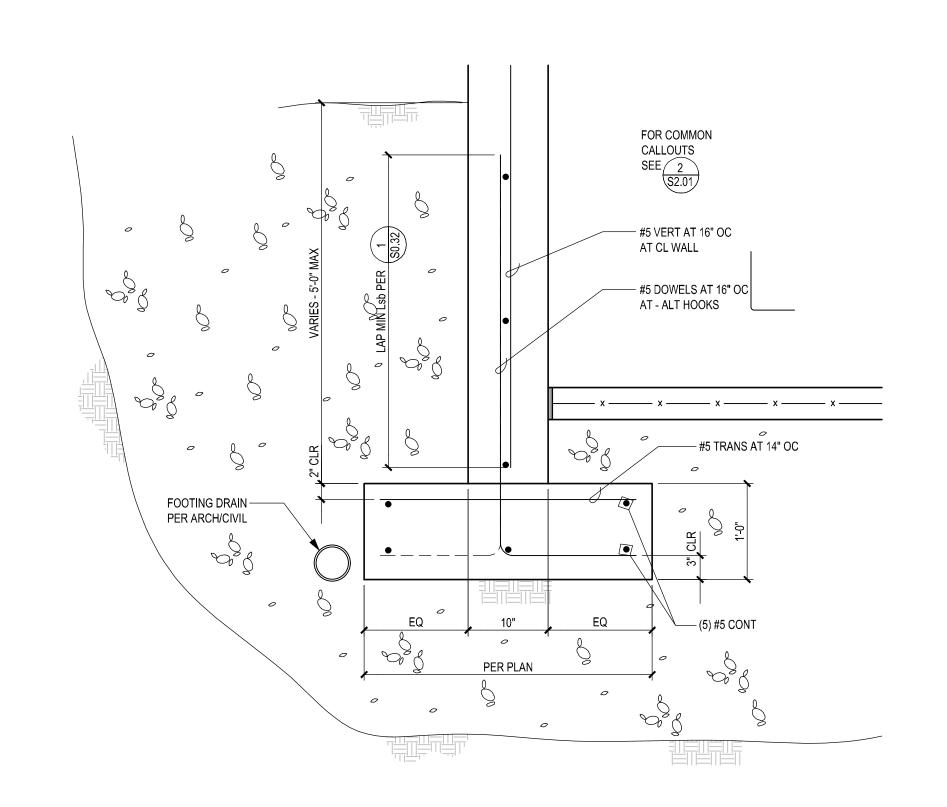
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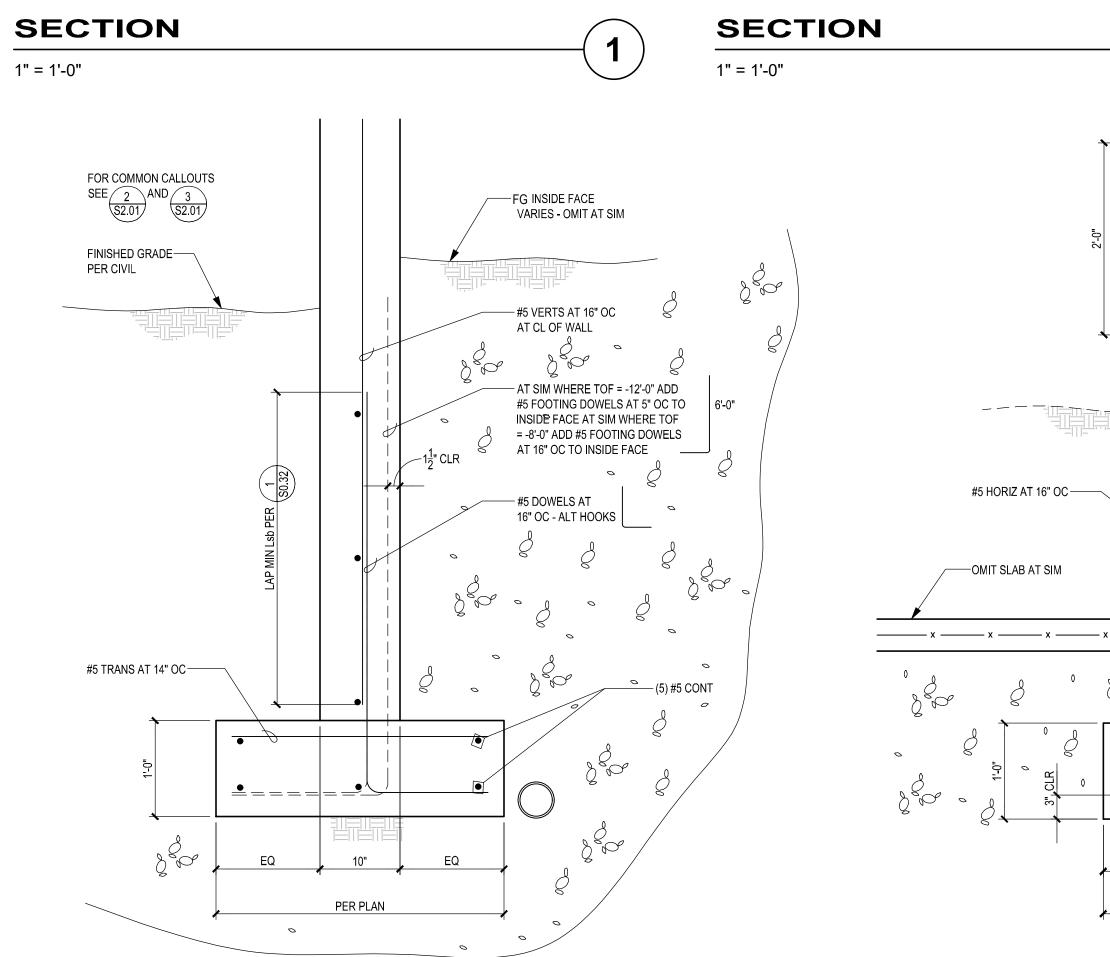
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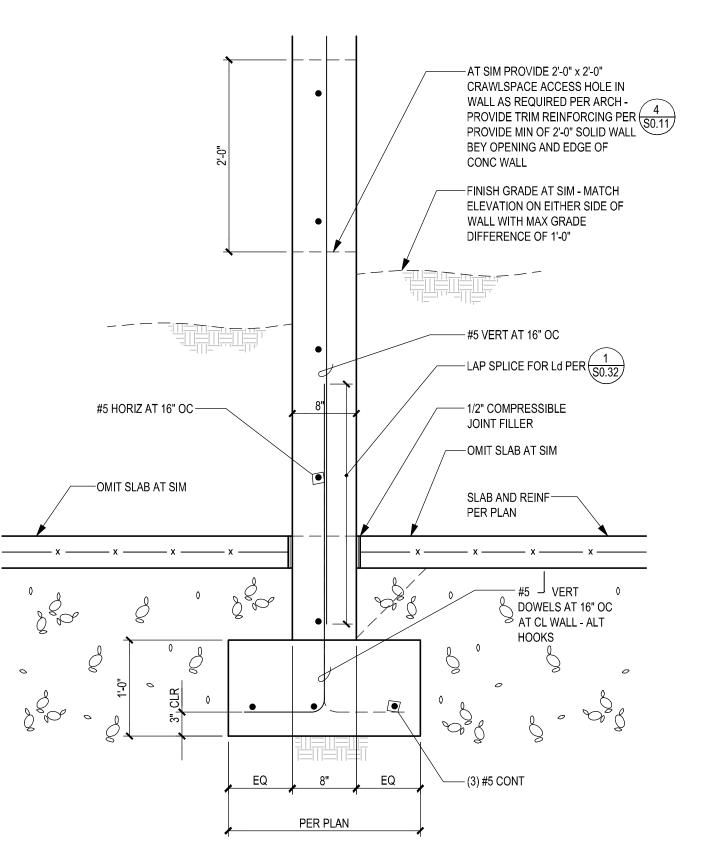
HIGH ROOF FRAMING PLAN

SHEET NO. **S1.13**









SECTION

1" = 1'-0"

4

SECTION

5

1" = 1'-0"



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FOUNDATION DETAILS

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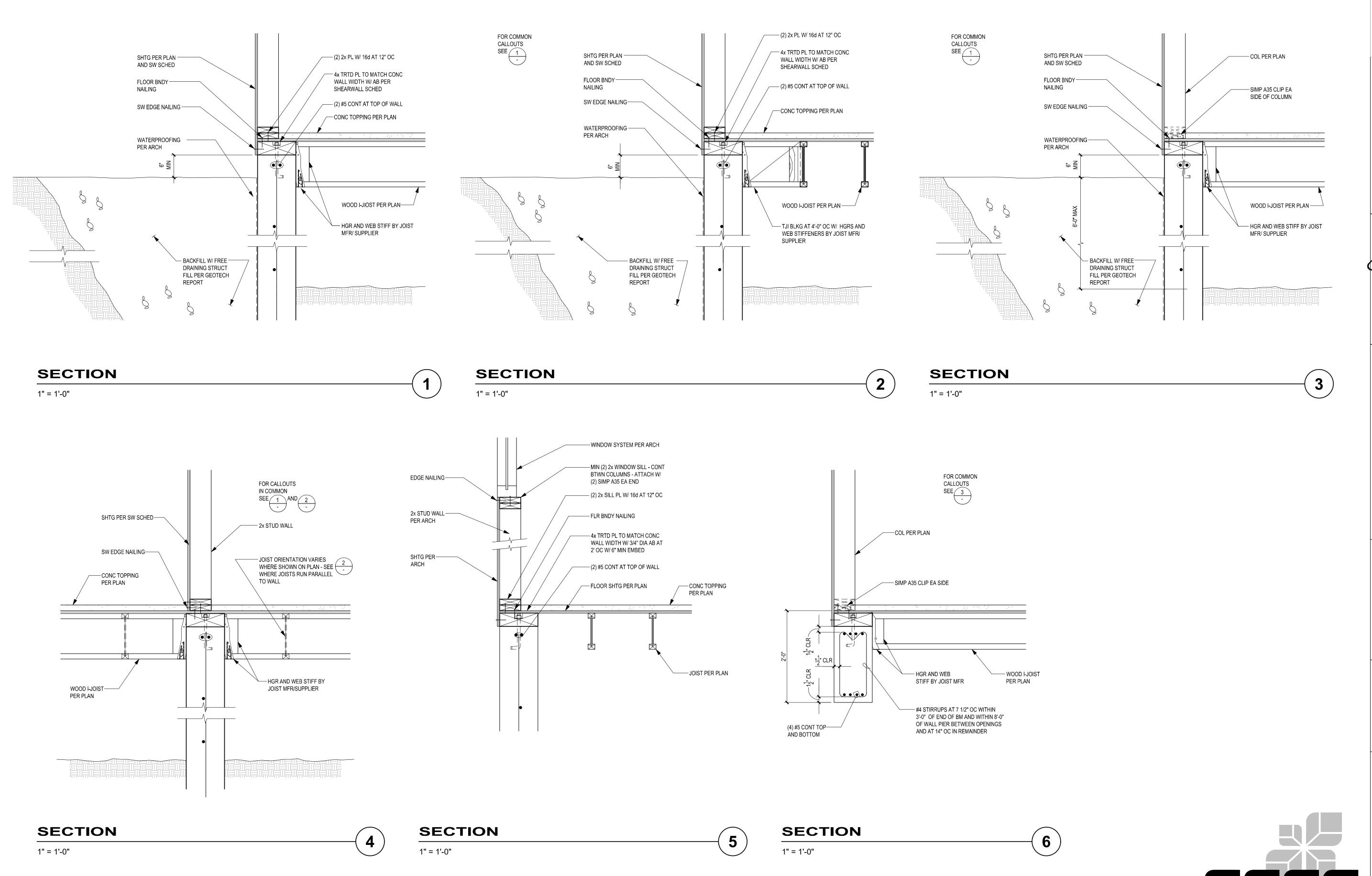
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SECTION

1" = 1'-0"

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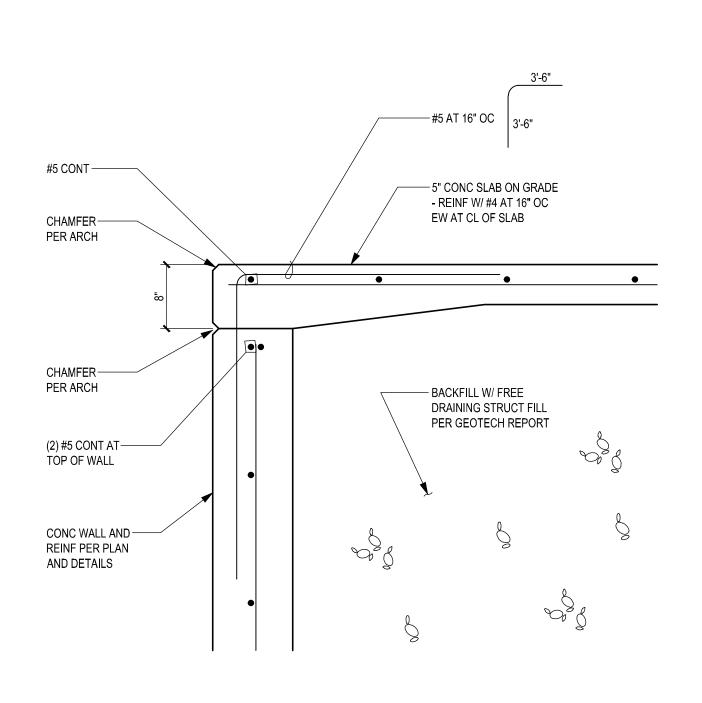


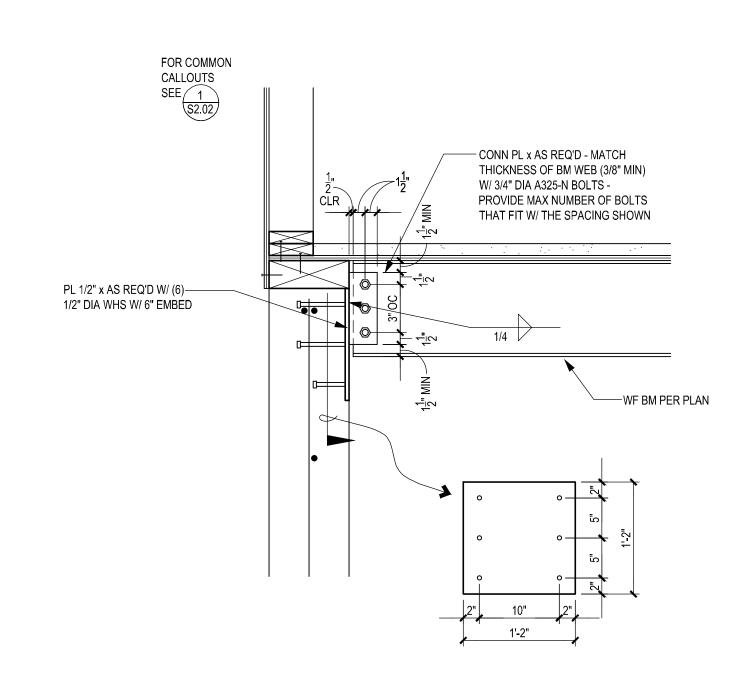
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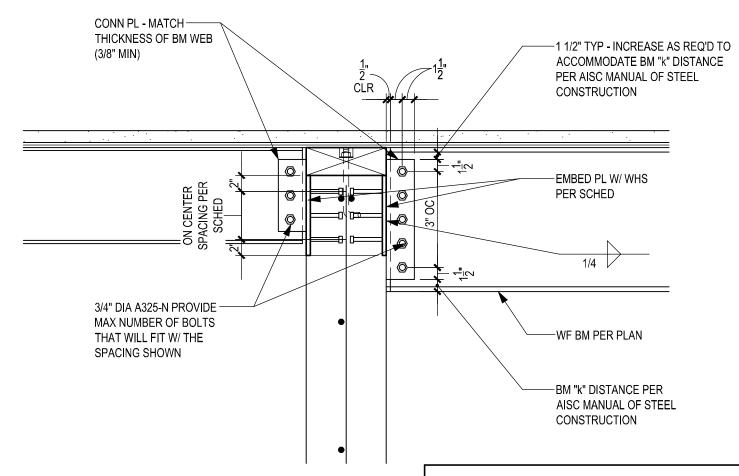
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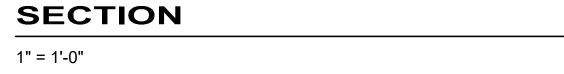


EMBE	DMENT	SCHED	ULE
SUPPORTED BEAM SIZE	EMB PLATE	WELDED HEADED STUDS	MAX FACTORED REACTION
W 12 x	PL 1/2" x 1'-4" x 1'-4"	(6) 3/4" DIA x 4" AT 6" OC AND 12" GAGE	17 KIPS
W 18 x	PL 1/2" x 2'-0" x 2'-2"	(6) 3/4" DIA x 4" AT 11" OC AND 20" GAGE	32 KIPS

SECTION

1" = 1'-0"

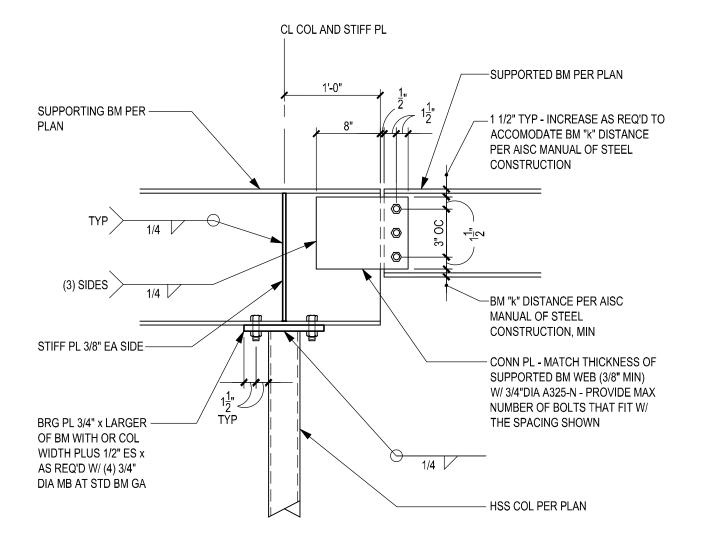


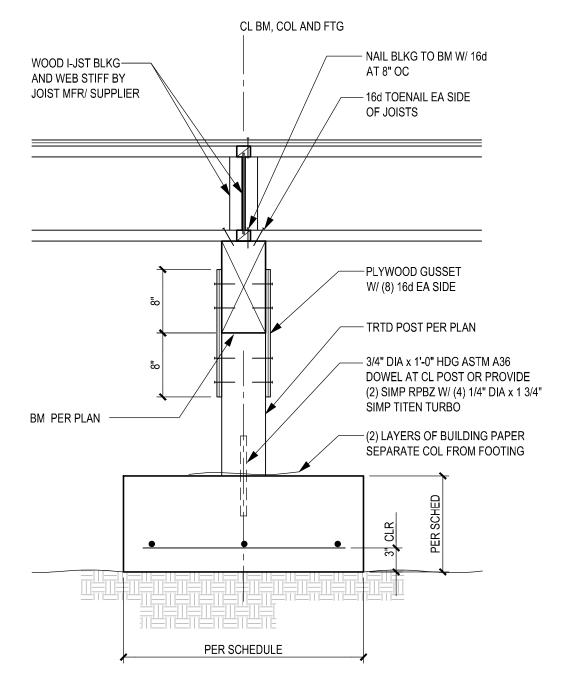


SECTION

1" = 1'-0"

— 2x STUD WALL PER PLAN - OMIT AT SIM AND SW SCHED - ATTACH SHTG INTO STEEL TYP 1/8 2 BMS W/ PDF AT 12" OC WOOD I-JOIST-PER PLAN — SIMP BA (MIN) OR HB TF HGR BY JST MFR - WELD TO BM FLANGE OR USE (6) 0.157" DIA x 5/8" PDFS - PROVIDE WEB STIFFENER BY JST MFR WF BEAM PER PLAN-- SIZE VARIES





6

SECTION

1" = 1'-0"

SECTION

1" = 1'-0"

SECTION

1" = 1'-0"

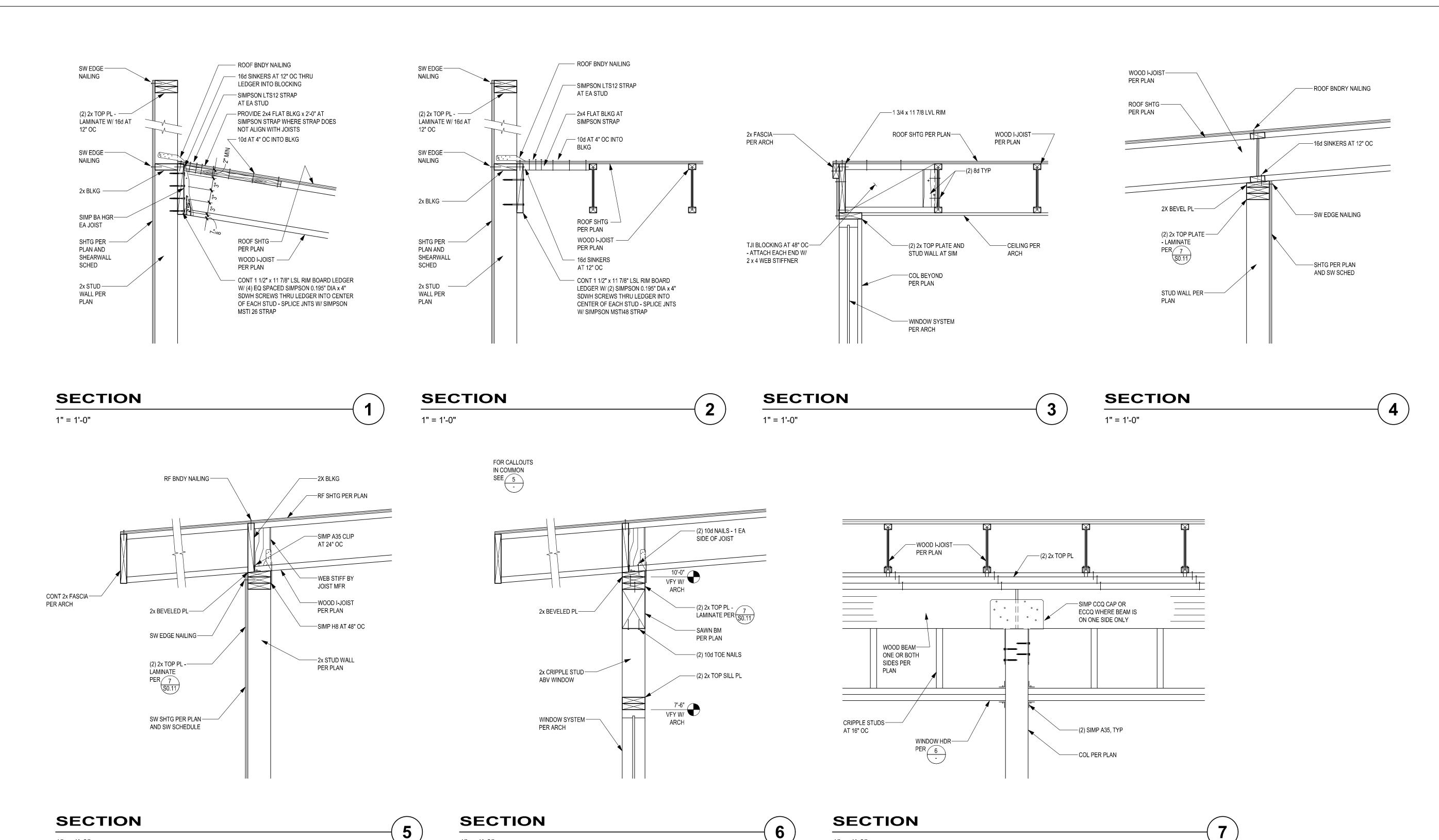
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FLOOR FRAMING DETAILS

SHEET NO. **S3.01**



1" = 1'-0"

1" = 1'-0"

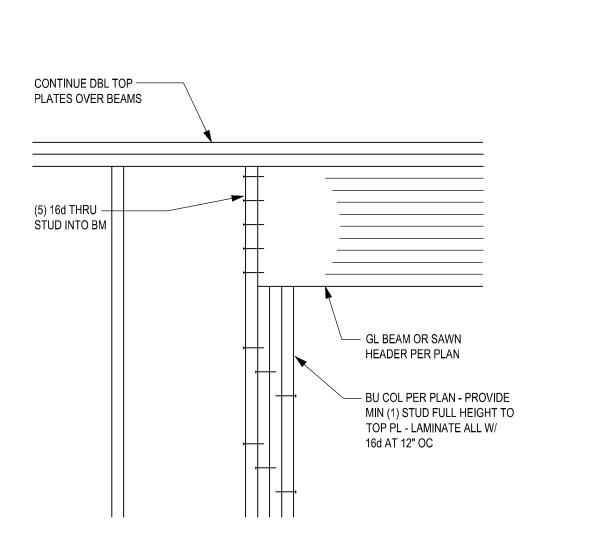


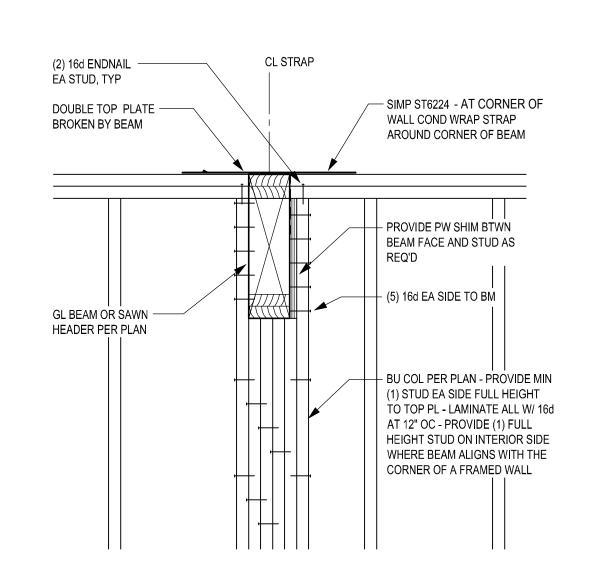
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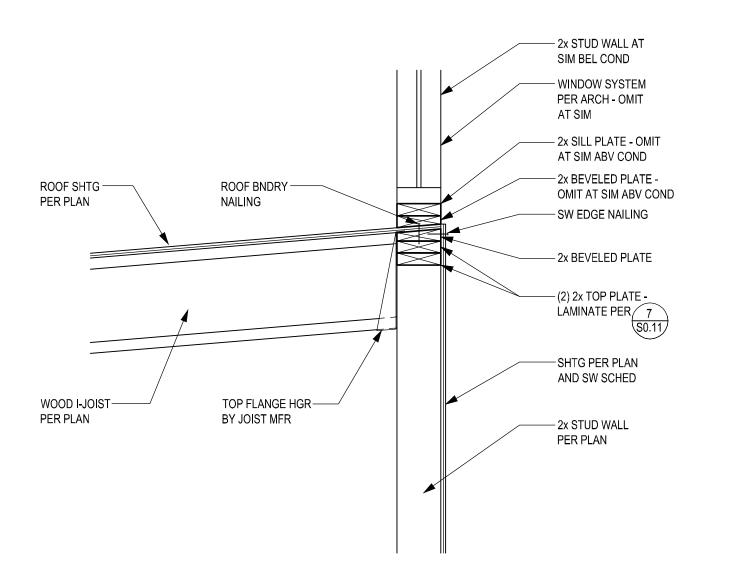
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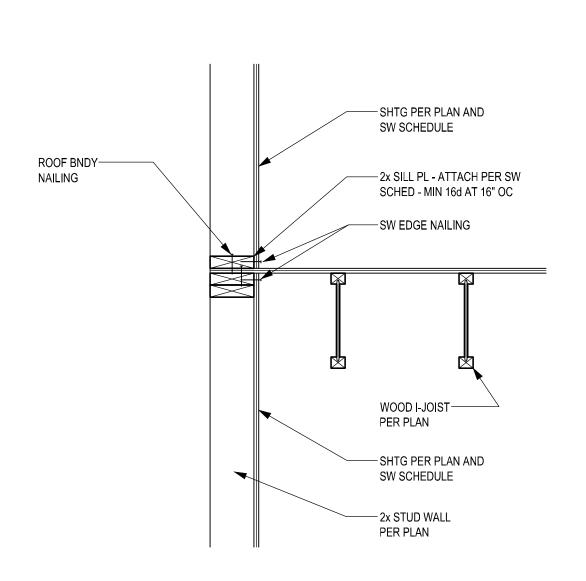
1" = 1'-0"

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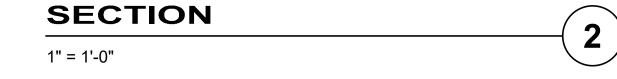


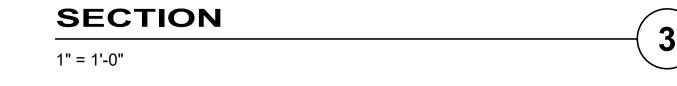






SECTION 1" = 1'-0"

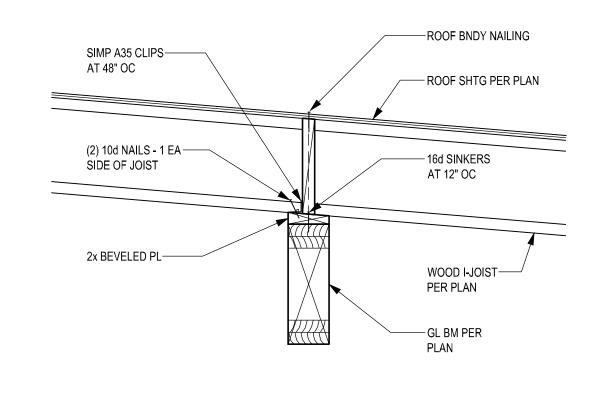


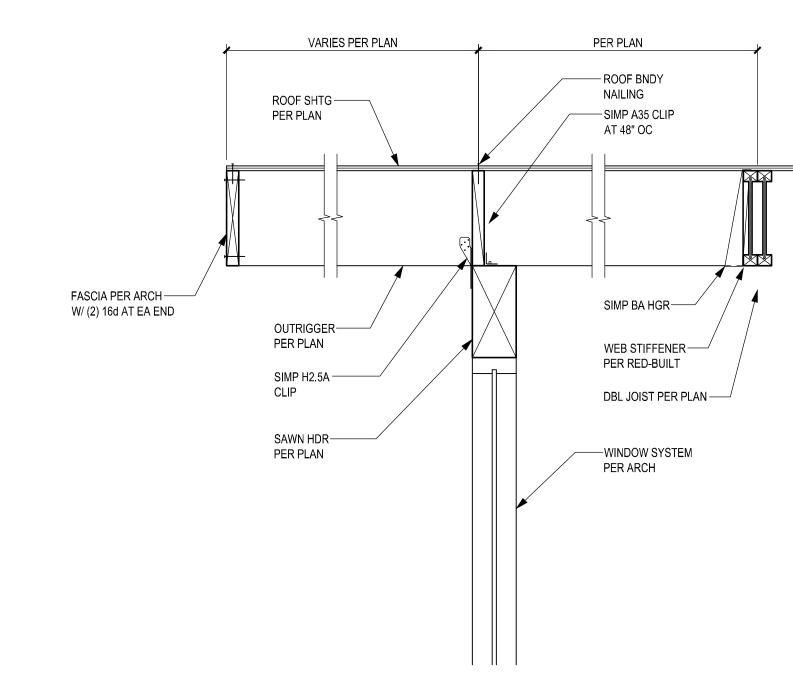




1" = 1'-0"

FOR CALLOUTS IN COMMON SEE 5 4.01 GL BEAM-PER PLAN PRE-ENGINEERED METAL— SUNSCREEN BY WINDOW SYSTEM MFR OR OTHERS - GL SILL BEAM PER PLAN W/ SIMP HUC EA END AND (2) SIMP A35 EA END WINDOW SYSTEM-PER ARCH 7'-6" VFY W/ ARCH 2x STUD WALL— PER PLAN





SECTION

1" = 1'-0"

SECTION 1" = 1'-0"

SECTION 1" = 1'-0"

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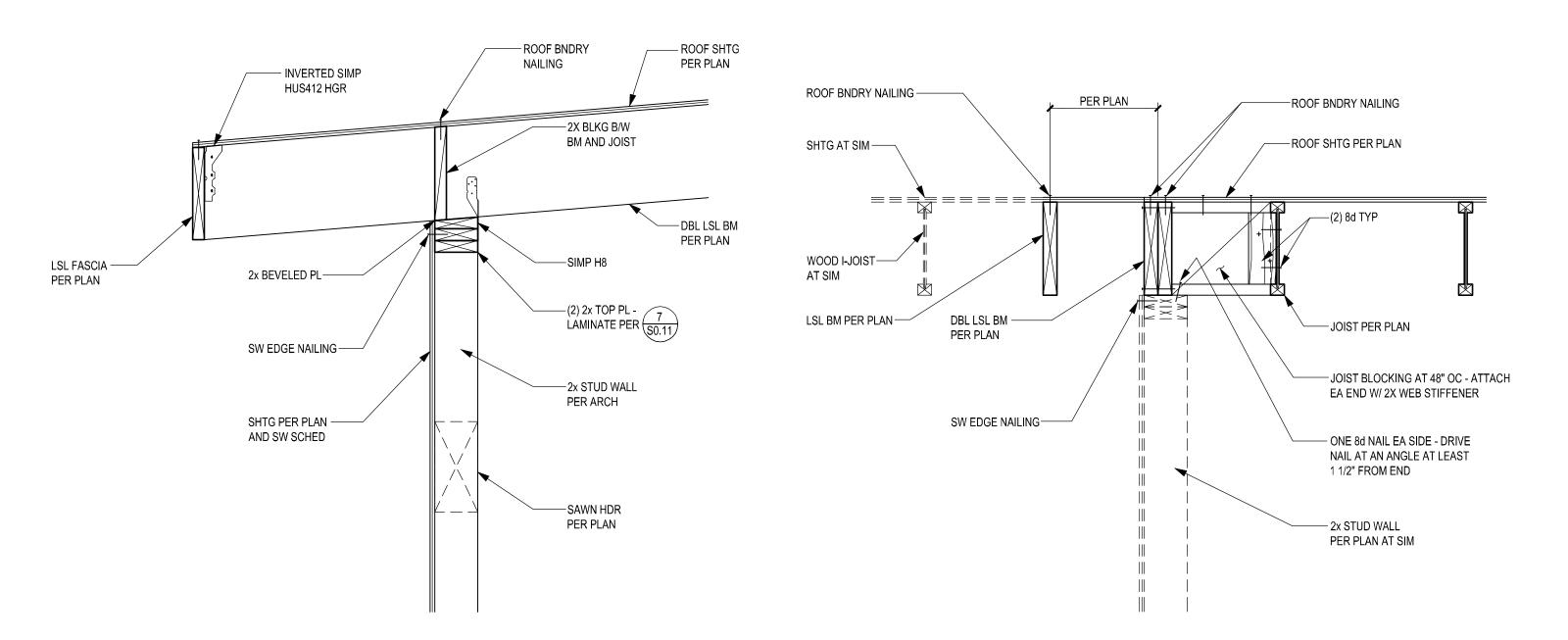
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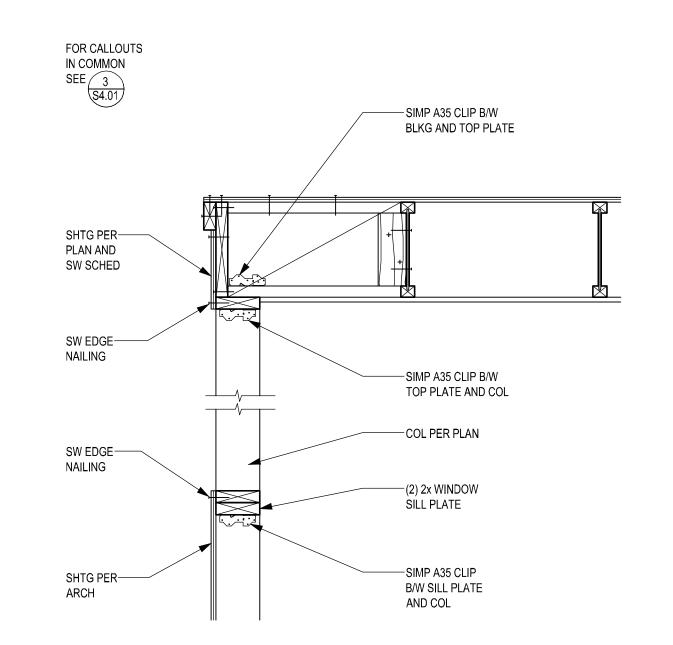
S4.02

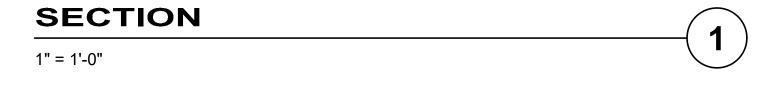
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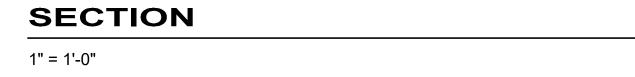
ROOF FRAMING DETAILS

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PROJECT

Secription

CONSEJO COUNSELING & REFERRAL SERVICES

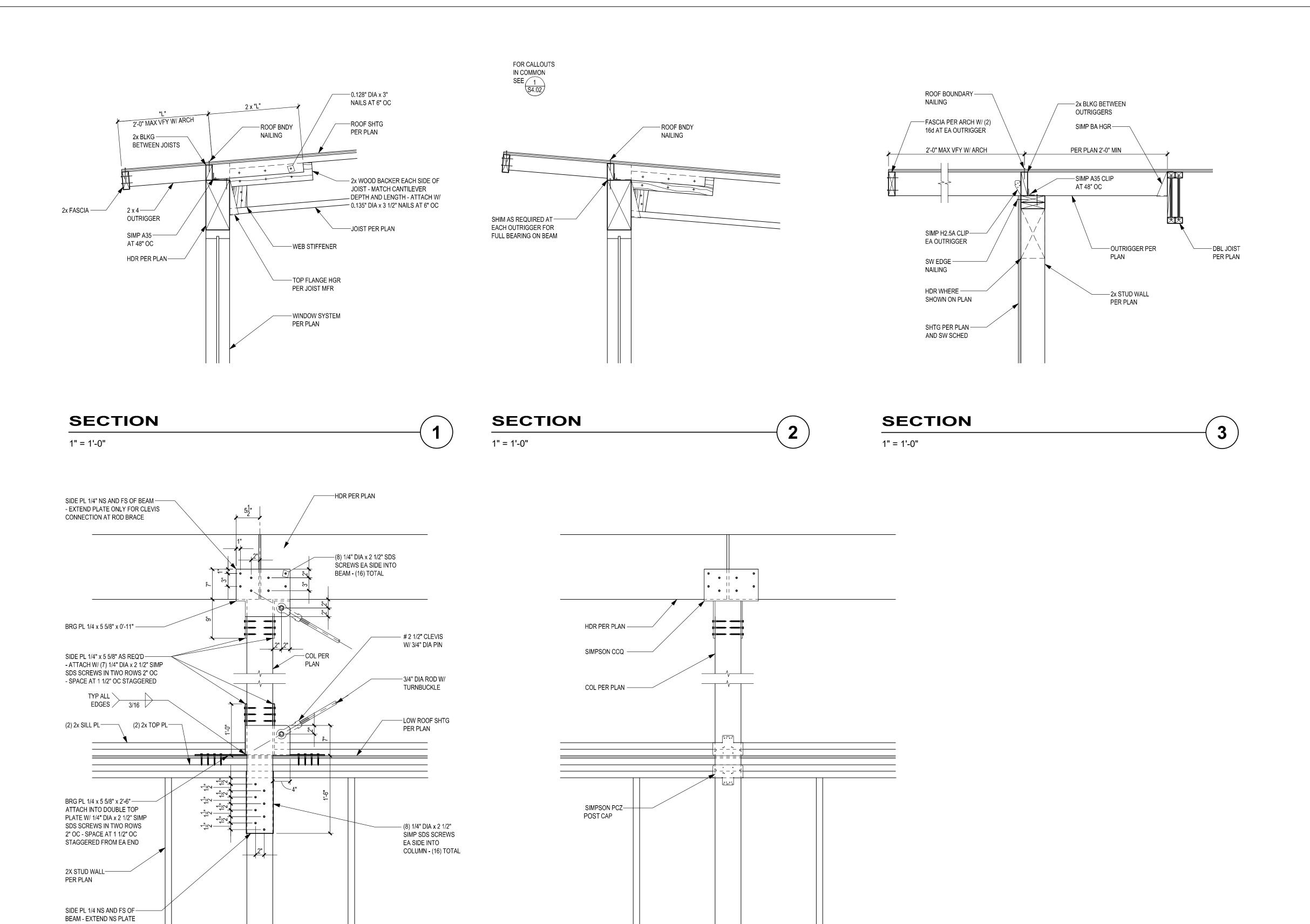
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SHEET NO. **S4.03**

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CONDITION WITHOUT ROD BRACING



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ONLY FOR CLEVIS

1" = 1'-0"

CONNECTION AT ROD BRACE

SECTION

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ROOF FRAMING DETAILS

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