

**STRUCTURAL GENERAL NOTES**

**GENERAL REQUIREMENTS**

- Codes and Standards**
  - Design of new elements conforms to the 2022 State of Oregon Edition Structural Specialty Code (SSC) based on the 2021 Edition International Building Code (IBC). All reference to other codes such as ACI, ASTM, etc. shall be the edition as adopted by the SSC.
- Contractor Responsibilities**
  - The General Contractor (GC) is responsible for carrying out the requirements of these documents through the use of their own efforts or that of sub-contractors. The GC is responsible for all construction methods, techniques, sequencing, and safety required to complete construction. All instructions contained in these documents are interpreted to be instructions to the GC and are the responsibility of the GC to fulfill.
  - Verify existing conditions prior to proceeding with construction. Immediately bring discrepancies to the attention of the Engineer of Record (EOR).
  - Measure dimensions of any existing structures associated with the work and coordinate with required dimensions for new construction. Drawing scales are indicated for reference to assist with clarifying the work and providing proportions that resemble actual conditions. Do not measure drawings for construction. Use text dimensions provided. Request unknown dimensions from the Architect or Engineer with sufficient lead time to prevent construction delay.
  - Arrange for, and coordinate work by trades and suppliers. Facilitate required inspections, special inspections and tests specified by contract documents, Building Code and permit. Where coverings or work conceals items or areas to be inspected prior to satisfactory approval, the GC is responsible for removal and replacement of coverings or work as necessary without cost to the owner or Engineer.
  - Shop drawings are required for the following items:

DRAWINGS REQ'D IF MARKED	ITEM	ENGINEERS STAMP REQ'D IF MARKED
[ ]	Reinforcing Steel	[ ]
(●)	Structural Steel	(●)

- Submit shop drawings for review, for each material indicated prior to construction. Shop drawings do not replace or supersede the requirements of the structural drawings. Special inspection shall be based on the structural drawings. Any discrepancy between the shop drawings and structural drawings shall be reported to the EOR by the contractor and by the special inspector for items that require inspection.
- This structure must be fully braced for wind and seismic loads during construction (see Item 2A above). Contractor provided bracing must remain in place until the permanent lateral force resisting system of the structure is completed.
- Where/If construction occurs around existing structures, protect existing footings from being undermined. Provide engineered shoring as necessary to protect existing structures. Repair damage, where caused by construction activity, to existing structures.
- Install items manufactured or supplied by others per the manufacturer's specifications.
- Where details of construction are not explicitly shown, provide materials and construction of the same type and character as that of similar conditions used on the project. The actual details used shall be submitted to the Engineer for approval prior to ordering materials or beginning construction.
- Any conflict or discrepancy shall be brought to the attention of the Engineer of Record (EOR) for clarification and resolution prior to ordering materials or beginning construction.
- General Contractor Warranty Requirements**
  - By acceptance of this project the General Contractor (GC) warrants that:
    - The GC and subcontractors hired by the GC 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; further that,
    - The GC has carefully examined the work site and that from those investigations is satisfied as to the nature and location of the work, as to the character, quality, quantities of material, and difficulties to be encountered, as to the extent of equipment and other facilities as needed for the performance of the work, and as to the general and local conditions, and other items which may affect the work or its performance; further that
    - The GC and all workers are experienced in the type of construction represented by the drawings and documents; further that,
    - Neither the GC or their employees, agents, intended suppliers, or subcontractors, have relied upon verbal representations allegedly authorized or unauthorized from the owner or their employees or agents, including the Engineer of Record.
  - Bring discrepancies to the attention of the Engineer of Record at least 10 days prior to close of bid.
    - The GC warrants that construction cost for items not brought to the attention of the Engineer of Record (EOR) prior to bid, but that require clarification or EOR assistance during construction, will be covered by the bid amount agreed to by the GC. See item 2) above.
- Design Loads**
  - Roof Loads**
    - Total Dead Load = 7 psf
    - Snow Load (Min Pg. PF) = 20 psf
  - Wind Load**
    - Basic Wind Speed = 96 mph (3-second gust)
    - Exposure = C
  - Seismic Load**
    - Importance Factor, I<sub>e</sub> = 1.00
    - Risk Category = II
    - Mapped Spectral Response Accelerations: S<sub>s</sub> = 0.64g, S<sub>1</sub> = 0.364g
    - Soil Site Class = D
    - Spectral Response Coefficients: S<sub>ds</sub> = 0.550g
    - Seismic Design Category (SDC) = D
    - Seismic-force-resisting system(s): Cantilevered Steel Columns
    - Response Modification Factor, R = 2.5
    - Analysis Procedure Used: Equivalent Lateral Force

- Equipment and Non-structural Components:**
  - Determine actual equipment and non-structural component weights, locations, and sizes supplied for this project. Notify Engineer of weights (exceed allowances noted on structural plans and if equipment footprints are reduced from that shown on plans.
  - For equipment and non-structural components weighing more than 400 lbs, prepare and submit seismic anchorage calculations and details sealed and signed by a Professional Engineer registered in the State where this project is built.
  - Coordinate with subcontractors to insure that:
    - Additional secondary framing is provided as required. Design of equipment supports and secondary framing by the vendor's engineer shall conform to IBC requirements.
    - Edges of decking are supported at all openings. Deck penetrations are made and reinforced to conform to deck vendors reinforcing recommendations.
    - Openings, penetrations and accessories are located to avoid interference with structural elements.
    - Pre-engineered elements are designed to support all weights and forces.
  - Brace equipment and accessories per SMACNA Seismic Restraint Manual. Unusual ductwork, piping, or conduit configurations that fall outside of SMACNA minimum limits should be securely restrained to prevent movement.
  - Brace suspended ceilings per ASTM E580 / E580M.

**INSPECTION AND TESTING**

- Construction**
  - Construction will be inspected as required by the IBC as described in the Special Inspection Schedule. Special inspections and/or structural observations do not replace Building Code Section 110 inspections by the building inspector.
  - Items noted as requiring special inspection in accordance with IBC Chapter 17 shall be performed by a qualified person who can demonstrate certification for the particular type of construction being inspected. The Special Inspection agency shall be independent from Contractors or Suppliers related to the job. The Engineer or Record retains the right to reject, for any reason, the agency chosen for the job.
  - The Special Inspector shall not be hired by the Contractor. The Owner or an independent agent of the Owner shall hire the Special Inspector.
  - Special inspection is required per the Special Inspection Program, and/or as noted by design drawings, and shall be performed as required by Building Code Section 1704.
- Site Preparation**
  - Remove vegetation, existing fill and any organic material until non-organic sub-grade soils are exposed. Remove material to a level at least eight inches below the existing grade. Roll three passes over the building area with a heavy vibratory roller. Extend rolled area at least five feet outside the perimeter footing line. Over-excavate any areas that the Geotechnical Engineer determines to exhibit excessive deflection. Place structural fill to replace removed material per the following section.
- Structural Fill and Compaction**
  - Place structural fill and/or backfill after removal of forms, screeds, other wood debris and material subject to decay or corrosion. Use only materials approved by the Geotechnical Engineer for fill. Limit fill to clean, granular material placed in loose 8 inch lifts and determined by ASTM D1557 compaction test procedure. Verification of compaction will be done by random field density tests per the Special Inspection Schedule. Use light-weight hand operated equipment to compact fill within 6 feet behind walls. For any site, follow the recommendations of the Geotechnical Report in place of requirements specified here.

**FOUNDATIONS**

- A Geotechnical Investigation (Soils) Report has not been prepared for this project.
- Assumed design parameters:
  - Soil bearing
    - Dead + Live 1500 psf
    - Dead + Live + EQ/Wind 2000 psf
- Contact Geotechnical Engineer for site visit after site excavation but prior to any foundation construction. Site visit is to verify adequacy of actual soil conditions and for special inspections required to satisfy IBC requirements related to soils, structural fill, and/or backfill.
- Place footings & slabs on compacted fill as directed by the soils report or Geotechnical Engineer. Footings may be placed on firm original material as approved by the Geotechnical Engineer during a site visit.
- Center footings on walls or columns above unless noted otherwise on plans or sections.
- Place backfill behind walls after wall material attains its design strength and no sooner than 7 days after placement of concrete or grout. For retaining walls, use only backfill material that is free draining granular fill free of fines, silt or clay and approved by the Geotechnical Engineer. Install and compact backfill in conformance with the geotechnical report requirements. GC is responsible for bracing walls during backfill operations. Protect walls from movement or damage due to backfilling operations. At contractor's expense, replace walls damaged or displaced by improper backfilling operations.

**REINFORCED CONCRETE**

- Concrete**
  - The American Concrete Institute- ACI 318 "Building Code Requirements for Structural Concrete" governs concrete materials and construction for this project. Acceptance of concrete is based on this code.
  - Use concrete with properties listed in the following table. All concrete strengths listed are the minimum strength. Submit statistical backup for mix designs along with mix design proportions for review. The Contractor is expected to know and follow standards of practice for formwork, mixing, placing, curing, cold and hot weather concreting and other relevant practices as described by ACI in the most current "ACI Manual of Concrete Practice".
  - Take a minimum of 3 concrete test cylinders as required by the Special Inspection Program. Break one cylinder after 7 days and two cylinders after 28 days. Take additional cylinders as required by the Special Inspection Program. Hold additional cylinders to be broken if problems arise with test strength at 28 days.

- Do not place concrete on frozen ground.
- Do not place electrical, mechanical, plumbing or similar conduits in slabs, walls or columns, or within 6 inches of the bottom of slabs on grade without prior approval from the Engineer.
- Roughen all construction joints to a minimum amplitude of 1/4". Coarseness of amplitude shall be a 1/4" variation every 1 inch or less. Roughness may be applied when wet or dry by use of a bushing hammer or similar device.

Location	Minimum Strength (psi)	Minimum W/C Ratio [1]	Maximum Slump [2]	Largest Aggregate Size Req'd	Air Entrainment	Maximum Water Content
Footings & Stemwalls	3000	0.58	4'	3/4"	2%	N/A
Slab on Grade	3500	0.54	3'	3/4"	2%	285#/cy

- Notes:**
- Water cementitious materials ratio (W/C) includes all cement, other cementitious products used.
  - Slump is the maximum allowed prior to the addition of water reducing or plasticizing agents.
  - Cost of mid-range and high-range water reducers shall be included in bid price to increase workability as required.

- Non-shrink Grout**
  - Non-shrink grout shall be non-metallic, non-shrink grout conforming to requirements of ASTM C1107, Type B or C, with a compressive strength of 5000 psi in T days. Acceptable products are Masterflow 428, Sono-grout 10K and Five Star Instant Grout or approved alternative.
- Reinforcing Steel (Rebar)**
  - Fabricate, detail, and place in accordance with Building Code (Note 1.A) supplemented by the following:
    - ACI 318 Building Code Requirements for Structural Concrete
    - ANSI D1.4 Structural Welding Code-Reinforcing Steel.
  - Materials UNO
    - Deformed bar reinforcement ASTM A615 GR 60
    - Welded deformed bar reinforcement ASTM A706 GR 60
    - Welded wire fabric (flat sheets) ASTM F 2453
  - Field Bent Bars (#5 and smaller) ASTM A706 - ASTM A615 reinforcing bars #5 and smaller may be field bent one time during construction. Bending a bar out of the way and back may be bent two times maximum. Field bending for #6 and larger requires specific approval by Engineer.
  - Welding electrodes shall conform to matching filler metal requirements defined by AWS D1.4 Matching Filler Metals Requirements.
  - Where welding of reinforcing is specified, bars shall conform to ASTM A706. Do not weld reinforcing steel unless specified by design or without authorization of the Engineer.
  - Do not tack-weld reinforcing steel.
  - Support reinforcement with approved chairs, spacers, or ties. All concrete slab reinforcing steel shall be supported at the required heights by approved bolsters. All reinforcement and embeds shall be securely tied in-place and shall be capable of supporting the weight of any worker without dislodging.
  - All structural anchor bolts shall be secured in place and inspected prior to delivery of concrete. Insertion of embedded items into wet concrete (wet setting) is prohibited unless approved prior to construction.

- In walls and slabs, place (2) #5 bars around all openings and recesses unless noted otherwise. Extend these bars at least 2' -0" beyond the corner of the openings unless noted otherwise. Where bars cannot be extended 2' -0" beyond the opening, extend as far as possible and terminate the bar with a standard hook.
- In walls and slabs, place (2) #5 x2'-0" diagonal bars at the corners of all openings.
- At walls and footing intersections and corners, place corner bars same size and spacing as horizontal bars and lap splice (Ls) to horizontal bars.
- See typical details for bends and hooks, hoops, ties and corner bar conditions.
- Reinforcing Protection (cover)**
  - Concrete deposited against earth: 3 inches.
  - Formed concrete surfaces exposed to ground and weather: #5 and smaller bar - 1-1/2 inches #6 and larger bar - 2 inches
  - Concrete surfaces not exposed to weather or in contact with the ground: #1 and smaller bar - 3/4 inches

Lap Splice Length (Ls)

Bar [ 1, 3 ]	Ls "Top bars" [ 2 ]	Ls All Other Bars				
	3000 psi	3500 psi	4000 psi	3000 psi	3500 psi	4000 psi
#3	28"	26"	24"	22"	20"	18"
#4	37"	35"	32"	24"	21"	25"
#5	47"	43"	40"	36"	33"	31"
#6	56"	52"	48"	43"	40"	37"

- Notes:**
- Bar shall be spaced at least three bar diameters center to center and shall have concrete cover of at least one bar diameter.
  - "Top bars" are horizontal bars with more than 12" of fresh concrete below splice.
  - Where different bar sizes are lap spliced, the required lap length is the Ls for the smaller bar and the required development length is the Ls for the bigger bar.

- Construction Joints (CJ)**
  - Construction Joints shall be located where specified or as approved by the Engineer.
  - Construction Joints shall be made to transfer shear across the construction joint by intentionally roughening the surface to full amplitude of approximately 1/4 inch in two directions. Intentional roughening may be made while the initial placement is still plastic.
  - Use concrete with properties listed in the following table. All concrete strengths listed are the minimum strength. Submit statistical backup for mix designs along with mix design proportions for review. The Contractor is expected to know and follow standards of practice for formwork, mixing, placing, curing, cold and hot weather concreting and other relevant practices as described by ACI in the most current "ACI Manual of Concrete Practice".
- Placement and Curing**
  - Concrete conveying, depositing and consolidation shall be performed in accordance with ACI-301. Mechanical vibration shall be mandatory for all elements 12" and deeper and in all post-tension slabs.
  - Cure concrete with water for at least 14 days. Other curing methods may be submitted to the engineer for approval prior to concrete placement. Regardless of approved curing method, the GC retains responsibility for improperly cured concrete and agrees to repair or replace such concrete at the engineer or architect's discretion.
  - Concrete shall be maintained above 50 degrees F for at least the first 7 days after placement.
  - Contractor shall protect curing concrete against hot or cold weather effects. When air temperatures exceed or are expected to exceed 85 degrees F, concrete shall be moist cured and kept continuously wet.

**STRUCTURAL STEEL**

- Codes and Specifications**
  - Detail, fabricate and erect in accordance with the following as adopted by the IBC (Note 1.A):
    - AISC 341 (2016 Edition) "Seismic Provisions for Structural Steel Buildings"
    - AISC 360 (2016 Edition) "Specifications for Structural Steel Buildings"
    - ANSI D11 (2020 Edition) "Structural Welding Code- Steel"
- Structural steel material (UNO):**
  - W shapes: ASTM A992 or ASTM 572 Grade 50
  - HSS tubing: ASTM A500, Grade C
  - Pipe: ASTM A53, Grade B
  - Angles & other shapes: ASTM A36
  - Plate & bar stock: ASTM A36
- Bolts**
  - High strength bolts shall be ASTM A325N with threads not excluded from the shear plane. Heavy Hex Nuts shall be ASTM A563 with ASTM F436 hardened washers, grade and finish to match bolt.
  - High strength bolts are bearing connections and should be at least "snug tight".
  - F436 compressible-washer-type direct-tension indicators or alternative local indicator bolts equivalent in strength shall be used for all bolted joints noted as slip-critical (SC) or tension loaded.
  - All other bolts not designated as high strength or specified to be machine bolts (MB) shall be ASTM A307, Grade A bolts ASTM A563, Grade A hex nuts ASTM F436 steel washers
  - Exterior bolts exposed to weather shall be zinc coated in accordance with ASTM A153 Class C.
- Welds**
  - Weld Procedure Specifications (WPS) shall be prepared and submitted in accordance with AWS D11 for all welding subjected to special inspection requirements.
  - Welding electrodes shall conform to AWS D11 table defining prequalified base metal-filler metal combinations for matching strength. Weld filler metal shall be TO ksi minimum.
  - End return fillet welds 2x nominal weld size wherever applicable, unless noted otherwise.
  - Minimum fillet weld size: See AISC Table J2.4 reproduced below:
 

Material Thickness of Thicker Part Joined (in.)	Minimum Leg Size of Fillet Weld (in.) (a)
To 1/4 inclusive	1/8
Over 1/4 to 1/2	3/16
Over 1/2 to 3/4	1/4
Over 3/4	5/16

    - Notes:
      - Single pass welds must be used.
- Welded Headed Studs (WHS)** shall be cold drawn bar stock conforming to ASTM A108, Grades 1010 through 1020, Type B with a minimum yield of 50 ksi or approved equal (AWS D.1 Table T.1, Type B). Provide appropriate ferrules and required accessories to accomplish the required automatic weld. Specified length is the nominal after welded length (ANL). Studs shall be welded with automatically timed welding equipment per AWS D11 Section 7.5
  - Stud qualification shall conform to AWS D11 Section 7.6
  - Stud production control testing shall conform to AWS D11 Section 7.7.
- Coatings**
  - Steel work concealed by interior building finish, or in contact with concrete need not be painted unless specified otherwise. In such cases, welding slag, dirt, and/or oil shall be removed by wire brushing or equivalent methods. Unpainted steel shall not be stored outside or allowed to rust before or during construction.
  - Do not paint or coat welds until quality control inspections are performed.
  - Surface preparations shall be performed to a level of cleanliness appropriate to the specified coating and consistent with coating manufacturer requirements.
  - Where shop applied primer is required, the following areas shall not be coated.
    - Within 2" of field weld locations. Coat after quality control inspections are completed.
    - Steel items to be galvanized.
- Erection**
  - Erection methods, sequencing and temporary support and bracing of structural steel shall be the Contractor's responsibility.
  - Erection shall conform to the AISC "Code of Standard Practice", Section 7. All steel frames shall be considered "non-self supporting" unless noted otherwise or verified by the contractor/erector's engineer.
  - Column base plates and anchor bolts (fasteners) are designed for loads required of the completed structure after grouting. Column base plates and anchor bolts are not designed to withstand wind or other lateral loads on a partially completed structure.
  - Anchor bolts are designed for loading after specified non-shrink grout is placed and cured. Anchor bolts are designed for shear and/or tension forces and have not been engineered for compression loads associated with the use of leveling nuts.

Material Thickness of Thicker Part Joined (in.)	Minimum Leg Size of Fillet Weld (in.) (a)
To 1/4 inclusive	1/8
Over 1/4 to 1/2	3/16
Over 1/2 to 3/4	1/4
Over 3/4	5/16

- Notes:**
- Single pass welds must be used.

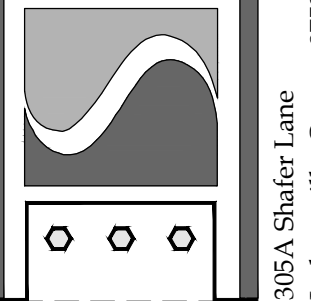
**METAL DECKING**

- Codes and Specifications**
  - Fabricate, detail, and place in accordance with 1A, above and the following:
    - ANSI, "North American Standard for Cold-Formed Steel Framing", 2016 Edition.
    - SDI standard specification applicable to the deck specified.
    - ANSI D1.3 "Structural Welding Code - Sheet Steel".
- Roof Decking**
  - Galvalume structural metal roof panels with exposed fasteners.
  - Panel gauge: Minimum 24 gauge thickness.
  - Panel width: 3'-0".
  - Panel Length: Precut to the length from the eave to the ridge; angles factory precut.
  - Panel Orientation: Ribs shall run with the pitch of the roof for proper drainage.
  - Trim: Provide matching roof trim and fasteners.
  - Finish: Factory pre-finished with 'Kynar 500' paint system; color to be selected by Owner from standard color chart.
- Welding**
  - Welding shall conform to AWS D1.3 with E60XX or E70XX welding electrodes in conformance with decking ICBO report.
  - Arc spot (puddle welds) shall be 5/8 inch (1/2 inch effective) diameter unless noted otherwise.

SEE SHEET SO.2 FOR SPECIAL INSPECTION REQUIREMENTS

**STRUCTURAL SHEET INDEX**

SHEET NO.	SHEET TITLE
SO.1	STRUCTURAL GENERAL NOTES
SO.2	SPECIAL INSPECTION SCHEDULES
SS.1	FOUNDATION PLAN & DETAILS
SS.2	ROOF FRAMING PLAN & DETAILS

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**STRUCTURAL GENERAL NOTES**

JOB NO.	451-21N	REVISIONS
ISSUE DATE	11-27-23	
DRAWN	JNP	
CHECKED	JNP	
FILE NAME	S-CEN	

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**STEEL SPECIAL INSPECTION PROGRAM**

(As required by IBC Chapter 17, Table 1705.2, AISC 360-16, AWS D1.1 & D1.4)

VERIFICATION & INSPECTION ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION	REFERENCED STANDARD	IBC REFERENCE
<b>1. Material verification of high-strength bolts, nuts and washers:</b>				
a. Identification markings to conform to ASTM standards and specified in the approved construction documents		X	AISC 360, Section A3.3 and applicable ASTM referenced standards	1705.2
b. Manufacturer's certificate of compliance required		X	---	---
<b>2. Inspection of high strength bolting:</b>				
a. Snug-tight joints		X	AISC 360 Section M2.5	1705.2
b. Pretensioned and slip-critical joints using turn-of-the-nut method with matchmarking, twist-off bolt or direct tension indicator methods of installation				
c. Pretensioned and slip-critical joints using turn-of-the-nut method without matchmarking or calibrated wrench methods of installation				
<b>3. Material verifications of structural steel:</b>				
a. For structural steel, identification markings to conform to AISC 360		X	AISC 360 Section N2.1	1705.2.1
b. For other steel, identification markings to conform to ASTM standards specified in the approved construction documents		X	Applicable ASTM material standards	1705.2.1
c. Manufacturer's certified test reports		X	---	---
<b>4. Material verification of cold-formed steel deck:</b>				
a. Manufacturer's certified test reports		X	---	---
<b>5. Material verification of weld filler materials:</b>				
a. Identification markings to conform to AWS specification in the approved construction documents		X	AISC 360, Section A3.5 and applicable AWS A5 documents	1705.2
b. Manufacturer's certificate of compliance required		X	---	---
<b>6. Inspection of welding:</b>				
<b>a. Structural steel and cold-formed steel deck:</b>				
1) Complete and partial joint penetration groove welds	X		AWS D1.1	1705.2.1
2) Multipass fillet welds	X			
3) Single-pass fillet welds > 5/16"	X			
4) Plug and slot welds	X			
5) Single-pass fillet welds < 5/16"		X		
6) Floor and roof deck welds		X	AWS D1.3	1705.2.2
<b>b. Reinforcing steel:</b>				
1) Verification of weldability of reinforcing steel other than ASTM A706			AWS D1.4 ACI 318 Section 26.6.4	1705.2.1
2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement				
3) Shear reinforcement	X			
4) Other reinforcing steel		X		
<b>7. Inspection of steel frame joint details for compliance:</b>				
a. Details such as bracing and stiffening		X	---	---
b. Member location		X		
c. Application of joint details at each connection		X		

**GEOTECHNICAL SPECIAL INSPECTION PROGRAM**

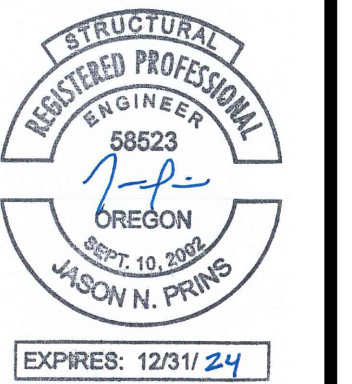
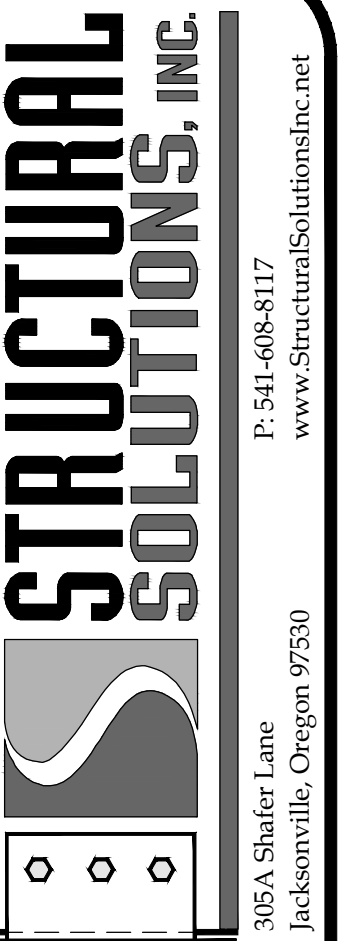
(As required by IBC Chapter 17, Table 1705.6)

VERIFICATION & INSPECTION ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity		X
2. Verify excavations are extended to proper depth and have reached proper material		X
3. Perform classification and testing of compacted fill materials		X
4. During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved Geotechnical Report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	
5. Prior to placement of compacted fill, observe sub-grade and verify site has been prepared properly		X

**ABBREVIATIONS (UNO)**

above	ABV
alternate	ALT
anchor bolt	AB
architectural	ARCH'L
base plate	BASE PL
beam	BM
bearing	BRG
block	BLK
blocking	BLK'G
both sides	BS
bottom	BTTM
bottom of beam	BOB
bottom of footing	BOF
bottom of steel	BOG
bracing	BRG'G
building	BLD'G
cast in place	CIP
center	CTR
centerline	CL OR CL
clear/clearance	CLR/CLRC
column	COL
concrete	CONC
concrete masonry unit	CMU
construction joint	CJ
continuous	CONT
dead load	DL
detail	DF
diagonal	DTL
diameter	DIA
dimension	DIA OR Ø
ditto, do over	DIM
double	-do-
drawing	DWG
each	EA
each face	EF
each side	ES
each way	EW
equal	EO
expansion	EXP
exterior	EXT
for side	FS
finish	FIN
finish floor	FF
floor	FLG
foot/feet	FLR
footing	FT
foundation	FTG
face of concrete	FNO
face of masonry	FCC
face of stem, stud	FOM
header	FOS
height	HDR
horizontal	HT
include	HORIZ OR H
inside diameter	INCL
inside face	ID
interior	IF
joint	INT
kips(s)	JNT
kips per square inch	KSI
location, locate	KS
long leg horizontal	LOC
long leg vertical	LLH
machine bolt (A307 quality UNO)	LLV
material	MB
maximum	MATL
mechanical	MAX
metal	MCH'L
mezzanine	MTL
minimum	MEZZ
miscellaneous	MIN
near side	MISC
not to scale	N5
not in contract	NTS
opening	NC
opposite	OPN'G
outside diameter	OPP
outside face	OD
precast/precast panel	OF
panel	PC/PCP
places	PN
plate	PLCS
pounds per square foot	PL OR PL
pounds per square inch	PSF
pressure treated	PSI
quantity	PT
reference	QTY
reinforce, -ed, -ing, -ment	REF
required	REIN'
required	REQ'D
revise/revision	REV
rough opening	RO
sawcut contraction joint	SCJ
schedule	SCHED
section	SECT
sheet	SHT
similar	SIM
slab on grade	SOG
spacing	SPC'G
special concentric braced frame	SCBF
specification	SPEC
square	SG
staggered	STAG
standard	STD
steel	STL
structural	STRUCT'L
top and bottom	T&B
top of beam elevation	TOB
top of concrete	TOC
top of footing	TOF
top of steel	TOS
typical	TYP
top of masonry	TOM
top of wall	TOW
unless noted otherwise	UNO
vertical	VERT OR V
welded wire fabric	WWF
welded headed studs	WHS
welded threaded studs	WTS
with	W
without	W/O
working point	WP

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**OAK GROVE ELEMENTARY SCHOOL**  
**OUTDOOR EATING SPACE**  
 2838 WEST MAIN STREET  
 MEDFORD, OREGON

**SPECIAL INSPECTION SCHEDULES**

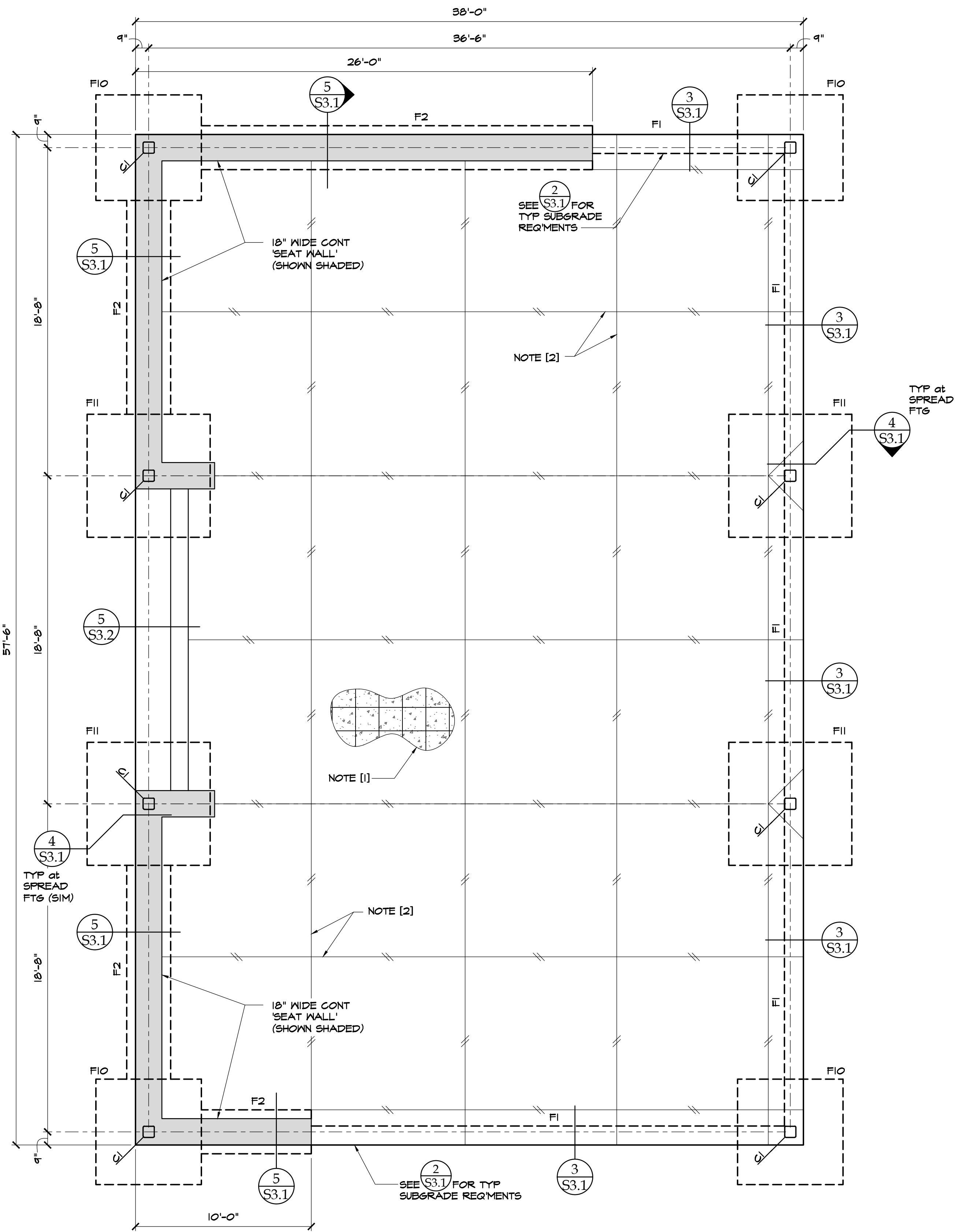
JOB NO.	451-21N	REVISIONS
ISSUE DATE	11-27-23	
DRAWN	JNP	
CHECKED	JNP	
FILE NAME	S-GEN	

SHEET

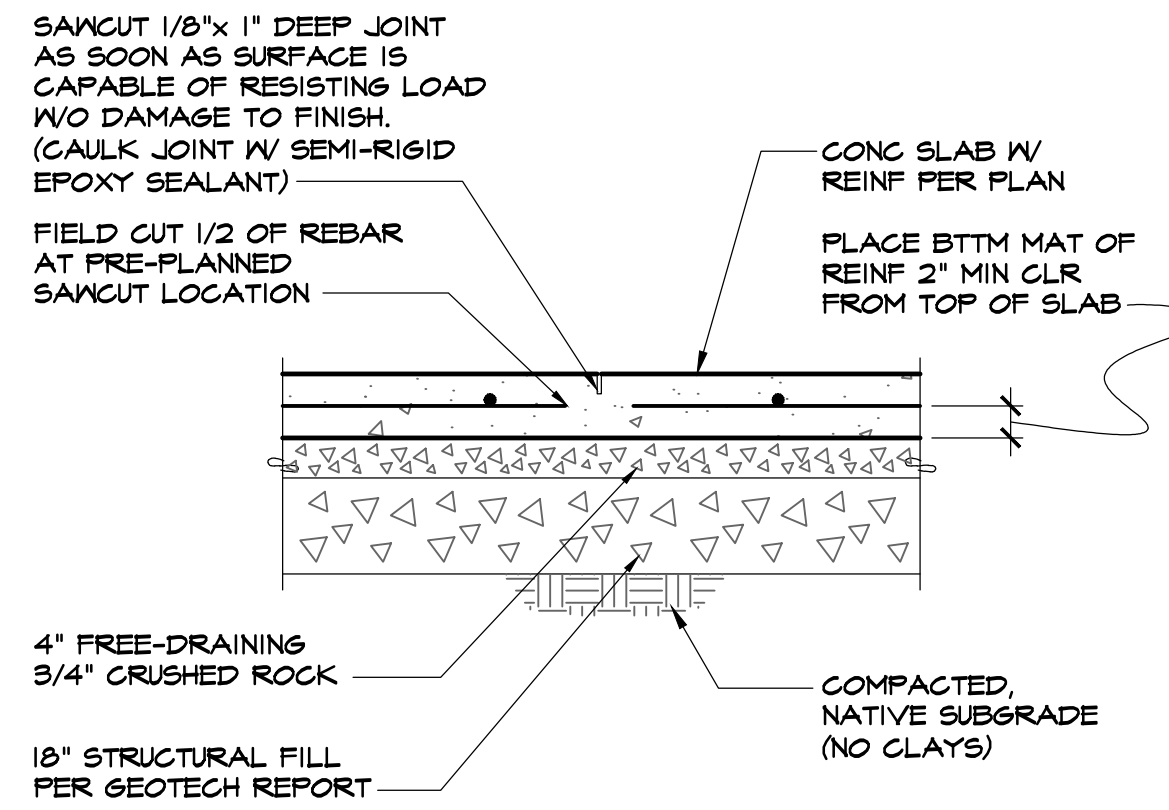
**30.2**

OF 4 SHEETS

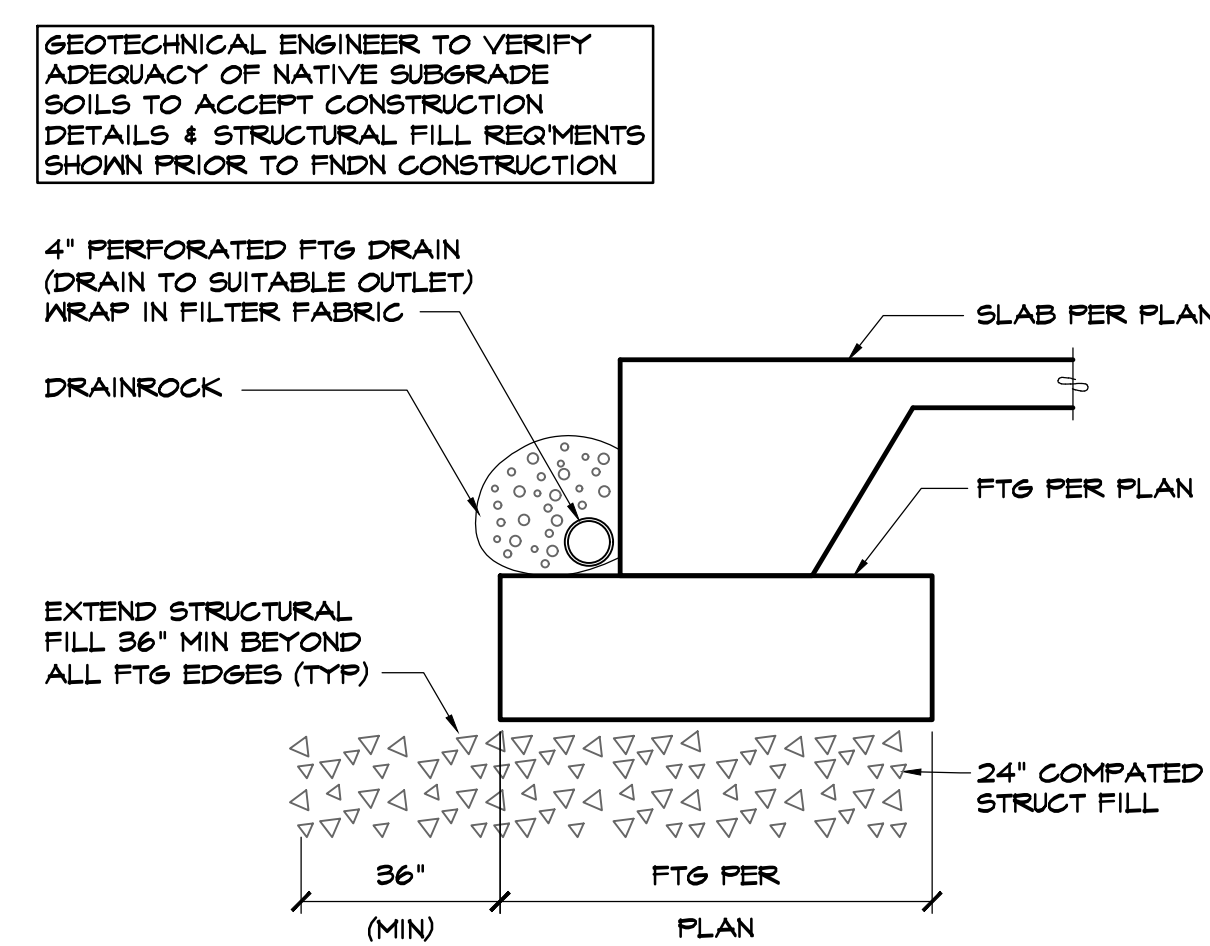
P: 541-608-8117  
www.StructuralSolutionsInc.net  
305A Shaker Lane  
Jacksonville, Oregon 97330



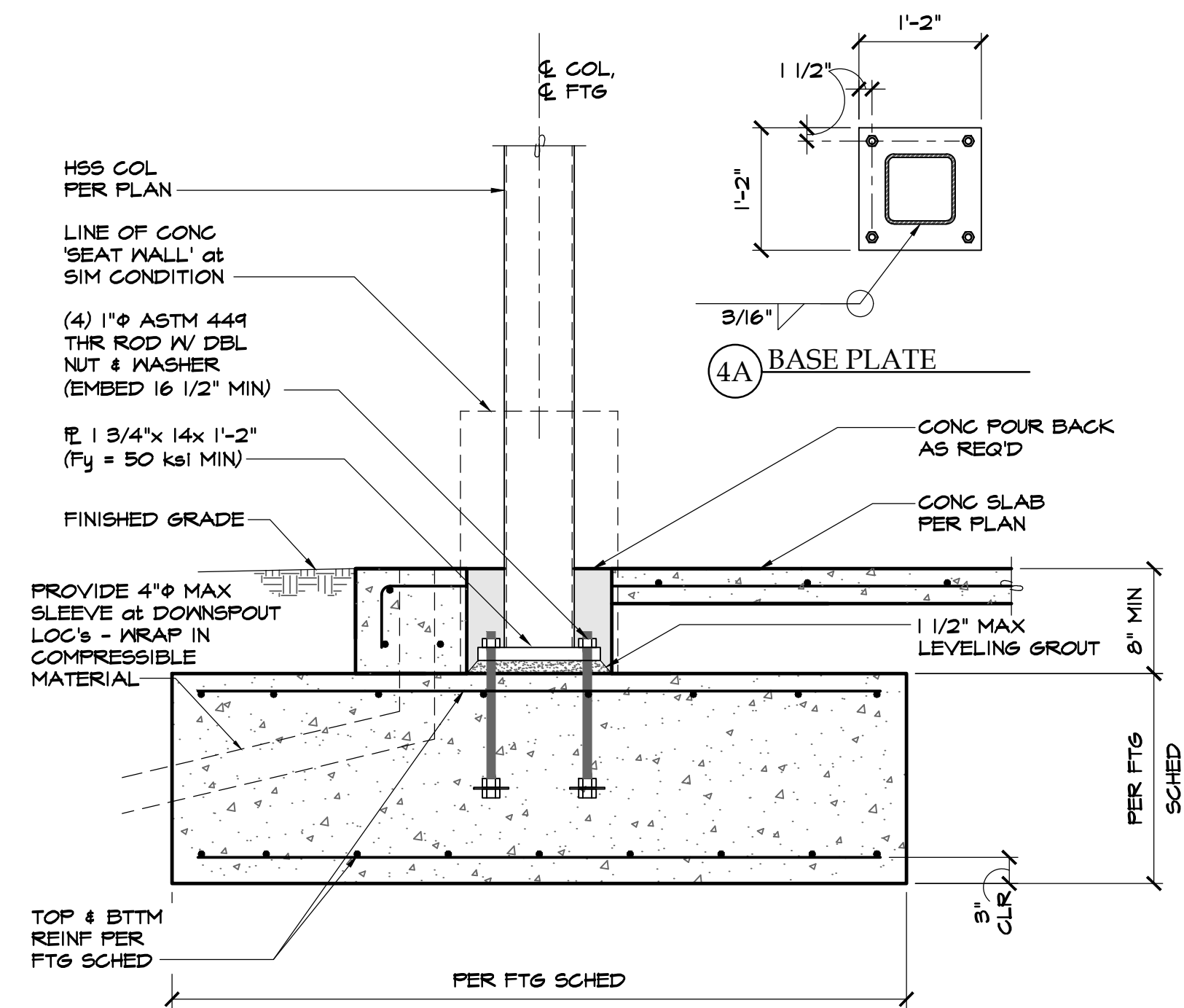
**FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"



**1 SLAB CONTROL JOINT & SUBGRADE**  
SCALE: 1"=1'-0"



**2 SUBGRADE at CONT EXTERIOR FTGS**  
SCALE: 3/4"=1'-0"



**4 DETAIL**  
SCALE: 3/4"=1'-0"

**FOOTING SCHEDULE:**

MARK	WIDTH	LENGTH	DEPTH	REINFORCEMENT
F1	18"	CONT	12"	(2) #4 CONT
F2	30"	CONT	12"	(3) #4 CONT
F10	6'-0"	6'-0"	24"	(7) #6 EA WAY, T&B
F11	7'-0"	7'-0"	24"	(8) #6 EA WAY, T&B

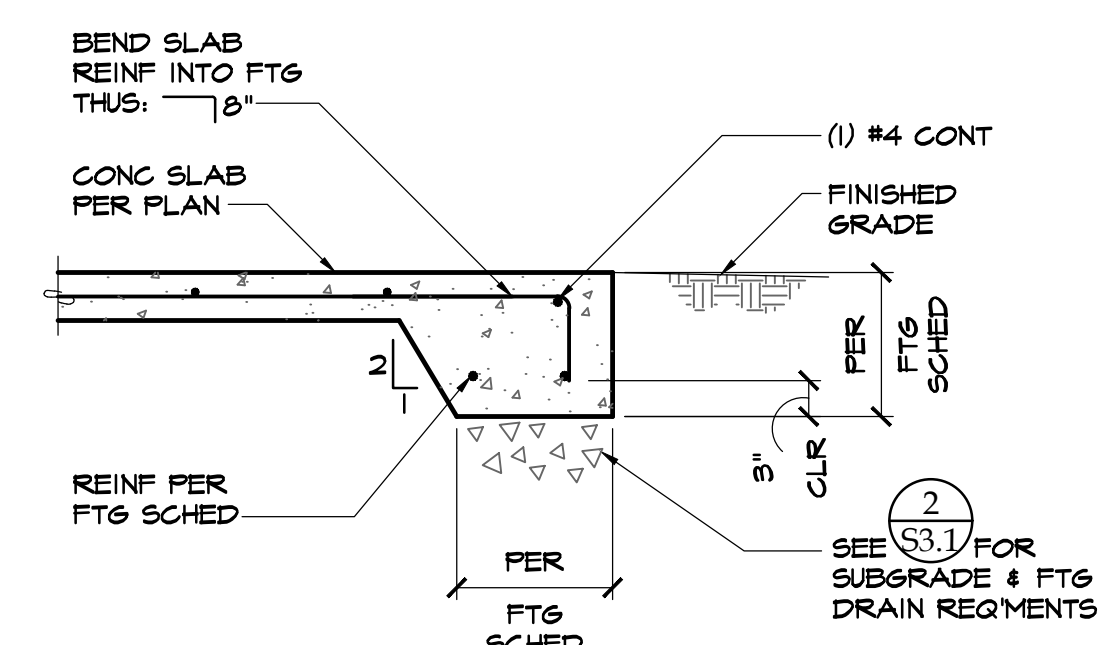
**COLUMN SCHEDULE:**

MARK	SIZE
C1	HSS 8x8x 5/16

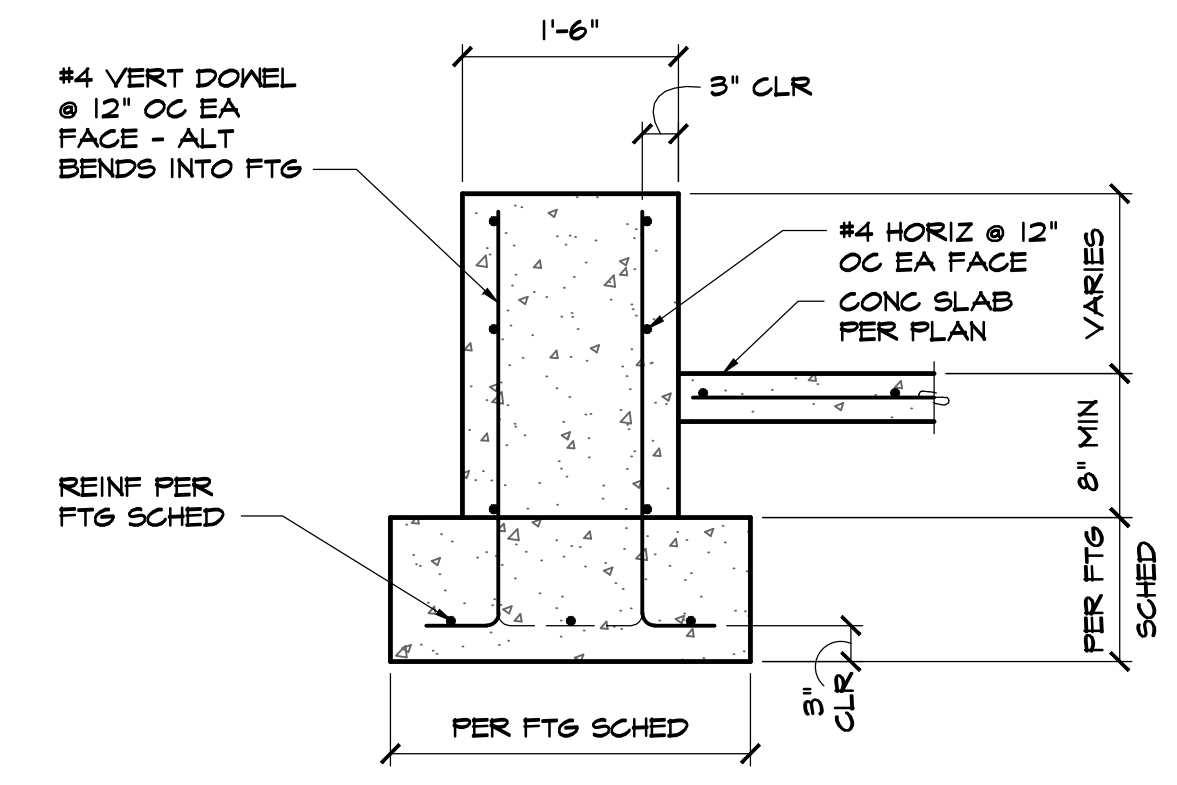
**GENERAL NOTES**  
1. SEE S0.1 FOR GENERAL NOTES.  
2. SEE SITE PLAN FOR ADD'L DIMENSIONS.

**LEGEND**

**KEYED NOTES**  
 (1) 4" CONC SLAB W/ #3 @ 16" OC EA WAY. SEE (1) S3.1 FOR SUBGRADE REQUIREMENTS.  
 (2) LOCATE SAWCUT CONTROL JOINTS AS SHOWN. SEE (1) S3.1 FOR FURTHER REQUIREMENTS.



**3 DETAIL**  
SCALE: 3/4"=1'-0"



**5 DETAIL**  
SCALE: 3/4"=1'-0"

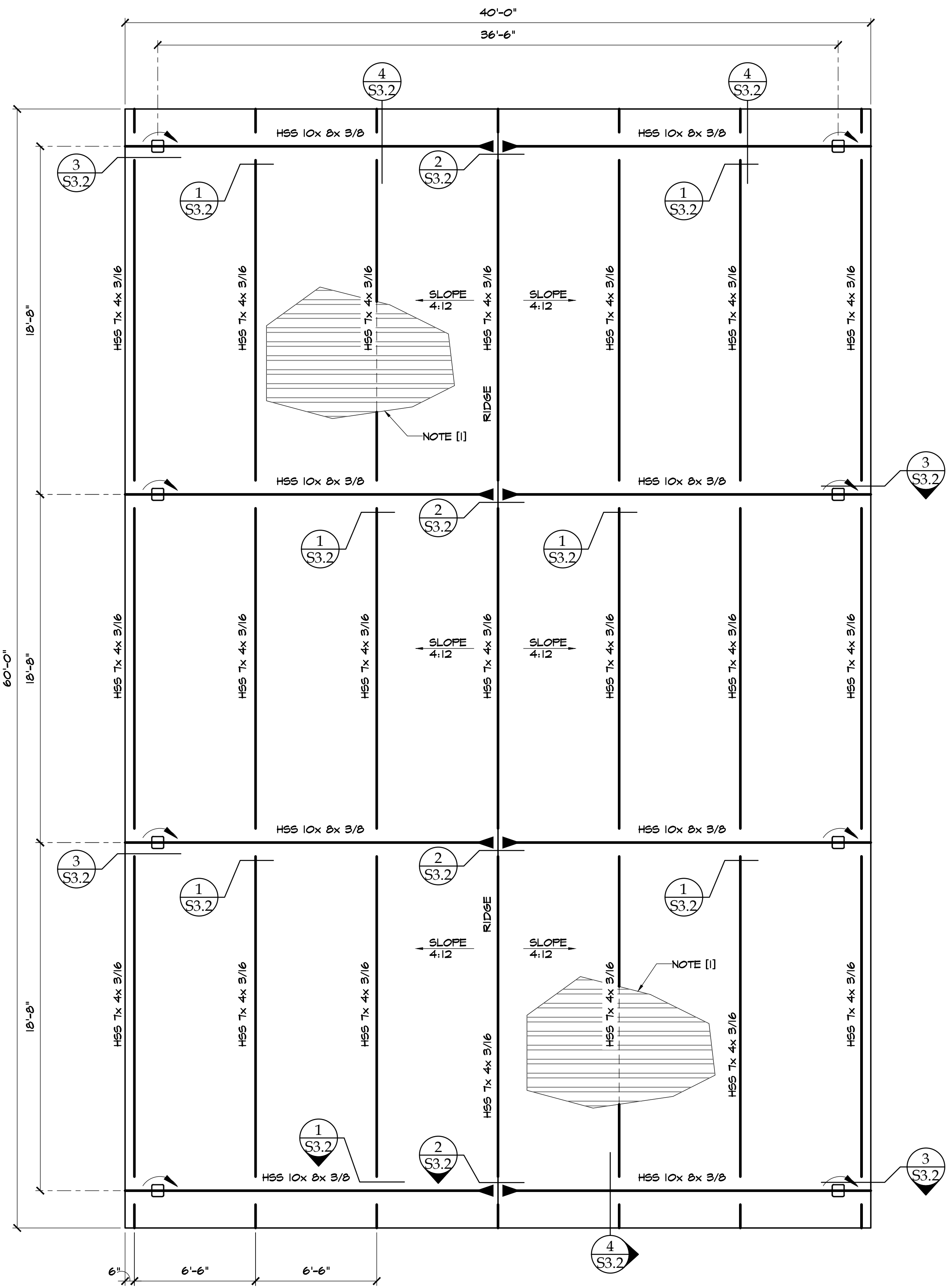
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REGISTERED PROFESSIONAL ENGINEER  
 58623  
 J. N. PRIMS  
 OREGON  
 EXPIRES: 12/31/24

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**FOUNDATION PLAN & DETAILS**

NO.	DATE	BY	REVISIONS
1	11-27-23	JNP	ISSUE
2		JNP	CHECKED
3		JNP	CHECKED
4		S-PEND	FILE NAME



NORTH  
**ROOF FRAMING PLAN**  
 SCALE: 1/4"=1'-0"

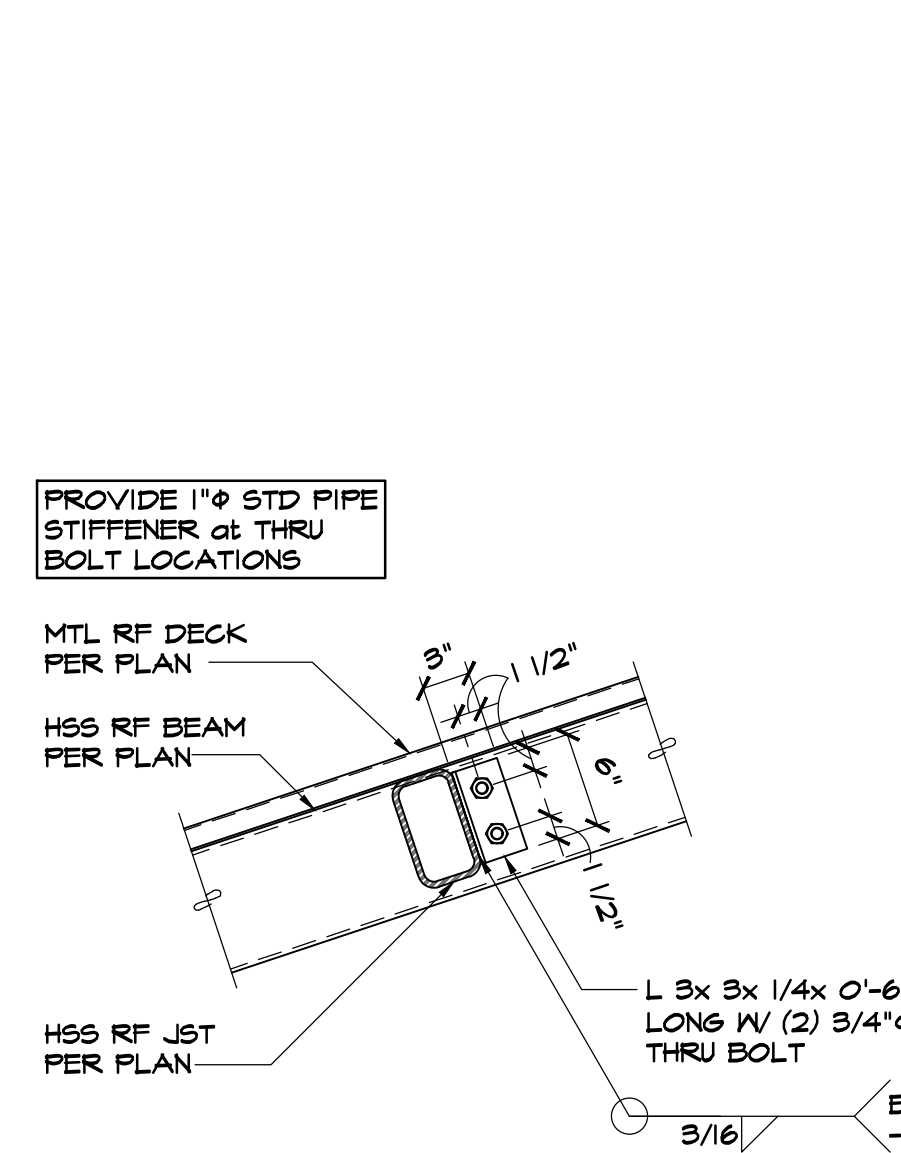
GENERAL NOTES  
 1. SEE SO.1 FOR GENERAL NOTES.  
 2. SEE SITE PLAN FOR ADD'L DIMENSIONS.  
 3. SEE SITE PLAN FOR DOWNSPOUT LOCATIONS.

**LEGEND**

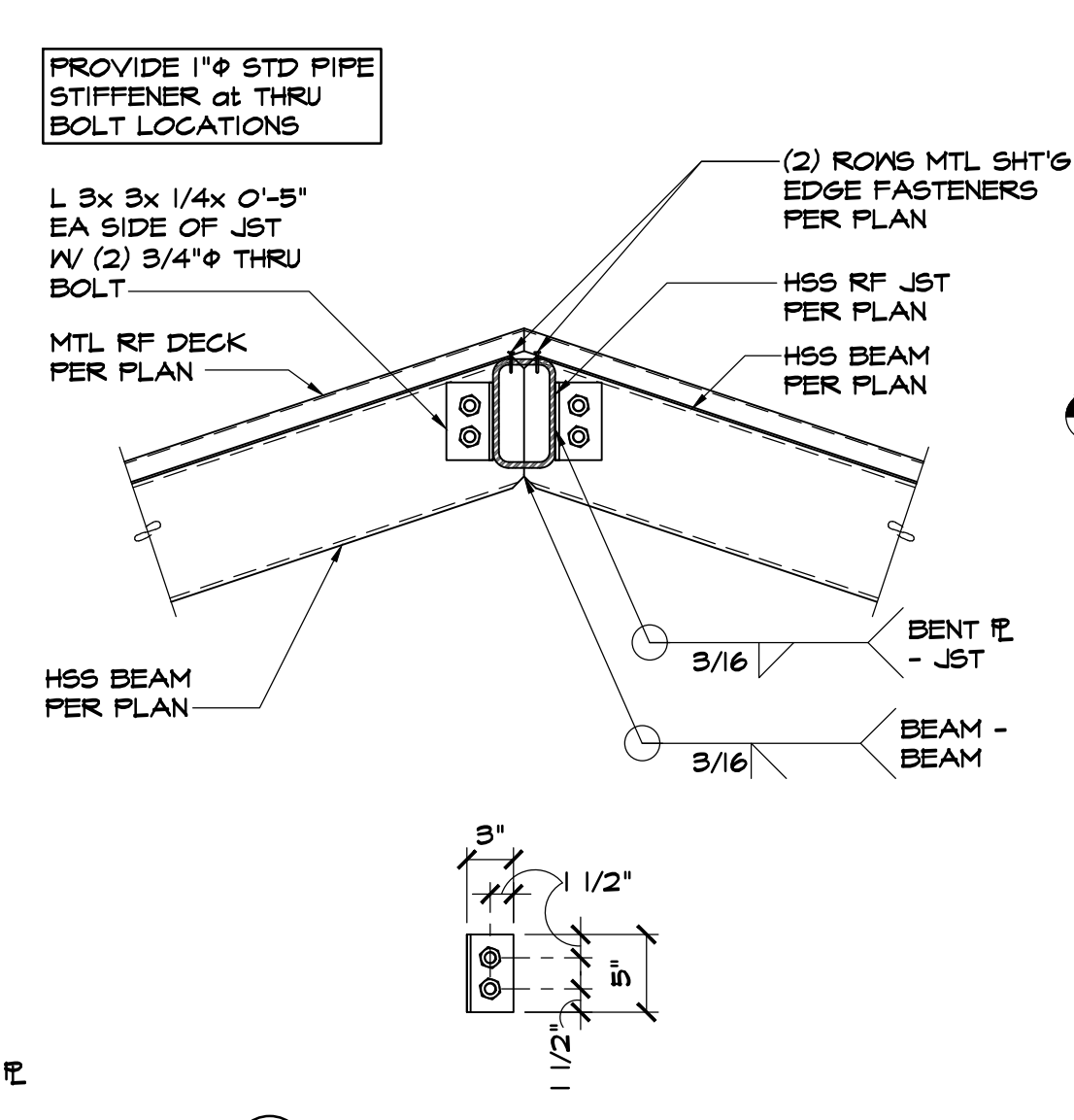
- HSS STEEL COLUMN BELOW
- ⊕ BEAM CONT OVER SUPPORT
- ▶ STEEL MOMENT CONNECTION

**KEYED NOTES**

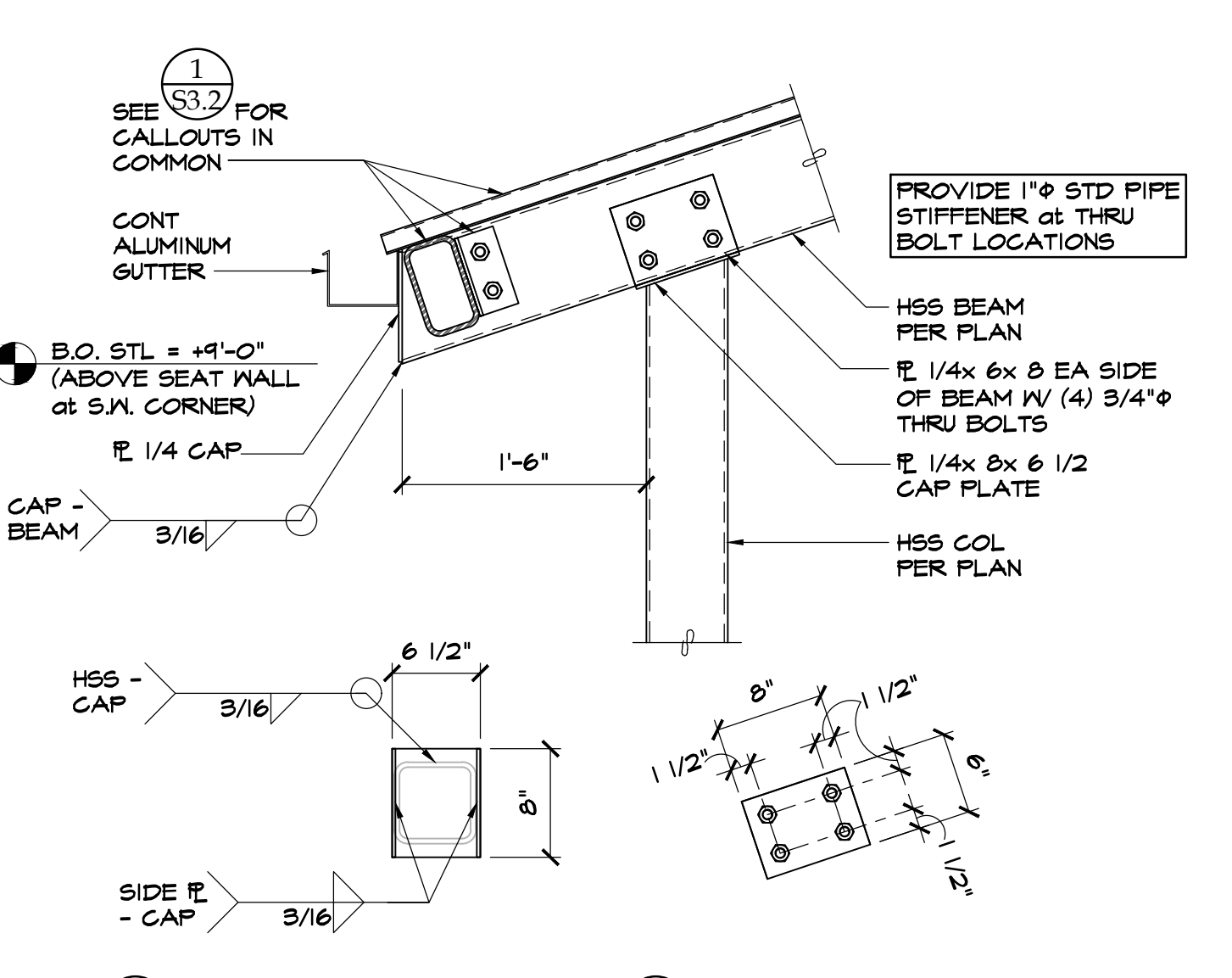
(1) 1/2" x 24 GA. 'GALVALUME' ROOFING PANELS, 2-SPAN CONT. MIN. ATTACH TO PERP SUPPORTS W/ (4) HILTI 'X-EDNK22' FASTENERS PER 36" WIDE SHEET. ATTACH TO ALL PARALLEL SUPPORTS W/ HILTI 'X-EDNK22' FASTENERS @ 12" OC. FASTEN SIDE LAPS W/ #10 SMS @ 24" OC (TYP). USE RUBBER WASHERS AT FASTENERS, TYP. SEE METAL DECKING SECTION OF GENERAL NOTES (SHEET SO.1) FOR FURTHER REQUIREMENTS.



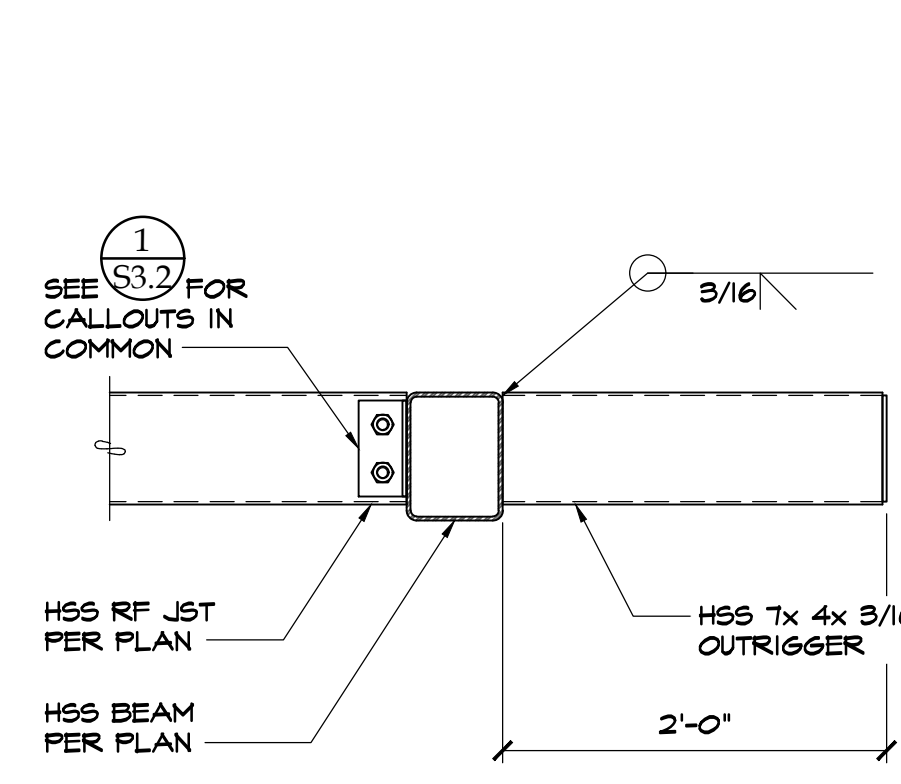
**1 DETAIL**  
 SCALE: 1"=1'-0"



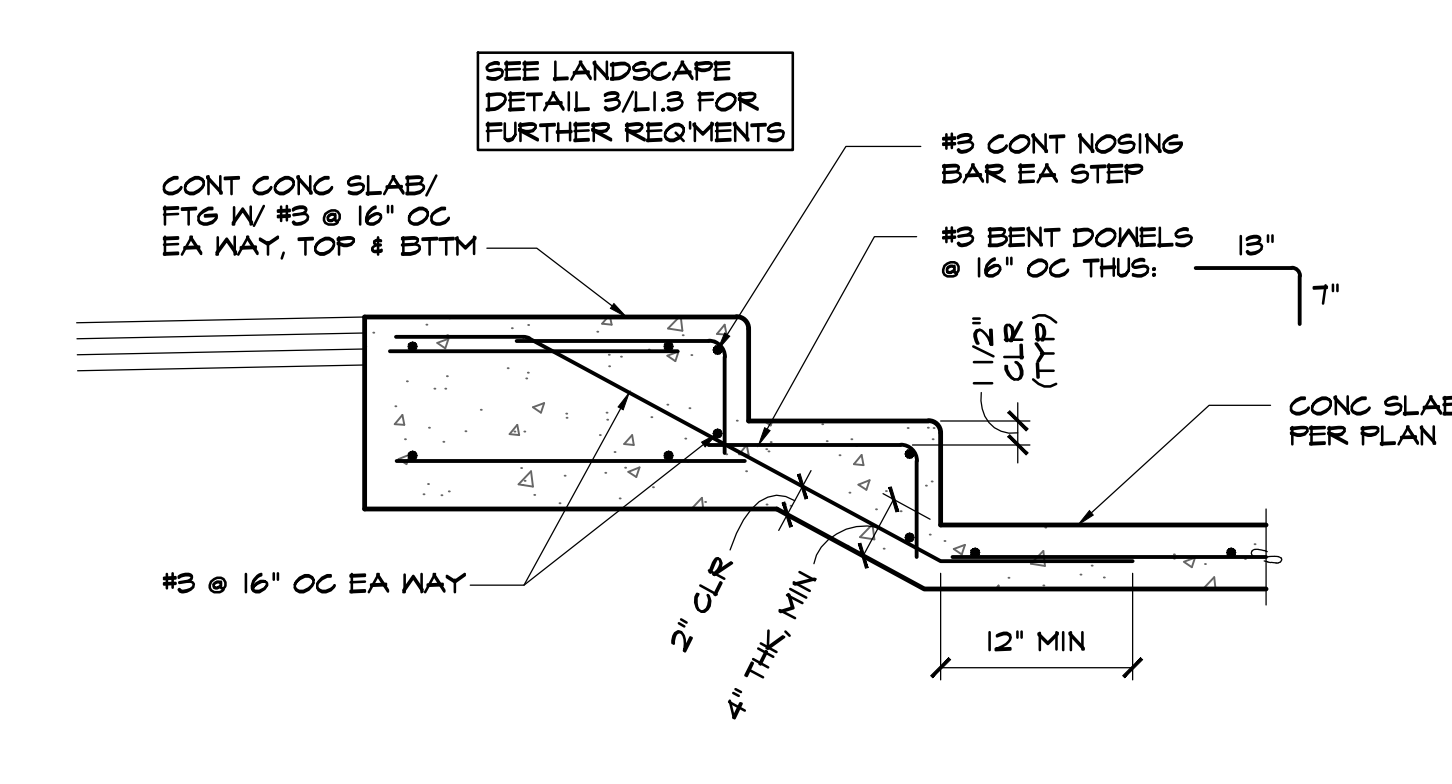
**2 DETAIL**  
 SCALE: 1"=1'-0"



**3 DETAIL**  
 SCALE: 1"=1'-0"



**4 DETAIL**  
 SCALE: 1"=1'-0"



**5 CONCRETE STAIR DETAIL**  
 SCALE: 1"=1'-0"

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