



SPECIAL INSPECTIONS			
1. Special Inspections shall be performed in accordance with Section 1705 of 2012 IBC. An independent testing agency shall be employed to provide Special Inspections during construction on the type of work listed under Section 1705. The following areas of work require Special Inspections in accordance with 2012 IBC.			
2. Refer to project specification for additional quality control/quality assurance requirements.			
3. Construction Manager/Contractor shall coordinate any additional Special Inspection requirements with the Owner and applicable building authorities.			
4. <b>Special Inspections are not the responsibility of the Structural Engineer of Record.</b>			
5. Special Inspections shall be paid for directly by the Construction Manager.			
6. Copies of all Special Inspections Reports shall be emailed to Brian L. Ovuchka, Ph.D., P.E., (BLO@tsstructural.com) within seven (7) calendar days of completing the individual inspection(s).			

STRUCTURAL STEEL (IBC 1705.2.1, 1705.11.1 & 1705.12.1)			
PRIOR TO WELDING (TABLE N5.4-1, AISC 360-10; TABLE J6-1, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verify welding procedures (WPS) and manufacturer certifications for welding consumable available	X	-----	-----
Verify type and grade of material.	-----	X	For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Welder identification	-----	X	A system shall be maintained by which a welder who has welded a joint or member can be identified. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Fit-up groove welds	-----	X	Verify joint preparation, dimensions, cleanliness, backing, and backing. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Access holes	-----	X	Verify configuration and finish. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Fit-up of fillet welds	-----	X	Verify dimensions, cleanliness, and backing. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Check welding equipment	-----	X	-----

DURING WELDING (TABLE N5.4-2, AISC 360-10; TABLE J6-2, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Use of qualified welders	-----	X	Verify that welders are appropriately qualified. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Control and handling of welding consumables	-----	X	Verify packaging and exposure control. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Cracked tack welds	-----	X	Verify welding does not occur over cracked tack welds. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Environmental conditions	-----	X	Verify wind speed within limits, precipitation and temperature. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
WPS followed	-----	X	Verify settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Welding techniques	-----	X	Verify interpass and final cleaning, each pass within profile limitations, and quality of each pass. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.

AFTER WELDING (TABLE N5.4-3, AISC 360-10; TABLE J6-3, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Welds cleaned	-----	X	Verify welds properly cleaned. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Size, length, and location of welds	X	-----	-----
Welds meet visual acceptance criteria	X	-----	Verify crack prohibition, weld size, undercut, and porosity meet visual acceptance criteria.
Arc strikes	X	-----	-----
k-area	X	-----	-----
Backing & weld tabs removed and finished, and fillet welds added (if required)	X	-----	-----
Repair activities	X	-----	-----
Document acceptance or rejection of welded joint/member	X	-----	-----
Placement of reinforcing or confining fillet welds	X	-----	Only required in components of seismic force resisting system.

PRIOR TO BOLTING (TABLE N5.6-1, AISC 360-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Manufacturer's certifications	-----	X	Verify certifications available for fastener materials.
Fasteners marked	-----	X	Verify marked in accordance with ASTM requirements. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Fastener selection	-----	X	Verify proper selection for joint detail including grade, type, and bolt length if threads excluded from shear plane. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Bolting procedure	-----	X	Verify proper bolting procedure selected for joint detail. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Connecting surfaces	-----	X	Verify connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Pre-installation verification testing by installation personnel	X	-----	Observe and document for fastener assemblies and methods used.
Fastener storage	-----	X	Verify proper storage provided for bolts, nuts, washers, and other fastener components. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.

DURING BOLTING (TABLE N5.6-2, AISC 360-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Position of fasteners	-----	X	Verify fastener assemblies, of suitable condition, are placed in all holes and washers, if required, are positioned as required. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Joint brought into snug-tight condition prior to the prestressing operation	-----	X	For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Fastener components not turned by the wrench are prevented from rotating	-----	X	For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Pretensioning of fasteners	-----	X	Fasteners are pretensioned in accordance with the RCSC specification, progressing systematically from the most rigid point toward the free edges. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.

AFTER BOLTING (TABLE N5.6-3, AISC 360-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Document acceptance or rejection of bolted connections	X	-----	-----

STRUCTURAL STEEL (CONT.) (IBC 1705.2.1, 1705.11.1 & 1705.12.2)			
NONDESTRUCTIVE TESTING (SECTION N5.5, AISC 360-10; SECTION J2, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
CJP welds (Risk Cat. II)	-----	X	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T, and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if >5% of welds tested have unacceptable defects. See AISC 360-10 Section N5.5 for increase requirements.
CJP welds (Risk Cat. III or IV)	X	-----	Ultrasonic testing shall be performed on all CJP groove welds subject to transversely applied tension loading in butt, T, and corner joints, in materials 5/16-inch thick or greater. See AISC 360-10 Section N5.5e for reduction in rate of ultrasonic testing.
Access holes (flange >2" for rolled shapes, web >2" for built-up shapes)	X	-----	Verify no cracks present per AISC 360-10 Section N5.5c.
Welded joints subjected to fatigue	X	-----	-----
Document all nondestructive testing	X	-----	Verify record indicates basis of rejection and location of defect for all rejected welds.
k-area	X	-----	For components of seismic force resisting system: Perform magnetic particle testing for cracks where welding of double plates, continuity plates, or stiffeners has been performed in the k-area. Testing area shall include the k-area base metal within 3 inches of weld. Inspection shall be performed no sooner than 48 hours following completion of welding.
CJP groove welds (all components of seismic force resisting system)	X	-----	Ultrasonic testing shall be performed on 100% of CJP groove welds in materials 5/16-inch thick or greater. Magnetic particle testing shall be performed on 25% of all beam-to-column CJP groove welds. See AWS D1.1D1.1M Table 6.2 for acceptance/rejection criteria. See Sections J6-2g and J6-2h in AISC 341-10 for potential reduction in the rate of magnetic particle and ultrasonic testing.
Base metal (>1 1/2")	X	-----	For components of seismic force resisting system: Ultrasonic testing for discontinuities shall be performed after joint completion, behind and adjacent to fusion line of CJP groove welds where base metal (>1 1/2") is loaded in tension in through-thickness direction in T, and corner joints and the connection material is >3/4" thick. See AWS D1.1D1.1M Table 6.2 for acceptance/rejection criteria.
Beam Cope and Access Holes	X	-----	For components of seismic force resisting system: Magnetic particle testing or penetrant testing shall be performed.
Reduced beam section repair	X	-----	For components of seismic force resisting system: Magnetic particle testing shall be performed on any weld and adjacent area of the reduced beam section cut surface that has been repaired by welding, or on the base metal of the reduced beam section cut surface if sharp notch has been removed by grinding.
Weld tab removal sites	X	-----	For components of seismic force resisting system: Magnetic particle testing shall be performed on same beam-to-column joints receiving ultrasonic testing under the CJP groove welds for components of seismic force resisting system listed in this table. See Sections J6-2d and Section J6-2e of AISC 341-10 for reference. See Sections J6-2g and J6-2h in AISC 341-10 for potential reduction in the rate of magnetic particle and ultrasonic testing.

STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL (IBC 1705.2.2)			
STEEL ROOF AND FLOOR DECKS (IBC TABLE 1705.2.2)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Material verification of cold-formed steel deck	-----	X	Verify identification markings conform to ASTM standards specified on construction documents. Verify manufacturer's certified test reports.
Floor and roof deck welds	-----	X	Verify weld meets acceptance criteria of AWS D1.3. Verify welder qualifications.
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Trusses spanning > 60-feet	-----	X	Verify temporary and permanent truss bracing is installed in accordance with approved truss package.
Welding in wind-force-resisting systems or seismic-force-resisting systems	-----	X	Verify proper screw attachment, bolting, anchoring and other fastening of shear walls, diaphragms, drag bracing, braces, shear panels and holdowns. See IBC 1705.10.2 for exceptions.

OTHER STEEL INSPECTIONS (SECTION N5.7, AISC 360-10; Tables J8-1 & J10-1, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Structural steel details (fabricated steel or steel frames)	-----	X	Verify compliance with the details in construction documents in items including: braces, stiffeners, member locations, and proper application of joint details at each connection. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Anchor rods and other embedded supporting structural steel	-----	X	Verify compliance with construction documents. Verify diameter, grade, type, length of anchor rod or embedded item, and extent or depth of embedment prior to placement of concrete. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-10 Section J5.1.
Reduced beam sections (RBS)	X	-----	For seismic force resisting system components: Verify contour and finish as well as dimensional tolerances.
Protected zones	X	-----	For seismic force resisting system components: Verify that no holes or unapproved attachments occur within the protected zones of girding.
H-piles	X	-----	For seismic force resisting system components: Verify that no holes or unapproved attachments occur within the protected zones of girding.

CAST-IN-PLACE DEEP FOUNDATIONS (IBC 1705.8)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Observe drilling operations and reporting	X	-----	Maintain complete and accurate records for each element.
Verify placement locations & dimensions, confirm element diameters, lengths, embedment and adequate end-bearing capacity. Record concrete or grout volumes.	X	-----	-----
Perform additional inspections for concrete elements.	X	-----	Concrete per IBC 1705.3.

CONCRETE CONSTRUCTION (IBC 1705.3 & 1705.12.1; TABLES J9-2 & J9-3, AISC 341-10)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Reinforcing steel, including prestressing tendons	-----	X	Verify, prior to placing concrete, reinforcing is of specified type, grade and size; free of oil, dirt and rust; located and spaced properly; hooks, bends, ties, stirrups and supplemental reinforcement placed correctly; lap lengths, stagger and offsets provided; and all mechanical connections installed per the manufacturer's instructions and/or evaluation report.
Cast-in bolts & embeds	-----	X	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used. See IBC 1905.5 for load increase limitations. See IBC 1909.1 for strength design requirements. See ACI 318, 5.1.3 for anchor design requirements.
Post-installed anchors or dowels	-----	X	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. See ACI 318, 3.8.6 and 8.1.3 for anchor design requirements. See IBC 1909.1 for strength design requirements.
Use of required mix design	-----	X	Verify mixes comply with the approved construction documents. ACI 318, Ch. 4, 5.2.5.4, and IBC 1909.2, 1910.2, 1910.3.
Concrete sampling for strength tests, slump, air content, and temperature	X	-----	Perform slump and air content tests and determine concrete temperature at the time fresh concrete is sampled for strength tests. Verify all sampling in accordance with ASTM C172 and ASTM C31. See ACI 318, 5.6 for evaluation and acceptance of concrete. See ACI 318, 5.8 for mixing requirements of concrete. See IBC 1910.10 for shotcrete.
Concrete & shotcrete placement	X	-----	Verify proper application techniques. See ACI 318, 5.9 for concrete conveying requirements and ACI 318, 5.10 for depositing requirements. See IBC 1910.6.8 for shotcrete rebound, joint, and damage requirements.
Curing temperature and techniques	-----	X	Verify concrete surface temperature (other than high-early-strength) is kept >50°F in most condition for at least 7 days after placement unless accelerated curing in accordance with ACI 318, 5.11.3 is used. High-early-strength concrete shall be kept >50°F in most condition for at least 3 days unless accelerated curing in accordance with ACI 318, 5.11.3 is used. See IBC 1910.9 for curing of shotcrete requirements. Verify compliance with cold weather requirements in ACI 318, 5.12 or hot weather requirements in ACI 318, 5.13, whichever is applicable.
Pre-stressed concrete	X	-----	Verify application and measurement of prestressing force in accordance with ACI 318, 18.20 and grouting of bonded prestressing tendons in accordance with ACI 318, 18.18.4.
Erection of precast concrete	-----	X	Verify all precast elements are lifted, assembled and braced in accordance with the approved construction documents. See ACI 318, Ch. 16.
Strength verification	-----	X	Verify adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons. See ACI 318, 5.2.
Formwork	-----	X	Verify forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents. See ACI 318, 6.1.1.
Reinforcement complying with ASTM A 615 in special moment frames, special structural walls and coupling beams	-----	X	Verify ASTM A 615 reinforcing steel used in these areas complies with ACI 318, 21.1.5.2 by means of certified mill test reports. If this reinforcing steel is to be welded, chemical tests shall be performed in accordance with ACI 318, 3.3.2.
Limits on water added at the truck or pump	-----	X	Verify during concrete placement. Applicable to composite construction in seismic force resisting system components. Perform on a random, daily basis per AISC 341-10 Section J5.1. See Table J9-2, AISC 341-10.
Proper placement techniques to limit segregation	-----	X	Verify during concrete placement. Applicable to composite construction in seismic force resisting system components. Perform on a random, daily basis per AISC 341-10 Section J5.1. See Table J9-2, AISC 341-10.

INSPECTION OF FABRICATORS (IBC 1704.2)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verify fabricator maintains detailed fabrication and quality control procedures	-----	X	See IBC 1704.2.5.1.
Review procedures for completeness and adequacy relative to the Code requirements for the fabricator's scope of work	-----	X	See IBC 1704.2.5.1.
Submit certificate of compliance	-----	X	Where work is done on premises of "Approved" fabricator: Fabricator shall submit a Certificate of Compliance to the building official stating work was performed in accordance with the approved construction documents. See IBC 1704.2.5.2.

SOILS CONSTRUCTION (IBC 1705.6)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verify subgrade is adequate to achieve design bearing capacity	-----	X	Prior to placement of concrete, per Geotechnical Report.
Verify excavations extend to proper depth and material	-----	X	Prior to placement of compacted fill or concrete, per Geotechnical Report.
Verify subgrade has been appropriately prepared prior to placing compacted fill	-----	X	Prior to placement of compacted fill, per Geotechnical Report.
Perform classification and testing of compacted fill materials	-----	X	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000 sqft. of surface area unless otherwise noted; per Geotechnical Report.
Verify proper materials, densities and lift thicknesses	X	-----	During placement and compaction on compacted fill, per Geotechnical Report.

MASONRY CONSTRUCTION (IBC 1705.4)			
PRIOR TO CONSTRUCTION (ARTICLE 1.5, TMS-602/ACI 530-1-11)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Review material certificates, mix designs, test results and construction procedures	-----	X	Verify materials conform to requirements of approved construction documents. Mix design, test results, material certificates, and construction procedures submitted for review. Mortar mix designs conform to ASTM C 270; grout conforms to ASTM C 476. Material certificates provided for: reinforcement, anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction reviewed.

AS CONSTRUCTION BEGINS (TABLE 1.19.2 & TABLE 1.19.3, TMS-602/ACI 530-1-11)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Proportions of site-prepared mortar	-----	X	Verify mortar is type and color specified on construction documents, conforms to ASTM C 270, and is mixed in accordance with Article 2.6 A of TMS-602/ACI 530-1-11.
Construction of mortar joints	-----	X	Verify mortar joints comply with Article 3.3 B of TMS-602/ACI 530-1-11.
Grade and size of prestressing tendons and anchorages	-----	X	Verify prestressing tendons comply with Article 2.4 B of TMS-602/ACI 530-1-11 and anchorages, couplers, and end blocks comply with Article 2.4 H.
Location of reinforcement, connectors, and prestressing tendons and anchorages	-----	X	Verify reinforcement is placed in accordance with Article 3.4 of TMS-602/ACI 530-1-11. Prestressing tendons placed per Article 3.6 A.
Prestressing technique	-----	X	Verify prestressing technique complies with Article 3.6 B of TMS-602/ACI 530-1-11.
Properties of thin-bed mortar for AAC masonry	-----	X	Verify mortar complies with Article 2.1 C of TMS-602/ACI 530-1-11. Continuous inspection required for first 5000 sqft. of AAC masonry. Periodic inspection required thereafter.

DURING MASONRY CONSTRUCTION (TABLE 1.19.2 & TABLE 1.19.3, TMS-602/ACI 530-1-11)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verify locations of structural elements comply with approved plans. Confirm tolerances meet the requirements of Article 3.3 F of TMS 602/ACI 530-1-11.	-----	X	-----
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	-----	X	Verify anchorages and connectors are provided per approved plans, Section 1.16.4.3 and 1.17.1 of TMS 602/ACI 530-1-11. Continuous inspection required for Risk Category IV buildings.
Welding of reinforcement	X	-----	Verify welded splices has bars butted and welded to develop at least 125% of yield strength of bar in tension or compression. See Sections 2.1.7.2, 3.3.3.4(c), and 8.3.3.4(b) of TMS 602/ACI 530-1-11.
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F)	-----	X	Verify cold-weather construction performed in accordance with Article 1.8 C of TMS 602/ACI 530-1-11 and hot weather construction per Article 1.8 D of TMS 602/ACI 530-1-11.
Application and measurement of prestressing force	X	-----	Verify compliance with Article 3.6 B of TMS 602/ACI 530-1-11.
Placement of grout and construction of thin-bed mortar joints	X	-----	Verify placement of grout in compliance with Article 3.5 of TMS 602/ACI 530-1-11 and grout for bonded tendons in compliance with Article 3.6 C of TMS 602/ACI 530-1-11.
Placement of AAC masonry units and construction of mortar joints	-----	X	Verify mortar is placed in accordance with Article 3.3 B of TMS 602/ACI 530-1-11. Continuous inspection is required for first 5000sqft. of AAC masonry. Periodic inspection required thereafter.
Observation of preparation of grout specimens, mortar specimens, and/or prisms	-----	X	Confirm specimen/prism preparation performed as required by Article 1.4 of TMS 602/ACI 530-1-11. Continuous inspection is required for Risk Category IV buildings.
Placement of masonry unit and construction of mortar joints	-----	X	Verify placement in accordance with Article 3.3 B of TMS 602/ACI 530-1-11.
Properties of thin-bed mortar for AAC masonry	X	-----	Verify thin-bed mortar complies with Article 2.1 C 1 of TMS 602/ACI 530-1-11.

PRIOR TO GROUTING (TABLE 1.19.2 & TABLE 1.19.3, TMS-602/ACI 530-1-11)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Grout space	-----	X	Verify grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and cleanouts are provided per Article 3.2 D and 3.2 F of TMS-602/ACI 530-1-11. Continuous inspection is required for Risk Category IV buildings.
Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	-----	X	Verify reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors comply with the approved construction documents, Section 1.16 of TMS 602/ACI 530-1-11, and Articles 2.4 and 3.4 of TMS 602/ACI 530-1-11.
Placement of reinforcement, connectors, and prestressing tendons and anchorages	-----	X	Verify reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with the approved construction documents, Section 1.16 of TMS 602/ACI 530-1-11, and Articles 2.4, 3.4, and 3.6 A of TMS 602/ACI 530-1-11. Continuous inspection is required for Risk Category IV buildings.
Proportions of site-prepared grout and prestressing grout for bonded tendons	-----	X	Verify grout is proportioned per ASTM C 476 and has a slump between 8-11 inches. Self-consolidating grout shall not be proportioned onsite. See Article 2.4 B of TMS 602/ACI 530-1-11. Verify prestressing grout complies with Article 2.4 G.1.b of TMS 602/ACI 530-1-11.
Construction of mortar joints	-----	X	Verify mortar joints are placed in accordance with Article 3.3 B of TMS 602/ACI 530-1-11.

MINIMUM TESTING (TABLE 1.19.2 & TABLE 1.19.3, TMS-602/ACI 530-1-11)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verification of slump flow and Visual Stability Index (VSI) for self-consolidating grout	-----	X	Compressive strength tests should be performed in accordance with ASTM C 1019; slump flow and VSI performed in accordance with ASTM C 1611.
Verification of fm and FAAC	-----	X	Determine compressive strength for each wythe by "unit strength method" or by the "prism test method" as specified in Article 1.4 B of TMS 602/ACI 530-1-11 prior to construction. For Risk Category IV buildings this should be verified at every 5,000 sq. ft. of construction.
Verification of proportions of materials in grout and premixed or preblended mortar	-----	X	Verify that proportions for mortar meet ASTM C 270 and proportions for grout meet ASTM C 476. This applies to Risk Category IV buildings only.

Architecture and Interiors

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**CONSTRUCTION SAFETY GENERAL NOTE**  
THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS, SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

**Drilled Pier General Notes 2200:**

1. Drilled pier construction shall conform to the "Specification for the Construction of Drilled Piers" (ACI 336).
2. Drilled pier concrete shall develop a 28-day minimum compressive strength of 4,000 psi. This concrete shall have a designed slump of 6" ± 1" and utilize a water-reducing admixture or a high range water reducing admixture.
3. Reinforcing steel shall be deformed bars conforming to ASTM A615, grade 60.
4. When steel casing is required, the casing shall conform to ASTM A283, grade C or ASTM A36.
5. Drilled piers have been designed using an allowable end bearing capacity of 35,000 psf. Drilled piers shall bear in hard limestone. See Soils Report No. 21-1-5-188 dated Dec. 14, 2021 by GTS, Inc.
6. Bottom of drilled piers shall bear in hard limestone as called for in the Typical Drilled Pier Detail 5/S1.1. Depth of penetration into the hard limestone shall be as called for in the Typical Drilled Pier Detail 5/S1.1.
7. Bottom of drilled pier elevations are estimated from boring logs to extend from 17 ft to 21 ft for bid purposes. Final elevations shall be determined by the contractor's inspection of the bearing material noted above and the minimum penetration noted in the Typical Pier Detail 5/S1.1. All pier bottoms shall be inspected by the Geotechnical Engineer.
8. Temporary casing of piers is anticipated to prevent soil from sloughing off into excavation. Dewatering of excavation may be required before placing of concrete.
9. If excessive ground water is encountered, use tremie tube to place concrete for drilled pier. Withdraw casing only as excavation is filled with concrete. Maintain adequate head of concrete to balance outside soil to water pressure above bottom of casing during withdraw.
10. Drilled piers shall have a minimum length of 3 pier diameters.

**Concrete General Notes 3100:**

1. All detailing, fabrication and placing of reinforcing steel shall conform to the ACI Standard "Details and Detailing of Concrete Reinforcement" (ACI 315).
2. Concrete at slab-on-grade shall develop a 28-day minimum compressive strength of 3,500 psi and have Ultra Fiber 500 manufactured by Solomon Colors, Inc. mixed into the concrete at 2.0 lb/cubic yard. Follow normal mixing time and speed as recommended by ASTM C94.
3. All concrete at elevated slab on metal deck shall typically develop a 28-day minimum compressive strength of 3,500 psi.
4. All concrete at grade beams, pedestals, pier caps and walls shall typically develop a 28-day minimum compressive strength of 4,000 psi.
5. All concrete for grade beams, pier caps, pedestals, elevated slab, walls and slab-on-grade shall have a 5" maximum slump.
6. All reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
7. All reinforcing bar splices shall be 44 bar diameters for #6 and smaller diameter bars. Reinforcing bar splices shall be 48 bar diameters for #7 and larger bar diameters.
8. All reinforcing bar hooks shall be ACI standard 90 degree hook, unless noted otherwise.
9. Provide two #4 x 4'-0" long diagonal bars centered in slab, at all re-entrant corners and any other locations designated on the plans.
10. Provide corner bars in grade beams, concrete stemwall and turn-down slab same size and spacing as longitudinal reinforcing.
11. Provide (1) #4 hoop with 8" lap in slab-on-grade and elevated slab around floor drains, columns and all slab penetrations 3" in diameter or greater. Also install around electrical conduit groupings 3" in diameter or greater.
12. Limit the width of conduit groups to 3'-0" as they pass under grade beams. As much as possible, align the conduit perpendicular to the footing as it passes under the footing. Provide a minimum spacing of 2'-0" between conduit groups as the conduit passes under a footing. Do not extend conduits under column footings or spread footings.
13. Plate dowel system shall be Diamond Dowel System by PNA Construction Technologies, the Speed Plate System by Sika Corp. or approved equal. Install plate dowels at slab construction joints at 16" O.C.
14. Welded wire fabric shall conform to ASTM A1064. Provide mesh in flat sheets.
15. Wire fabric reinforcing shall lap 6" and be securely wired at each side and end.
16. Smooth dowels shall be steel conforming to ASTM A36.
17. All slots, sleeves and other embedded items shall be set before concrete is placed. See Architectural, Electrical, Mechanical, and Vendor's drawings for size and locations.
18. Bar supports at footings and slabs-on-grade shall be factory made wire bar supports, type "SBU" linear supports.
19. Epoxy for doweling reinforcement shall be HY-200 by Hilli, unless noted otherwise.
20. Construction joints in grade beams shall occur at mid-span. Continue all longitudinal reinforcement through construction joint and maintain proper bar splice lengths.
21. Grade beam reinforcement splices shall be over the drilled piers for the bottom bars and at the center of the span for all other bars.
22. Use of compacted, free-draining pea gravel, crushed stone, or coarse sand underneath the building slab is recommended by TSWE, Inc. Consult Geotechnical Engineer regarding potential substitution of free-draining coarse materials with approved subgrade. Slabs-On-Grade have been designed for a modulus of subgrade reaction (R-value) of 125 psin. Slab-on-grade shall be supported on a minimum of 2'-0" of compacted, tested, and approved select fill as described in Soils Report No. 21-1-5-188 dated December 14, 2021 by GTS, Inc.

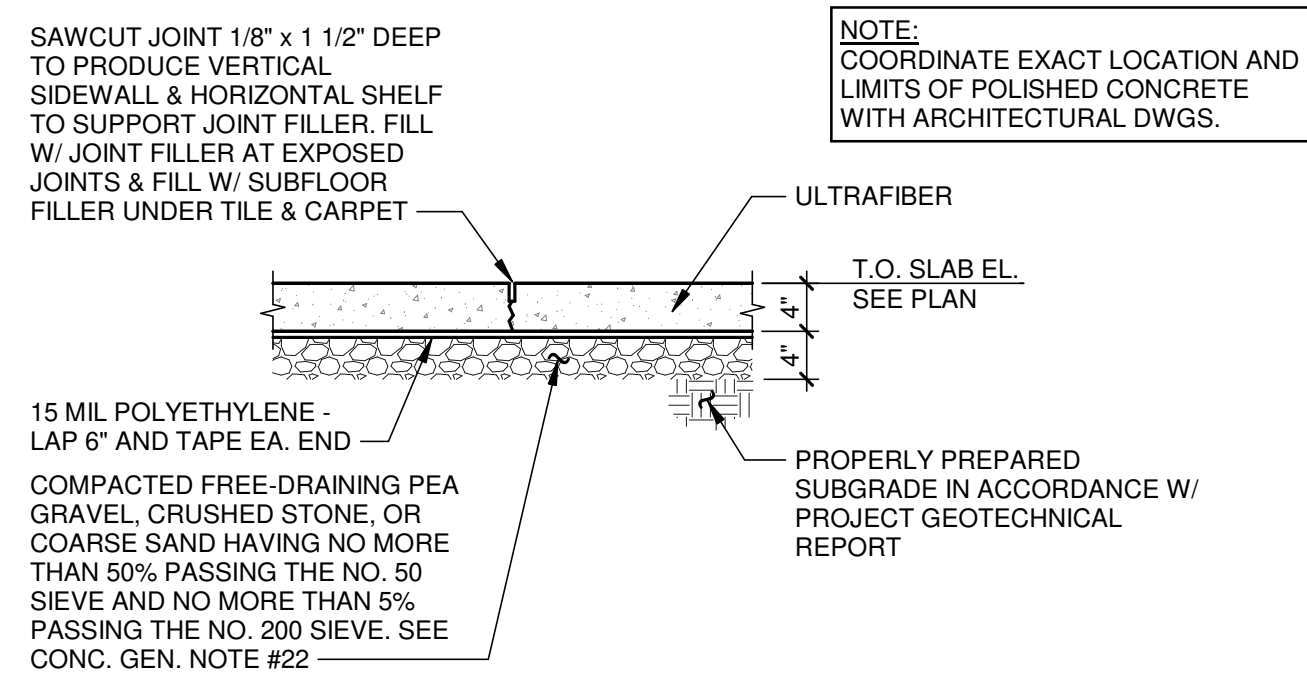
**Concrete Masonry General Notes 4100:**

1. All concrete masonry units shall be lightweight above finished floor and normal weight below grade. All hollow concrete masonry units shall conform to ASTM C90, Grade N, Type 1 with a minimum ultimate compressive strength (f'm) of 2000 psi for the masonry assemblage. All concrete masonry shall be laid in Running (Common) Bond. CMU shall also comply with requirements of fire wall rating. See arch. drawings for firewall rating required.
2. Mortar at walls shall be Type S mortar and have a minimum compressive strength of 1,800 psi. Mortar at interior non-load-bearing walls not higher than 20'-0" and mortar at masonry veneer shall be Type N mortar and have a minimum compressive strength of 750 psi. All mortar shall conform to ASTM C270. Masonry cement shall not be used for mortar. Mortar shall also comply with requirements of fire wall rating. See arch. drawings for firewall rating required.
3. All grout shall be ready-mix concrete, with 3/8" diameter max. aggregate, have a minimum 28-day compressive strength of 2,000 psi and a design slump between 8" to 10" or preblended product (Core Fill Grout, Coarse CF-02, by Spec Mix) with a minimum 28-day compressive strength of 2,000 psi and a design slump between 8" to 10".
4. All 8" CMU bond beam units shall be reinforced with one bar. See details for size of bars for vertical wall reinforcement and bond beam requirements. Provide corner bars and lap bond beam reinforcing 48 bar diameters.
5. All reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
6. All bolts, anchors, reinforcement and embedded items shall be grouted in place.
7. All reinforcing bar splices shall be 48 bar diameters, U.N.O.
8. At all 8" CMU walls provide (1) vertical bar each cell for the first (2) cells adjacent to control joints in walls, at ends of walls, wall corners and on each side of wall openings, unless noted otherwise. Vertical bars shall match reinforcement for remainder of wall. See details for size of reinforcement. Wall cell fill shall also comply with requirements of fire wall rating. See arch. drawings for firewall rating required.
9. Provide control joints in brick veneer where shown on Architectural Drawings.
10. Provide control joints in CMU walls where shown on Architectural Drawings. Place joints for CMU walls max. 24'-0" O.C.
11. Provide horizontal joint reinforcement at 16" O.C. Reinforcement shall be ladder design, min. 9 gage welded steel wire, hot dipped galvanized to 1.5 oz. width shall be 1 1/2" less than wall thickness.

**TYPICAL STRUCTURAL ABBREVIATIONS**

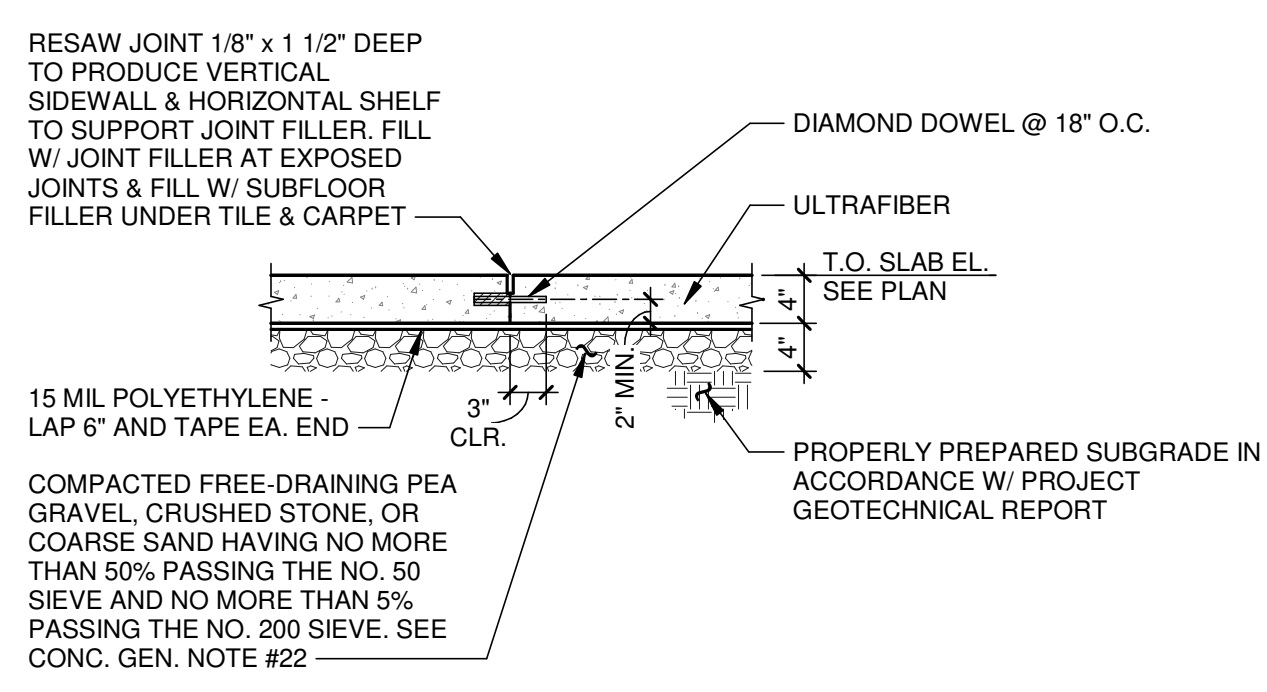
A.R.	ANCHOR ROD	F.S.	FAR SIDE	PLF	POUNDS PER FOOT
ACI	AMERICAN CONCRETE INSTITUTE	FDN	FOUNDATION	PROJ	PROJECTION
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FIN	FINISH	PSF	POUNDS PER SQUARE FOOT
ARCH	ARCHITECT	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	FTG	FOOTING	R	RADIUS
BLDG	BUILDING	GALV	GALVANIZED	REINF	REINFORCEMENT
BM	BEAM	H.S.A.	HEADED STUD ANCHOR	RECD	REQUIRED
BOTT	BOTTOM	HK	HOOK	RTU	ROOF TOP UNIT
BRG	BEARING	HORIZ	HORIZONTAL	S.O.G.	SLAB ON GRADE
BTWN	BETWEEN	J.B.E.	JOIST BEARING ELEVATION	SCHED	SCHEDULE
CFS	COLD-FORMED STEEL	JST	JOIST	SECT	SECTION
CL or C	CENTER LINE	JT	JOINT	SEOR	STRUCTURAL ENGINEER OF RECORD
CLR	CLEAR	LG	LONG LEG	SIM	SIMILAR
COL	COLUMN	LLH	LONG LEG HORIZONTAL	SJI	STEEL JOIST INSTITUTE
CONC	CONCRETE	LLV	LONG LEG VERTICAL	SPA	SPACING
CONN	CONNECTION	LONG	LONGITUDINAL	SPECS	SPECIFICATIONS
CONT	CONTINUOUS	MAX	MAXIMUM	STD	STANDARD
DIA. or Ø	DIAMETER	MEM	METAL BUILDING MANUFACTURER	STIFF	STIFFENER
DIM	DIMENSION	MECH	MECHANICAL	STL	STEEL
DN	DOWN	MFR	MANUFACTURER	TOF	TOP OF FOOTING
Ø	DIAMETER	MNI	MINIMUM	TOG	TOP OF GRADE BEAM
DTL	DETAIL	MISC	MISCELLANEOUS	TOW	TOP OF WALL
DWG	DRAWING	MTL	METAL	TRANS	TRANSVERSE
E.F.	EACH FACE	N.S.	NEAR SIDE	TYP	TYPICAL
E.W.	EACH WAY	O.C.	ON CENTER	U.N.O.	UNLESS NOTED OTHERWISE
EA	EACH	O.F.	OUTSIDE FACE	VERT	VERTICAL
EL	ELEVATION	OPNG	OPENING	W/	WITH
EQ	EQUAL	PL or P	PLATE	WP	WORK POINT
EXIST	EXISTING			WWF	WELDED WIRE FABRIC
EXP	EXPANSION				

**NOTE:**  
ALL SLAB-ON-GRADE SHALL HAVE ULTRAFIBER 500 REINFORCING FIBERS AT DOSAGE OF 2.0 LB. / CUBIC YD. AS MANUFACTURED BY SOLOMON COLORS, INC.



**1 TYP. SLAB-ON-GRADE CONTROL JT. DTL. (CJ)**  
NOT TO SCALE

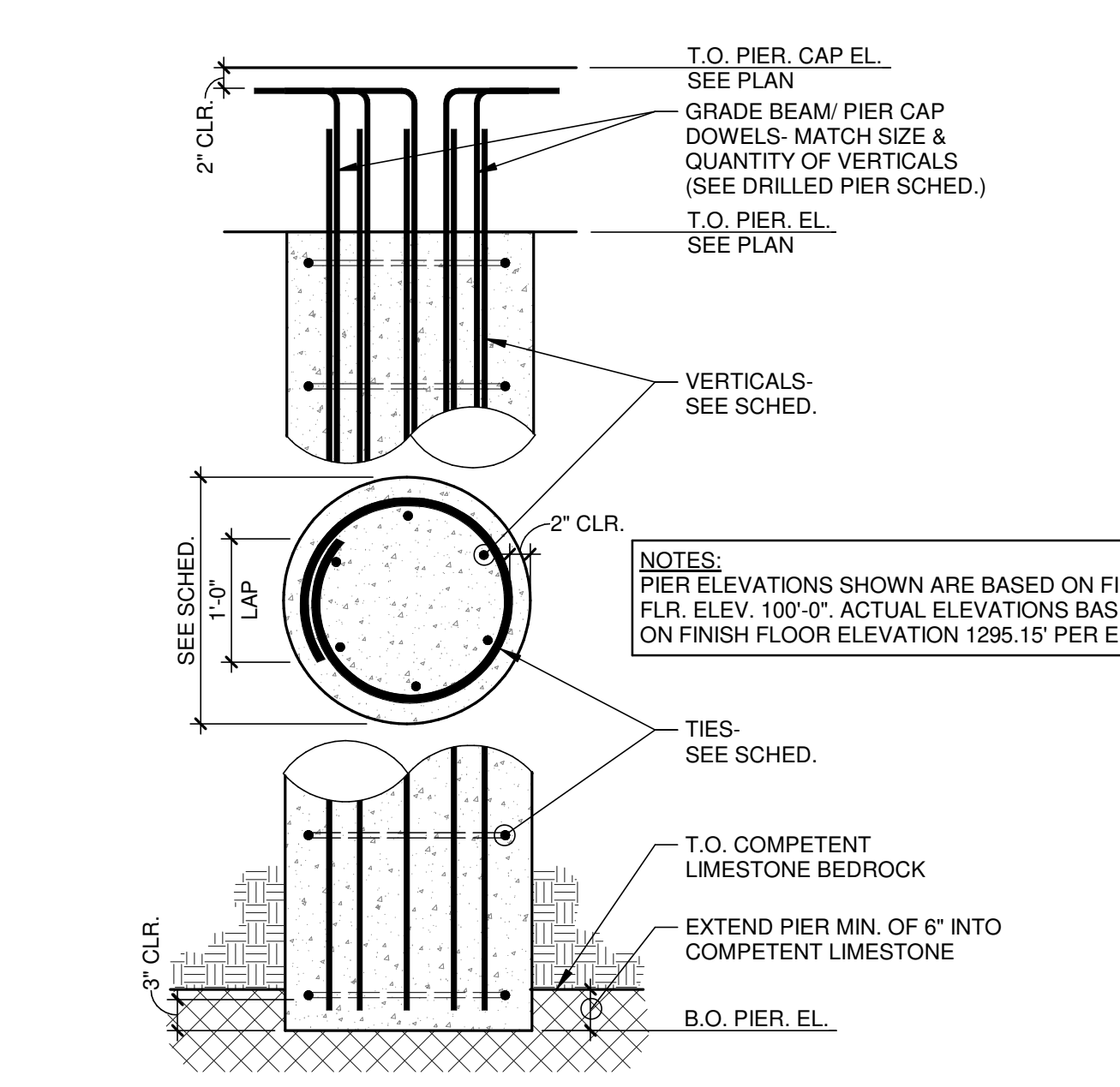
**NOTE:**  
PROVIDE DIAMOND DOWEL SYSTEM AS MANUFACTURED BY PNA CONSTRUCTION TECHNOLOGIES OR THE SPEED SYSTEM BY SIKA CORPORATION AT CONSTRUCTION JOINTS IN ALL FLOOR AREAS. COORDINATE WITH ARCHITECT FOR CONSTRUCTION JOINT LOCATIONS.



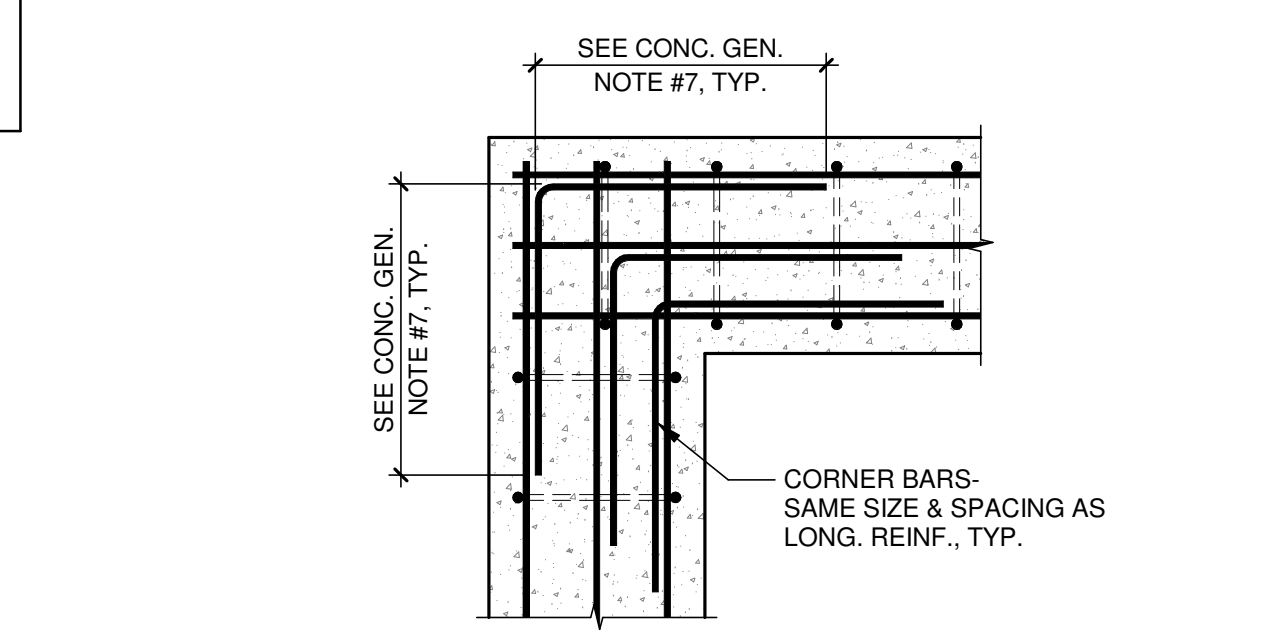
**2 TYP. SLAB-ON-GRADE CONSTRUCTION JT. DTL. (CJ)**  
NOT TO SCALE

**DRILLED PIER SCHEDULE**

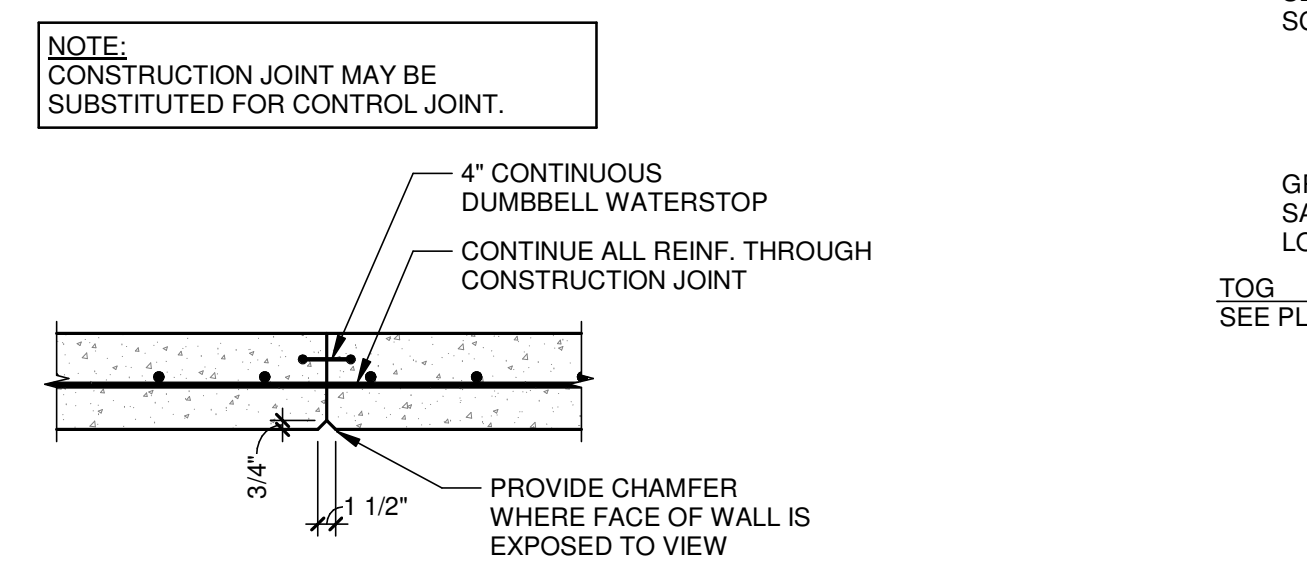
MARK	DIAMETER	VERTICALS	TIES	VERT. LAP LENGTH	REMARKS
DP1	2'-0"	(6) #6	#4 @ 12" O.C.	12"	<varies>
DP2	2'-6"	(9) #6	#4 @ 12" O.C.	12"	----



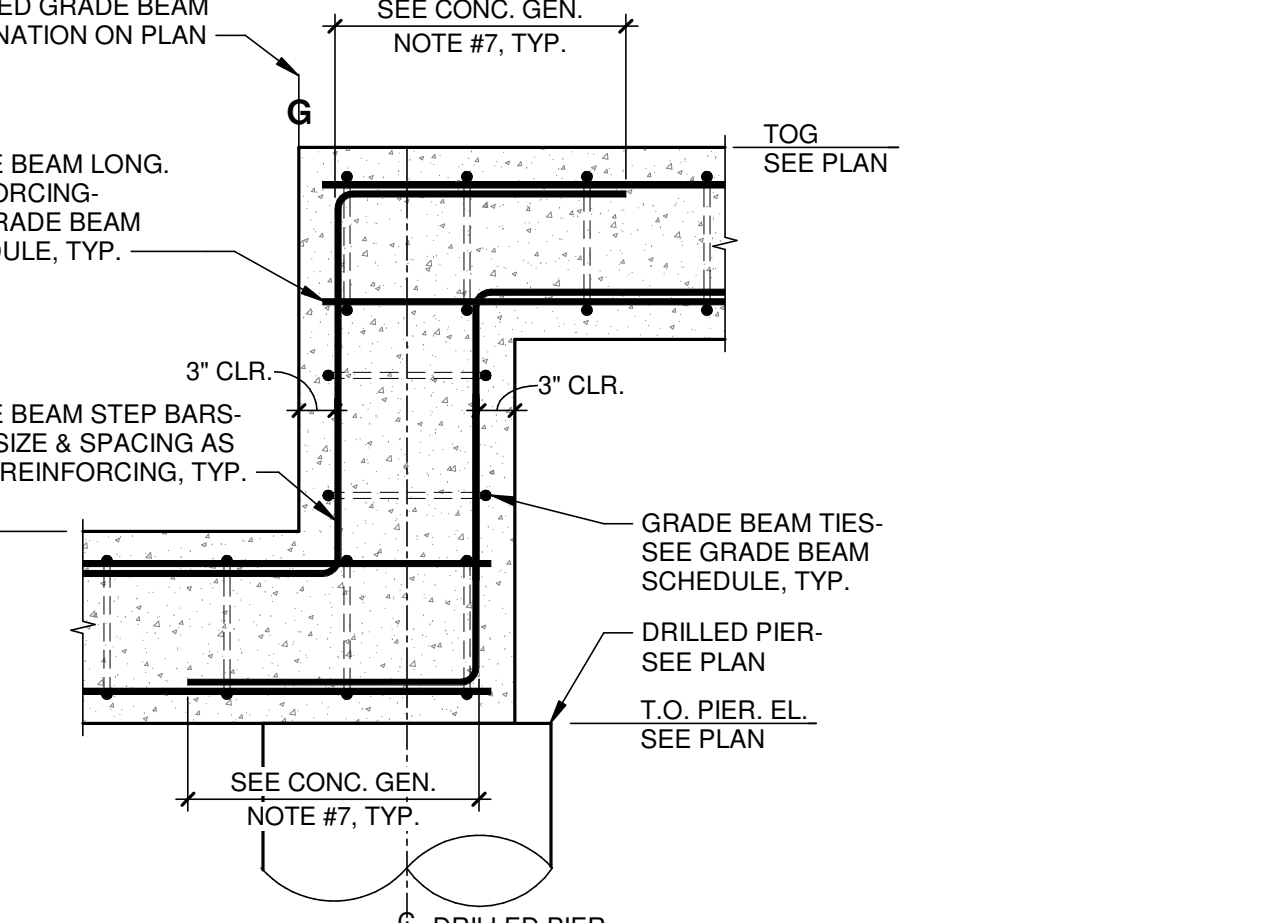
**5 TYP. DRILLED PIER DETAIL**  
NOT TO SCALE



**6 TYP. GRADE BEAM CORNER DETAILS**  
NOT TO SCALE



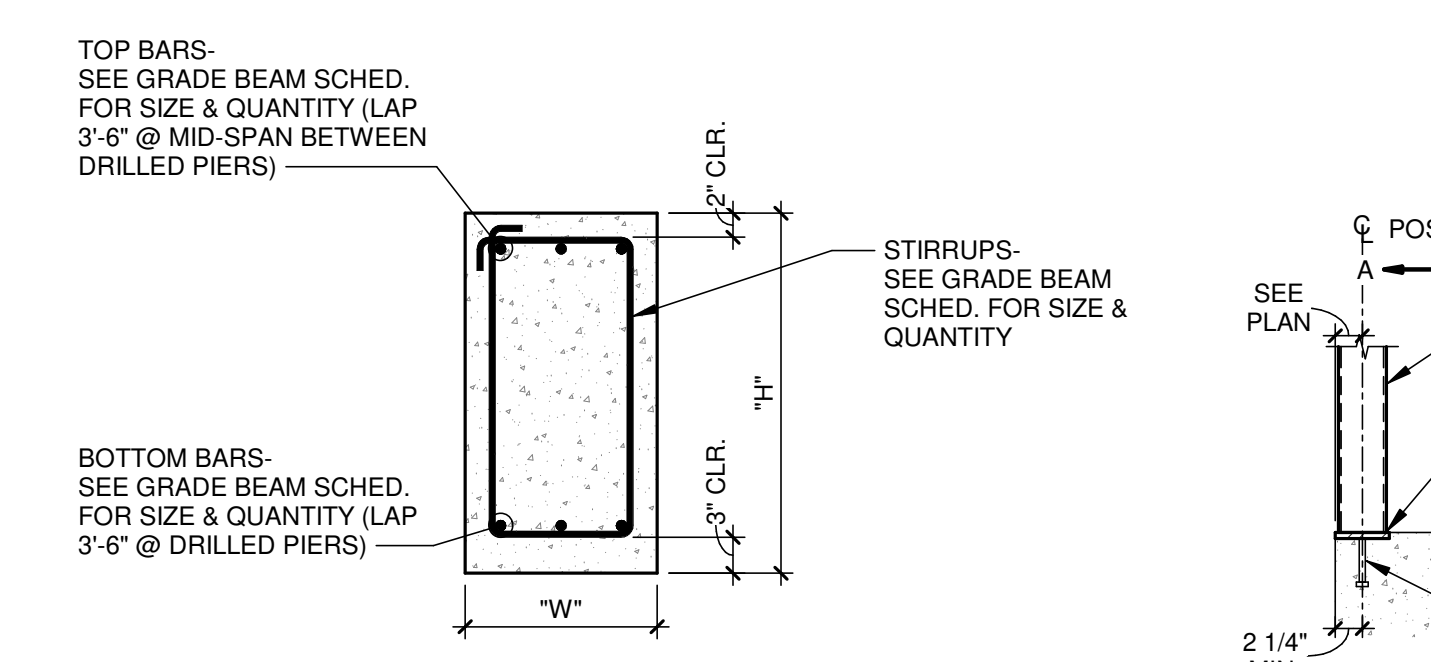
**8 TYP. CONCRETE WALL CONSTRUCTION JT. DTL.**  
NOT TO SCALE



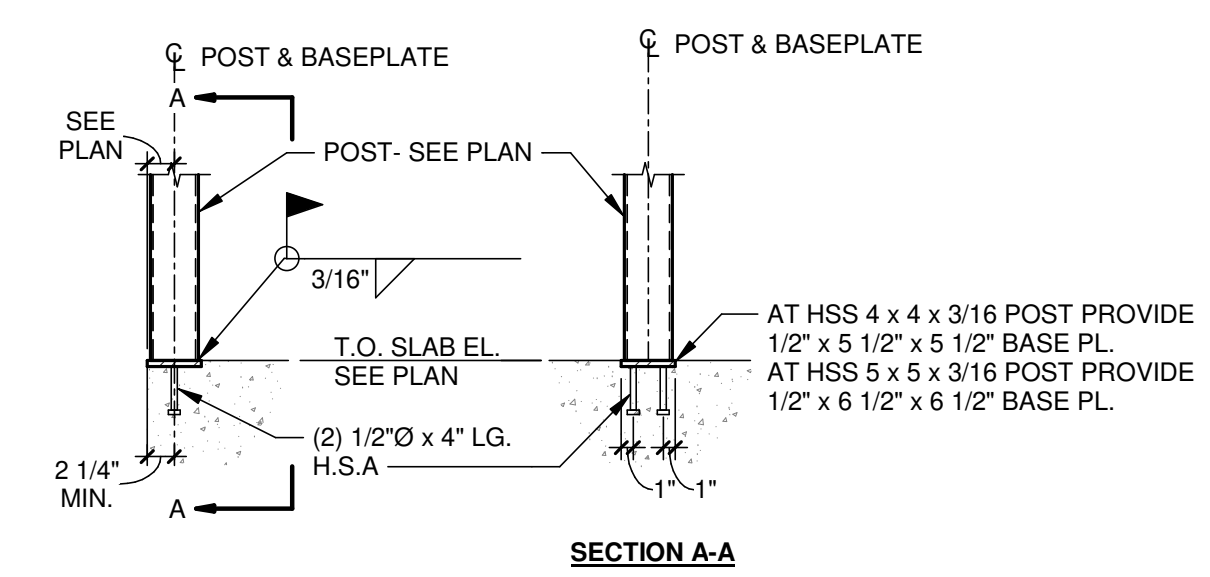
**9 TYP. STEPPED GRADE BEAM @ PIER DETAIL**  
NOT TO SCALE

**GRADE BEAM SCHEDULE**

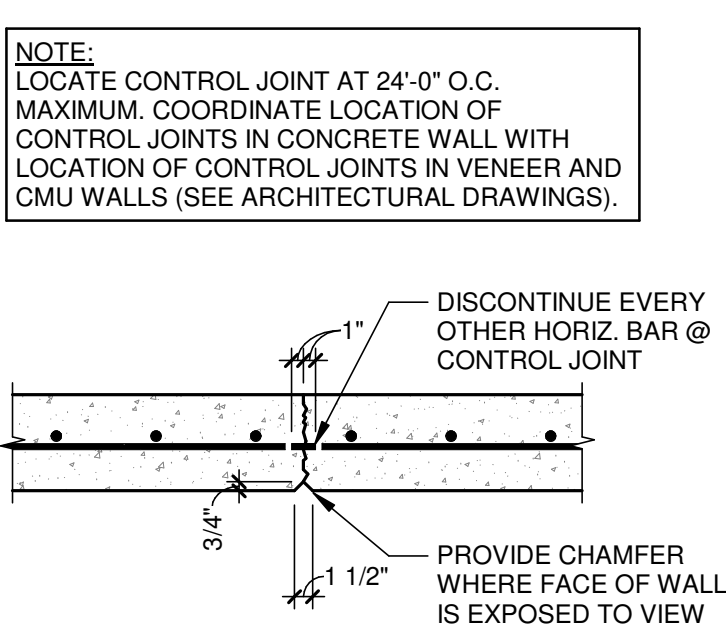
MARK	GRADE BEAM SIZE		TOP BARS	MIDDLE BARS	BOTTOM BARS	STIRRUPS	REMARKS
	W	H					
GB1	2'-0"	2'-0"	(6) #6	----	(6) #6	#3 @ 8" O.C.	----
GB2	3'-0"	2'-0"	(9) #6	----	(6) #6	#3 @ 6" O.C.	----
GB3	3'-0"	2'-0"	(9) #6	----	(9) #6	#3 @ 6" O.C.	----
GB4	2'-0"	3'-0"	(8) #6	----	(8) #6	#3 @ 8" O.C.	----
GB5	3'-0"	3'-0"	(10) #6	----	(10) #6	#3 @ 12" O.C.	----
GB6	1'-6"	2'-6"	(6) #6	----	(6) #6	#3 @ 10" O.C.	----



**3 TYP. GRADE BEAM DETAIL**  
NOT TO SCALE



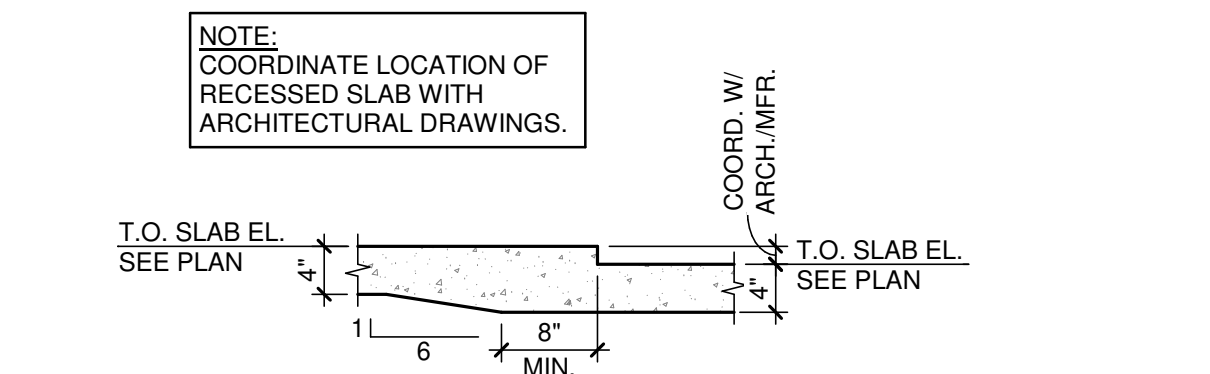
**4 TYP. POST BASE**  
NOT TO SCALE



**7 TYP. CONCRETE WALL CONTROL JT. DTL.**  
NOT TO SCALE



**10 TYP. CONCRETE WALL CORNER DETAIL**  
NOT TO SCALE



**11 TYP. RECESSED SLAB**  
NOT TO SCALE

**PIER CAP SCHEDULE**

MARK	SIZE		REINFORCING	REMARKS
	WIDTH	DEPTH		
PC1	2'-6"	2'-6"	(3) #4 EA. WAY TOP & BOT.	SEE NOTES
PC2	3'-6"	3'-6"	(4) #4 EA. WAY TOP & BOT.	SEE NOTES
PC3	4'-6"	4'-6"	(5) #4 EA. WAY TOP & BOT.	SEE NOTES
PC4	4'-6"	5'-0"	(5) #4 LONG. EA. WAY TOP & BOT. TOP OF GRADE BEAM. #3 TIES @ 8" O.C. EA. WAY	SEE NOTES
PC5	4'-6"	4'-6"	(4) #4 LONG. EA. WAY TOP & BOT. (6) #4 TRANS. EA. WAY TOP & BOT. #3 TIES @ 8" O.C. EA. WAY	SEE NOTES
PC6	2'-6"	4'-6"	(4) #4 LONG. EA. WAY TOP & BOT. (6) #4 TRANS. EA. WAY TOP & BOT. #3 TIES @ 8" O.C. LONG	SEE NOTES

**PIER CAP SCHEDULE NOTES:**  
1. SEE FOUNDATION PLAN FOR LOCATION AND ORIENTATION.  
2. SEE FOUNDATION PLAN FOR PIER CAP DEPTH.

**PEDESTAL SCHEDULE**

MARK	PEDESTAL SIZE		VERTICAL DOWELS	TIES	REMARKS
	WIDTH	LENGTH			
P1	1'-4"	1'-4"	(6) #6 DOWELS	#3 TIES @ 12" O.C.	SEE NOTE #1
P2	1'-6"	2'-0"	(6) #6 DOWELS	#3 TIES @ 12" O.C.	SEE NOTE #1
P3	2'-0"	2'-0"	(8) #6 DOWELS	#3 TIES @ 12" O.C.	SEE NOTE #1

**PEDESTAL SCHEDULE NOTES:**  
1. SEE FOUNDATION PLAN FOR LOCATION AND ORIENTATION.

**Bentonville Public Library**  
**Expansion**  
 405 S Main Street  
 Bentonville, AR 72712  
 Project No. 2002007



Mark	Date	Description
1	12/15/2021	SCHEMATIC DESIGN PRICING
2	06/22/2022	DESIGN DEVELOPMENT PRICING
3	10/24/2022	90% CD PRICING
4	12/31/2022	PERMIT SET
5	01/06/2023	BID SET
6	03/24/2023	ASH-01
7	08/22/2023	ASH-07

**Structural Steel General Notes 5100:**

- All detailing, fabrication and erection of structural steel shall conform to the requirements of the AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
- Wide flanges and WT tees shall conform to ASTM A992 with a yield strength of 50 ksi.
- Hollow Structural Section (HSS) shall conform to ASTM A500, Grade B with a yield strength of 46 ksi.
- Steel pipes shall conform to ASTM A501.
- Headed stud anchors (H.S.A.'s) shall conform to ASTM A108.
- All other structural steel shall conform to the requirements of ASTM A36. Angle, plate and beam lintels at exterior wall openings shall be hot-dipped galvanized.
- All anchor rods shall conform to ASTM F1554, Grade 36. Nuts for anchor rods shall conform to ASTM A563, Grade A, heavy hex and anchor rod washers shall conform to ASTM F844.
- All welding shall conform to the Specifications of the American Welding Society. Welding electrodes shall be E-70 low hydrogen series. Welding shall be done by a certified welder.
- High strength bolts shall typically be 3/4" diameter bolts conforming to ASTM A325. Connections shall be designed as bearing type with threads in shear plane. Holes shall be 1/16" larger than bolt size. See details for connections with 1" diameter bolts.
- All bolts shall be tightened to a snug-tight condition. A snug tight condition is defined as the tightness attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. All connected elements must be brought into snug contact.
- Bearing ends of all columns shall be square cut.
- No openings shall be cut in structural members unless shown on the drawings.
- Steel frame is non-self-supporting and column anchor rods are designed for a completed condition only. Metal roof deck and steel moment frames are required to provide lateral stability for the frame and resistance to wind and seismic forces. Contractor shall provide all temporary bracing required to maintain stability of structural system.
- Anchor rod holes in base plates shall be sized in accordance with AISC "Detailing For Steel Construction".
- All exposed edges of plates, beams, etc., shall be shop ground smooth and uniform.
- All column base plates supported on drilled piers, pedestals and pier caps shall bear on 1 1/2" non-shrink non-metallic grout unless noted otherwise.
- 1 1/2"Ø sleeve anchors shall be 1 1/2"Ø x 4" long HLC-H Sleeve Anchor by Hilli. HLC-H Sleeve Anchor shall be carbon steel with zinc plating and have a 3" embedment depth.
- 1 1/2"Ø expansion bolts shall be 1 1/2"Ø x 5 1/2" long Kwik Bolt 3 by Hilli. Expansion Anchor shall be carbon steel with zinc plating and have a 3 1/2" embedment depth.
- 3/4"Ø expansion bolts shall be 3/4"Ø x 5 1/2" long Kwik Bolt 3 by Hilli. Expansion Anchor shall be carbon steel with zinc plating and have a 4 3/4" embedment depth.

GENERAL CONTRACTOR SHALL INCLUDE 2 TON AT A MINIMUM COST OF \$10,000/TON OF MISCELLANEOUS STEEL BEAMS, CHANNELS AND ANGLES IN ADDITION TO THE FRAMING SHOWN ON THE PLANS AND DETAILS. GENERAL CONTRACTOR SHALL INCLUDE ERECTION, FABRICATION, DESIGN AND DETAILING COSTS FOR THIS ADDITIONAL FRAMING WITH THE BASE BID. THE USE OF MISCELLANEOUS STEEL IS TO BE RECORDED BY THE GENERAL CONTRACTOR AND ANY UNUSED AMOUNT IS TO BE CREDITED TO THE OWNER.

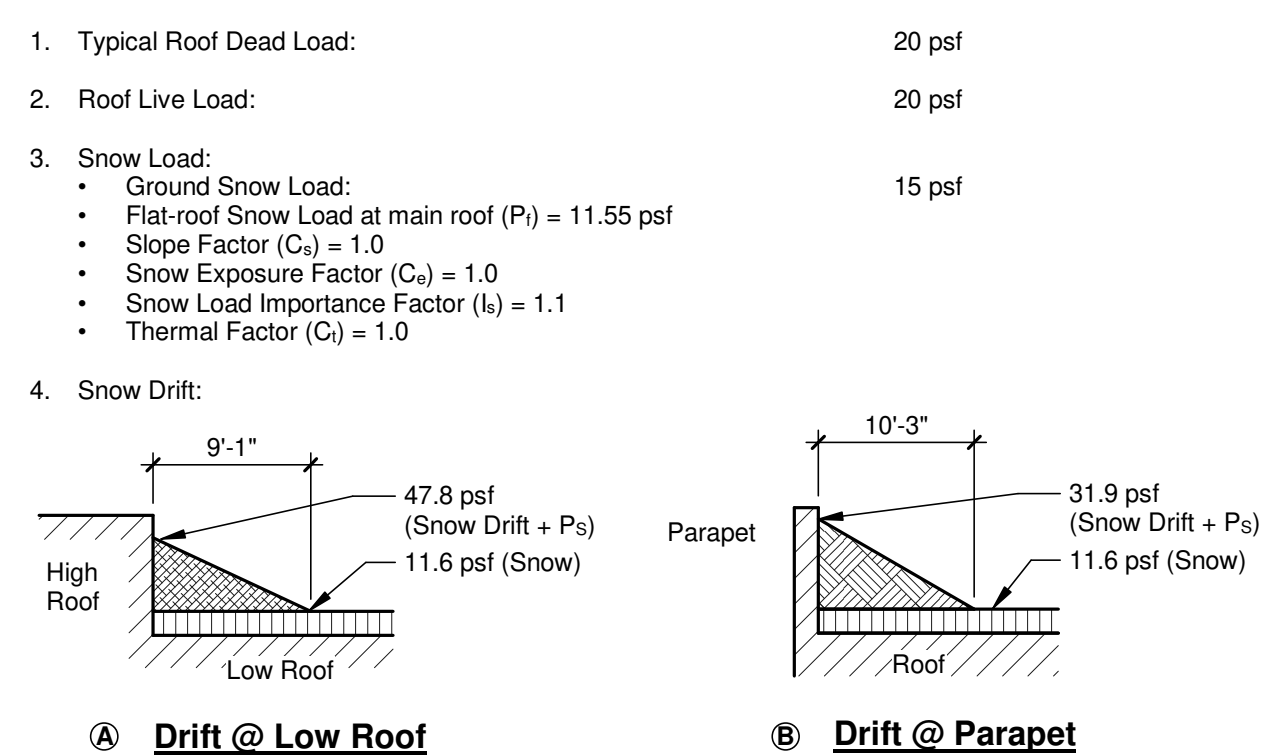
**Steel Deck General Notes 5300:**

- Typical roof deck shall be 3" deep, 22 gauge, wide rib type and shall have nested side laps (Vulcraft 3NL-32, New Millennium N or approved equal). See Roof Framing Plans for limits of roof deck.
- Roof deck shall be welded to the steel framing per the Roof Deck Fastening Pattern Detail 1/S1.2.
- Roof deck fastening pattern has been designed for a net wind uplift of 22 psf at corner zones, 13 psf at side zones and 7 psf at interior zones for roofs.
- Roof deck at elevated mechanical pad shall be 1" deep, 24 gauge, galvanized steel form deck (Vulcraft 1.0 C24, New Millennium 1.0FD24 or approved equal).
- Roof deck at elevated mechanical pad shall be welded to the steel framing per the Form Deck Fastening Pattern Detail 2/S1.2.
- All deck shall be fastened per Steel Deck Institute (SDI) requirements.
- Deck specified has been determined on basis of 3 span condition; deck supplier shall use heavier gauge if required for one and two span conditions.

**Light Gauge Steel General Notes 5400:**

- All structural studs and headers shall be of the type, size, gauge and spacing as shown on the drawings.
- All framing members shall be formed from steel, corresponding to the requirements of ASTM A653.
- Steel for framing members shall have a minimum yield strength of 33 ksi, unless noted otherwise.
- Exterior stud walls and lintels shall be constructed with the following, unless noted otherwise.
  - 6" studs: 600S162-43
  - 6" track: 800T125-43
  - 8" studs: 800S162-43
  - 8" track: 800T125-43
- See Architectural Drawings for summary of non-structural stud sizes; runner track gauge to match stud gauge.
- Exterior studs shall be braced in accordance with the manufacturer's specifications and recommendations. See Metal Stud Bridging Detail 6/S1.2.
- Slide clips shall be VertiClip SLB with vertical slots by The Steel Network, Inc. or approved equal.
- Rigid clips shall be StiffClip LB by The Steel Network, Inc. or approved equal.
- Powder actuated fasteners for attachment of bottom runner track shall have a 0.157" minimum shank diameter and a 1 1/2" minimum concrete embedment. Space fasteners at 16" O.C., unless noted otherwise.
- At interior stud walls extending to the underside of roof structures, provide a deflection track at the top of the wall.
- Provide bracing to structure for all stud walls and furr-downs.

**Design Loads**



**A Drift @ Low Roof**

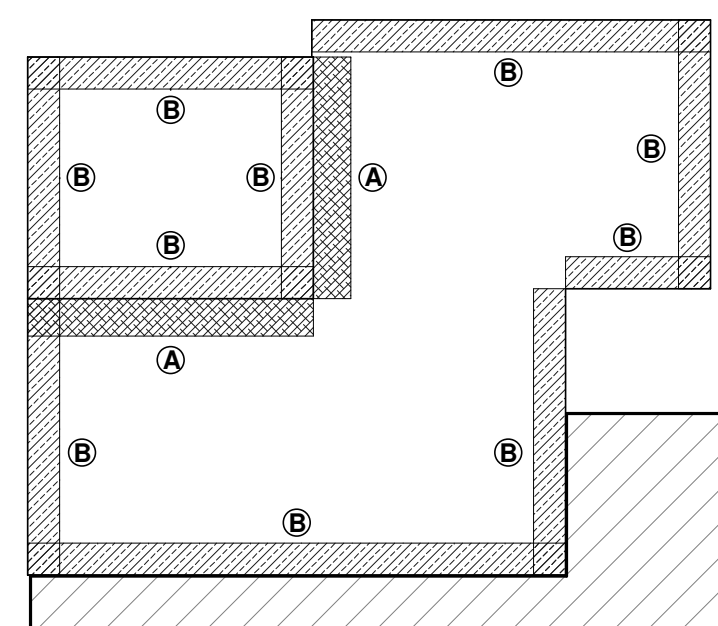
**B Drift @ Parapet**

- Typical Roof Dead Load: 20 psf
- Roof Live Load: 20 psf
- Snow Load: 15 psf
  - Ground Snow Load:
  - Flat-roof Snow Load at main roof (P<sub>s</sub>) = 11.55 psf
  - Slope Factor (C<sub>s</sub>) = 1.0
  - Snow Exposure Factor (C<sub>e</sub>) = 1.0
  - Snow Load Importance Factor (I<sub>s</sub>) = 1.1
  - Thermal Factor (C<sub>t</sub>) = 1.0
- Wind Load:
  - Ultimate Design Wind Speed (V<sub>ult</sub>): 120 mph
  - Nominal Design Wind Speed (V<sub>nom</sub>): 93 mph
  - Risk Category III
  - Wind Exposure B
  - Internal Pressure Coefficient, G<sub>Cp</sub> = ±0.18
- Components & Cladding Wind Load (Unfactored):
  - Width of Edge Zone, a = 8 ft
  - Wall Pressures (10 ft):
    - End Zone Wall = 31.6 psf
    - Interior Zone = 25.7 psf
  - Wall Pressures (100 ft):
    - End Zone Wall = 24.6 psf
    - Interior Zone = 22.2 psf
  - Roof Pressures (10 ft):
    - Corner Zone = 65.4 psf
    - Eave & Rake Zone = 43.4 psf
    - Interior Zone = 25.9 psf
  - Roof Pressures (100 ft):
    - Corner Zone = 28.1 psf
    - Eave & Rake Zone = 28.1 psf
    - Interior Zone = 23.7 psf
- Seismic:
  - Risk Category III
  - Seismic Importance Factor (I<sub>s</sub>) = 1.25
  - S<sub>s</sub> = 0.16
  - S<sub>i</sub> = 0.091
  - S<sub>0.1</sub> = 0.17
  - S<sub>0.2</sub> = 0.145
  - Site Class D (per Geotechnical Report)
  - Seismic Design Category C
  - Basic Structural System: Moment-Resisting Frame System
  - Seismic Restraint System: Steel Ordinary Moment Frames
  - Response Modification Coefficient (R): 3.5
  - Deflection Amplification Factor (C<sub>d</sub>): 3
  - Seismic Response Coefficient (C<sub>s</sub>): 0.061
  - Analysis Procedure: Equivalent Lateral Force Procedure
- Building Code:
  - 2012 International Building Code
  - ASCE 7-10
  - 2012 Arkansas Fire Prevention Code, Volume II

THIS FACILITY HAS BEEN DESIGNED FOR THE SEISMIC CRITERIA AND BUILDING CODE NOTED ON THIS DRAWING IN ACCORDANCE WITH THE REQUIREMENTS OF ACT 1100.

**LEGEND:**

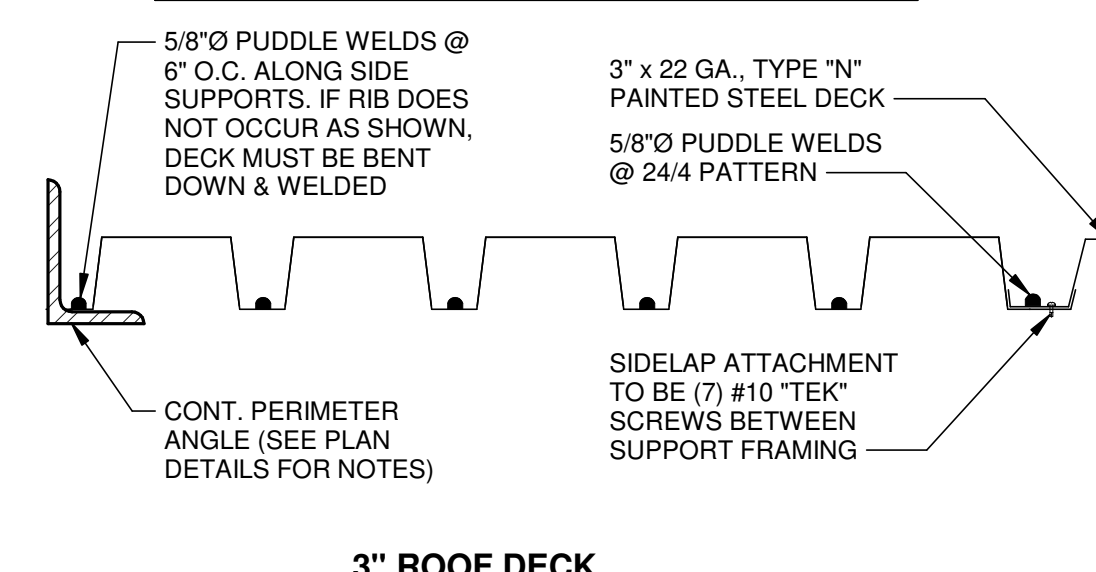
- A** DENOTES LIMITS OF SNOW DRIFT @ LOW ROOF (SEE DESIGN LOADS)
- B** DENOTES LIMITS OF SNOW DRIFT @ PARAPET (SEE DESIGN LOADS)



**5 SNOW DRIFT PLAN**

1" = 50'-0"

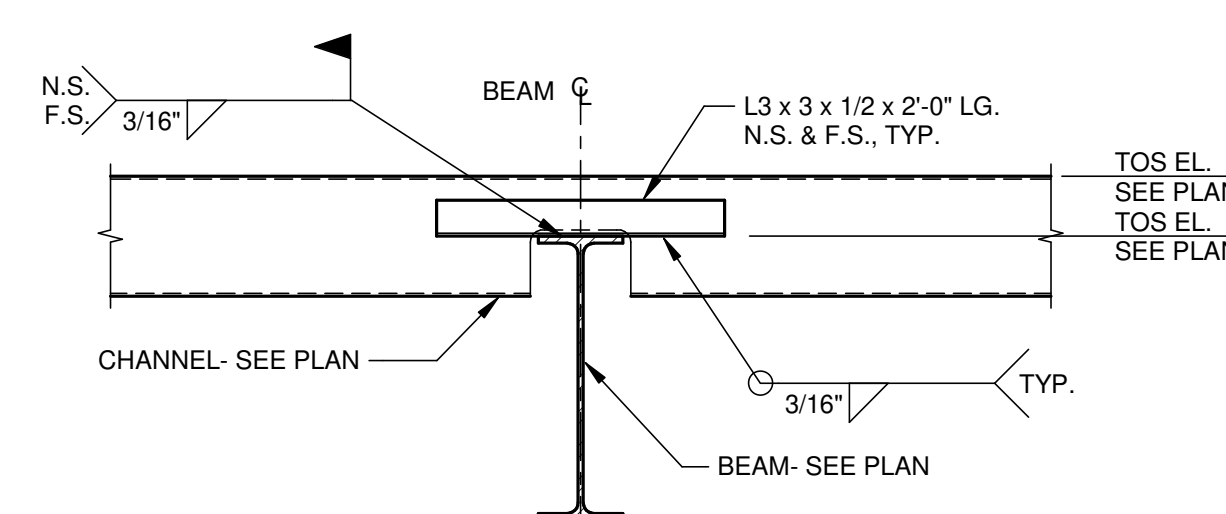
NOTE: PROVIDE 5/8" DIAMETER PUDDLE WELDS AT 6" O.C. FOR END LAPS (MIN. 2" LAP) AND ENDS OF EACH DECK RUN.



**3" ROOF DECK**

**1 TYP. ROOF DECK FASTENING PATTERN DETAIL**

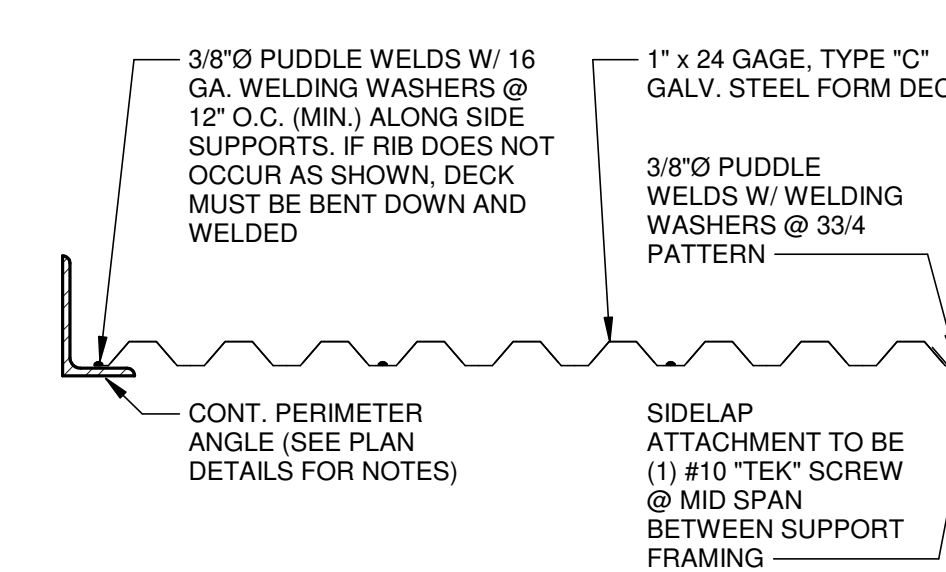
NOT TO SCALE



**3 TYP. COPED CHANNEL BEARING DETAIL**

NOT TO SCALE

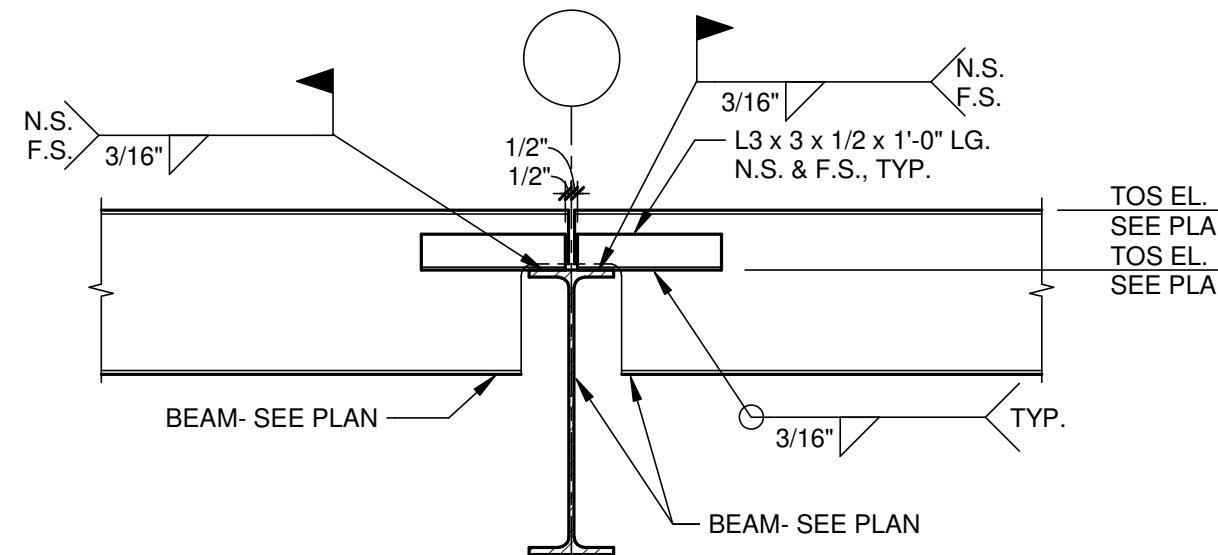
NOTE: PROVIDE 3/8" DIAMETER PUDDLE WELDS WITH 16 GA. WELDING WASHERS @ 12" O.C. FOR END LAPS (MIN. 2" LAP) AND ENDS OF EACH DECK RUN.



**1" FLOOR DECK**

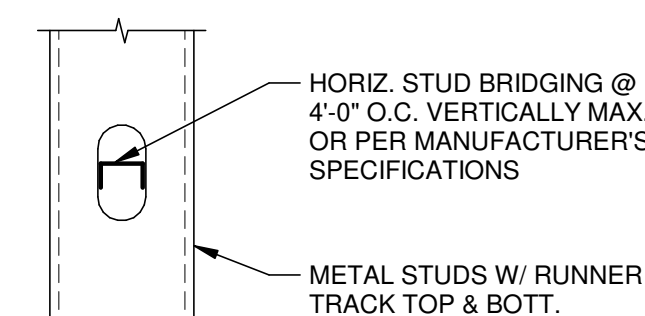
**2 MECHANICAL PAD DECK FASTENING PATTERN DETAIL**

NOT TO SCALE



**4 TYP. COPED BEAM BEARING DETAIL**

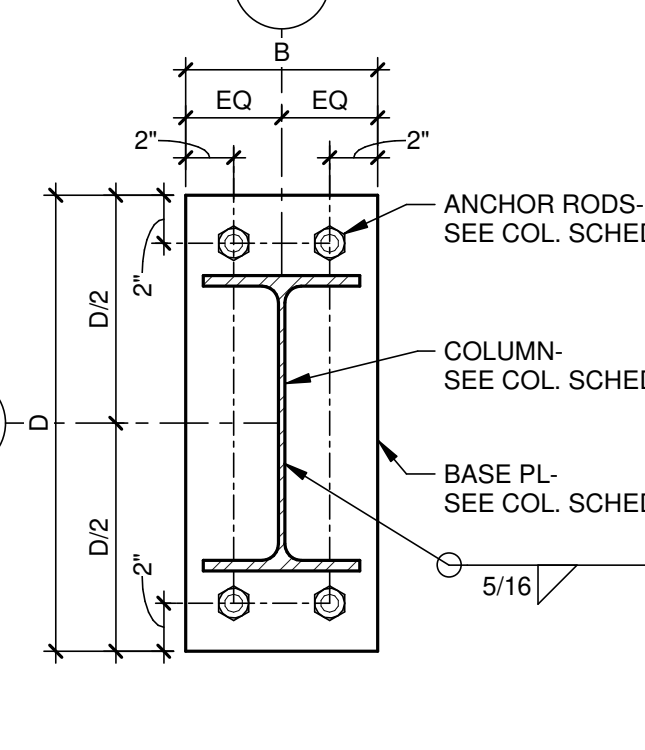
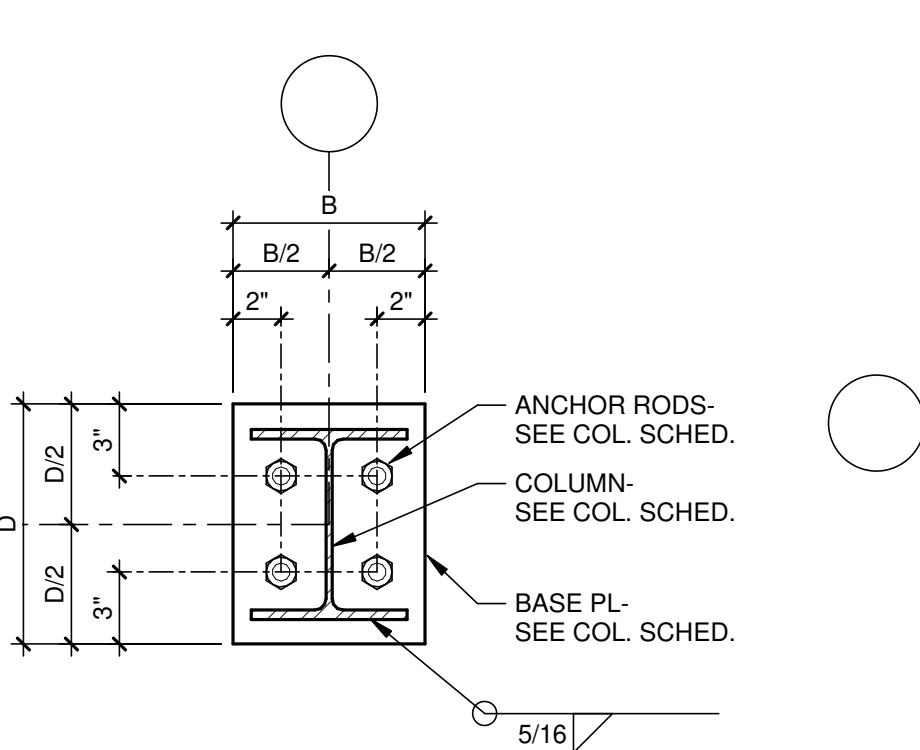
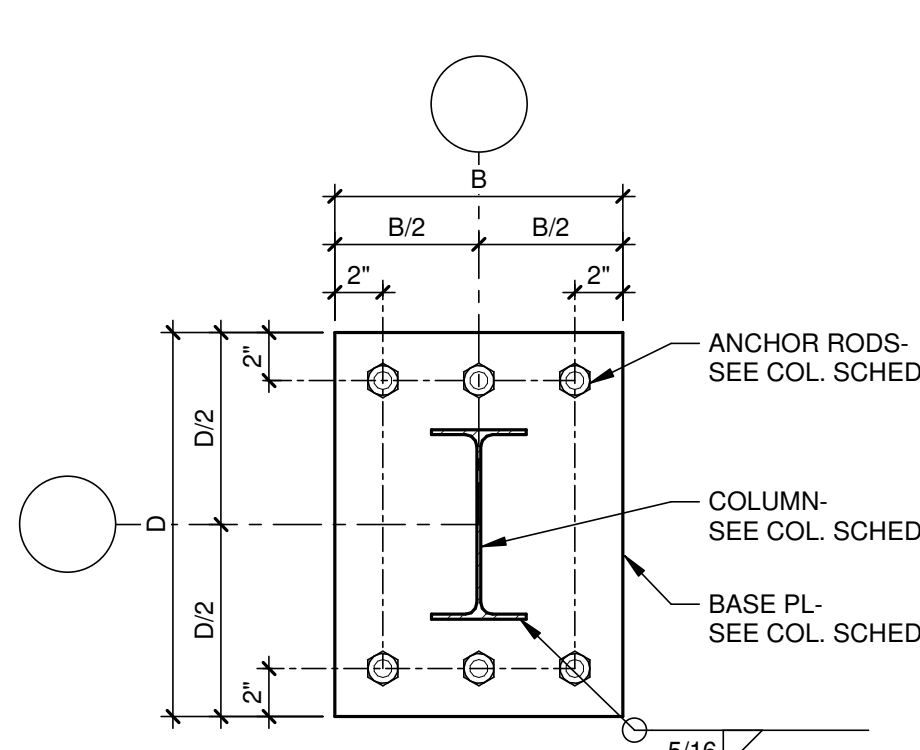
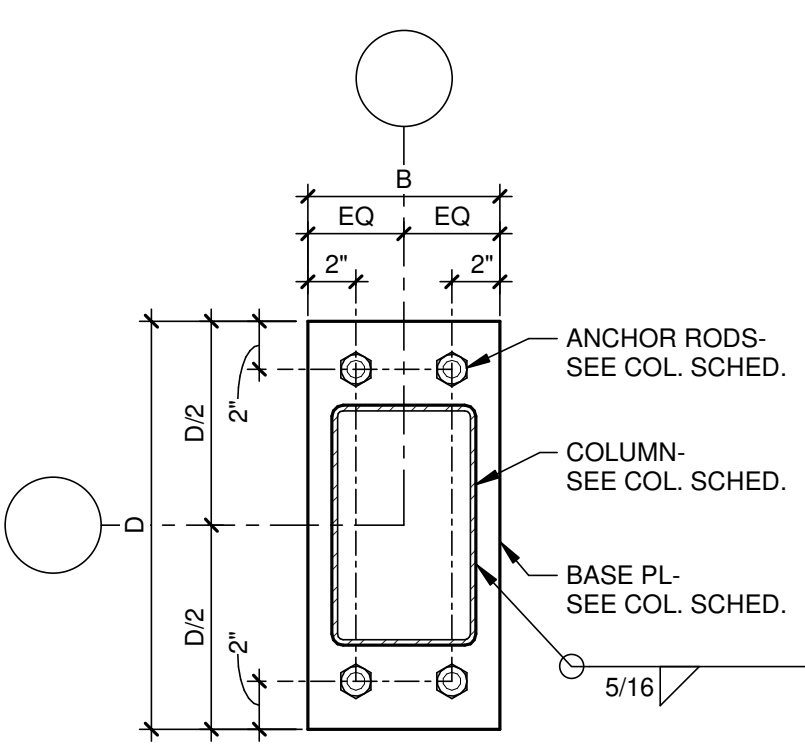
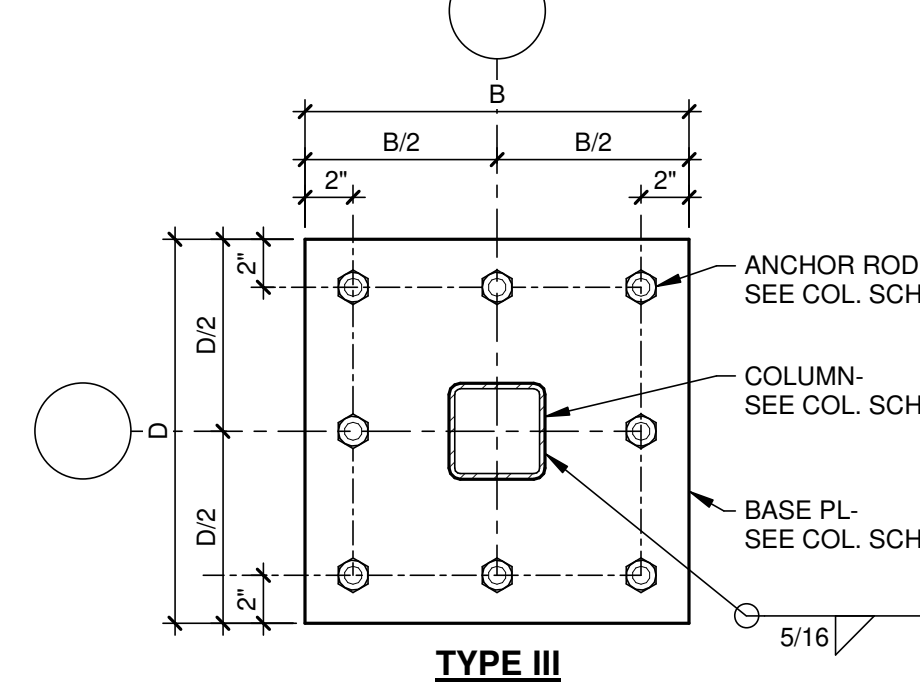
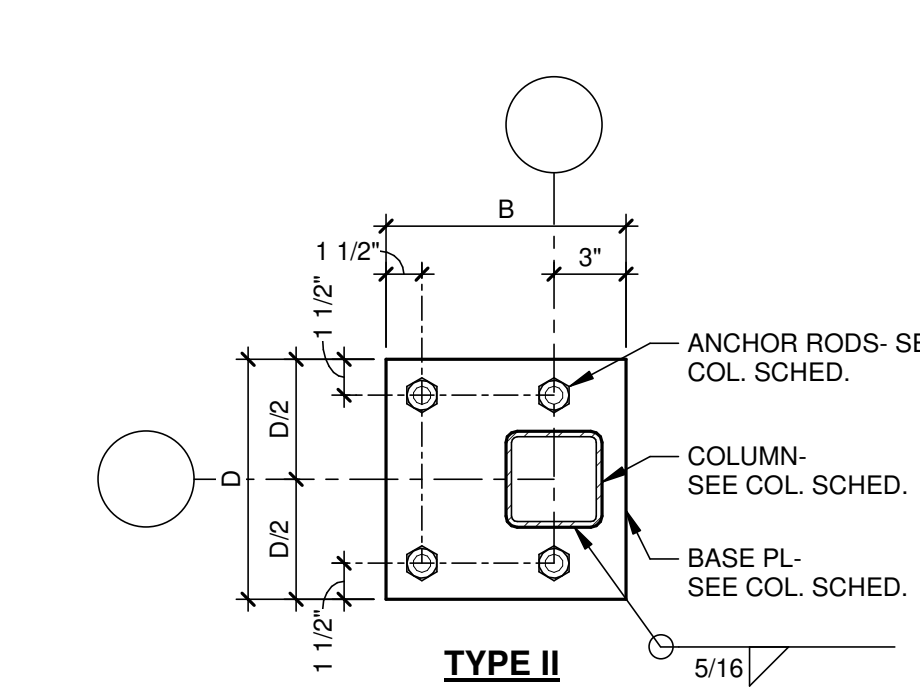
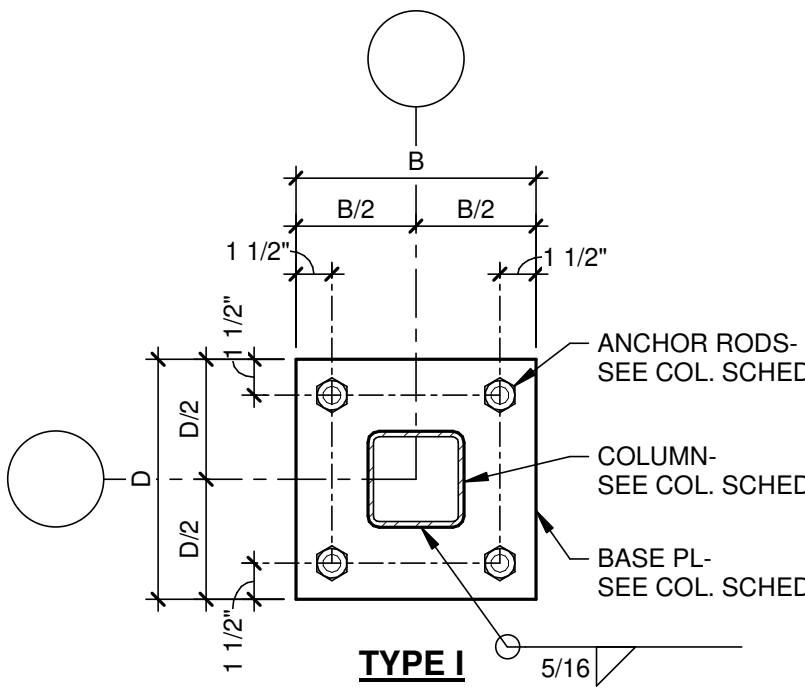
NOT TO SCALE



**6 TYP. METAL STUD BRIDGING DETAIL**

NOT TO SCALE

COLUMN SCHEDULE						
MARK	COLUMN SIZE	BASE PL SIZE (t x B x D)	BASE PL TYPE (SEE DTL 1/S1.4)	ANCHOR RODS (SEE DTL 2/S1.4)	BOTT. BASE PL THICKNESS	CAP PL THICKNESS
C1A	HSS4 x 4 x 1/4	3/4" x 10" x 10"	TYPE I	(4) 3/4"Ø F1554	99'-5 1/2"	1/2"
C1B	HSS4 x 4 x 1/4	3/4" x 10" x 10"	TYPE II	(4) 3/4"Ø F1554	99'-5 1/2"	1/2"
C1C	HSS4 x 4 x 1/4	3/4" x 10" x 10"	TYPE II	(4) 3/4"Ø F1554	98'-9 1/2"	1/2"
C2A	HSS5 x 5 x 3/16	3/4" x 11" x 11"	TYPE I	(4) 3/4"Ø F1554	99'-5 1/2"	1/2"
C2B	HSS5 x 5 x 3/16	3/4" x 11" x 11"	TYPE II	(4) 3/4"Ø F1554	98'-9 1/2"	1/2"
C3	HSS6 x 6 x 3/16	3/4" x 12" x 12"	TYPE I	(4) 3/4"Ø F1554	99'-5 1/2"	1/2"
C4	HSS6 x 6 x 5/16	1" x 12" x 12"	TYPE I	(4) 3/4"Ø F1554	99'-5 1/2"	1/2"
CSA	HSS8 x 8 x 5/16	1 1/2" x 14" x 14"	TYPE III	(8) 1"Ø F1554	99'-6"	1 1/2"
CSB	HSS8 x 8 x 5/16	1 1/2" x 14" x 14"	TYPE III	(8) 1"Ø F1554	98'-10"	1 1/2"
C6	HSS8 x 8 x 1/2	1 1/2" x 14" x 14"	TYPE III	(8) 1"Ø F1554	99'-6"	1 1/2"
C7	HSS9 x 9 x 5/16	1 1/2" x 16" x 16"	TYPE III	(8) 1"Ø F1554	99'-6"	1 1/2"
C8	HSS12 x 6 x 1/4	1 1/4" x 17" x 17"	TYPE IV	(4) 3/4"Ø F1554	99'-6"	1 1/2"
C9	W8 x 24	1" x 8" x 10"	TYPE VI	(4) 1"Ø F1554	98'-10"	1 1/2"
C10	W8 x 31	1 3/4" x 1" x 14"	TYPE V	(6) 1"Ø F1554	99'-6"	1 1/2"
C11	W10 x 39	1 1/4" x 11" x 16"	TYPE V	(6) 1"Ø F1554	98'-10"	1 1/2"
C12	W12 x 30	1 1/4" x 8" x 18"	TYPE VII	(4) 1"Ø F1554	99'-5 1/2"	1 1/2"

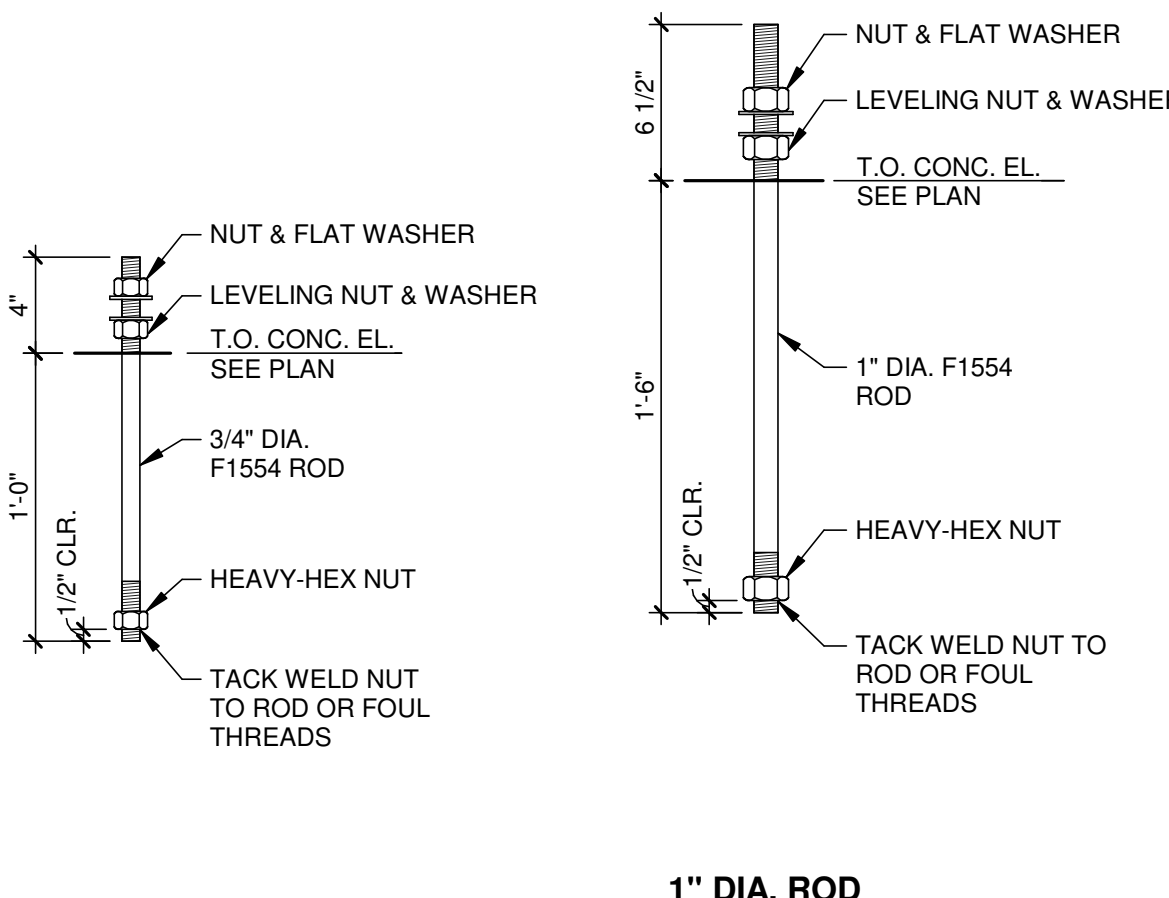


**7 TYP. BASE PLATE DETAILS**

NOT TO SCALE

**8 TYP. ANCHOR ROD DETAIL**

NOT TO SCALE



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**Structural Engineer**

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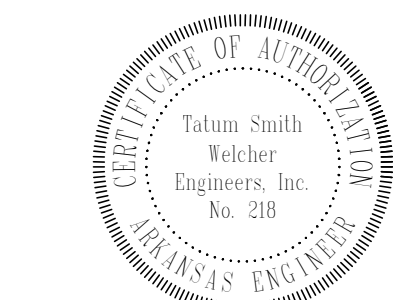
**MEP Engineer**

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**Bentonville Public Library Expansion**  
 405 S Main Street  
 Bentonville, AR 72712

Project No. 2021037



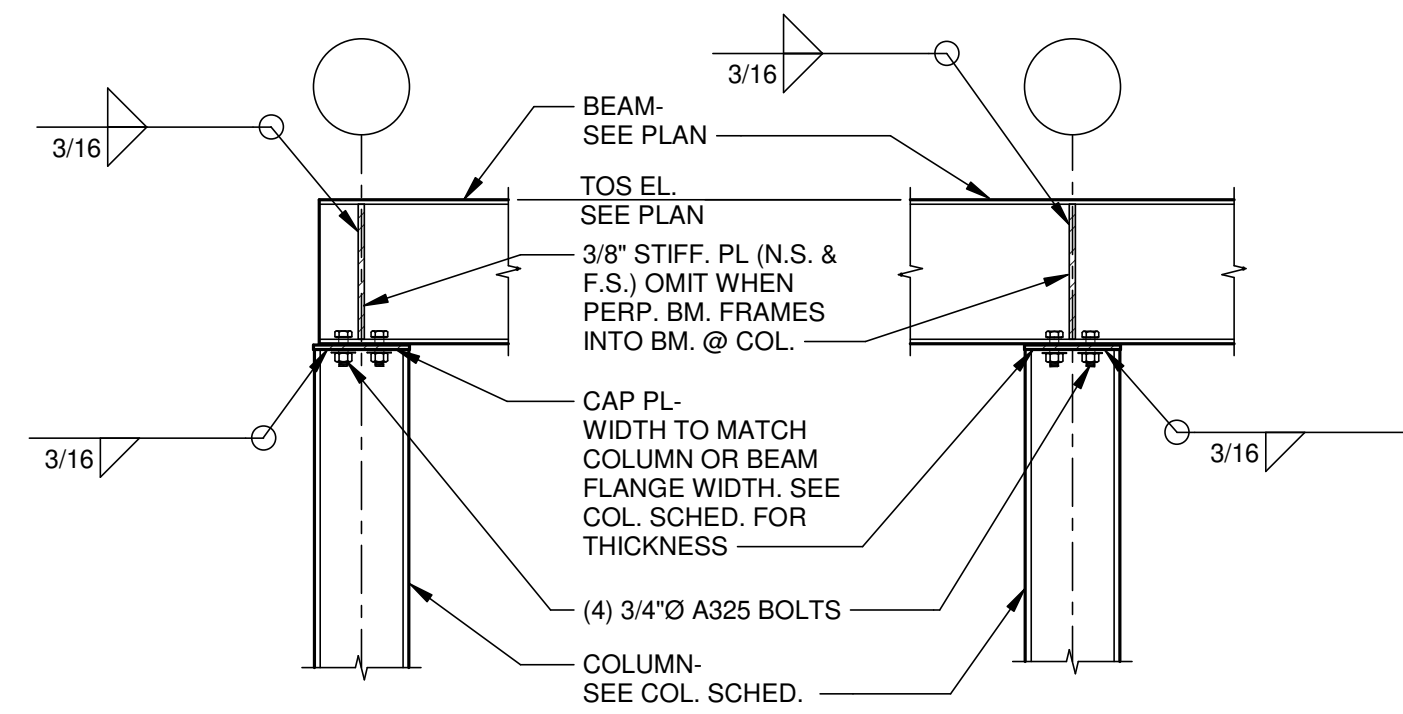
**BID SET**

**ISSUE / REVISION**

Mark	Date	Description
12/10/2021	12/10/2021	SCHEMATIC DESIGN PRICING
06/22/2022	06/22/2022	DESIGN DEVELOPMENT PRICING
10/24/2022	10/24/2022	60% CD PRICING
12/21/22	12/21/22	PERMIT SET
01/06/23	01/06/23	BID SET
1	01/16/23	BID SET - APPENDUM 1

**FRAMING GENERAL NOTES & TYP. DETAILS**

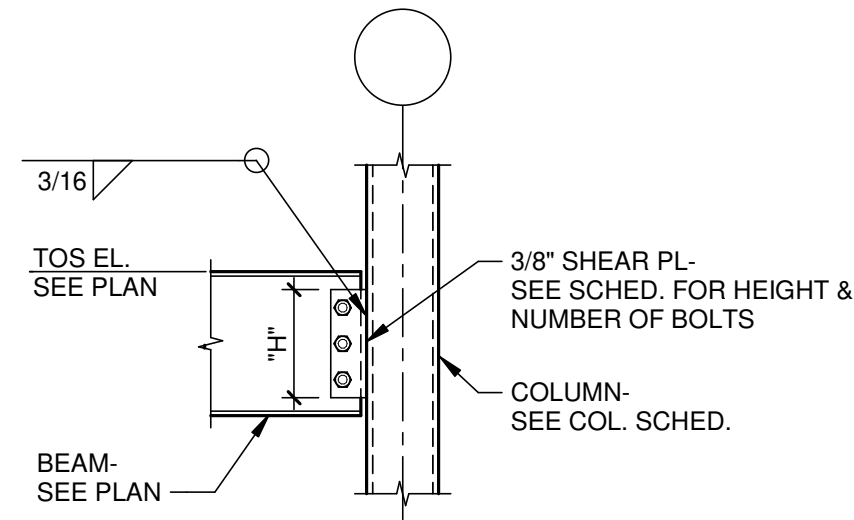
**S1.2**



**1 TYP. WF COL. CAP PLATE DETAILS**  
NOT TO SCALE

BEAM SIZE	SHEAR PL SIZE (H)	NUMBER OF BOLTS	REMARKS
C8, W8, C10, W10	6"	(2) 3/4"Ø A325	-----
C12, W12, MC12, W14	9"	(3) 3/4"Ø A325	-----
C15, W16, W18, MC18	1'-0"	(4) 3/4"Ø A325	-----
W21, W24, W27	1'-3"	(5) 3/4"Ø A325	-----
W30	1'-6"	(6) 3/4"Ø A325	-----

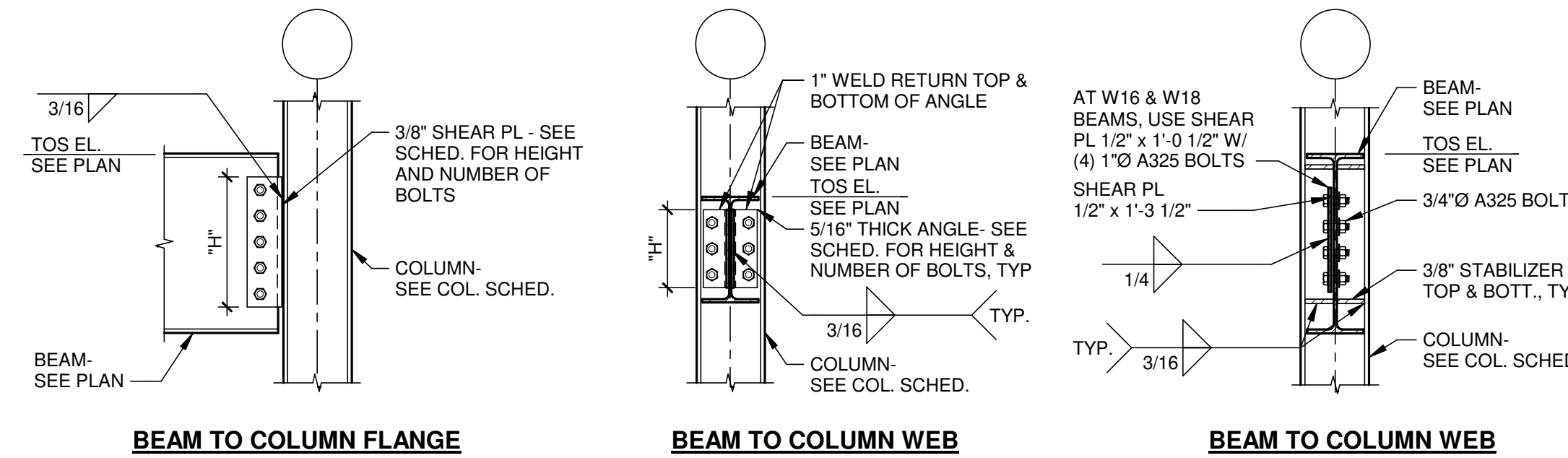
NOTE:  
TYPICAL BEAM TO COLUMN CONNECTION IS WITH CAP PLATE. USE THIS CONNECTION AT MISCELLANEOUS BEAMS FRAMING INTO COLUMNS BETWEEN MAIN FRAMING LEVELS.



**2 TYP. MISC. BEAM TO HSS COLUMN CONNECTION DETAIL**  
NOT TO SCALE

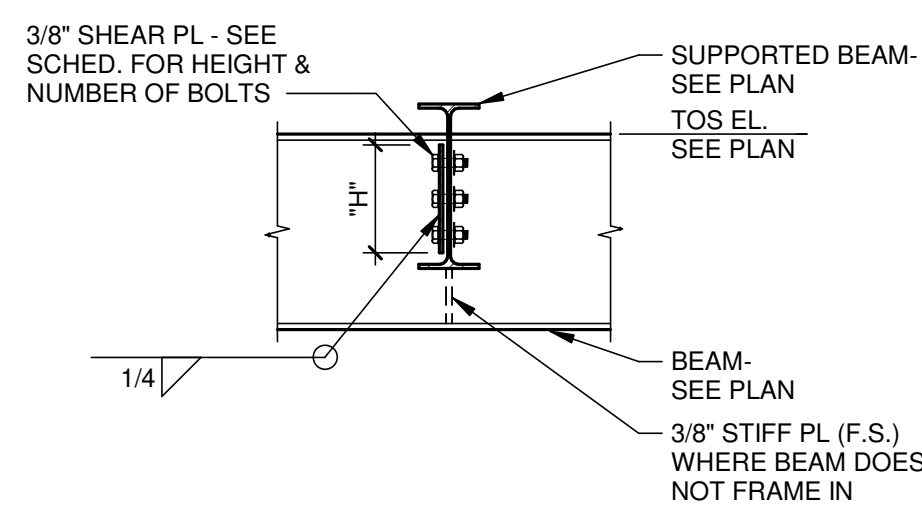
BEAM SIZE	SHEAR PL SIZE (H)	NUMBER OF BOLTS	REMARKS
C8, W8, C10, W10	6"	(2) 3/4"Ø A325	-----
C12, W12, MC12, W14	9"	(3) 3/4"Ø A325	-----
C15, W16, W18, MC18	1'-0"	(4) 3/4"Ø A325	-----
W21, W24, W27	1'-3"	(5) 3/4"Ø A325	-----
W30	1'-6"	(6) 3/4"Ø A325	-----

NOTE:  
USE THIS DETAIL IF COLUMN DEPTH RESTRICTS A DOUBLE ANGLE CONNECTION.



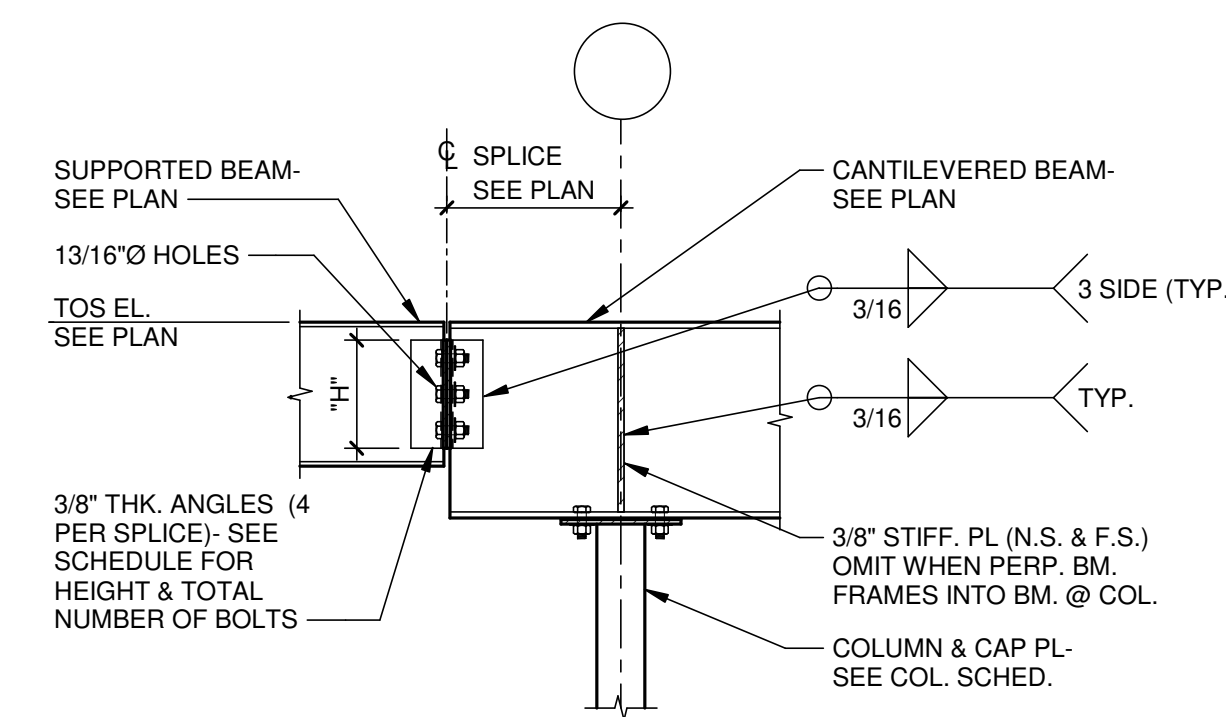
**3 TYP. MISC. BM. TO WF COL. CONNECTION DETAILS**  
NOT TO SCALE

SUPPORTED BEAM SIZE	SHEAR PL SIZE (H)	NUMBER OF BOLTS	REMARKS
C8, W8, C10, W10	6"	(2) 3/4"Ø A325	-----
C12, W12, MC12, W14	9"	(3) 3/4"Ø A325	-----
C15, W16, W18, MC18	1'-0"	(4) 3/4"Ø A325	-----
W21, W24, W27	1'-3"	(5) 3/4"Ø A325	-----
W30	1'-6"	(6) 3/4"Ø A325	-----



**4 TYP. HSS COL. CAP PLATE DETAILS**  
NOT TO SCALE

SUPPORTED BEAM SIZE	SHEAR PL SIZE (H)	NUMBER OF BOLTS	REMARKS
C8, W8, C10, W10	6"	(2) 3/4"Ø A325	-----
C12, W12, MC12, W14	9"	(3) 3/4"Ø A325	-----
C15, W16, W18, MC18	1'-0"	(4) 3/4"Ø A325	-----
W21, W24, W27	1'-3"	(5) 3/4"Ø A325	-----
W30	1'-6"	(6) 3/4"Ø A325	-----

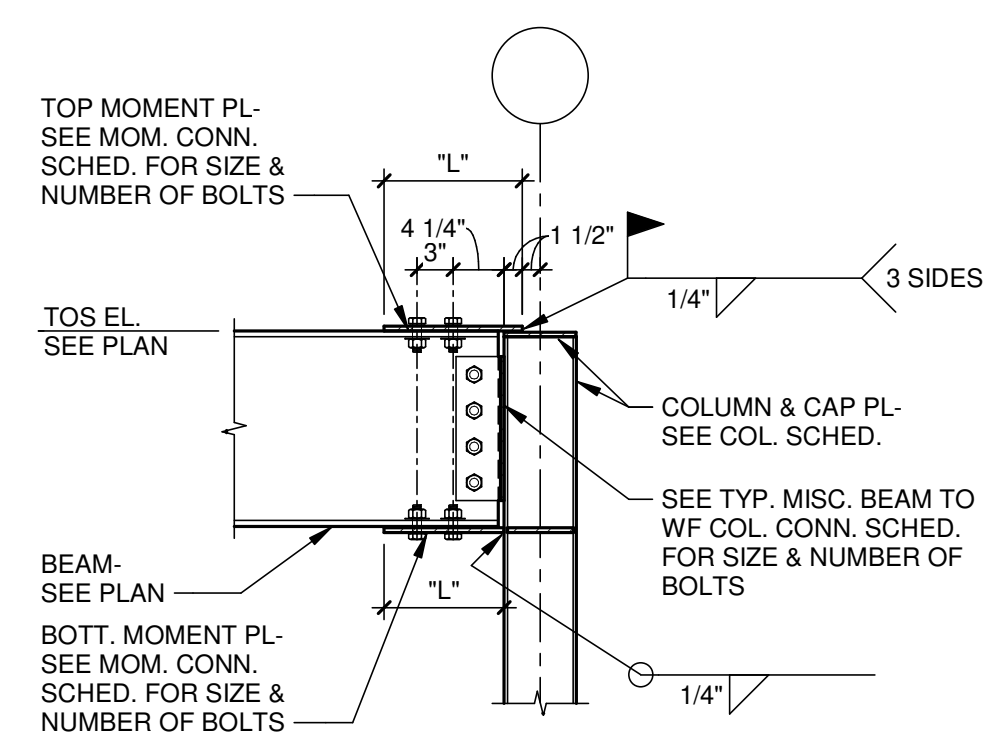


**5 TYP. BEAM TO BEAM CONNECTION DETAIL**  
NOT TO SCALE

**6 TYP. CANTILEVERED BEAM SPLICE**  
NOT TO SCALE

BEAM SIZE	TOP MOMENT PL (t x w x L)	BOTTOM MOMENT PL (t x w x L)	NUMBER OF BOLTS (TOP & BOT.)	BOLT DIAMETER	REMARKS
W14 x 30	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W18 x 35	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W18 x 40	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----

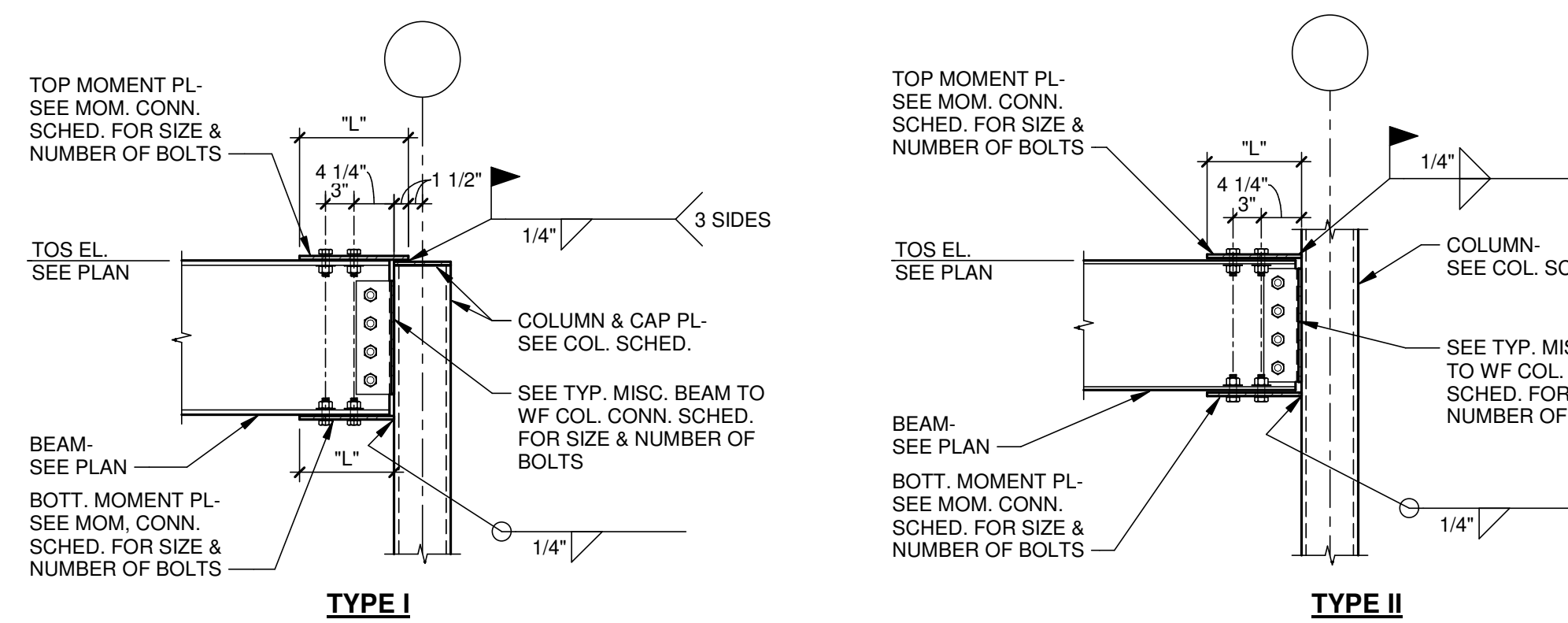
NOTES:  
1. DECK AND FRAMING OMITTED FOR CLARITY.  
2. SEE FRAMING PLANS FOR MOMENT CONNECTION LOCATIONS.



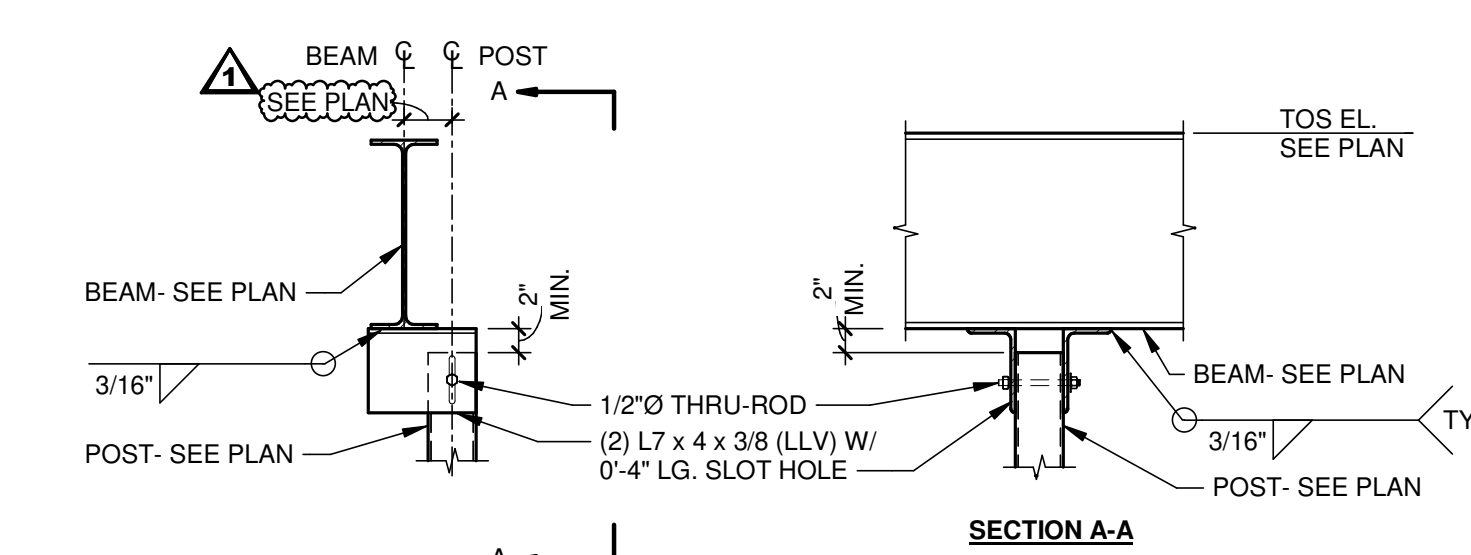
**7 TYP. MOMENT CONNECTION DETAILS**  
NOT TO SCALE

BEAM SIZE	TYPE MARK	TOP MOMENT PL (t x w x L)	BOTTOM MOMENT PL (t x w x L)	NUMBER OF BOLTS (TOP & BOT.)	BOLT DIAMETER	REMARKS
W10 x 45	I	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W14 x 30	I	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W16 x 31	I	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W16 x 31	II	1/2" x COL. WIDTH x 10"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----
W21 x 44	I	1/2" x COL. WIDTH x 11 1/2"	1/2" x COL. WIDTH x 10"	4	3/4"Ø	-----

NOTES:  
1. DECK AND FRAMING OMITTED FOR CLARITY.  
2. SEE FRAMING PLANS FOR MOMENT CONNECTION LOCATIONS.

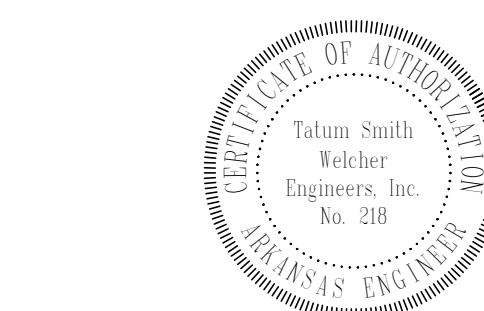


**8 TYP. HSS COLUMN MOMENT CONNECTION DETAILS**  
NOT TO SCALE

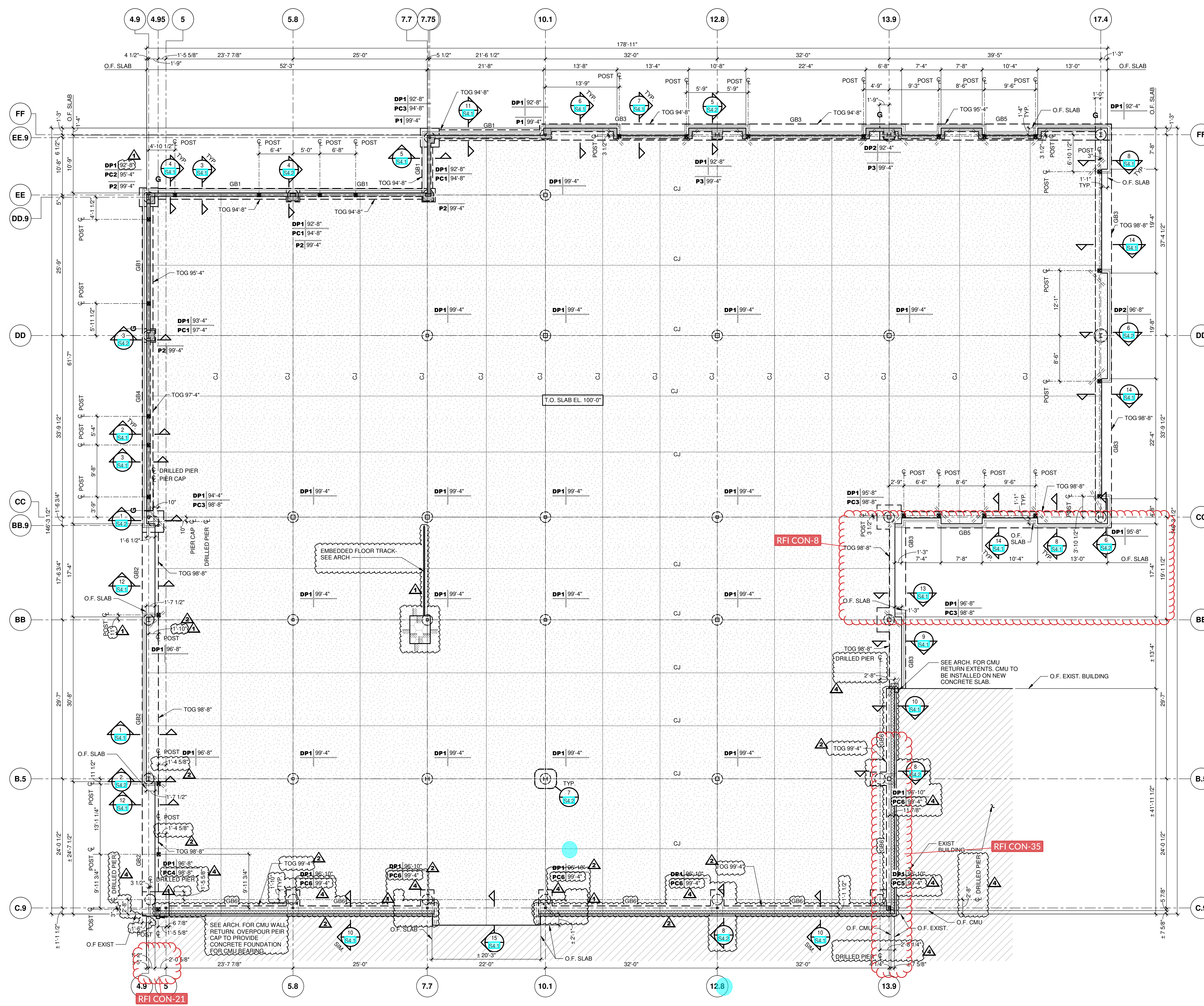


**9 TYP. POST TO BEAM CONNECTION**  
NOT TO SCALE

Project No. 2021037  
**Bentonville Public Library  
Expansion**  
 405 S Main Street  
 Bentonville, AR 72712



Mark	Date	Description
12/10/2021	12/10/2021	SCHEMATIC DESIGN PRICING
06/22/2022	06/22/2022	DESIGN DEVELOPMENT PRICING
10/24/2022	10/24/2022	60% CD PRICING
12/21/22	12/21/22	PERMIT BID SET
01/06/23	01/06/23	BID SET
1	01/16/23	BID SET - ADDENDUM 1



**1 FOUNDATION PLAN**  
1/8" = 1'-0"

**LEGEND:**

- DRILLED PIER MARK (SEE DRILLED PIER SCHED.)
- TOP OF DRILLED PIER EL.
- TOP OF PIER CAP
- PIER CAP MARK (SEE PIER CAP SCHED.)
- T.O. PEDESTAL ELEVATION
- PEDESTAL MARK (SEE PED. SCHED.)
- GB1 DENOTES GRADE BEAM (SEE GRADE BEAM SCHED.)
- TOG DENOTES TOP OF GRADE BEAM
- G DENOTES GRADE BEAM STEP MARK (SEE DTL. 9/S1.1)
- O.F. DENOTES OUTSIDE FACE
- ± DENOTES DIMENSION OR ELEVATION TO BE FIELD VERIFIED
- DENOTES LIMITS OF 4" SLAB (T.O. SLAB EL. 100'-0") SEE PLAN NOTES
- DENOTES LIMITS EXISTING SLAB
- DENOTES CONCRETE STEM WALL
- 100'-0" DENOTES TOP OF SLAB EL.
- DENOTES LOCATION OF POST (SEE DTL. 4/S1.1)
- DENOTES LOCATION OF RE-ENTRANCY CORNER BARS (SEE CONC. GEN. NOTE #9)
- DENOTES SLAB ELEVATION CHANGE
- DENOTES LIMITS OF RECESSED 4" CONCRETE SLAB. COORD. LOCATION & ELEV. W/ ARCH.
- DENOTES 8" CMU WALL

**PLAN NOTES:**

1. 4" S.O.G. CONSTRUCTION: 4" CONCRETE SLAB REINFORCED W/ ULTRA FIBER 500 ON 15 ML POLYETHYLENE FILM (COORD. W/ ARCH. SPECS.) OVER 4" CRUSHED STONE.
2. CENTER DRILLED PIERS AND PIER CAPS UNDER COLUMN, (U.N.O.).
3. ALL ELEVATIONS BASED ON FINISH FLOOR EL. 100'-0". ACTUAL FIN. FLR. EL. 1295.15 AS ESTABLISHED BY EDG.
4. TOP OF GRADE BEAM ELEVATION 98'-8" TYP. (U.N.O.).
5. TOP OF PIER CAP ELEVATION 98'-8" TYP. (U.N.O.).
6. SEE ARCH. DWGS. FOR DIMENSIONS NOT SHOWN.
7. "CJ" DENOTES CONTROL OR CONSTRUCTION JOINT. (SEE DTL. 1/S1.1 & 2/S1.1)
8. COORDINATE LOCATION & LIMITS OF VENEER WITH ARCH. DWGS.
9. COORDINATE DOOR LOCATIONS WITH ARCH. DWGS.
10. SEE ARCH. PLUMBING DWGS. FOR EXACT LOCATIONS OF ALL FLOOR DRAINS, SLOPED & RECESSED SLABS.
11. COORDINATE LOCATIONS OF PLUMBING LINES W/ PLUMBER PRIOR TO POURING GRADE BEAMS & SLABS-ON-GRADE.
12. SEE DWG. S1.1 FOR GENERAL NOTES, SCHEDULES, & TYP. DETAILS.
13. SEE ARCH. FLOOR PATTERN PLANS FOR SLAB LOCATIONS WITH EXPOSED CONCRETE.
15. POST LOCATIONS SHOW ARE APPROXIMATE. SEE ARCH. FOR EXACT LOCATION.

**NOTES:**

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER IMMEDIATELY.
2. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO SETTING CONCRETE REINFORCEMENT AND FORM WORK.
3. BEGINNING OF STEEL FABRICATION AND PLACEMENT OF CONCRETE CONSTITUTES CONTRACTOR ACCEPTANCE OF EXISTING CONDITIONS.

**SLAB-ON-GRADE JOINT NOTE:**  
CONTROL JOINTS AT POLISHED CONCRETE TO BE 14'-0" O.C. MAXIMUM. CONTROL JOINTS AT OTHER AREAS TO BE 16'-0" O.C. MAXIMUM.

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**Bentonville Public Library Expansion**  
405 S Main Street  
Bentonville, AR 72712

Project No. 20210027

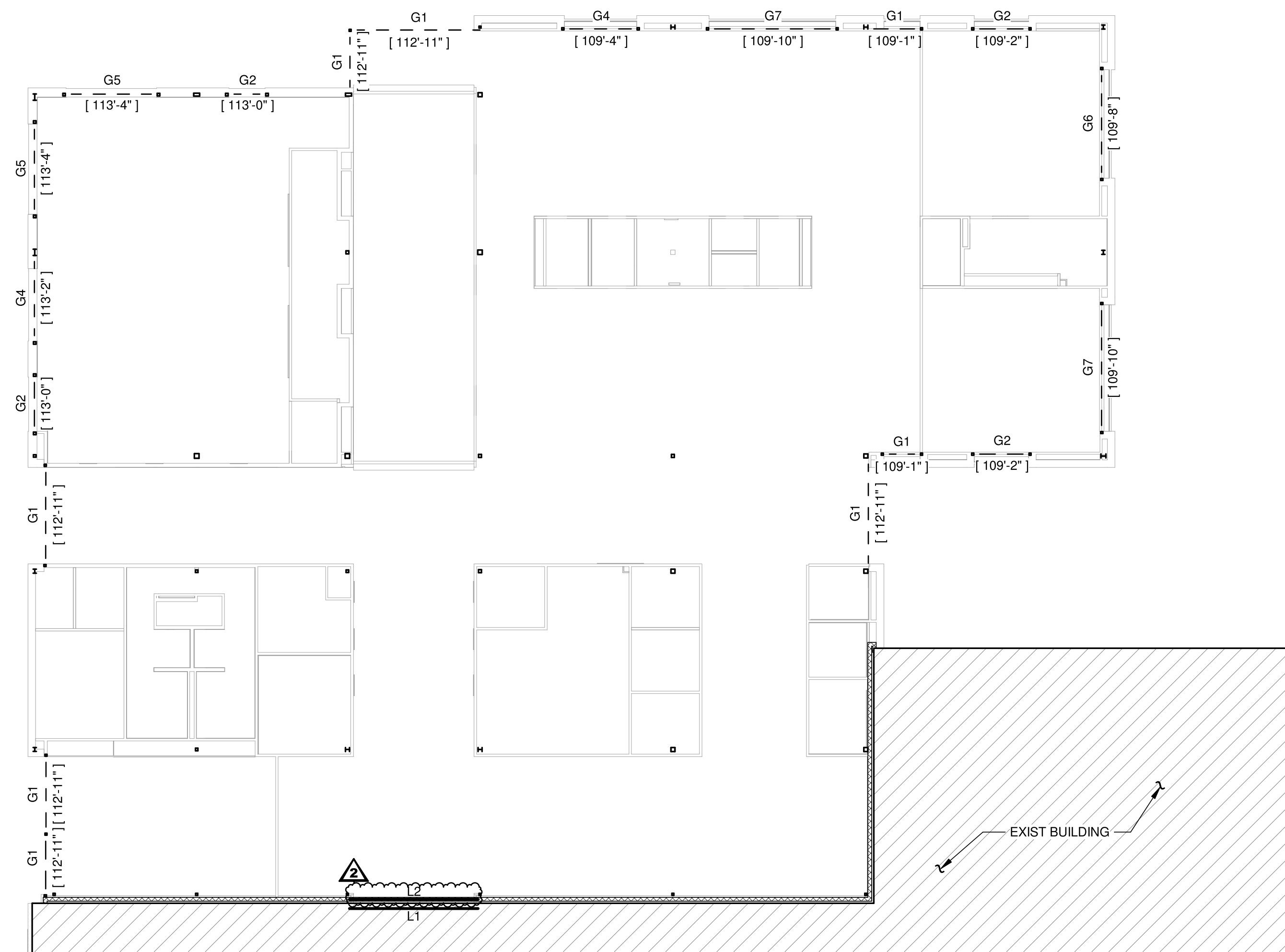
STATE OF ARKANSAS  
LICENSED PROFESSIONAL ARCHITECT  
*Paula J. Smith*  
No. 19779  
BENTONVILLE, ARKANSAS  
08/22/2023

STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
*Tatum Smith*  
No. 218  
BENTONVILLE, ARKANSAS

**BID SET**

**ISSUE / REVISION**

Mark	Date	Description
1	12/15/2021	SCHEMATIC DESIGN PRICING
2	06/22/2022	DESIGN DEVELOPMENT PRICING
3	10/24/2022	60% CD PRICING
4	12/21/2022	PERMIT SET
5	01/06/2023	BID SET
6	01/16/2023	BID SET - ADDENDUM 1
7	03/24/2023	AS-01
8	08/22/2023	AS-07



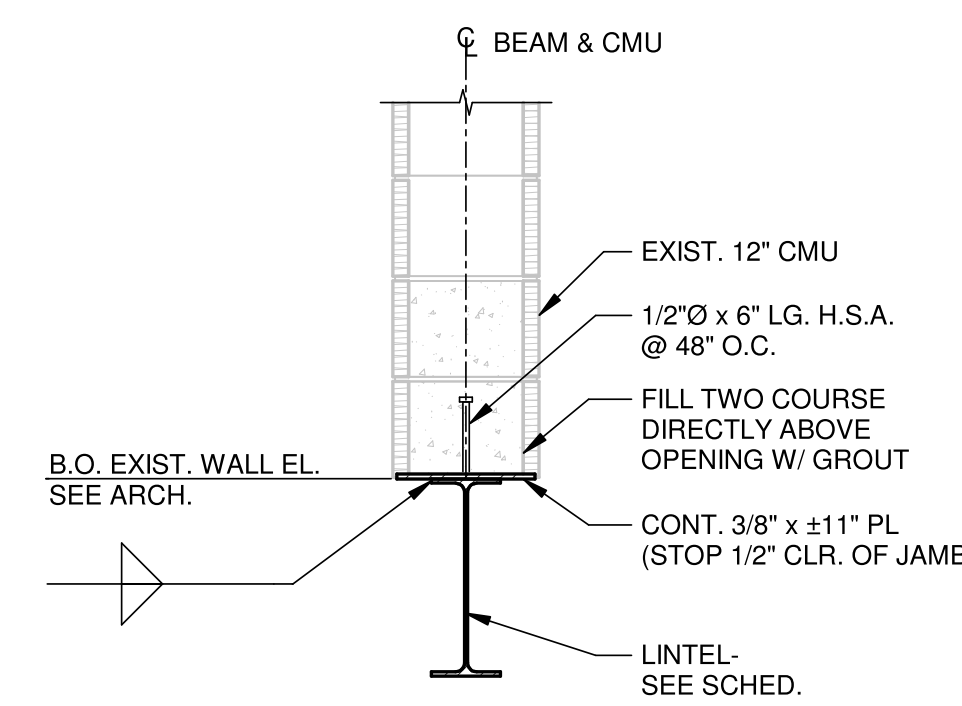
**1 LINTEL PLAN**  
1/16" = 1'-0"

- LEGEND:**
- L1 DENOTES LINTEL MARK, SEE LINTEL SCHED.
  - G1 DENOTES HSS 5 x 5 x 3/16 GIRTS
  - G2 DENOTES HSS 6 x 6 x 3/16 GIRTS
  - G3 DENOTES HSS 8 x 4 x 3/16 GIRTS
  - G4 DENOTES HSS 10 x 4 x 3/16 GIRTS
  - G5 DENOTES HSS 10 x 5 x 3/16 GIRTS
  - G6 DENOTES HSS 12 x 4 x 1/4 GIRTS
  - G7 DENOTES HSS 14 x 6 x 1/4 GIRTS

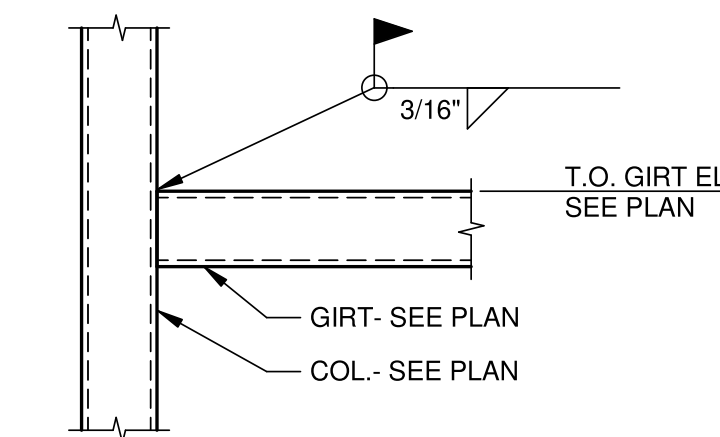
- PLAN NOTES:**
1. SEE DWGS. S1.1, S1.2, & S1.3 FOR GENERAL NOTES & TYP. DETAILS.

LINTEL SCHEDULE					
MARK	WALL LOCATIONS	TYPE & SIZE (THICKNESS x HEIGHT)	REINFORCEMENT OR ATTACHMENT	BRICK ANGLE OR PLATES	REMARKS
L1	EXIST. 12" CMU	W16 x 26	---	---	SEE NOTES #1, #2, #3, #4, #5, #6 & DTL 2
L2	8" CMU	CMU 8" x 24" BOND BEAM	(1) #6 BOT.	---	SEE NOTES #1, #2, #3, #7, #8, & #9

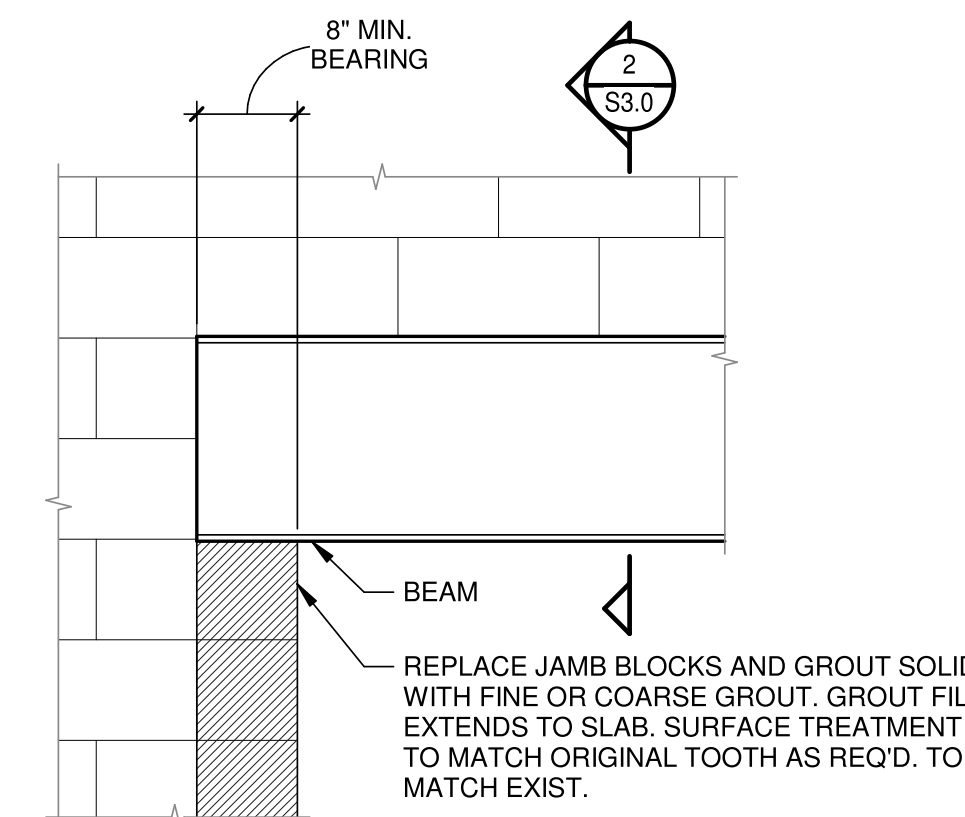
- LINTEL SCHEDULE NOTES:**
1. SEE ARCH. DWGS. FOR EXACT LOCATION OF ALL LINTELS.
  2. COORDINATE ALL BOTTOM PLATE/BEAM/CMU/ANGLE ELEVATIONS WITH ARCH. DWGS.
  3. FILL ALL CMU LINTELS WITH 2,000 PSI GROUT.
  4. WELD TOP & BOTTOM PLATE TO FLANGE OF BEAM WITH 3/16" x 3" LG. FILLET WELD @ 12" O.C. ALONG EACH SIDE OF FLANGE.
  5. ALL STEEL LINTELS SHALL HAVE 1/2" DIA. x 6" LG. H.S.A. @ 48" O.C. WELDED TO TOP FLANGE OR TOP PLATE.
  6. AT EACH END OF STEEL LINTEL - STOP BOTTOM PLATE 1/2" CLEAR OF THE JAMB.
  7. ALL CMU LINTELS SHALL HAVE 8" MIN. BEARING EACH SIDE OF OPENING.
  8. ALL 8" CMU LINTELS SHALL HAVE A MIN. (2) CELLS OF (1) #5 JAMB STEEL EACH SIDE OF OPENING.
  9. WHERE MECHANICAL DUCTS PASS THROUGH MASONRY WALLS, PROVIDE L2 AT 8" CMU WALLS.



**2 TYP. NEW LINTEL @ EXIST. 12" CMU**  
NOT TO SCALE

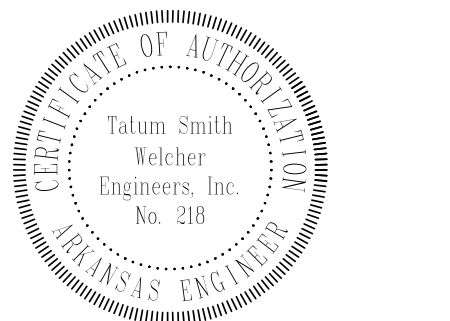


**3 TYP. GIRTS TO POST/COL. CONN. DETAIL**  
NOT TO SCALE



**4 NEW OPENING IN EXISTING 12" MASONRY WALL DETAIL**  
NOT TO SCALE

**Bentonville Public Library  
Expansion**  
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Bentonville, AR 72712



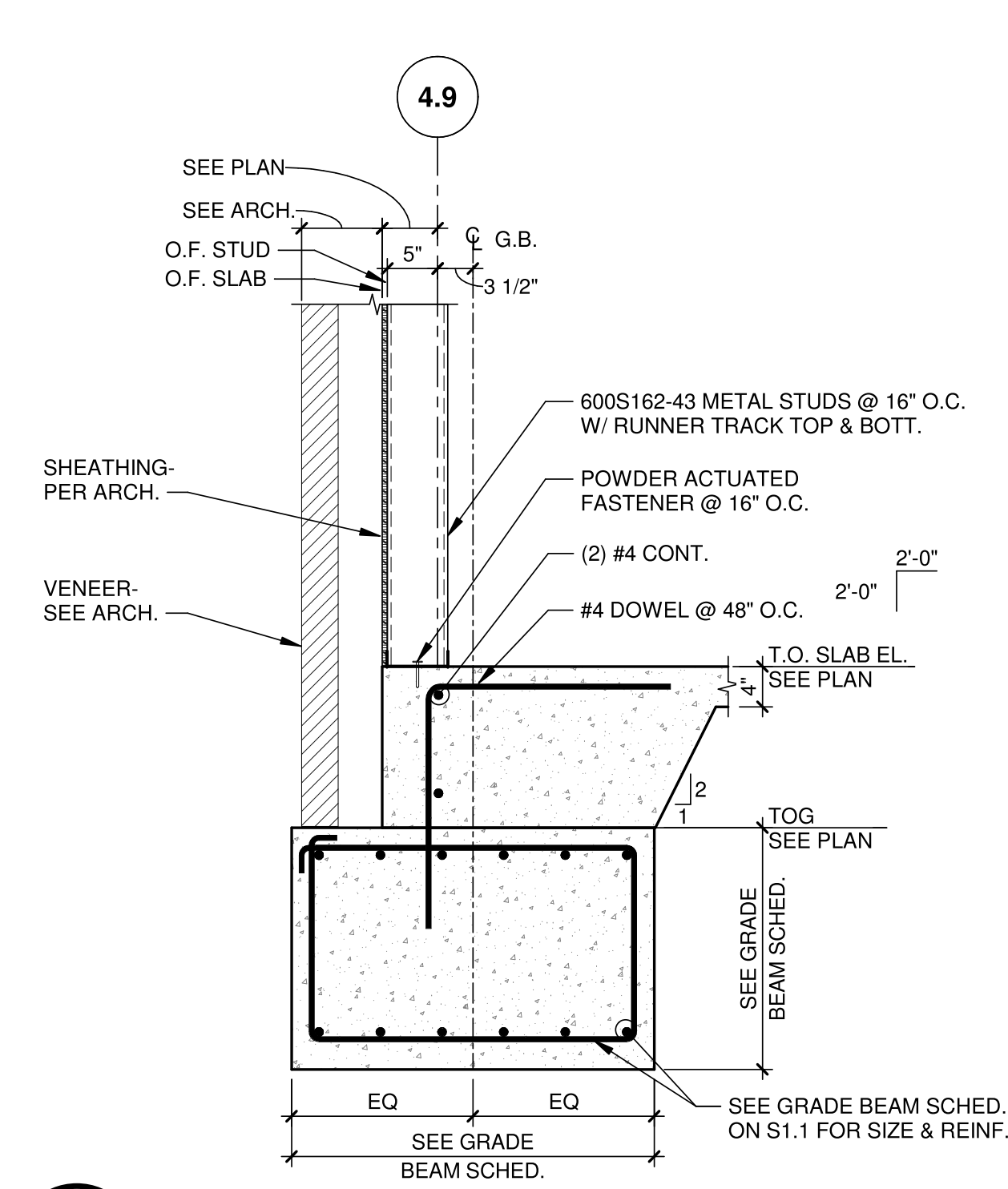
**BID SET**

**ISSUE / REVISION**

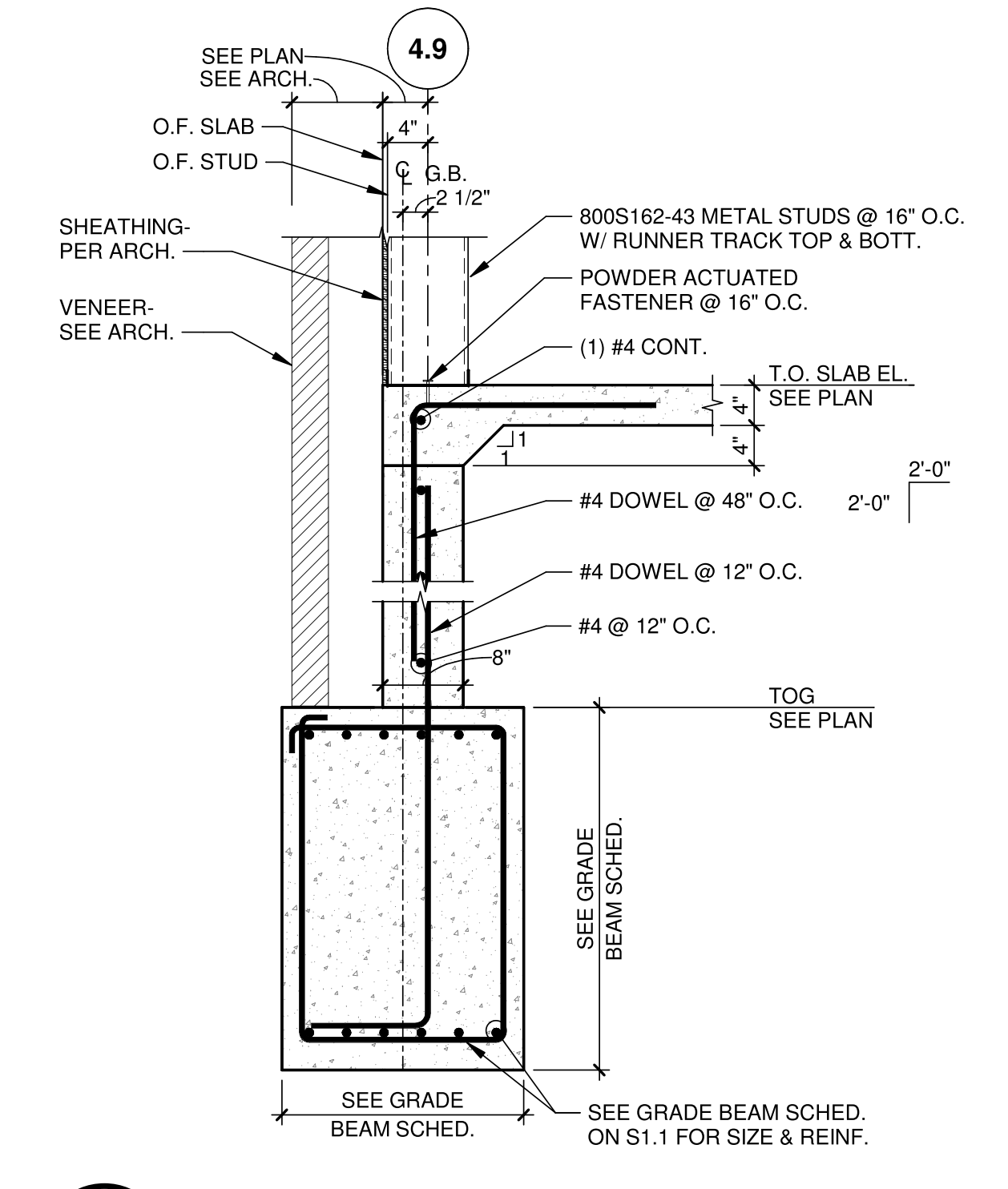
Mark	Date	Description
1	12/10/2021	SCHEMATIC DESIGN PRICING
2	06/22/2022	DESIGN DEVELOPMENT PRICING
3	10/24/2022	60% CD PRICING
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1	01/16/2023	BID SET - ADDENDUM 1
2	03/04/2023	AS1/41



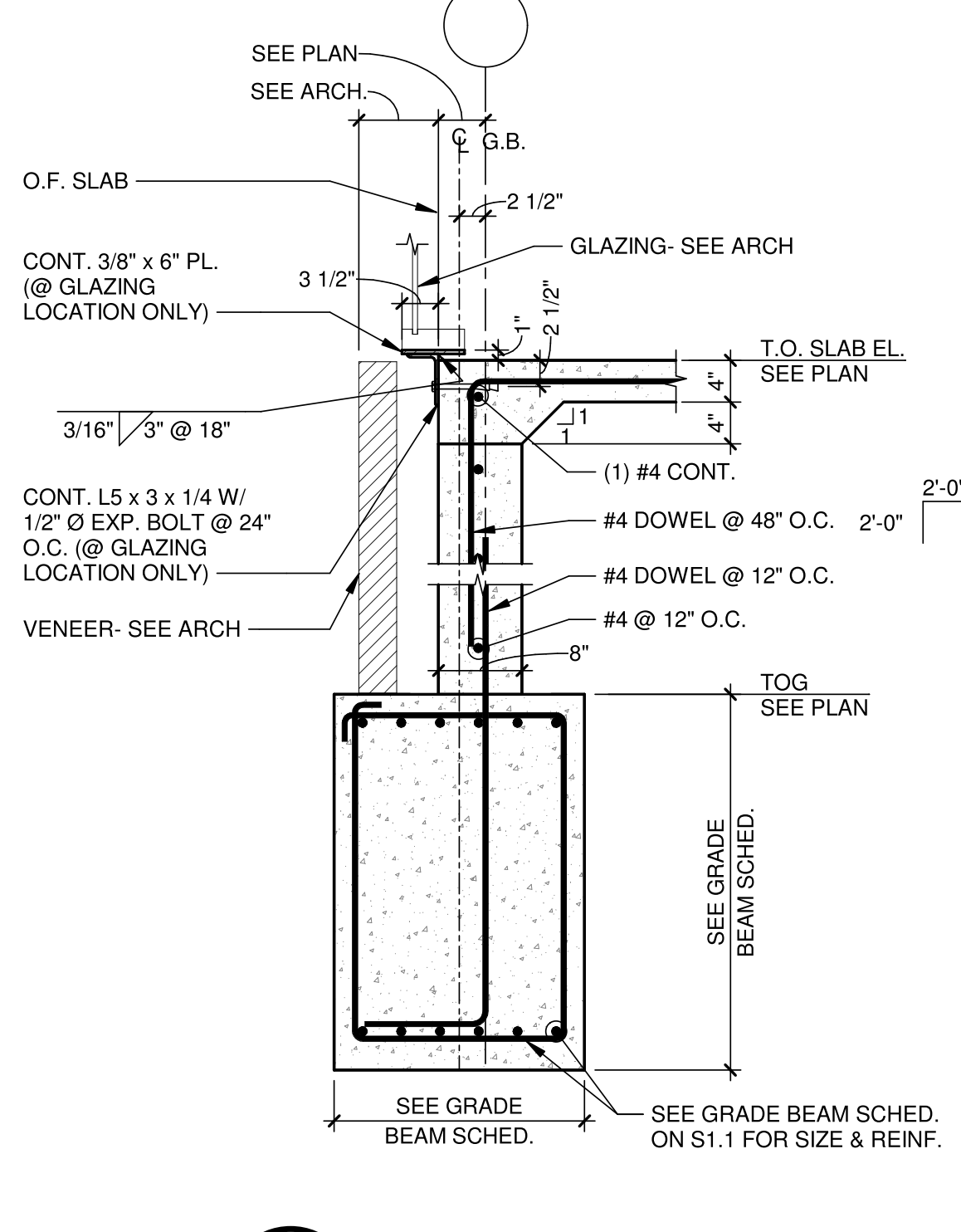




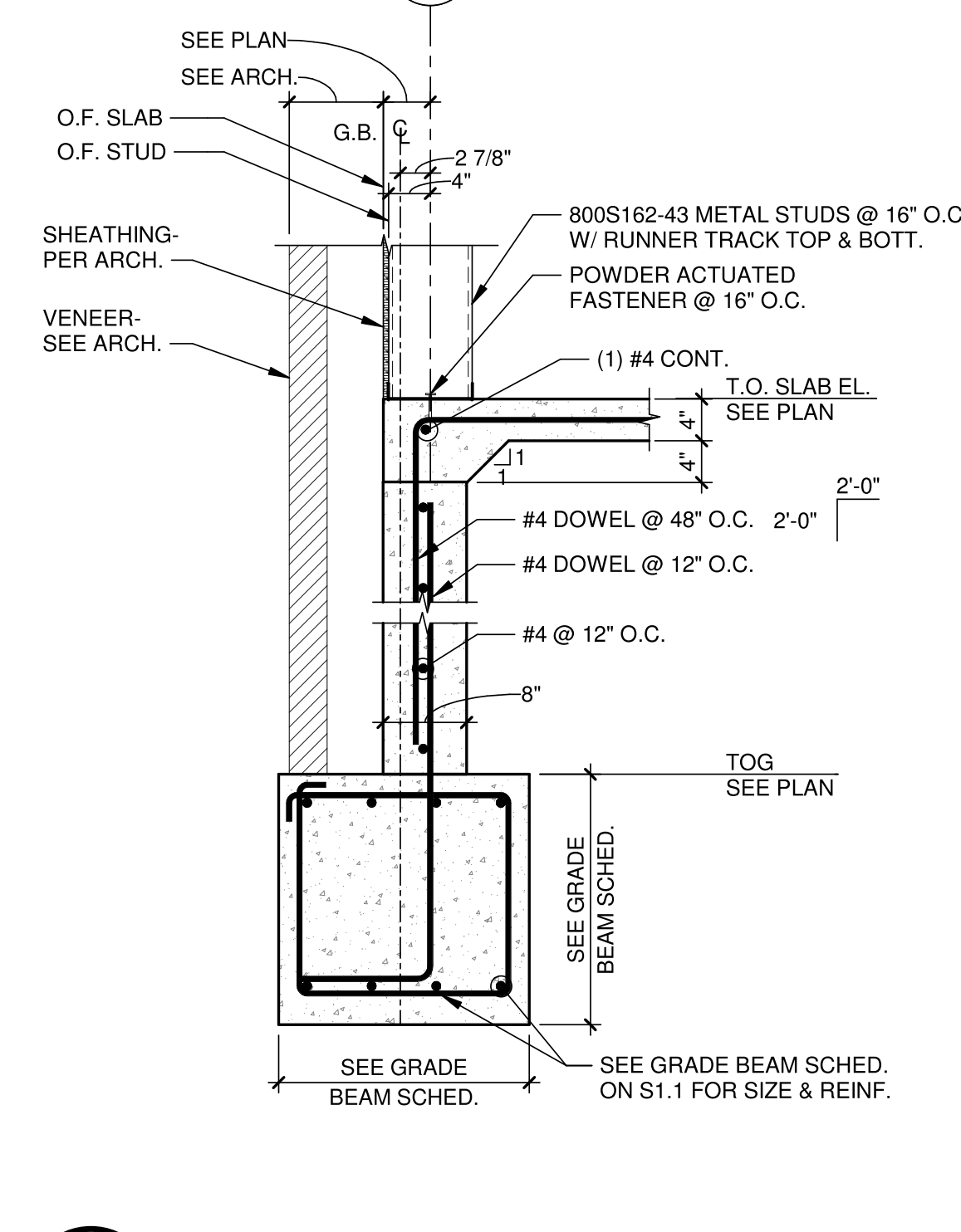
**1 SECTION**  
3/4" = 1'-0"



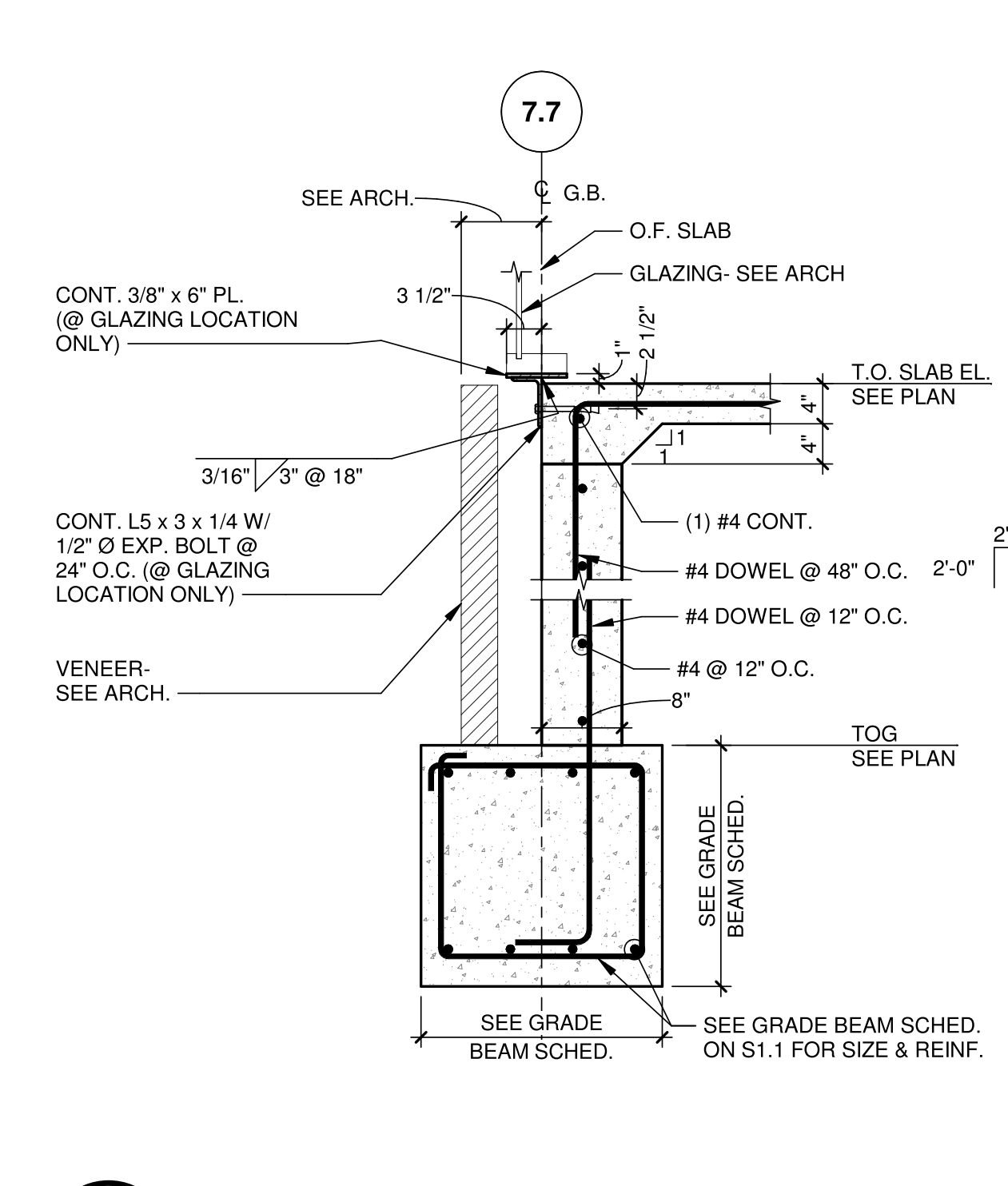
**2 SECTION**  
3/4" = 1'-0"



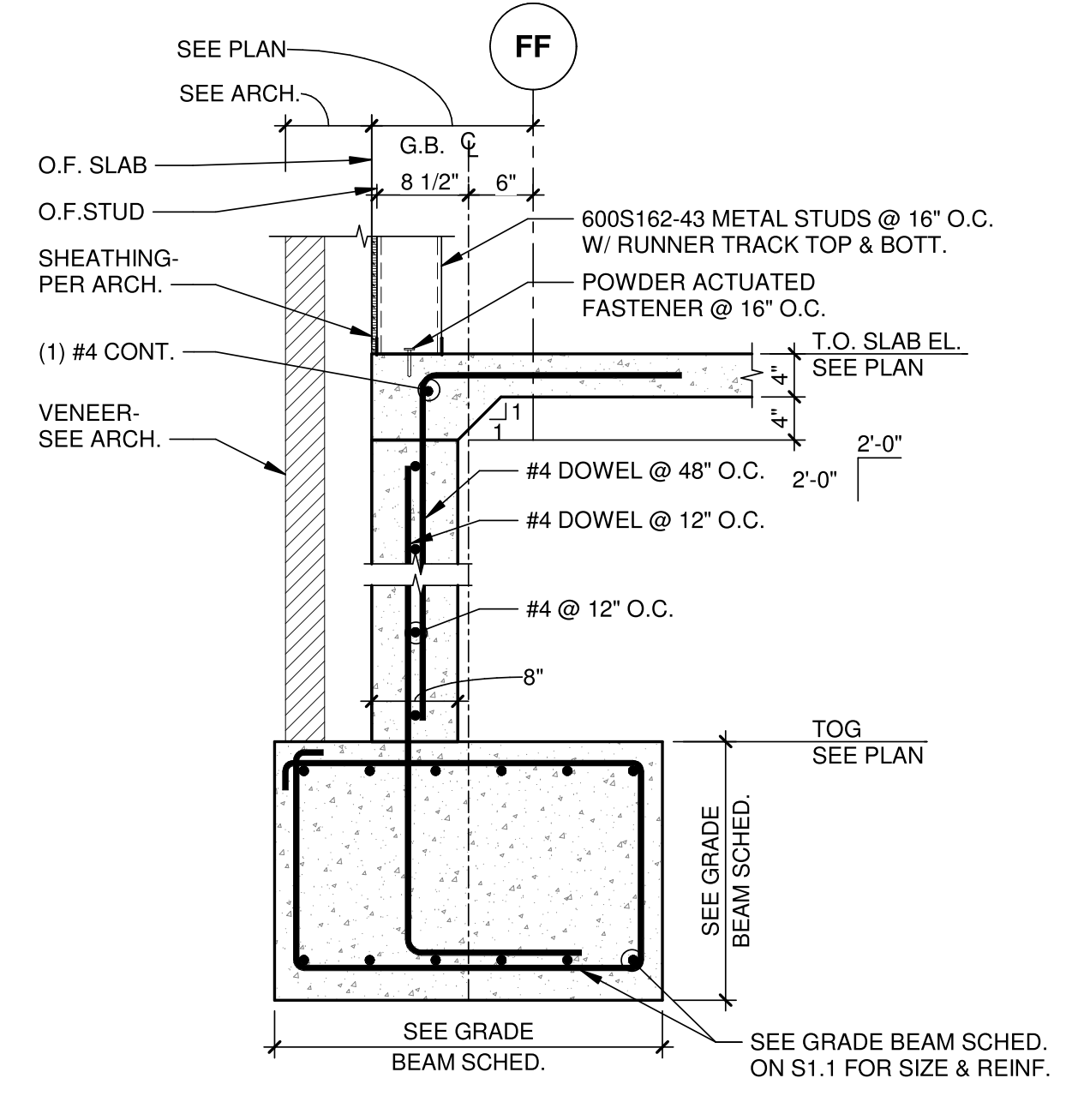
**3 SECTION**  
3/4" = 1'-0"



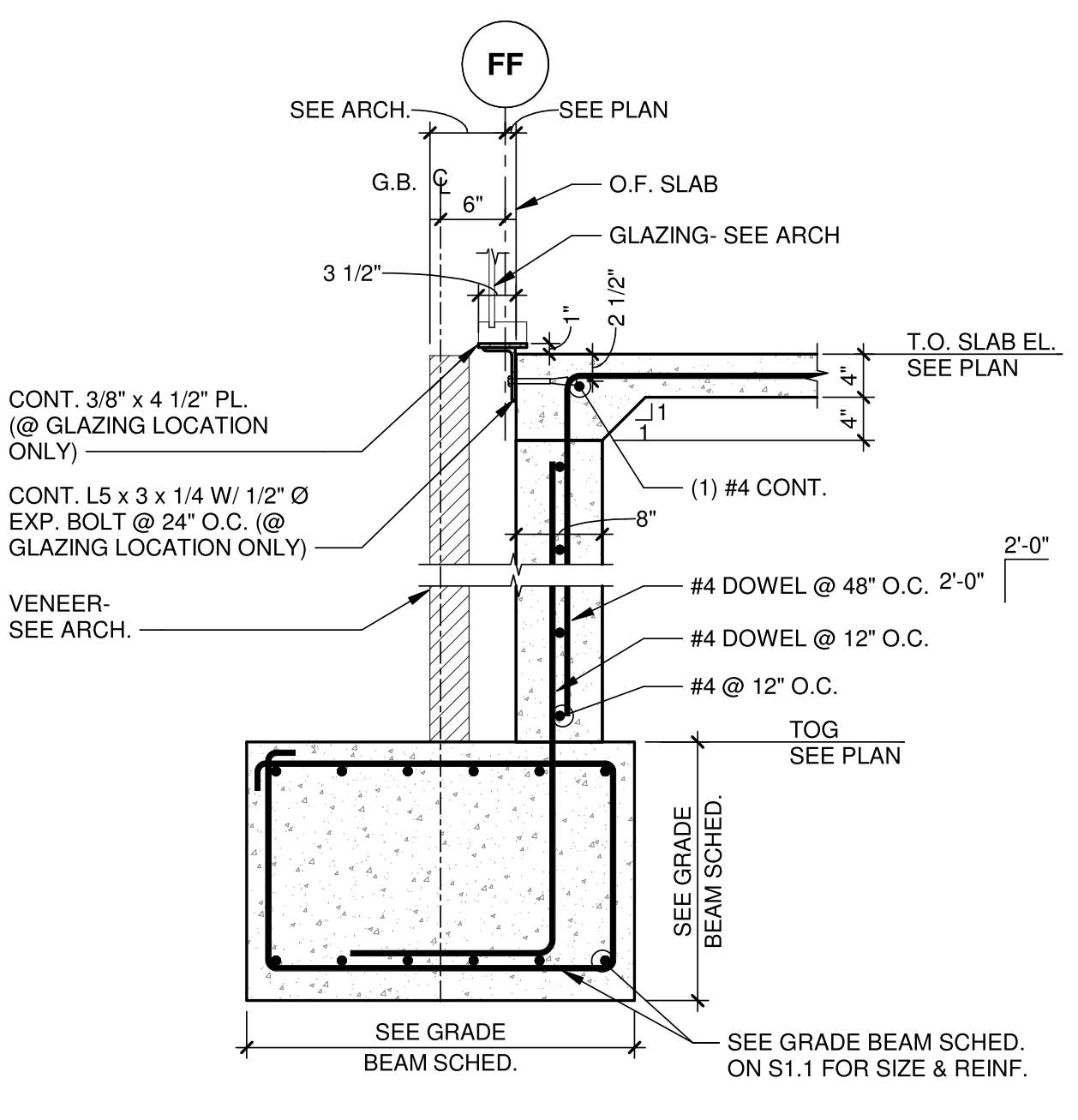
**4 SECTION**  
3/4" = 1'-0"



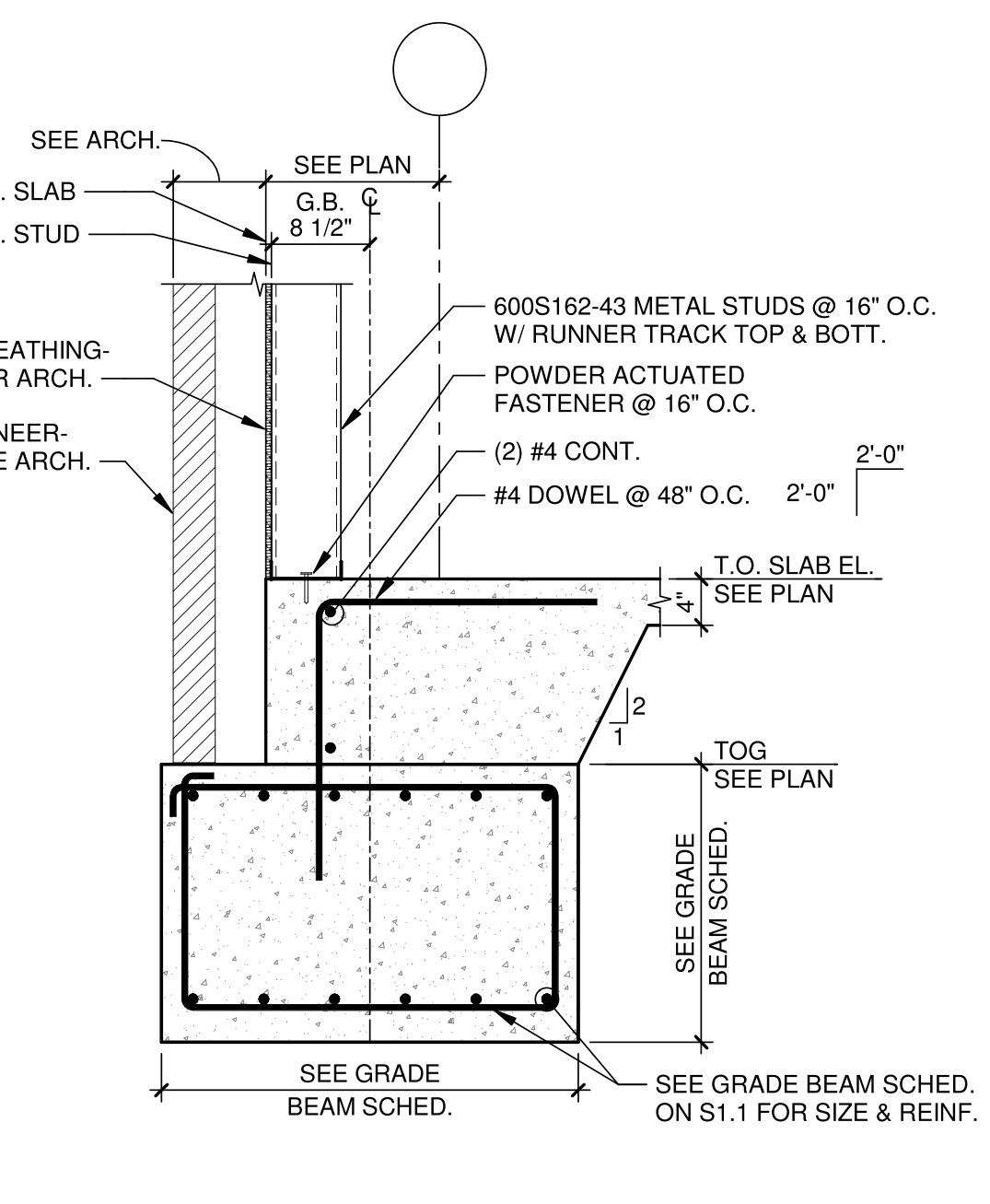
**5 SECTION**  
3/4" = 1'-0"



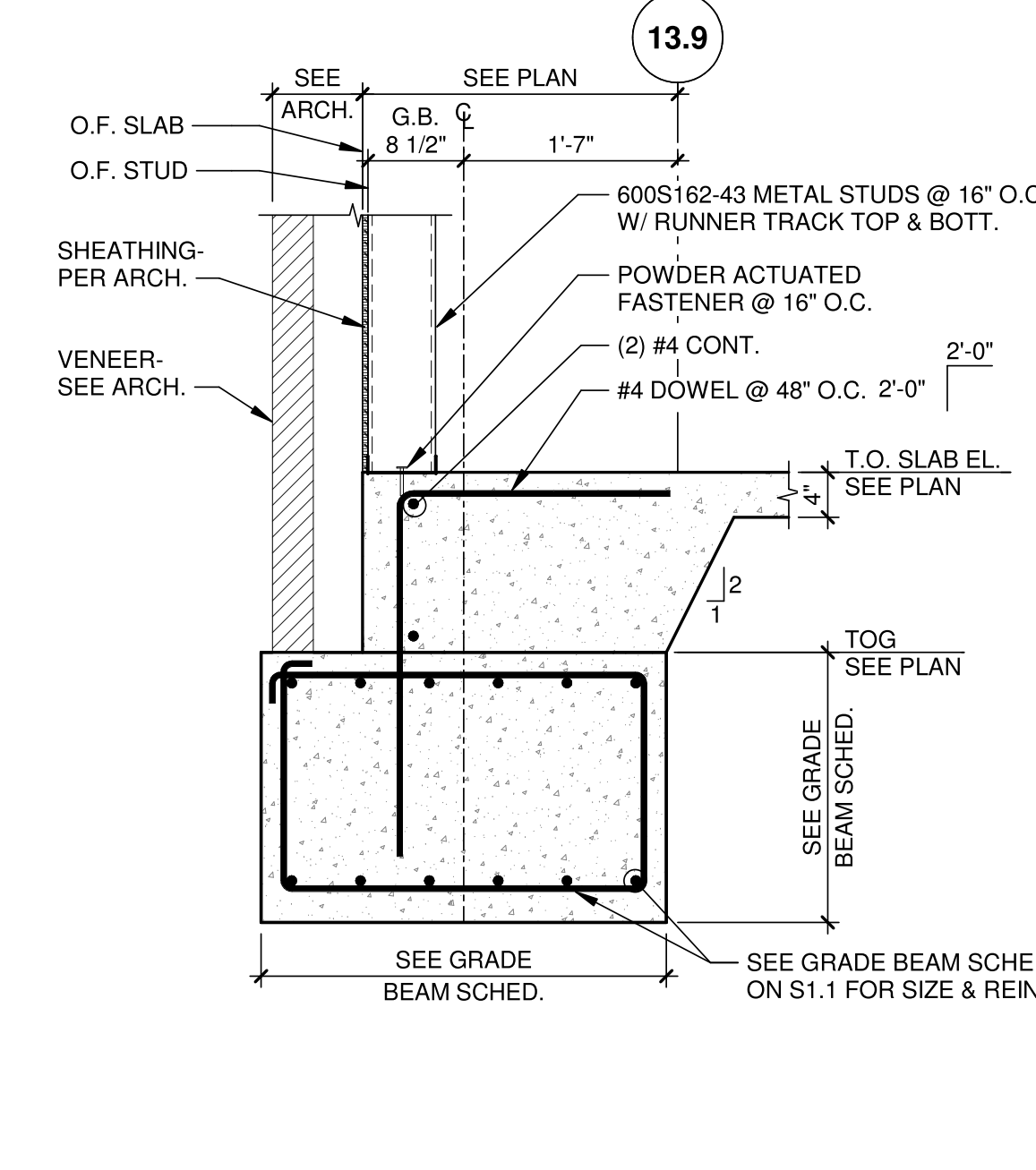
**6 SECTION**  
3/4" = 1'-0"



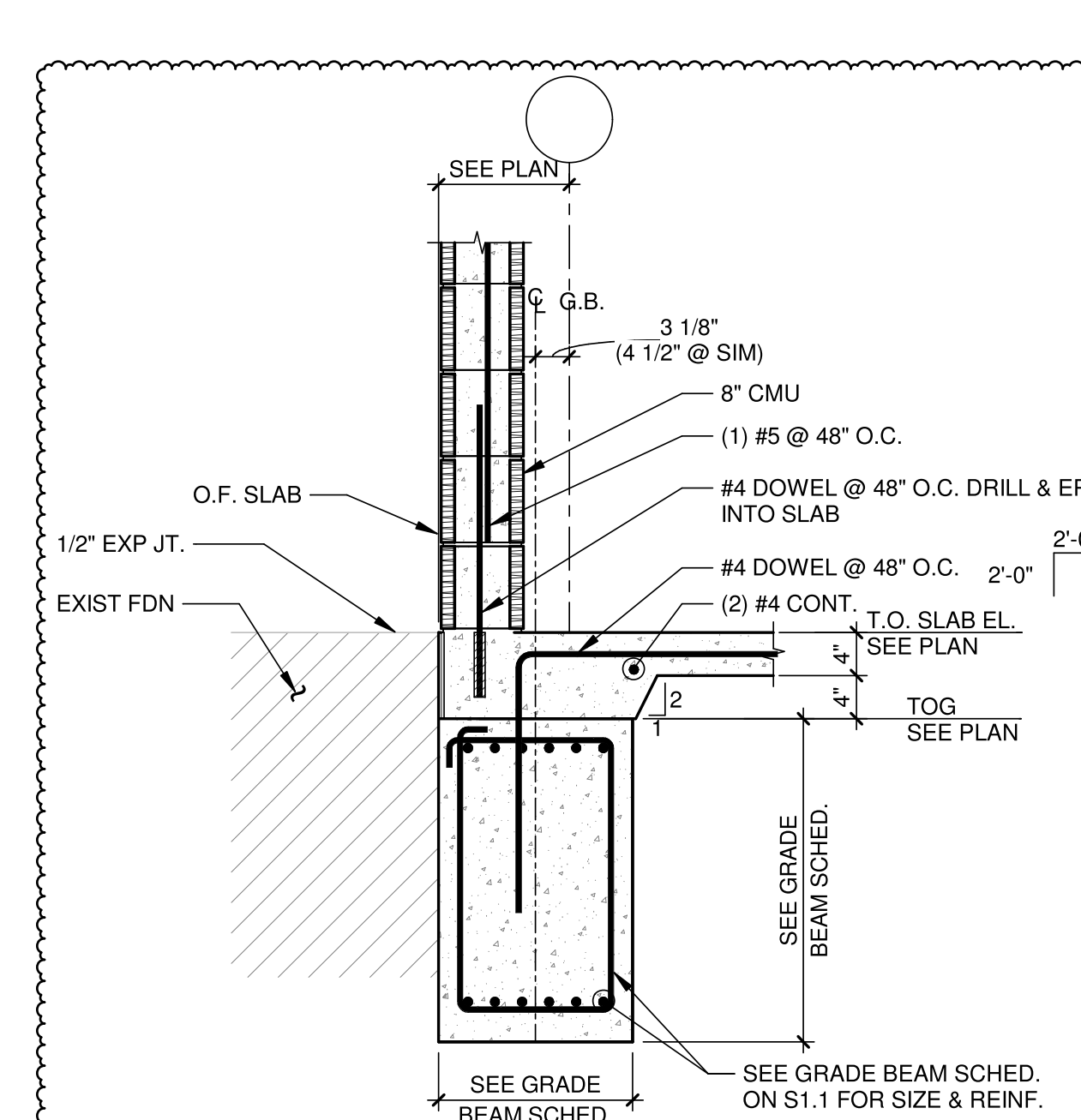
**7 SECTION**  
3/4" = 1'-0"



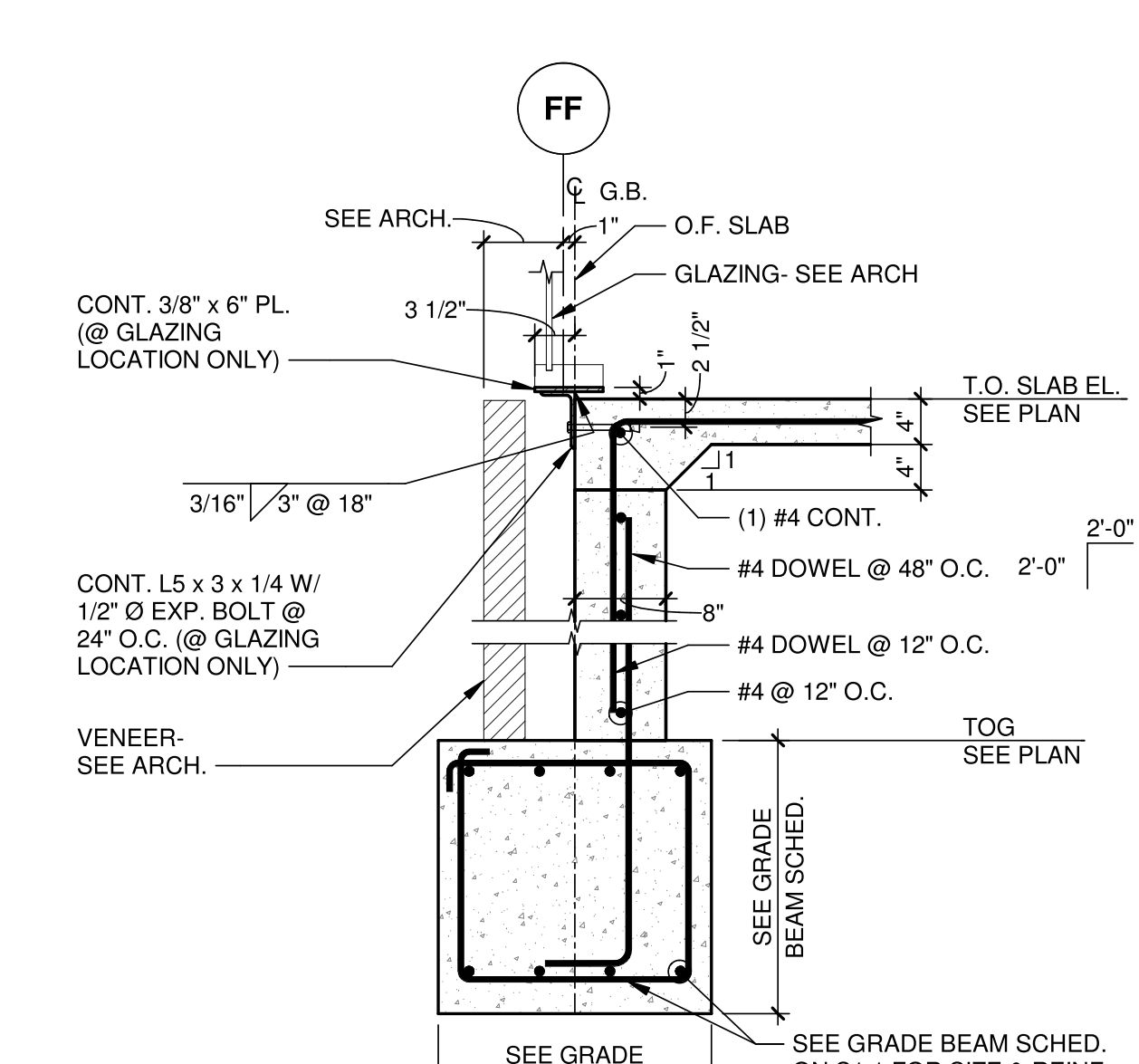
**8 SECTION**  
3/4" = 1'-0"



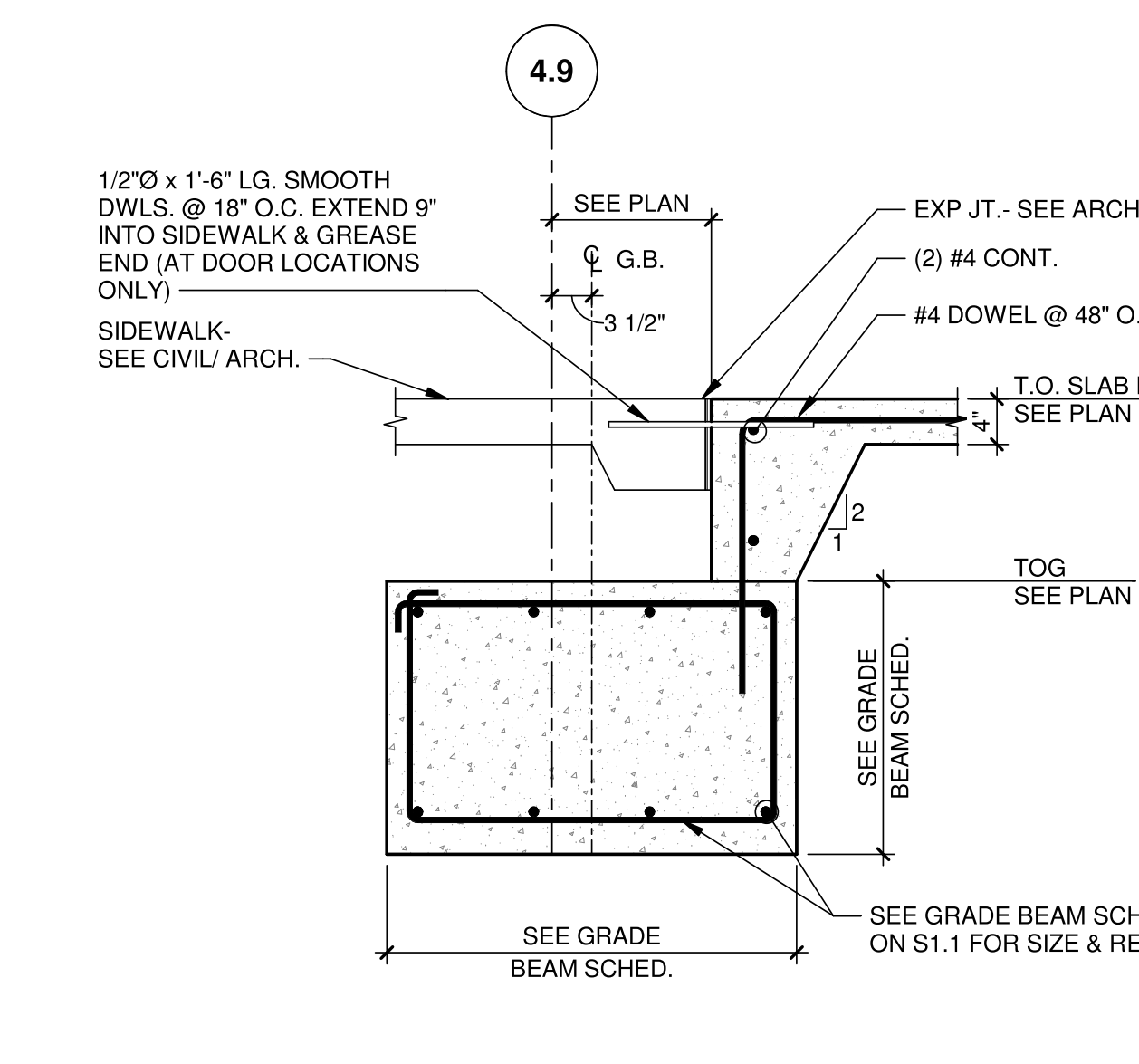
**9 SECTION**  
3/4" = 1'-0"



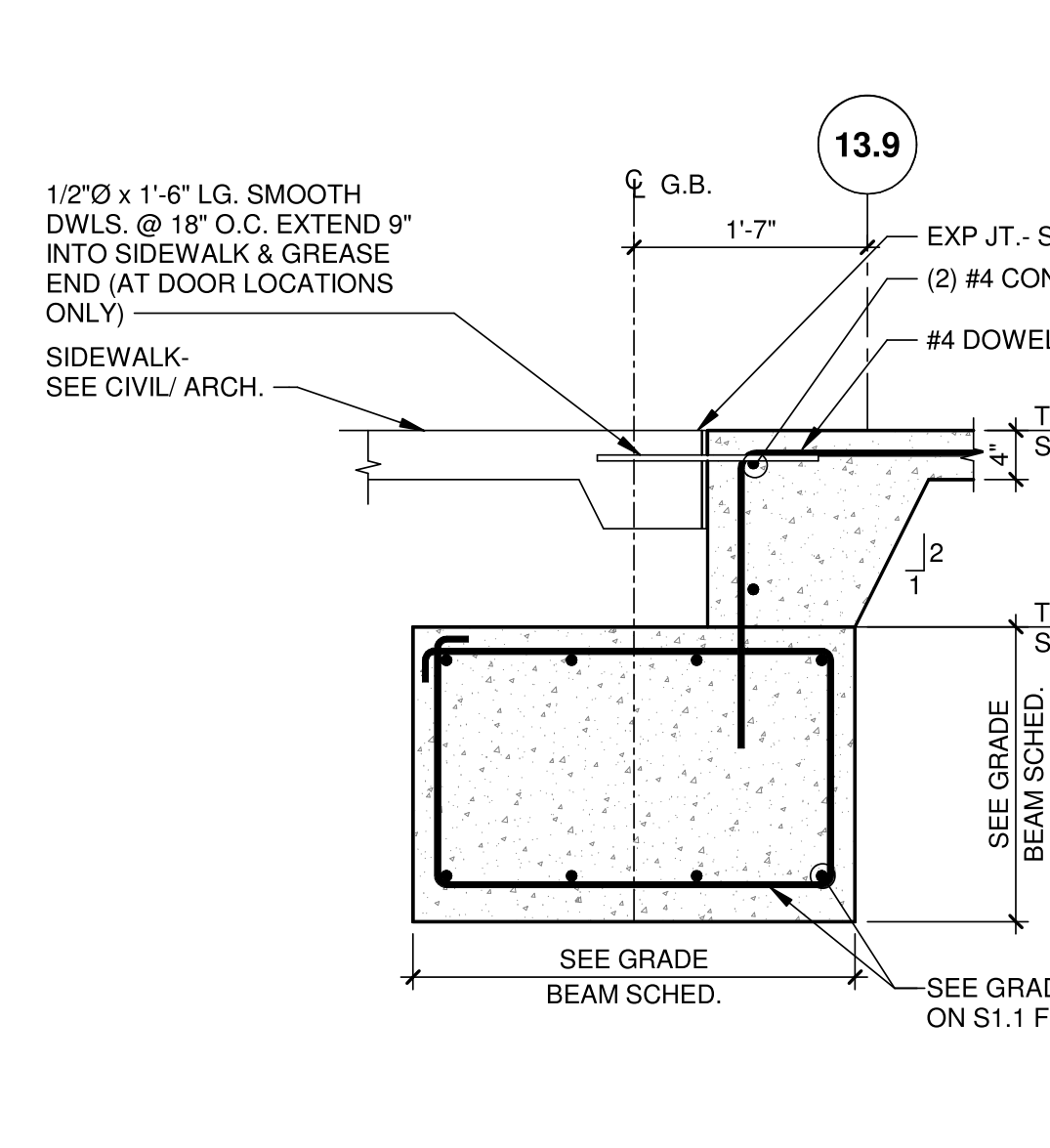
**10 SECTION**  
3/4" = 1'-0"



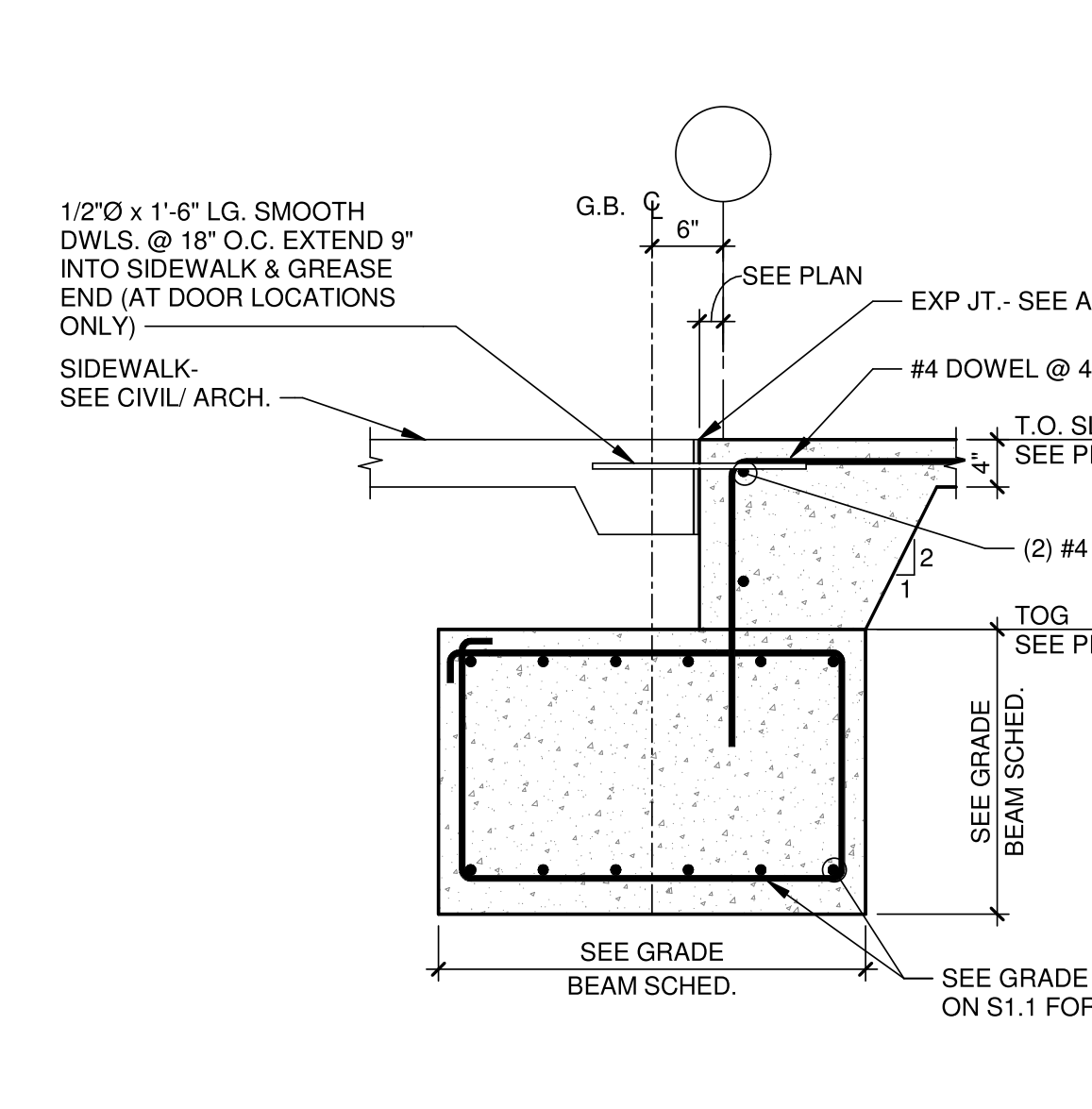
**11 SECTION**  
3/4" = 1'-0"



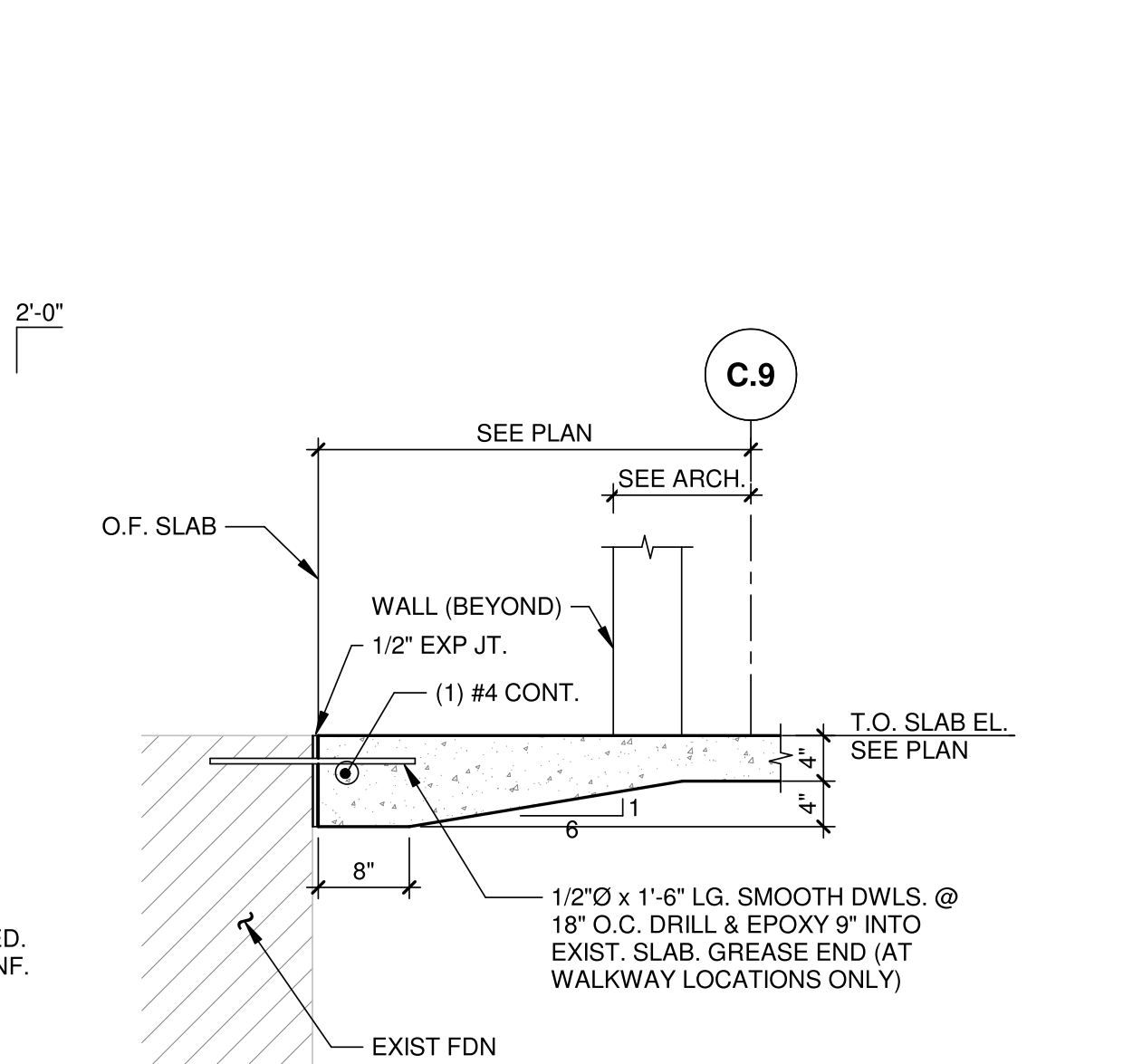
**12 SECTION**  
3/4" = 1'-0"



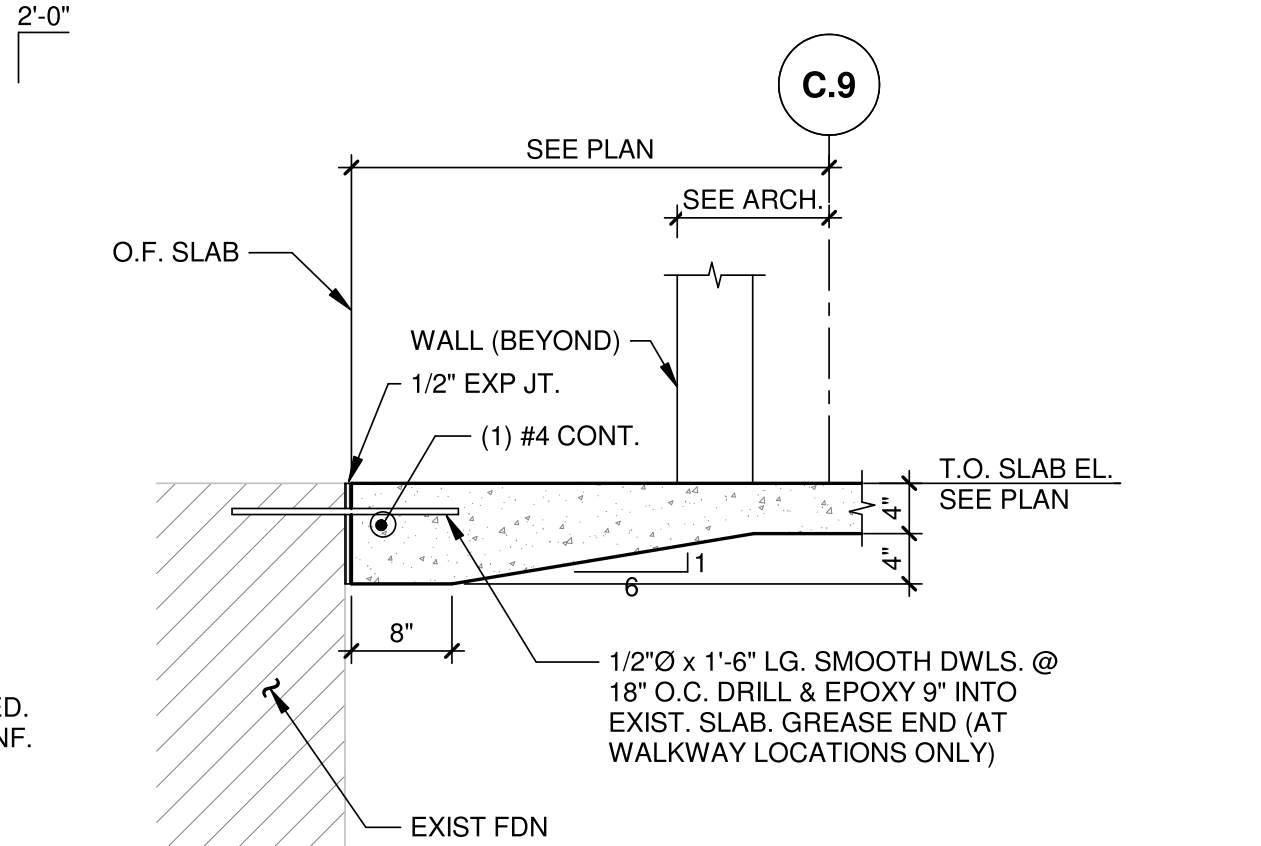
**13 SECTION**  
3/4" = 1'-0"



**14 SECTION**  
3/4" = 1'-0"



**15 SECTION**  
3/4" = 1'-0"



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MEP Engineer  
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**Bentonville Public Library Expansion**  
 405 S Main Street  
 Bentonville, AR 72712

Project No: 2021027

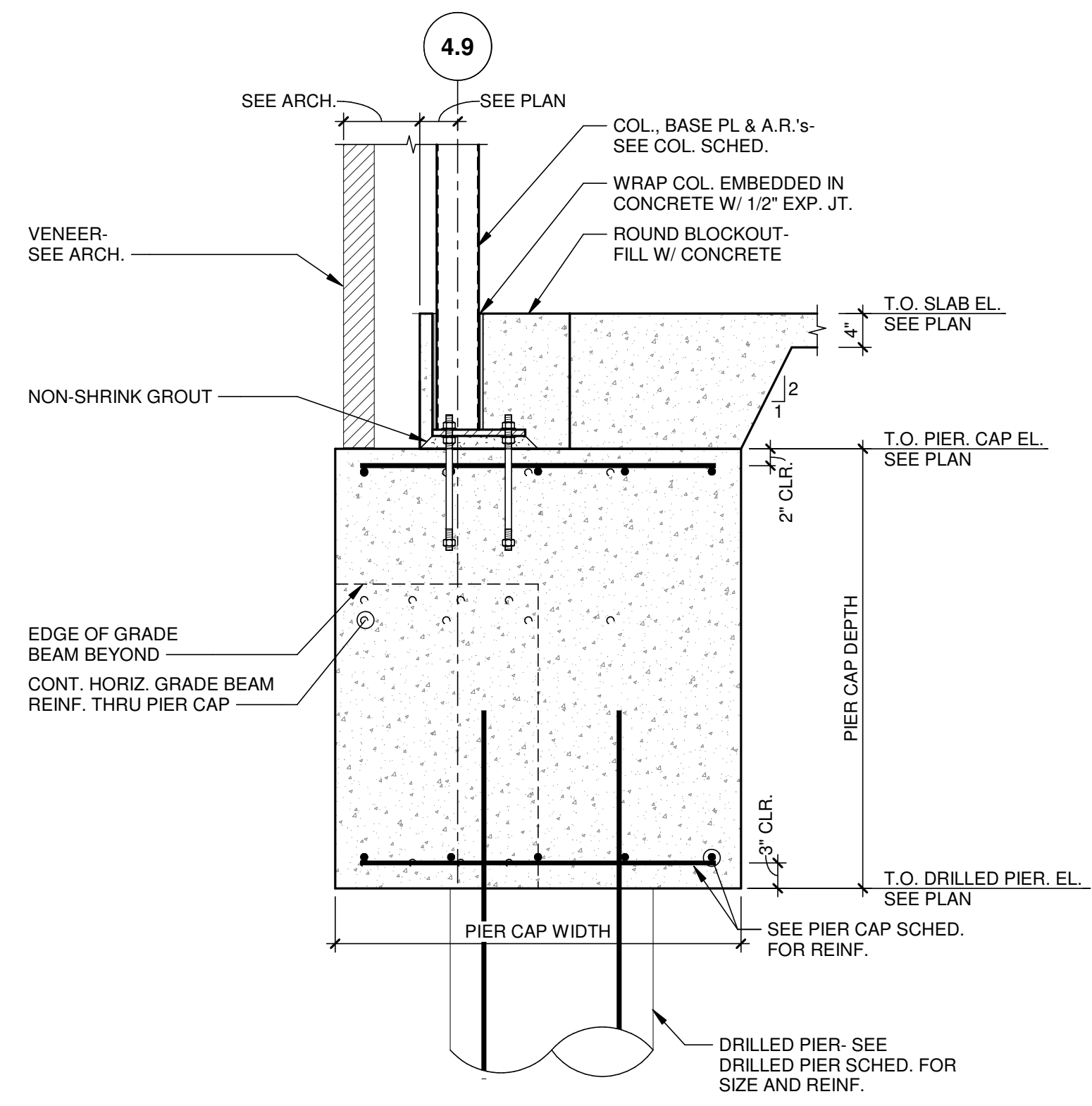
**BID SET**

**ISSUE / REVISION**

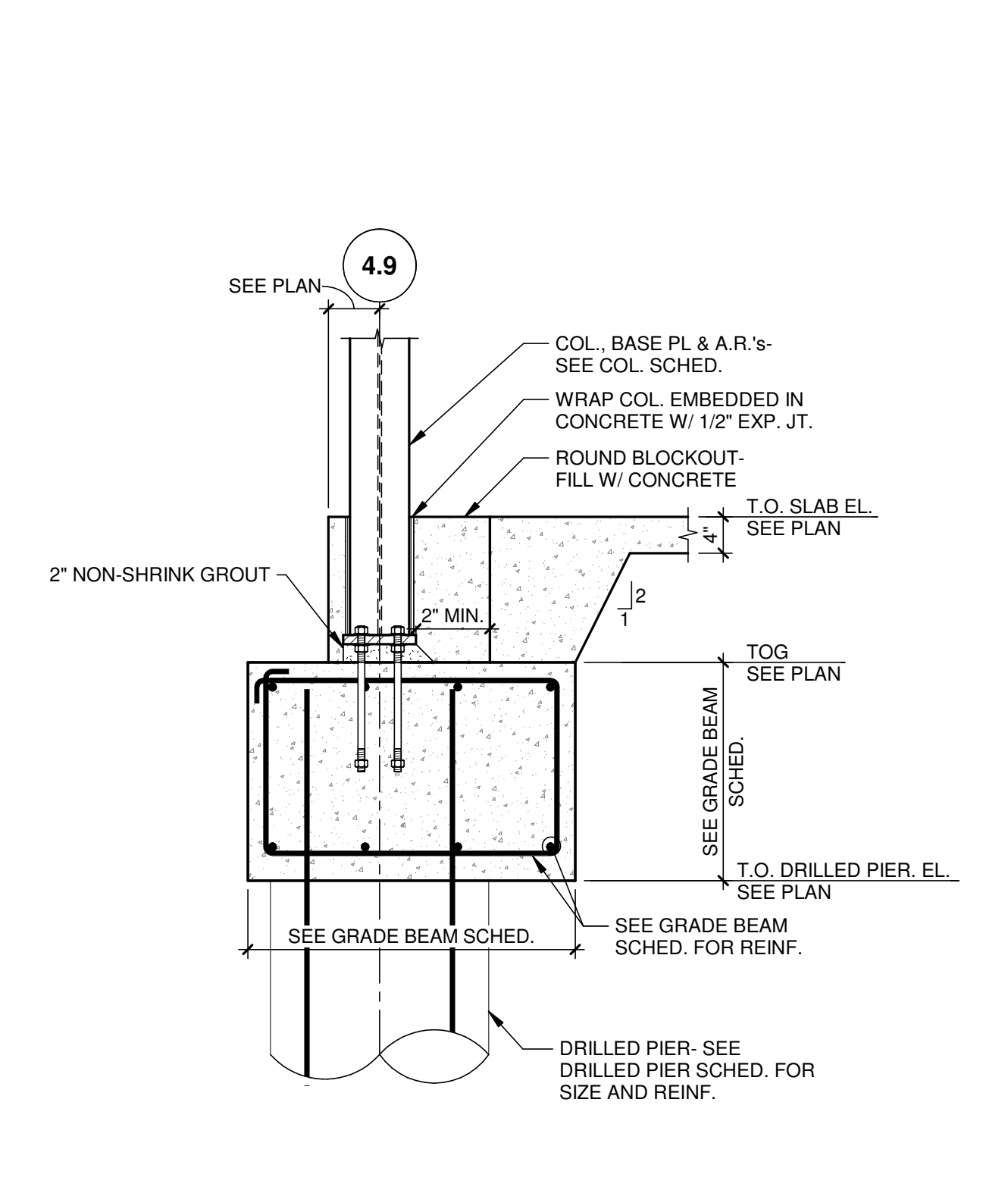
Mark	Date	Description
1	12/10/2021	SCHEMATIC DESIGN PRICING
2	06/22/2022	DESIGN DEVELOPMENT PRICING
3	10/24/2022	60% CD PRICING
4	12/21/2022	PERMIT SET
5	01/06/2023	BID SET
1	01/16/2023	BID SET - ADDENDUM 1
2	03/04/2023	ASB/SH

FOUNDATION DETAILS

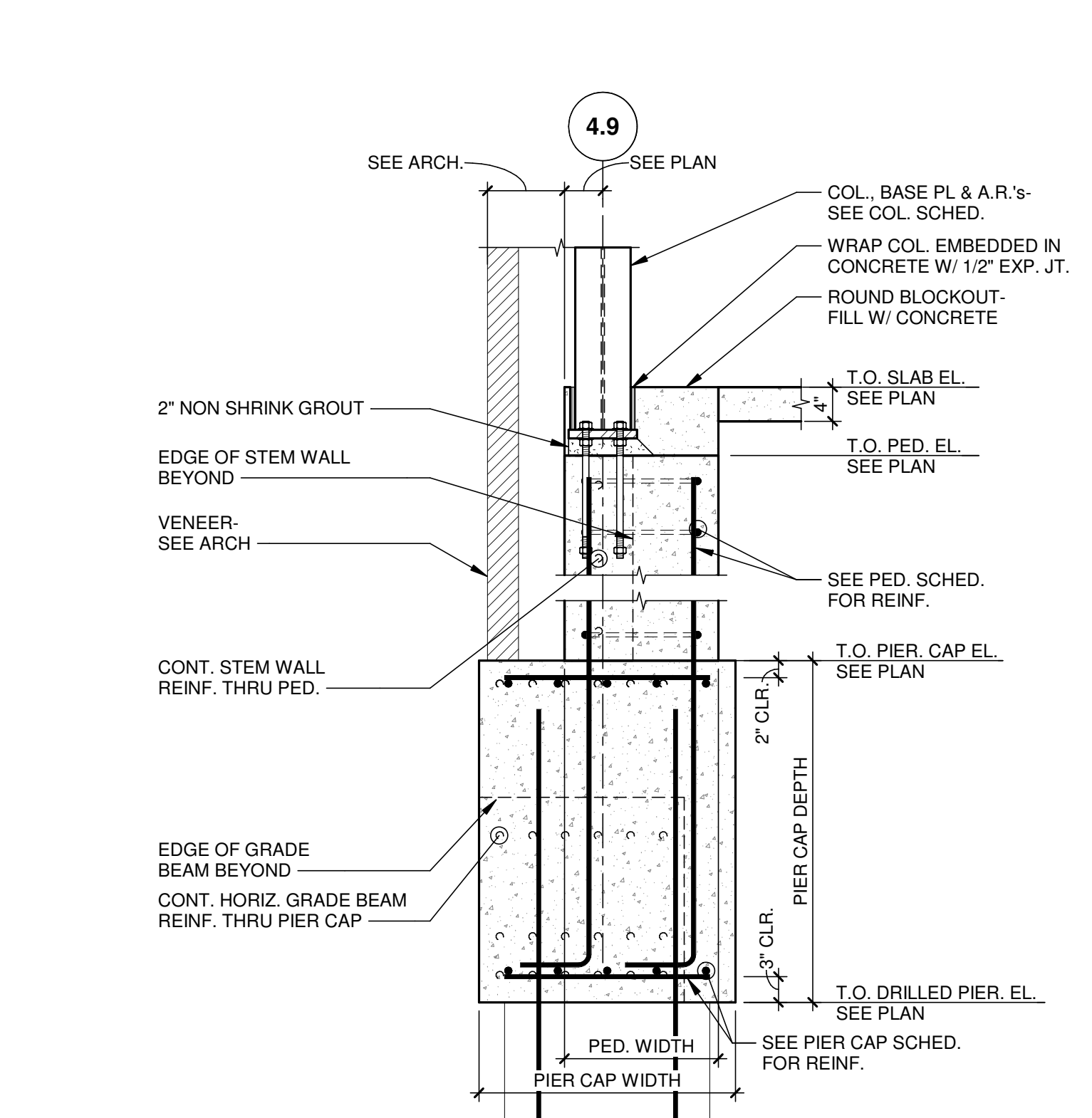
**S4.1**



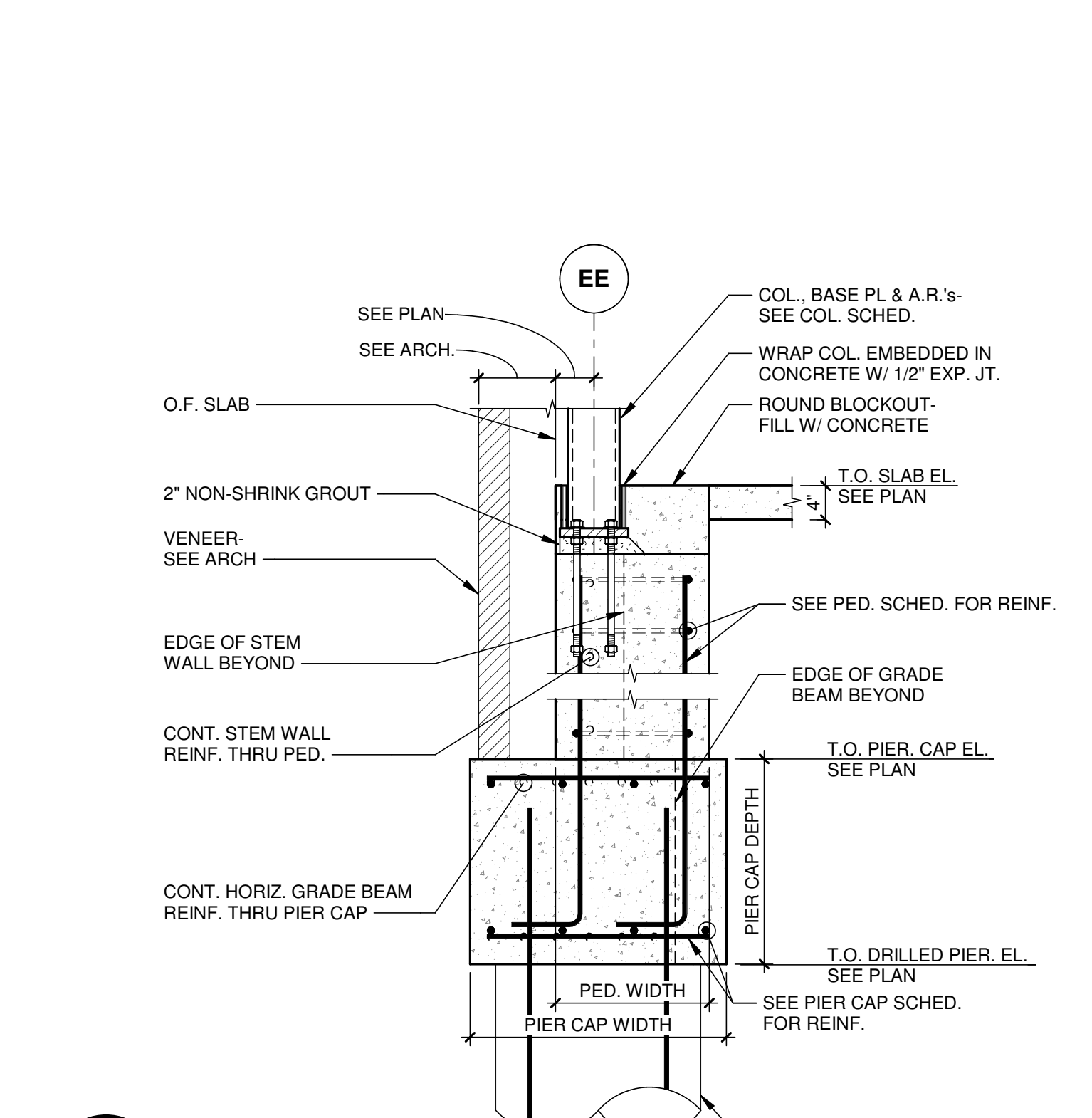
**1 SECTION**  
3/4" = 1'-0"



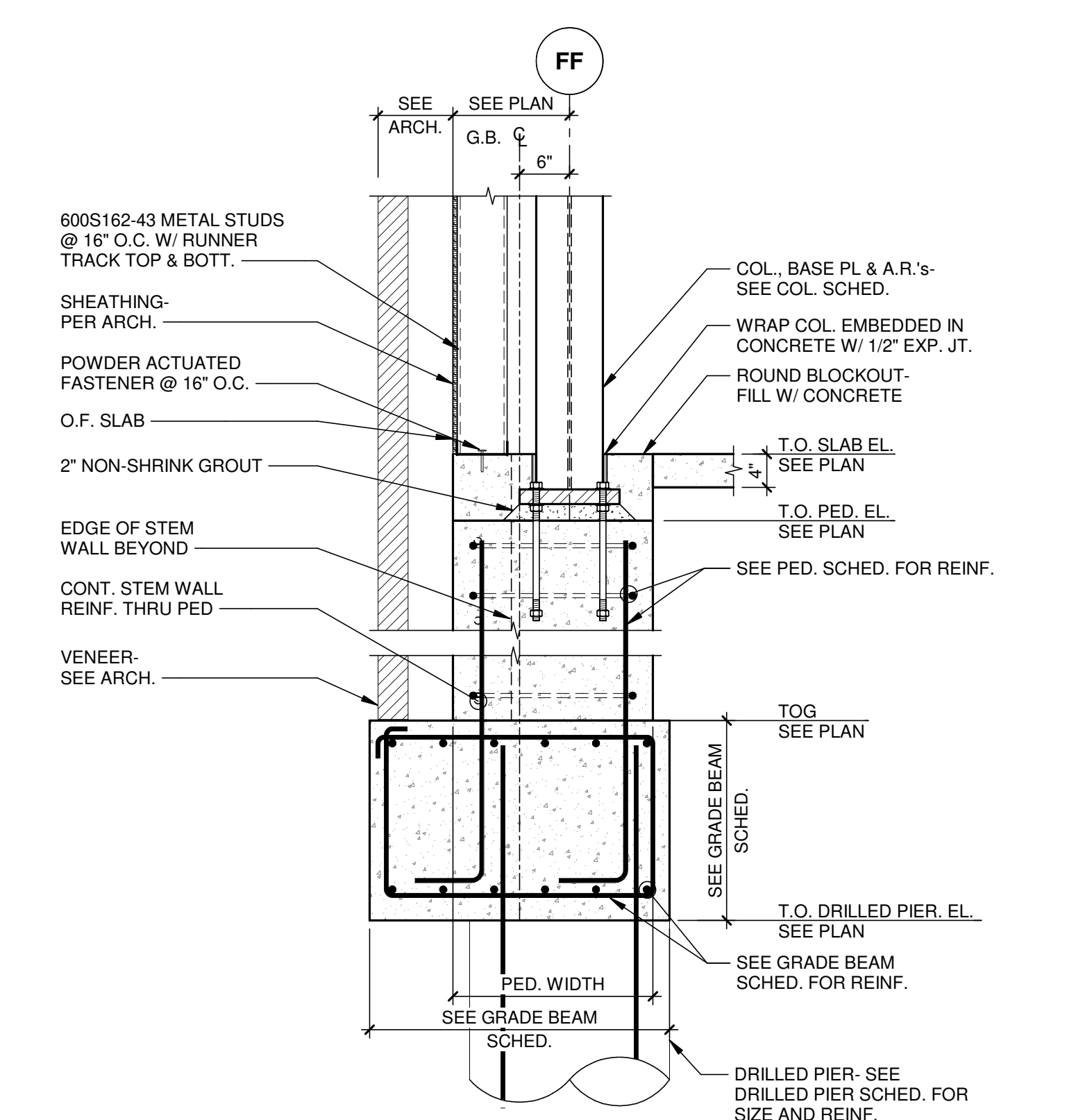
**2 SECTION**  
3/4" = 1'-0"



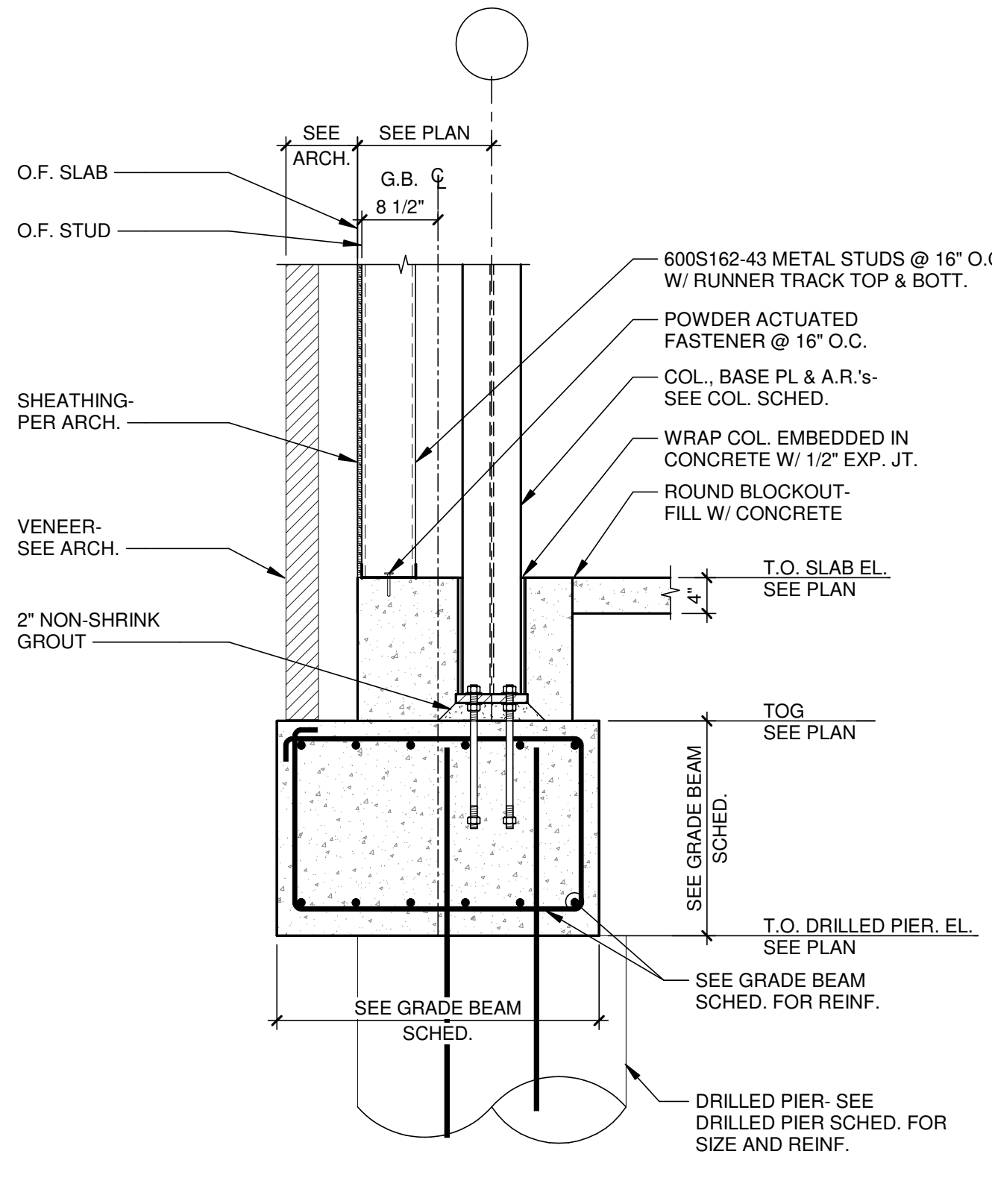
**3 SECTION**  
3/4" = 1'-0"



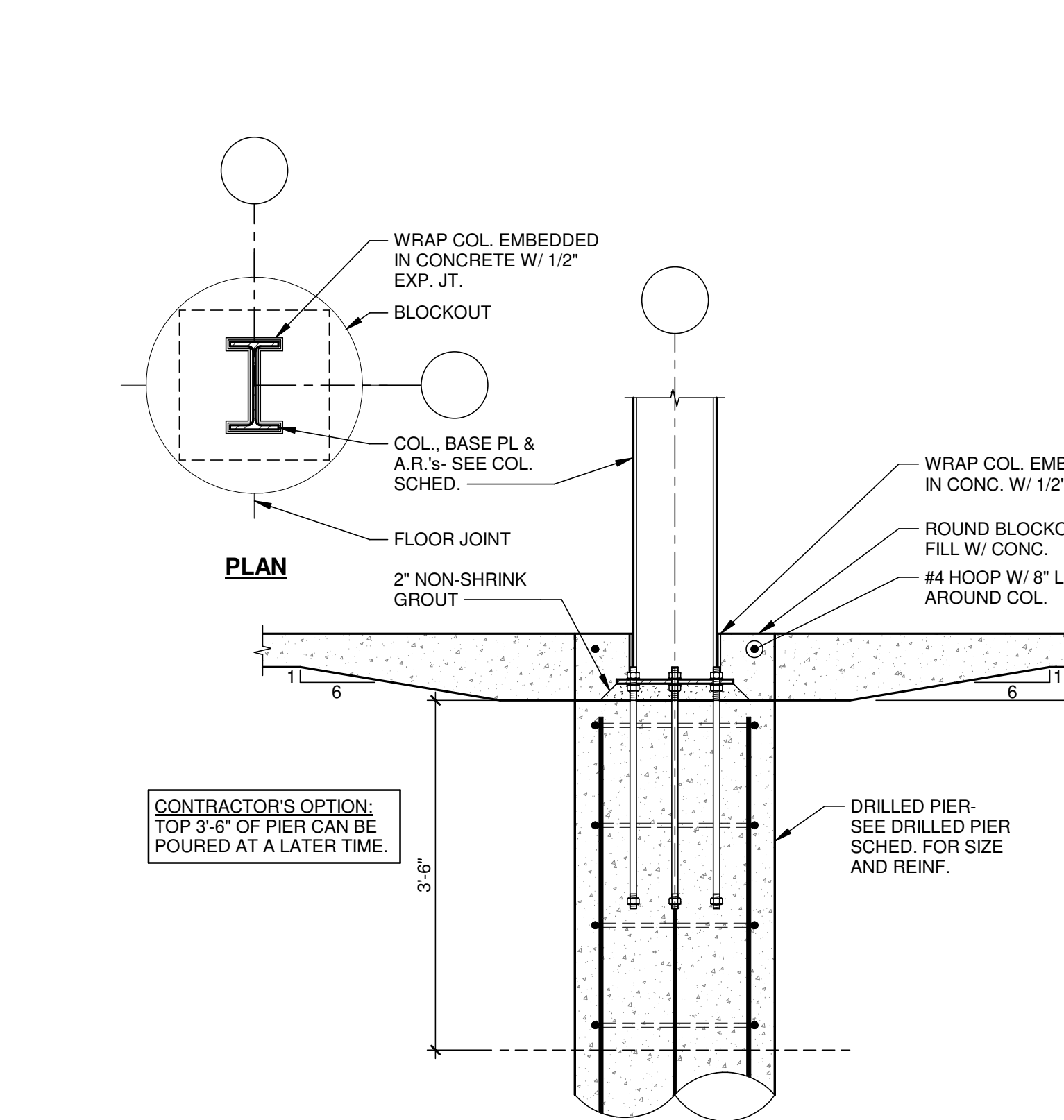
**4 SECTION**  
3/4" = 1'-0"



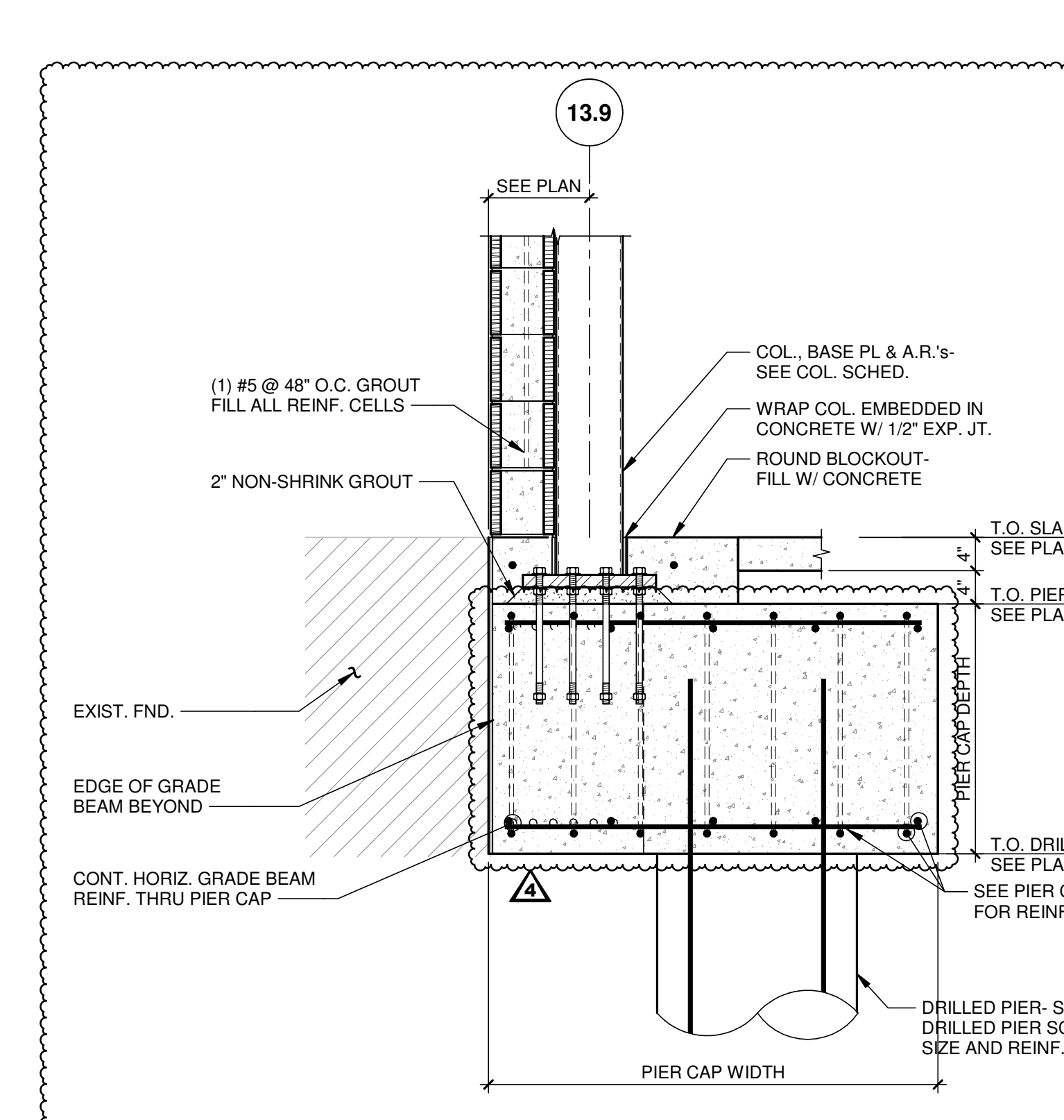
**5 SECTION**  
3/4" = 1'-0"



**6 SECTION**  
3/4" = 1'-0"



**7 SECTION**  
3/4" = 1'-0"



**8 SECTION**  
3/4" = 1'-0"

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**Bentonville Public Library**  
**Expansion**  
 405 S Main Street  
 Bentonville, AR 72712

Project No. 2021037



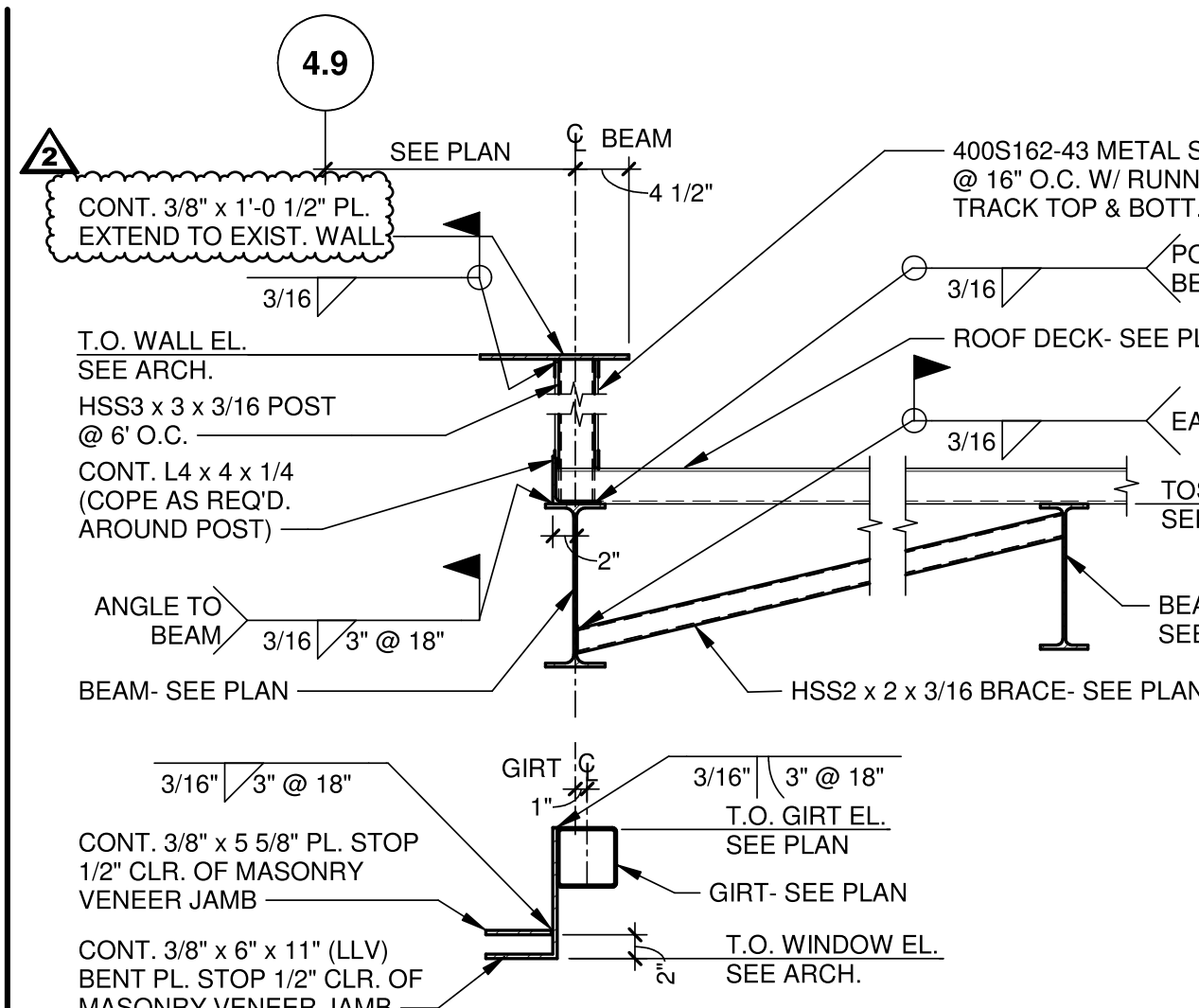
**BID SET**

**ISSUE / REVISION**

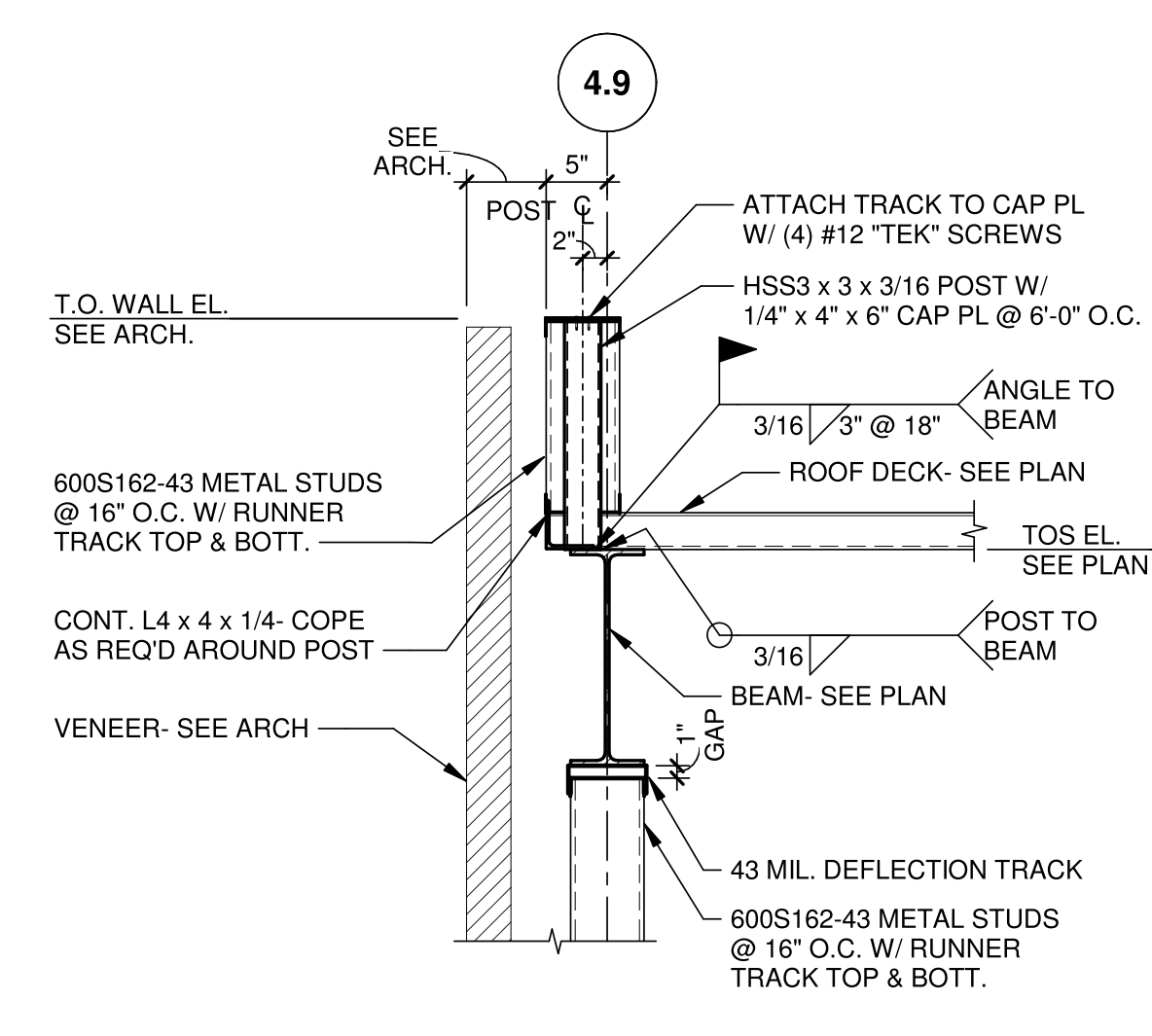
Mark	Date	Description
1	12/15/2021	SCHEMATIC DESIGN PRICING
2	06/22/2022	DESIGN DEVELOPMENT PRICING
3	10/24/2022	60% CD PRICING
4	12/31/2022	PERMIT SET
5	01/06/2023	BID SET
6	03/24/2023	ASH-01
7	08/22/2023	ASH-07

FOUNDATION  
 DETAILS

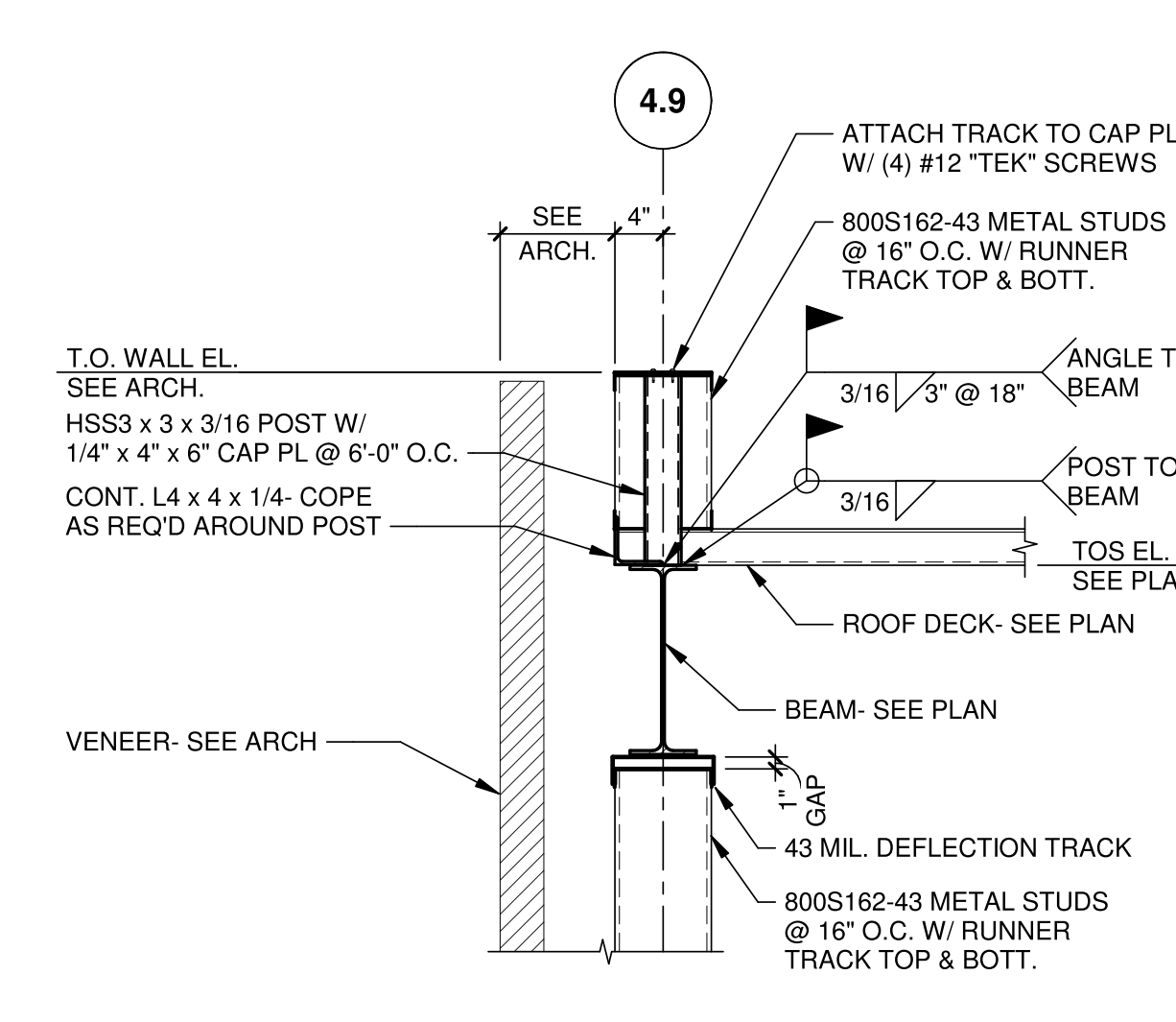
# S4.2



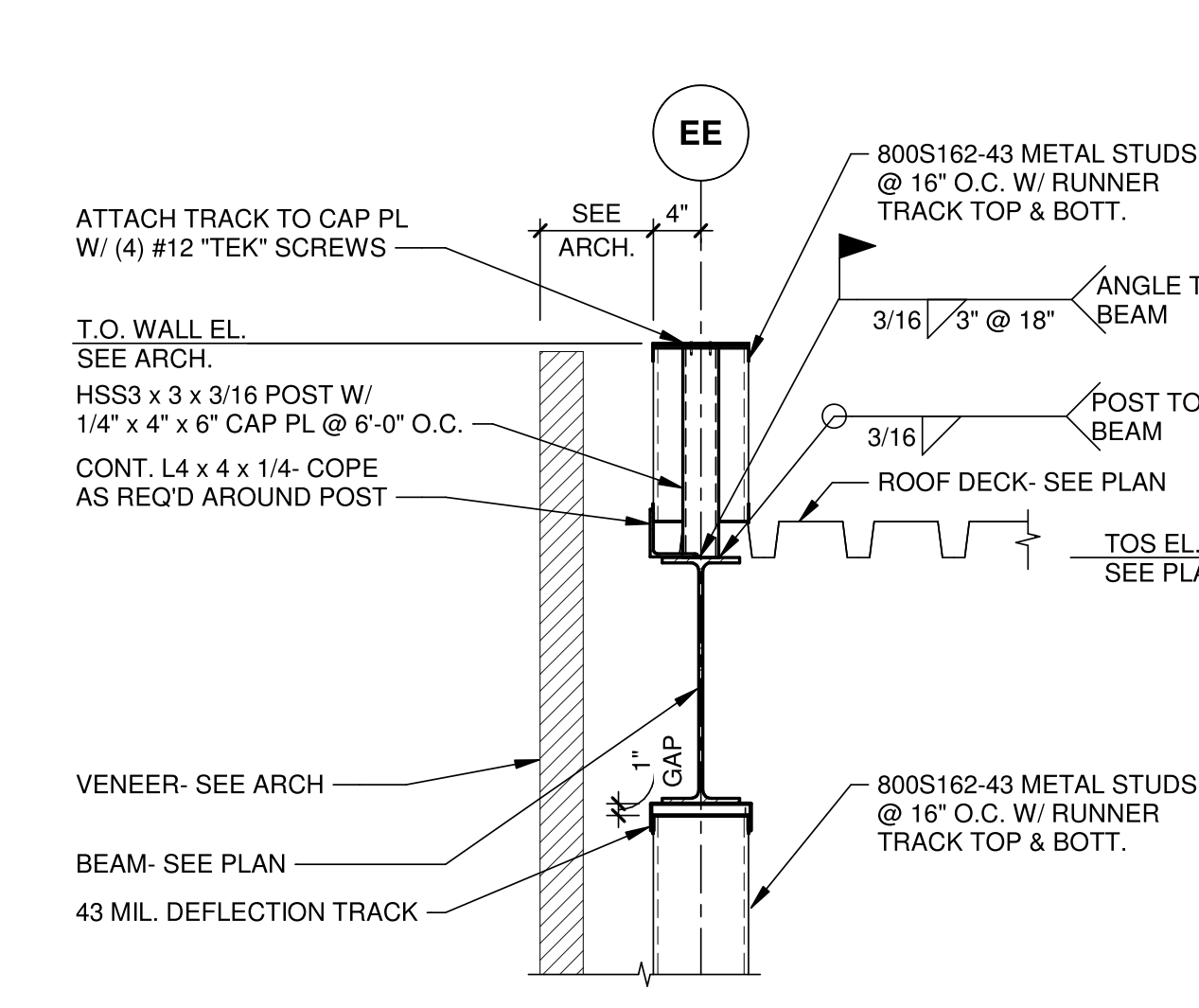
**1 SECTION**  
3/4" = 1'-0"



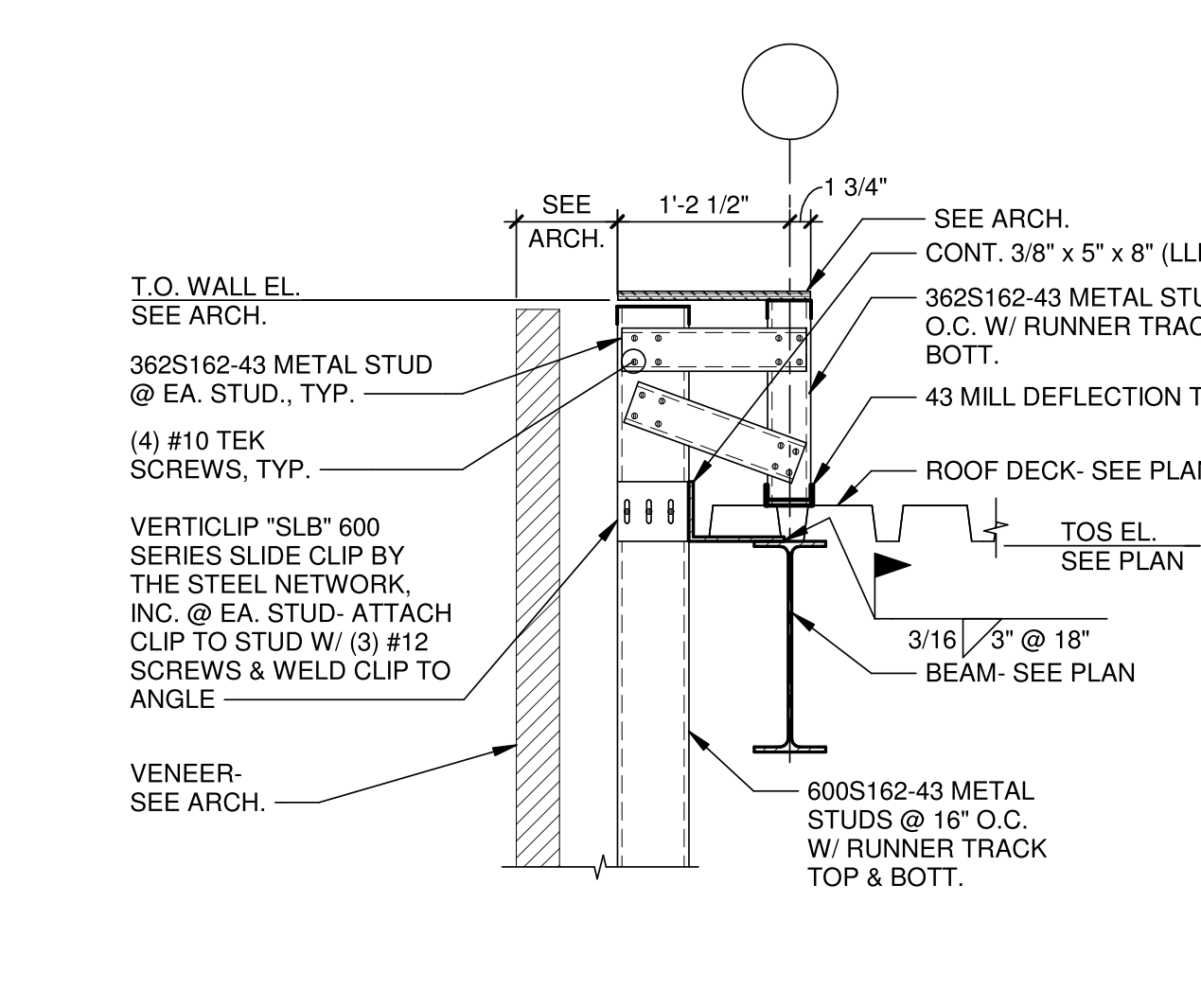
**2 SECTION**  
3/4" = 1'-0"



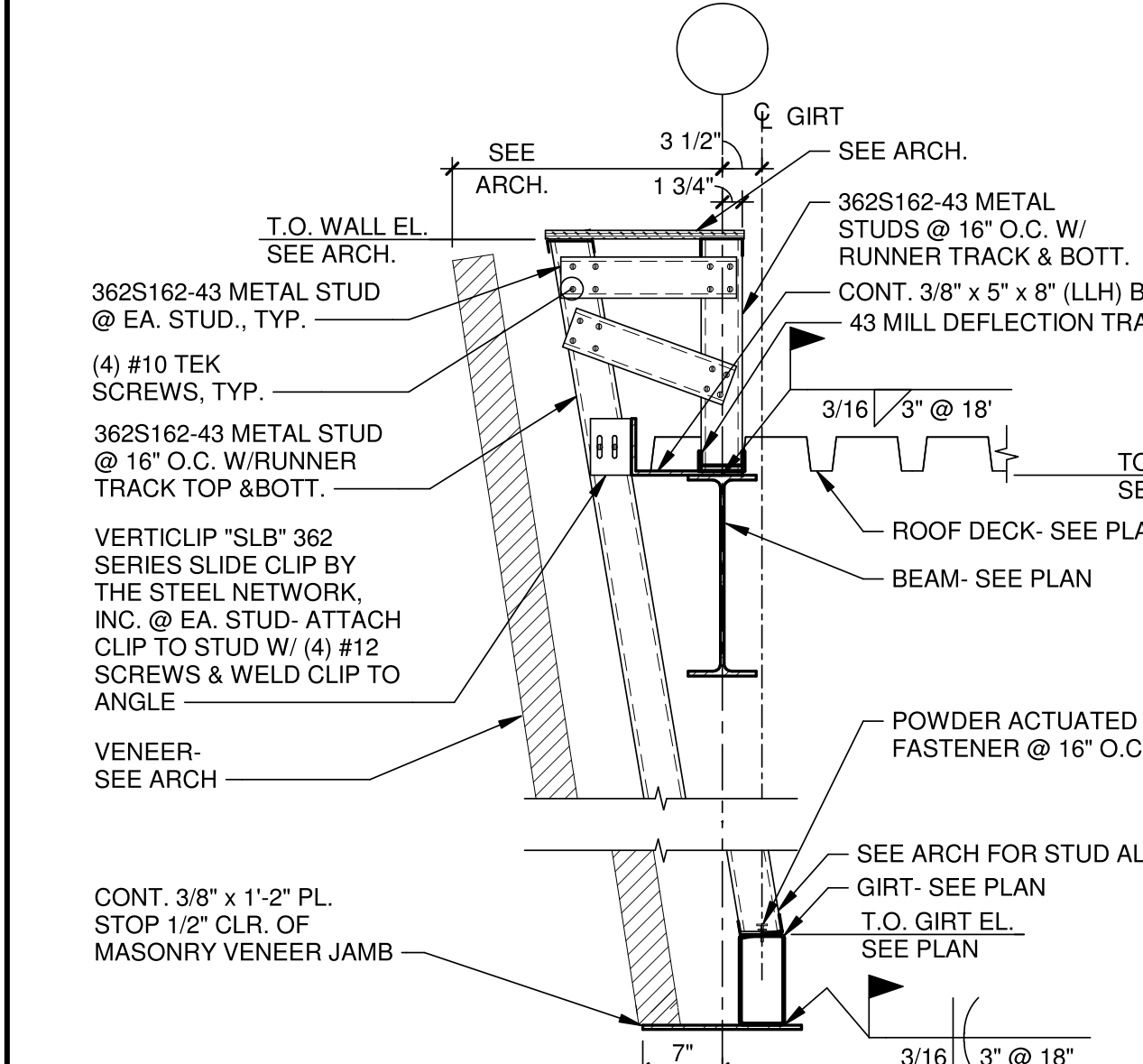
**3 SECTION**  
3/4" = 1'-0"



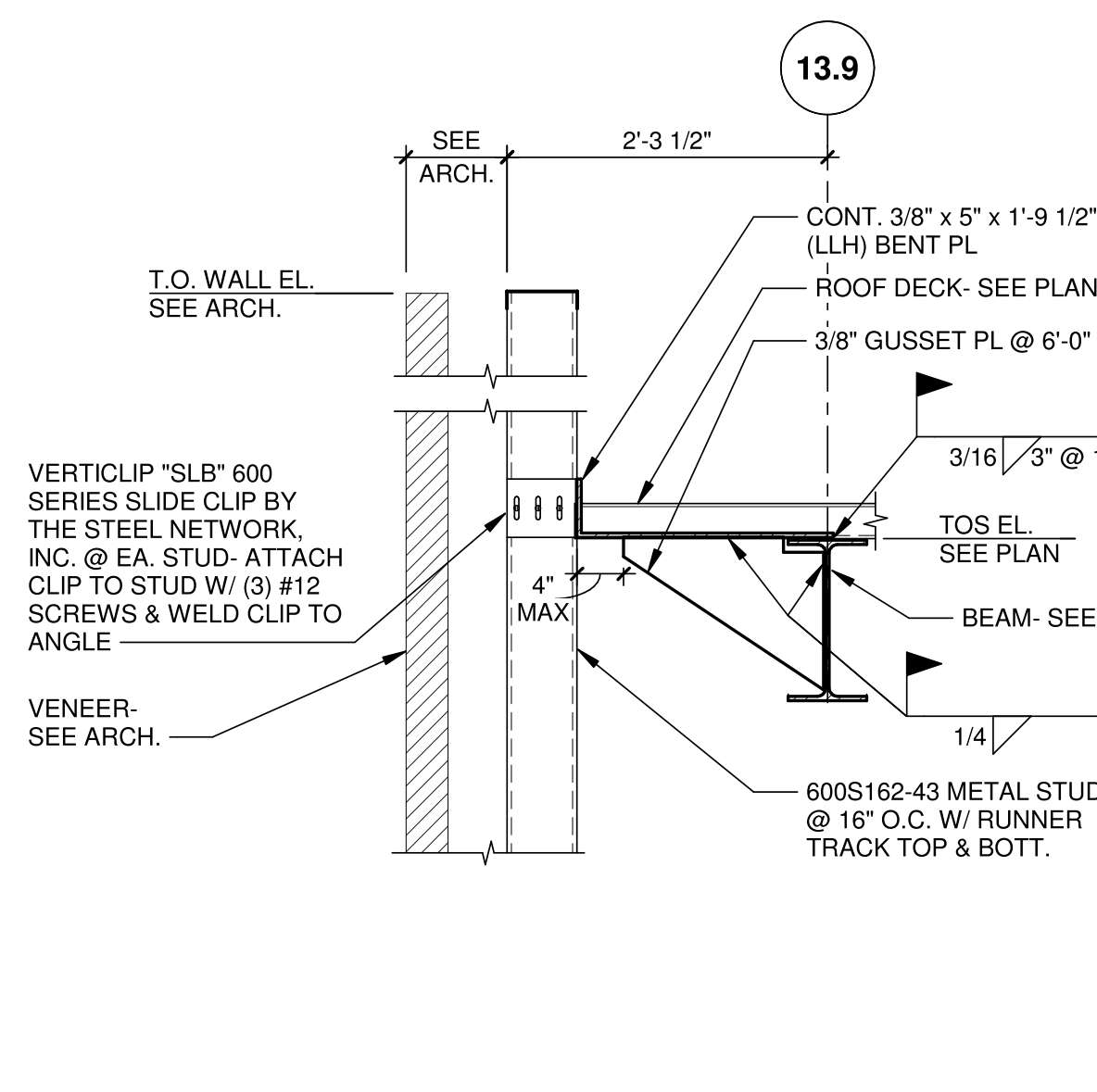
**4 SECTION**  
3/4" = 1'-0"



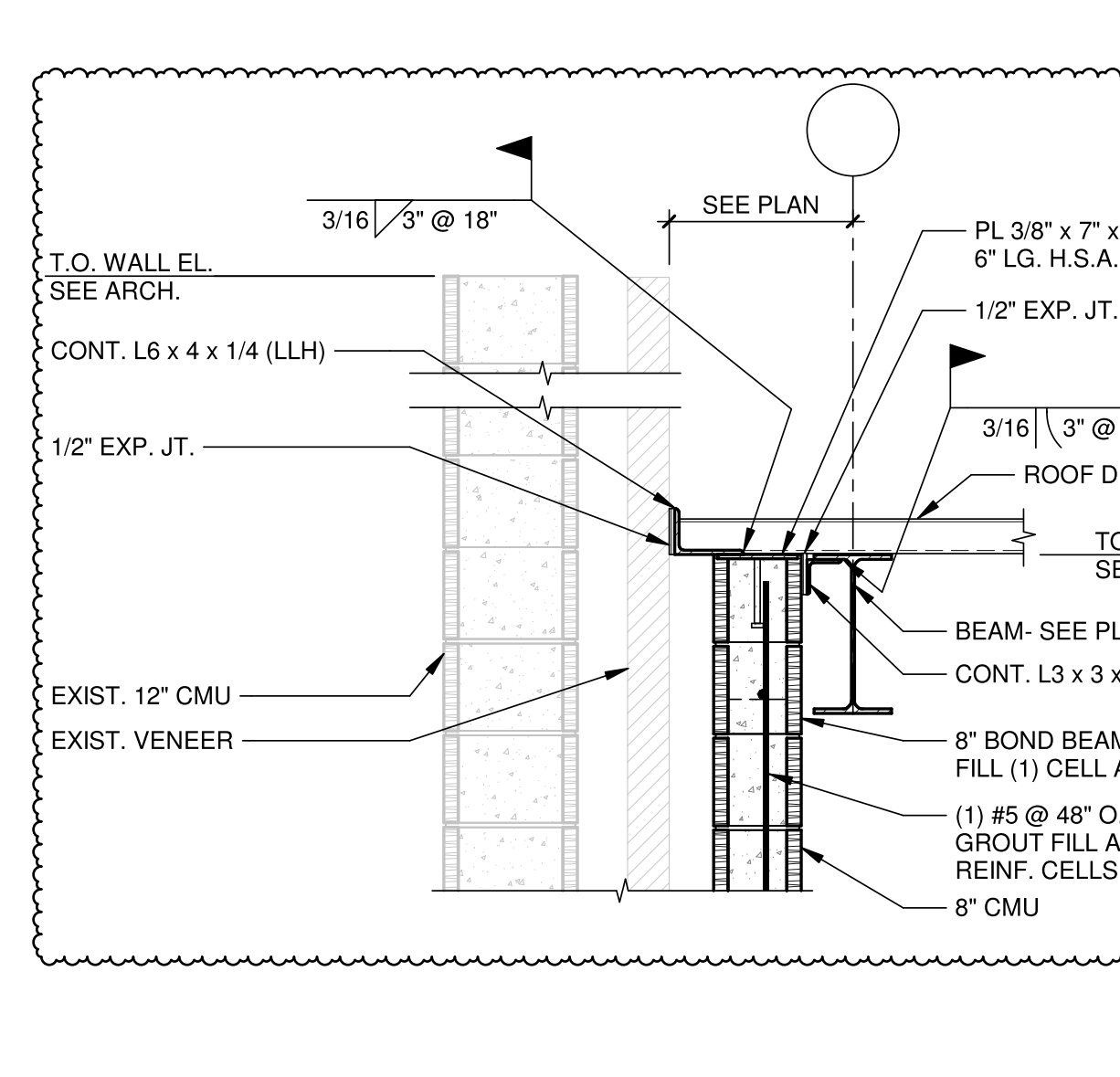
**5 SECTION**  
3/4" = 1'-0"



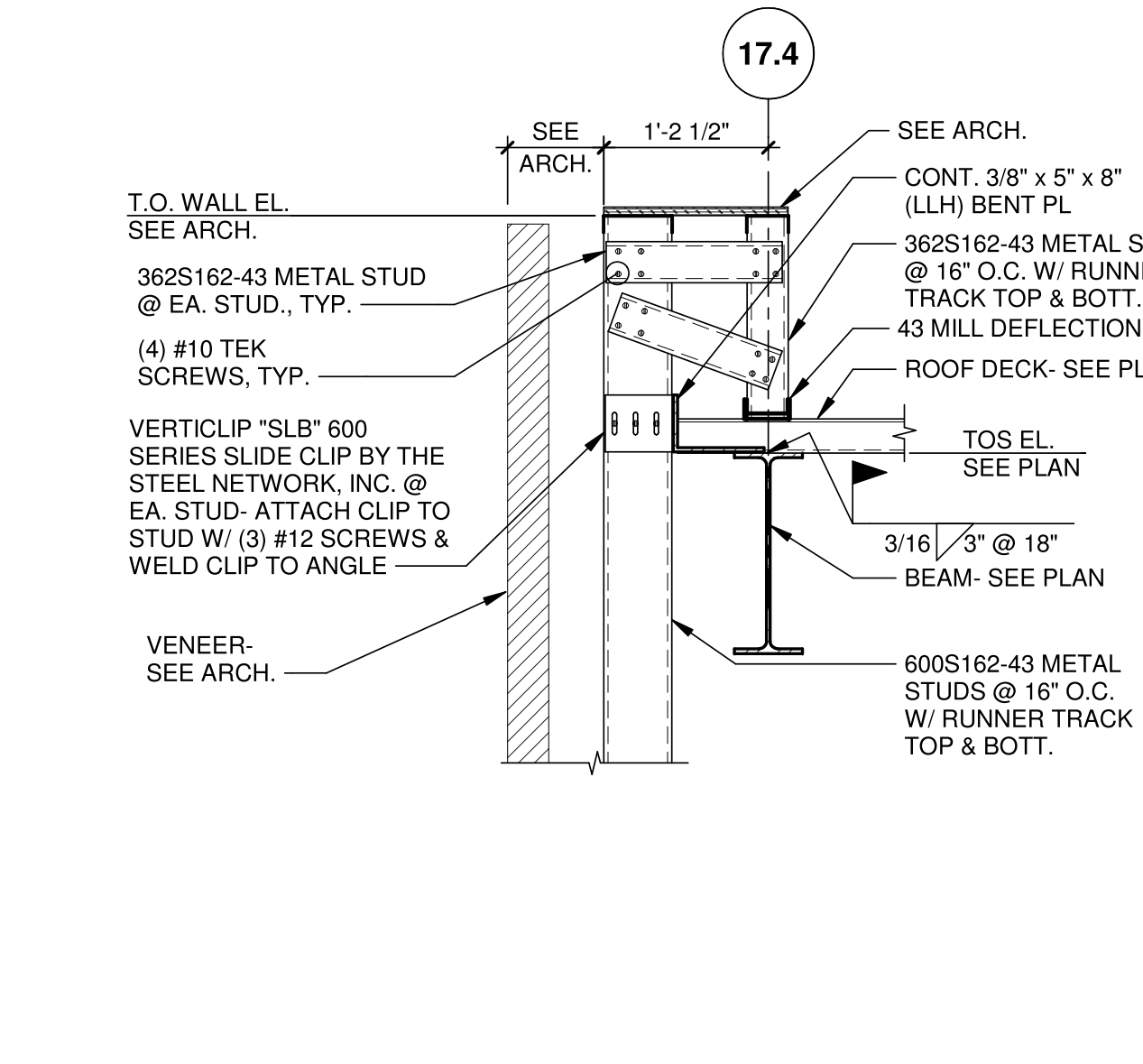
**6 SECTION**  
3/4" = 1'-0"



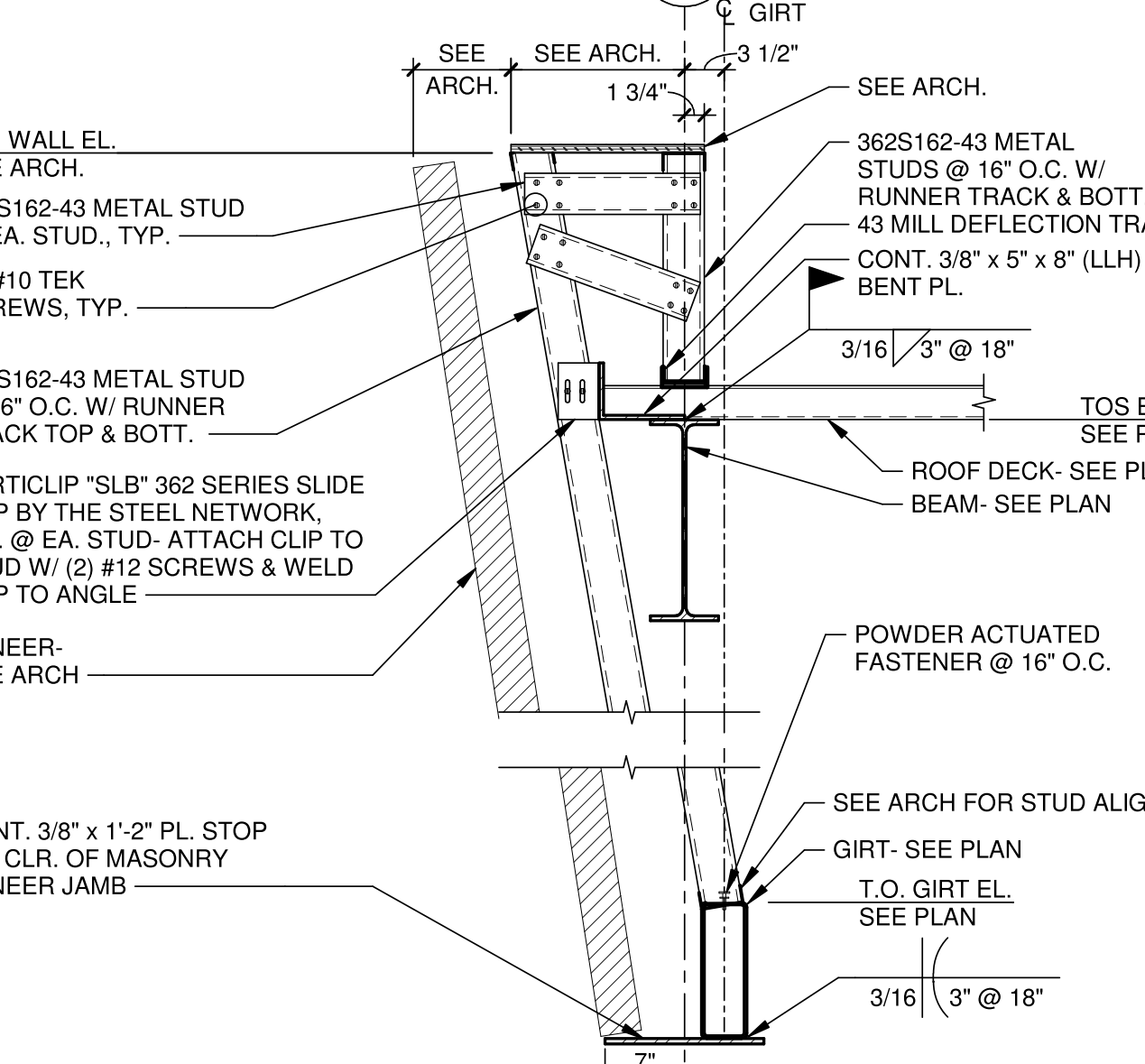
**7 SECTION**  
3/4" = 1'-0"



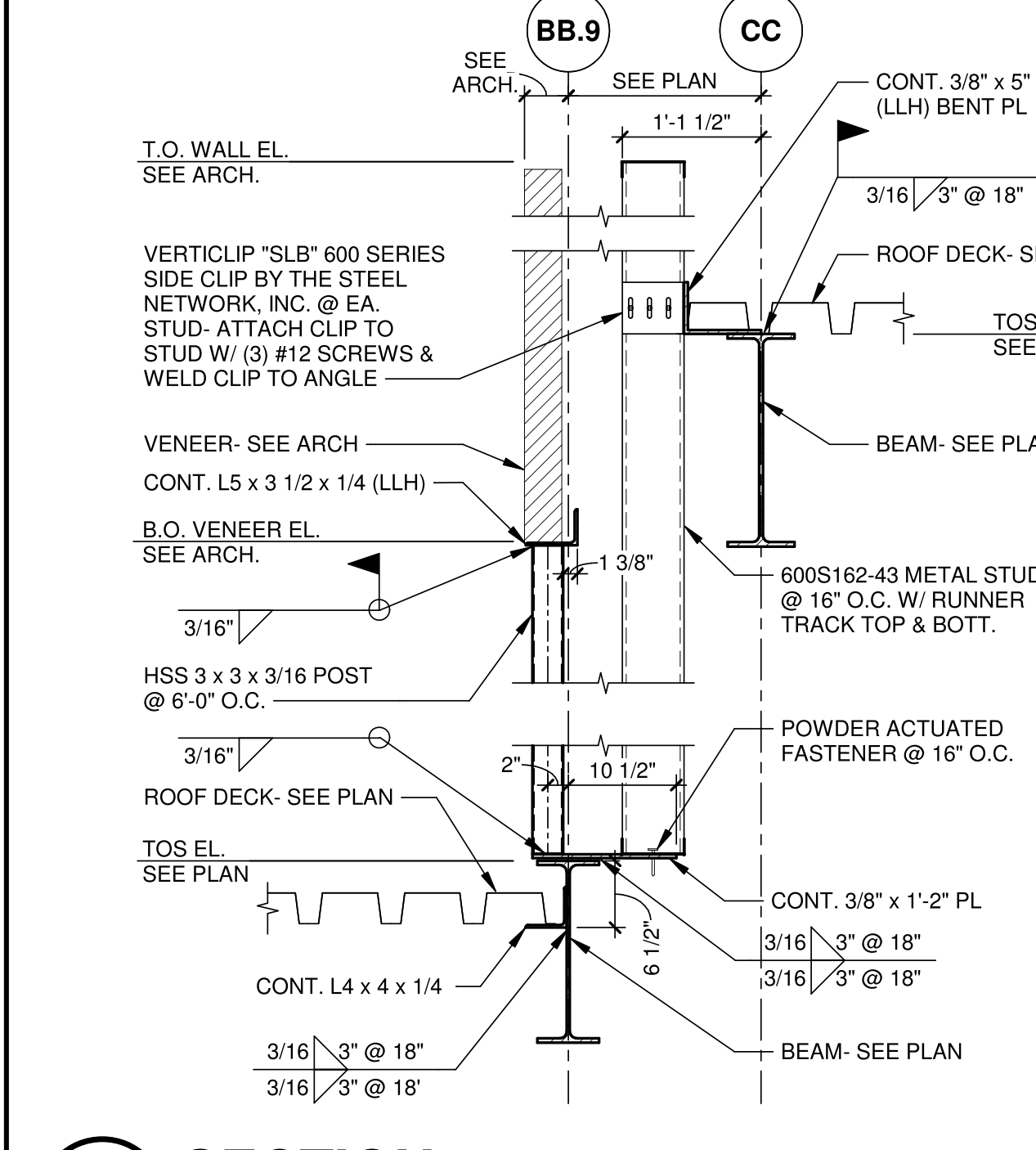
**8 SECTION**  
3/4" = 1'-0"



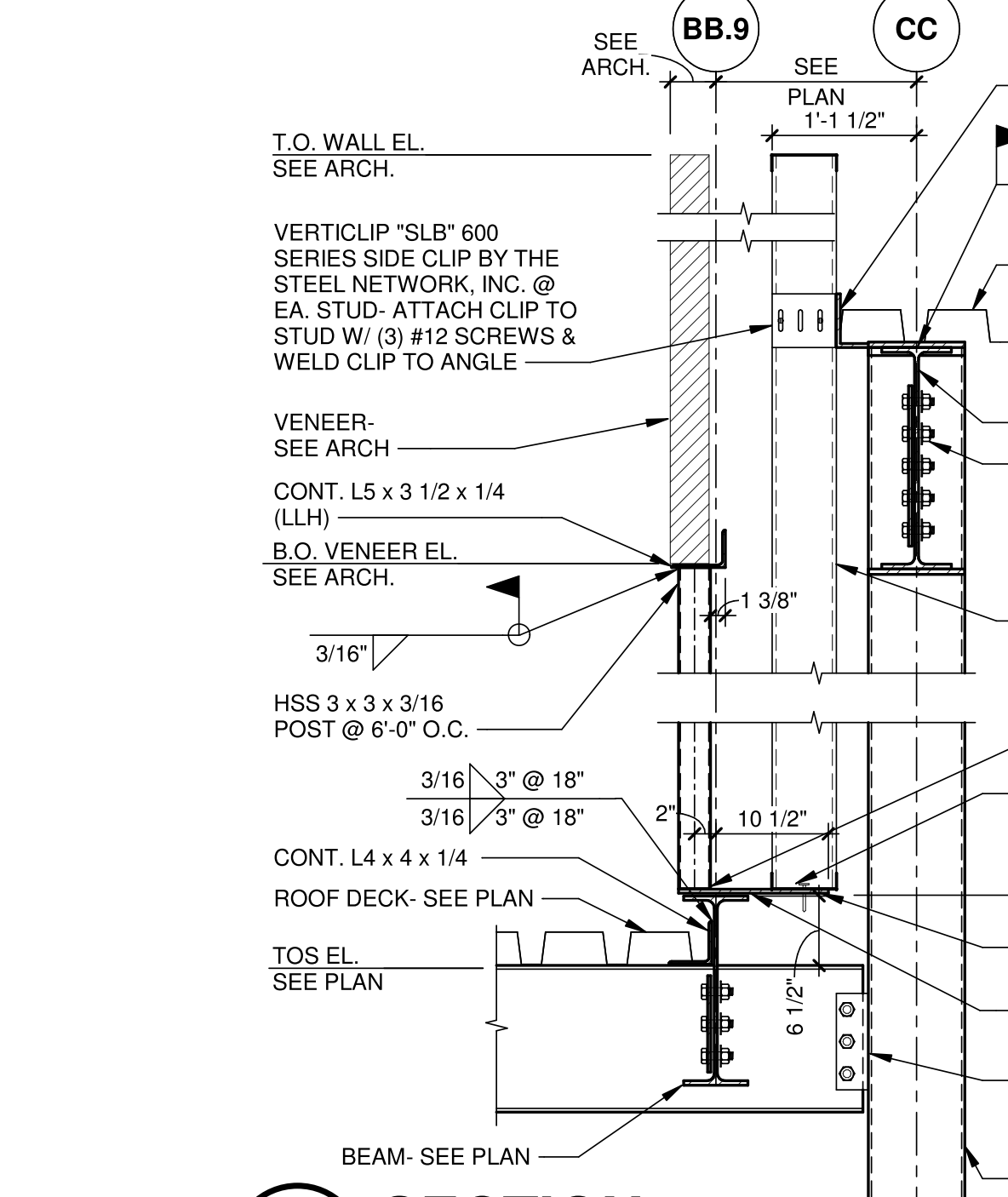
**9 SECTION**  
3/4" = 1'-0"



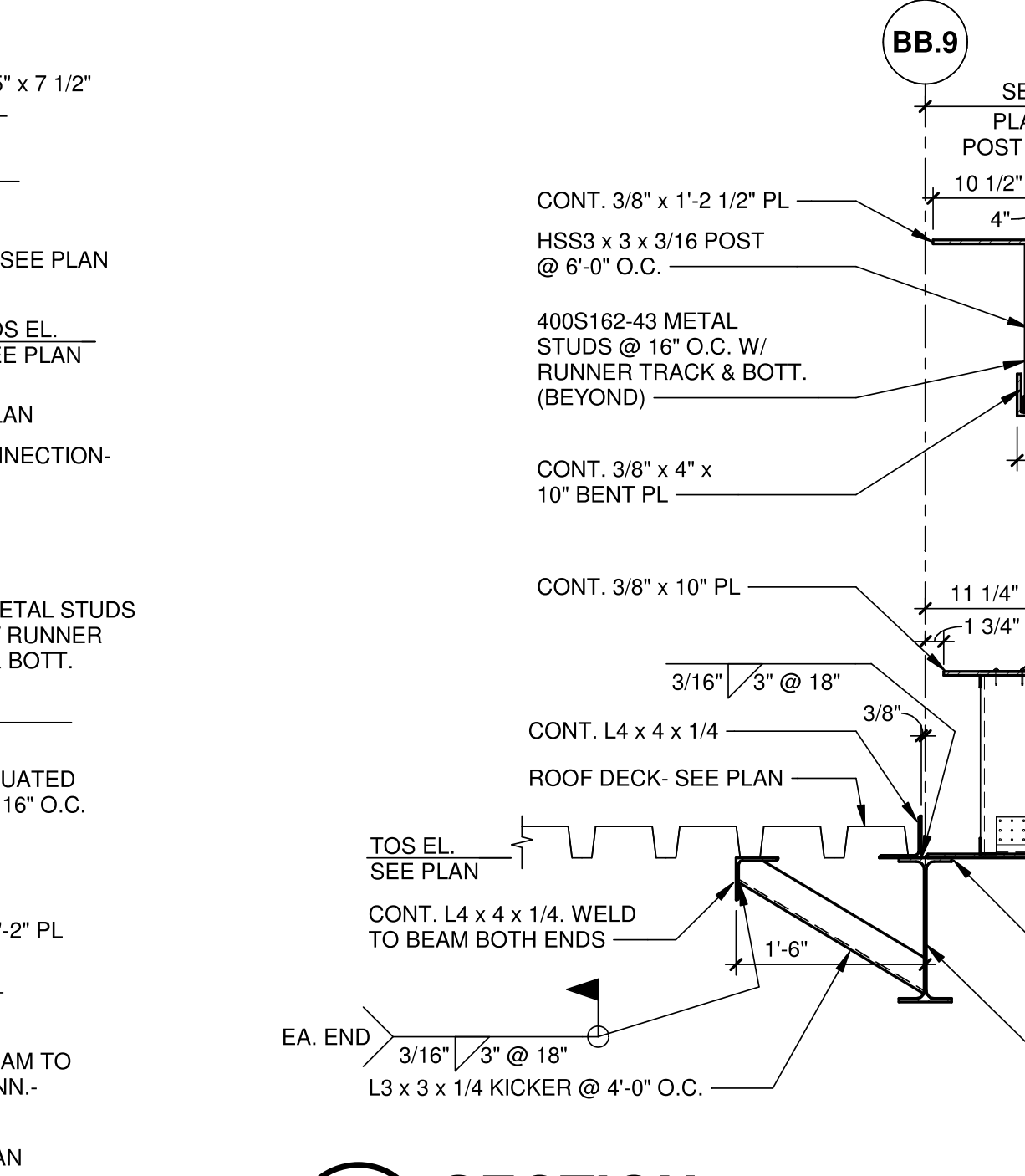
**10 SECTION**  
3/4" = 1'-0"



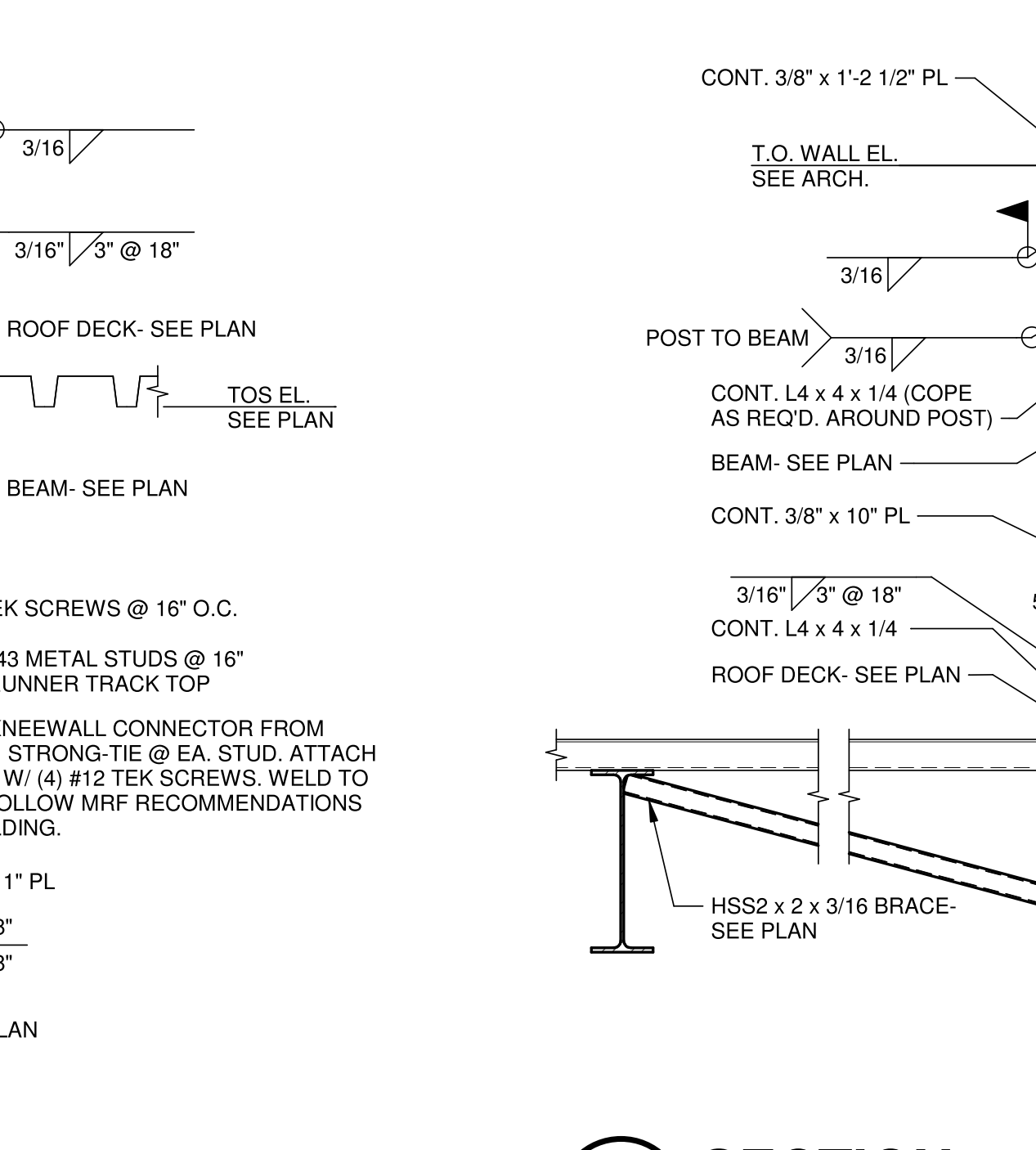
**11 SECTION**  
3/4" = 1'-0"



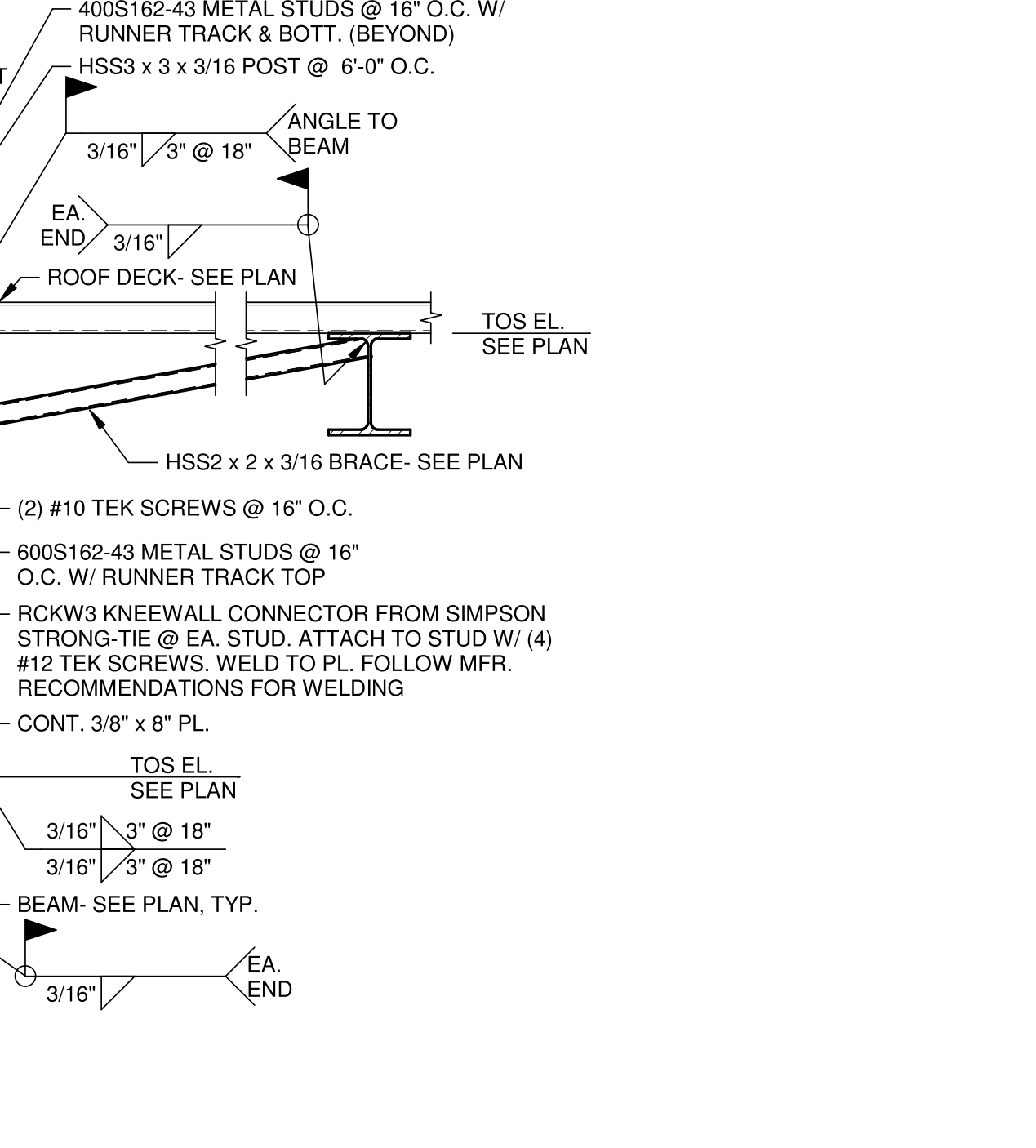
**12 SECTION**  
3/4" = 1'-0"



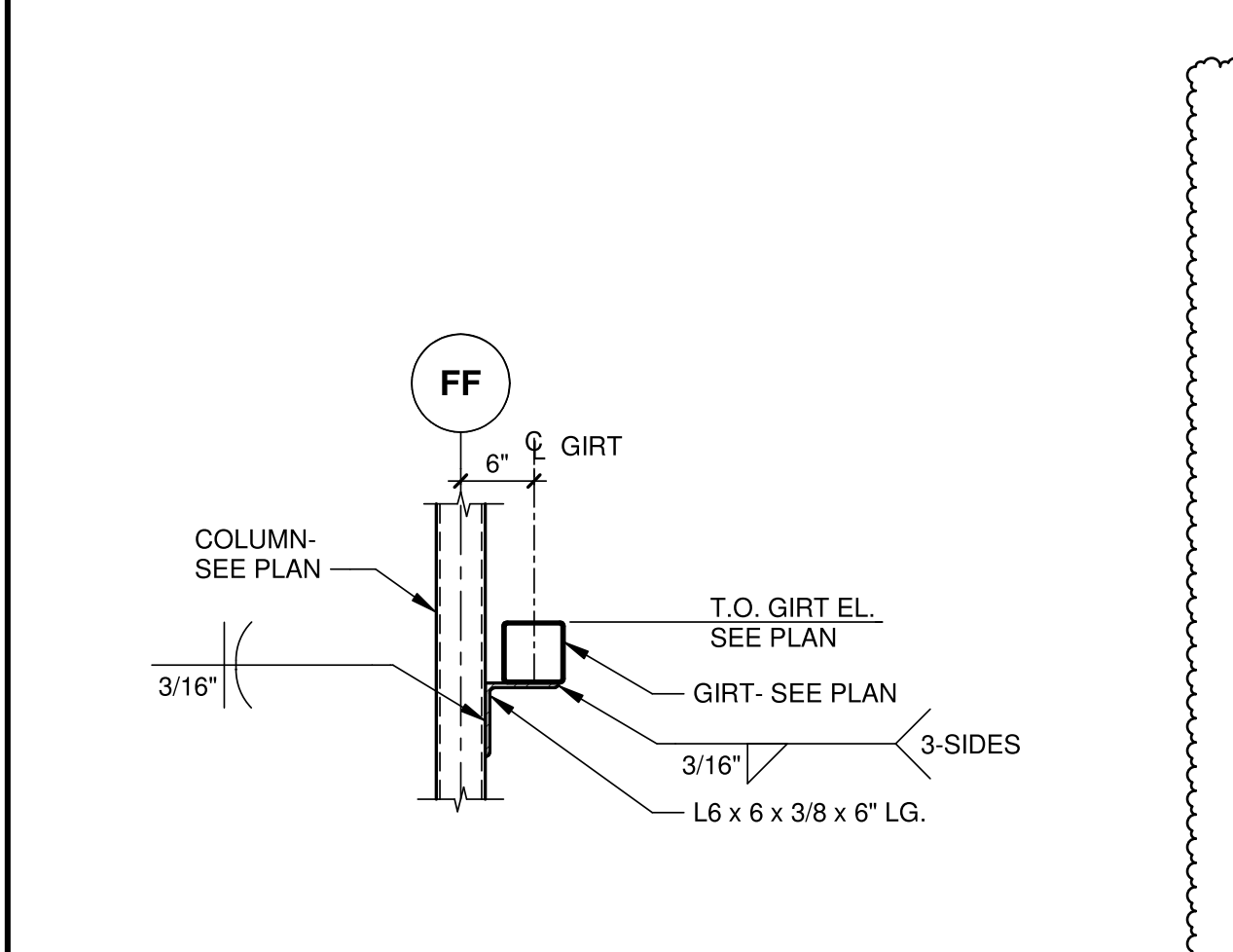
**13 SECTION**  
3/4" = 1'-0"



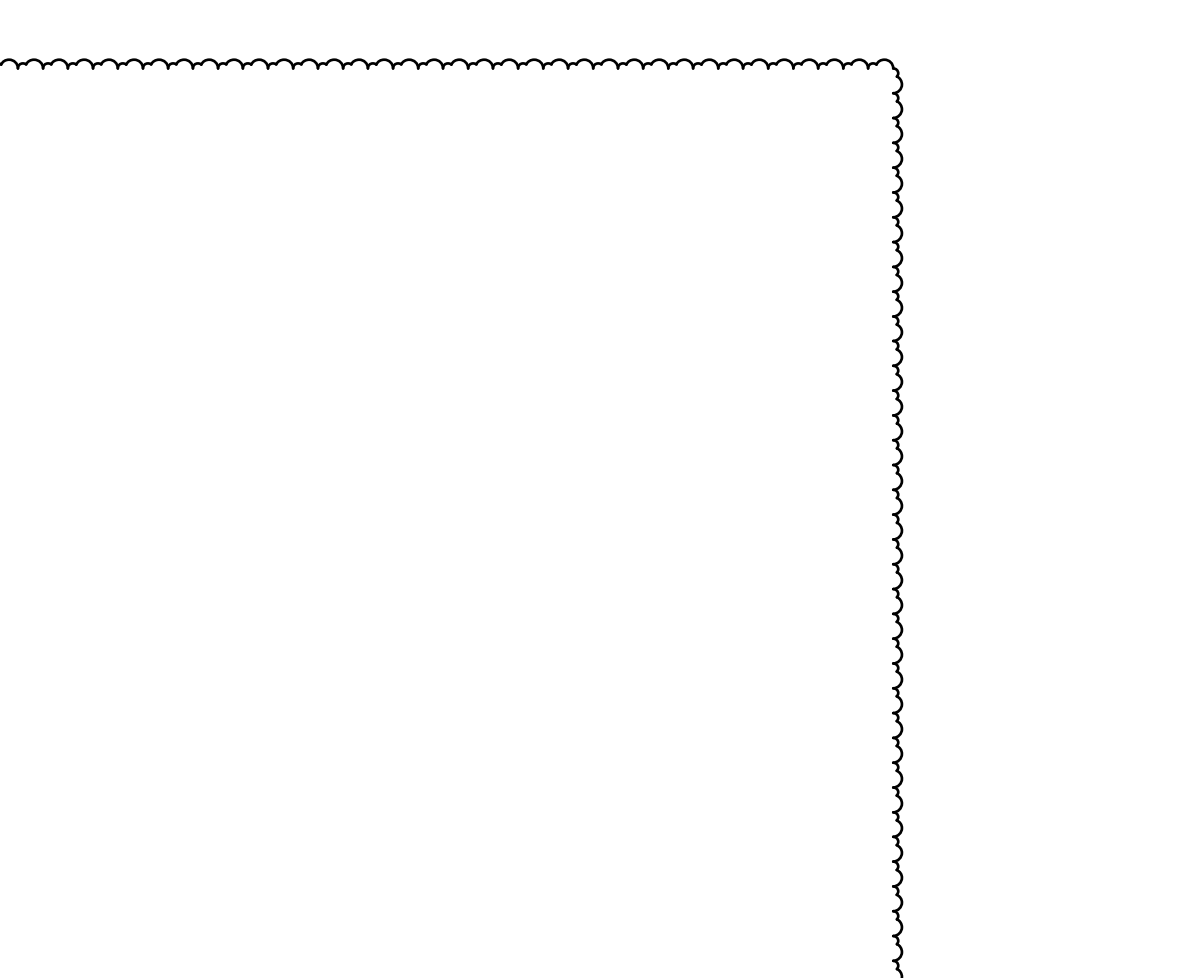
**14 SECTION**  
3/4" = 1'-0"



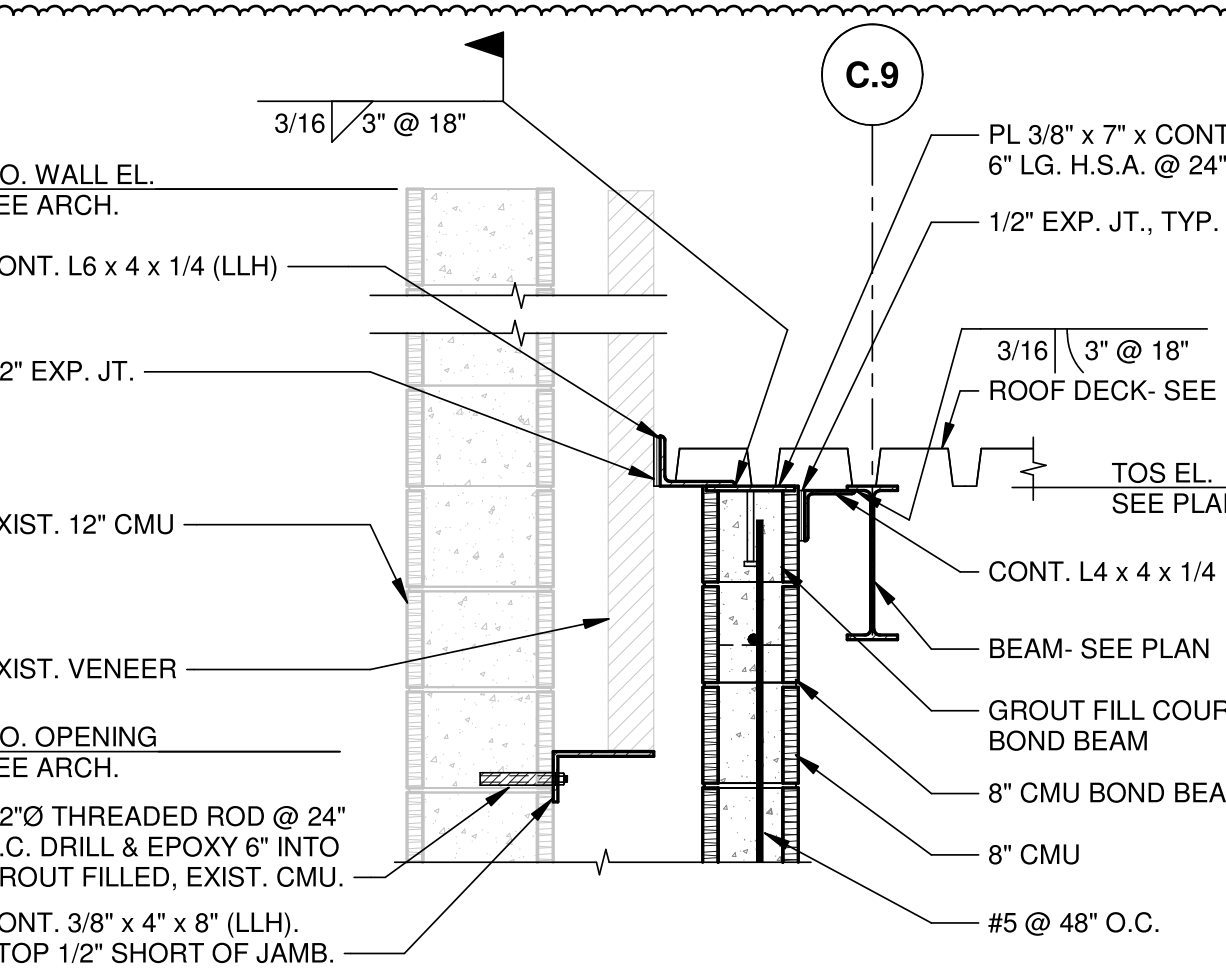
**15 SECTION**  
3/4" = 1'-0"



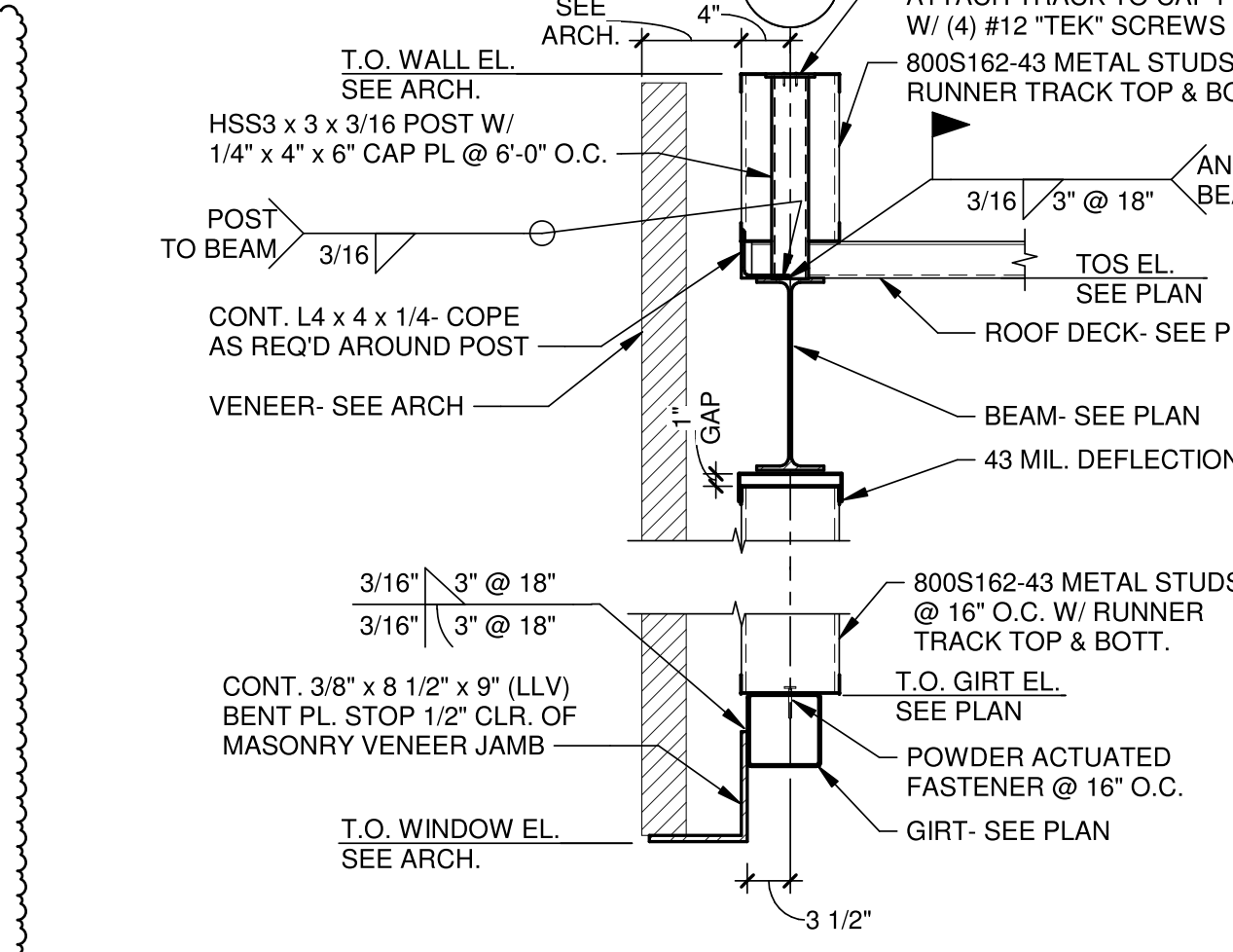
**16 SECTION**  
3/4" = 1'-0"



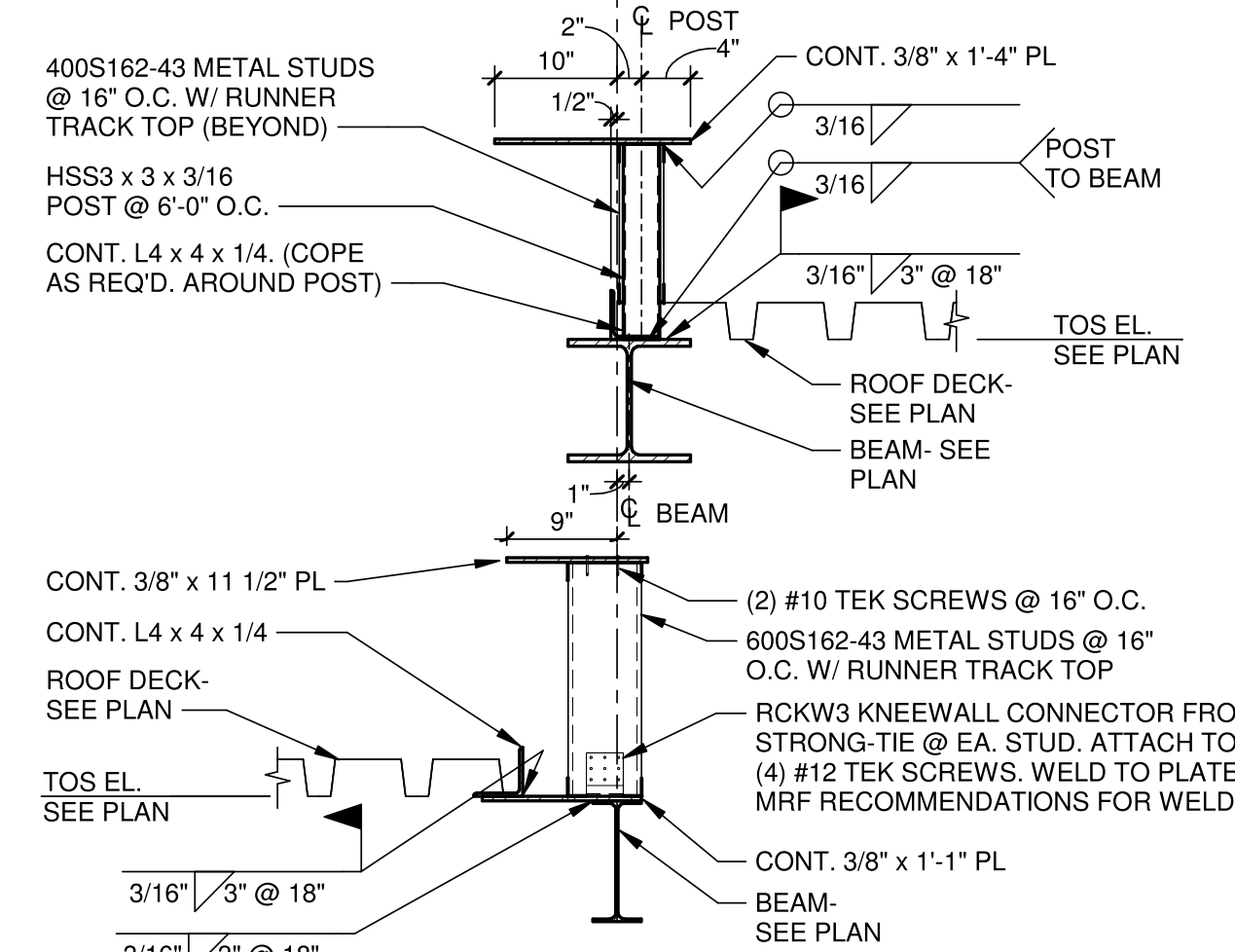
**17 SECTION**  
3/4" = 1'-0"



**18 SECTION**  
3/4" = 1'-0"



**19 SECTION**  
3/4" = 1'-0"



**20 SECTION**  
3/4" = 1'-0"

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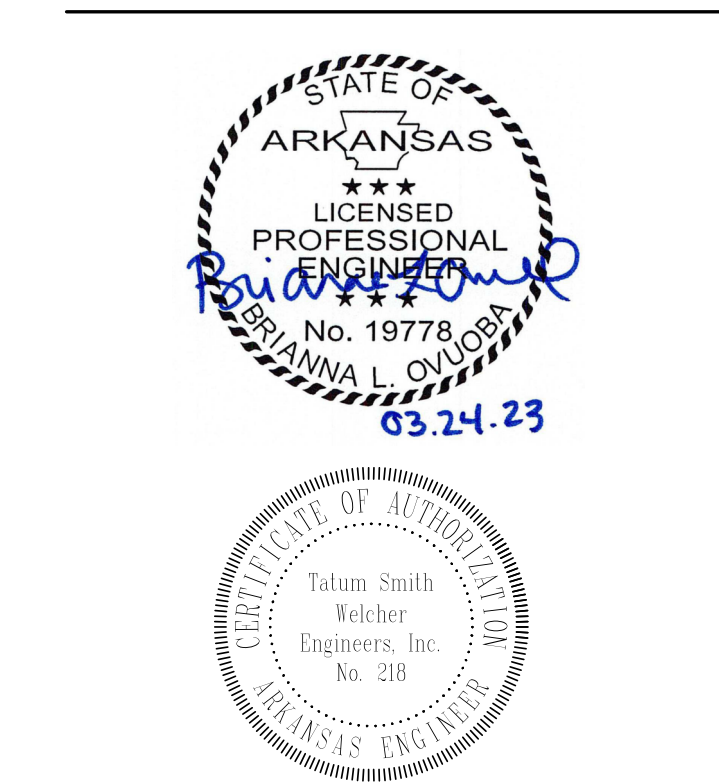
Landscape Architect  
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Structural Engineer  
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**Bentonville Public Library Expansion**  
 405 S Main Street  
 Bentonville, AR 72712

Project No: 2021027



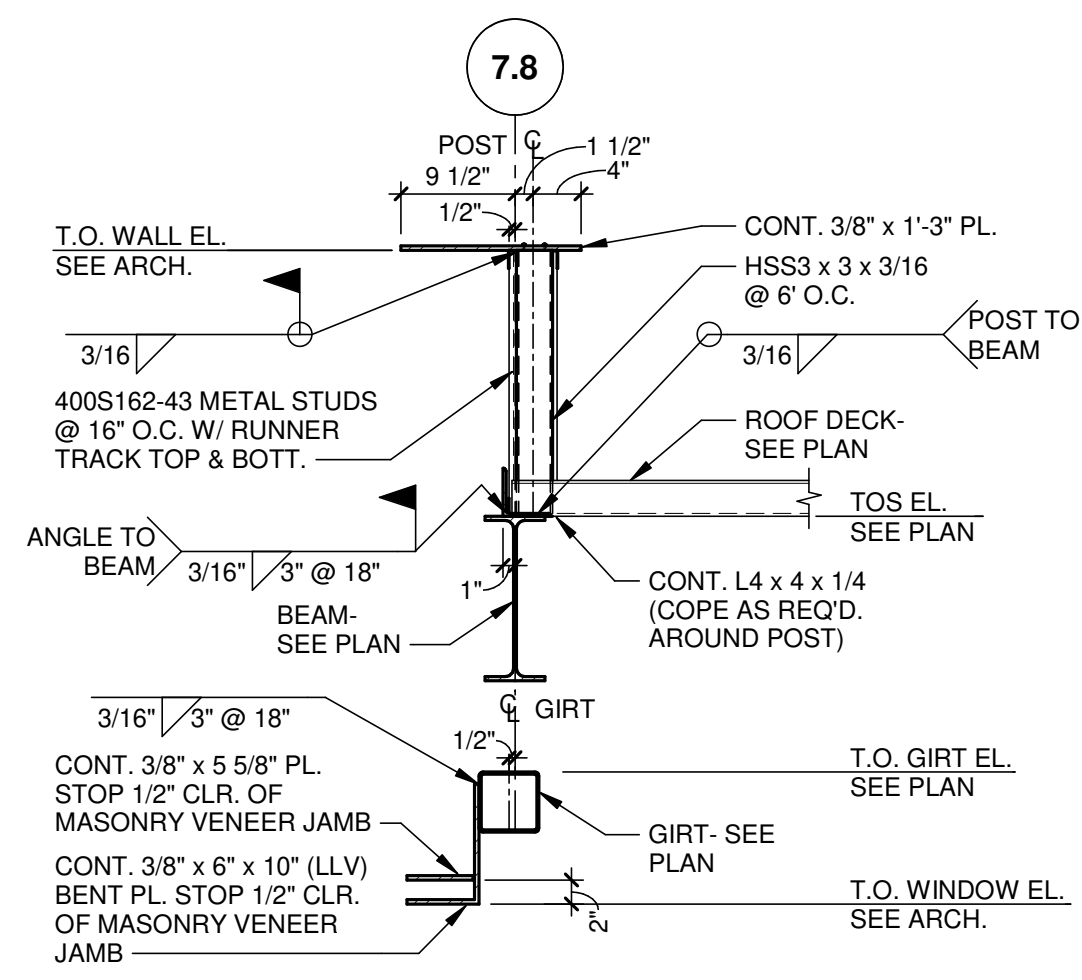
**BID SET**

**ISSUE / REVISION**

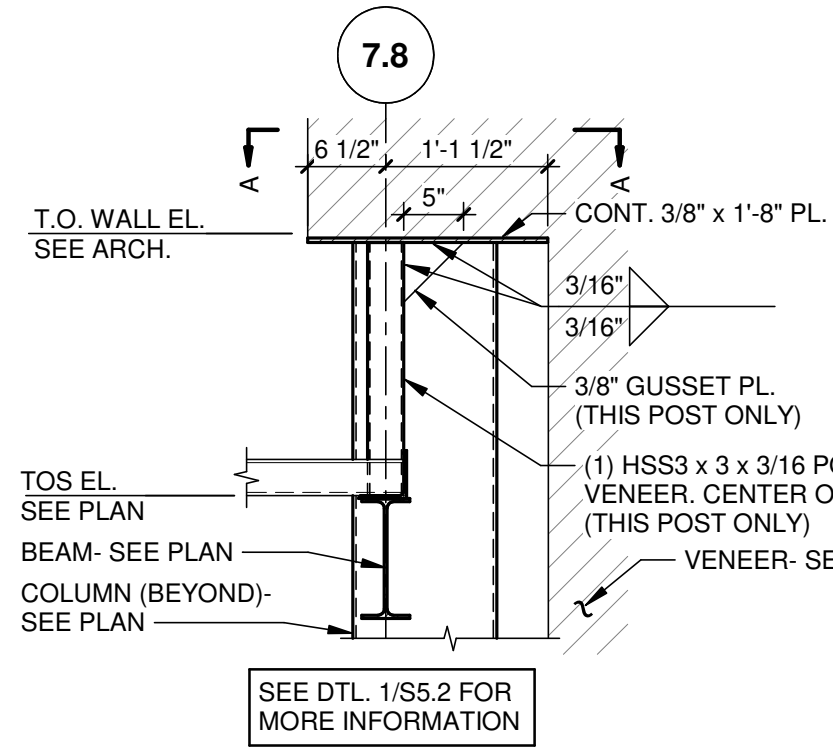
Mark Date	Description
12/19/2021	SCHEMATIC DESIGN PRICING
06/22/2022	DESIGN DEVELOPMENT PRICING
10/24/2022	60% CD PRICING
12/21/2022	PERMIT SET
01/06/2023	BID SET
2	03/24/2023 ASI-01

FRAMING DETAILS

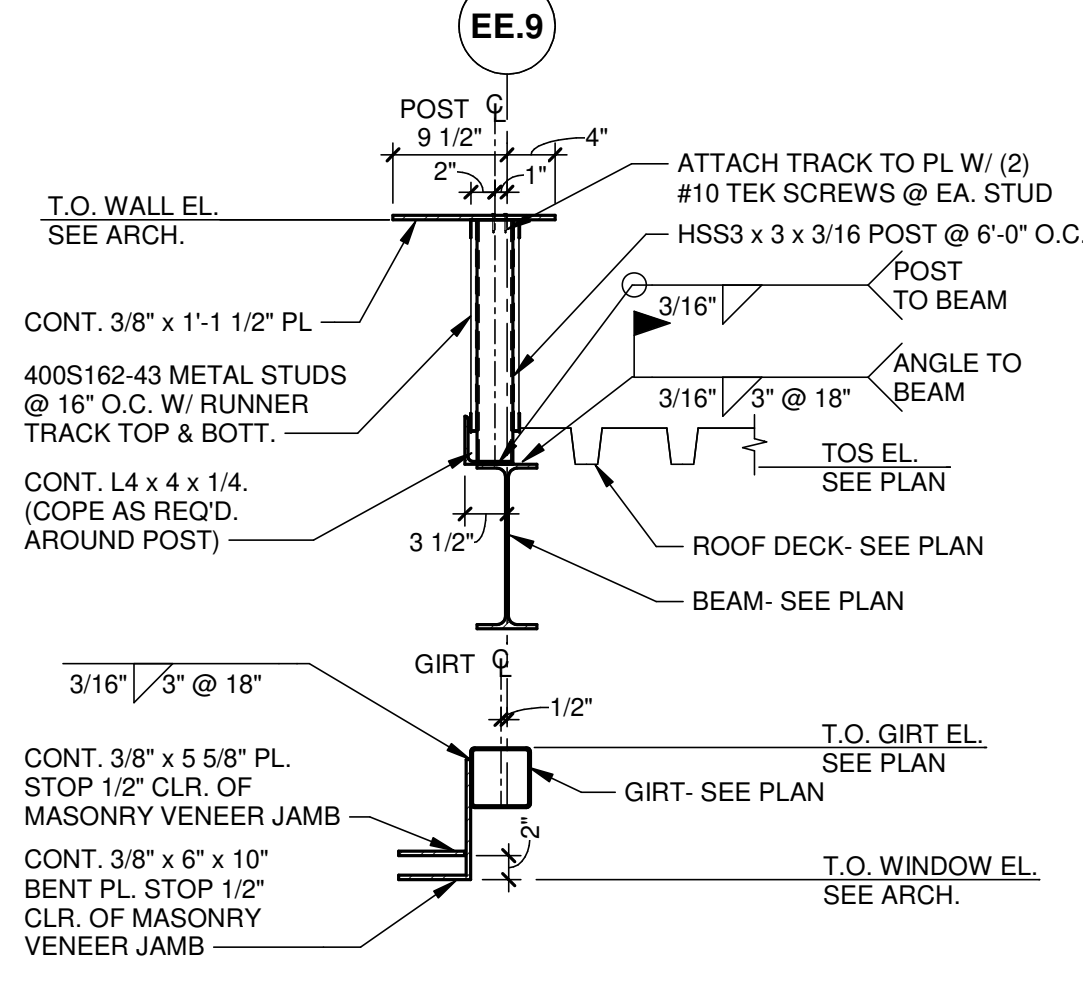
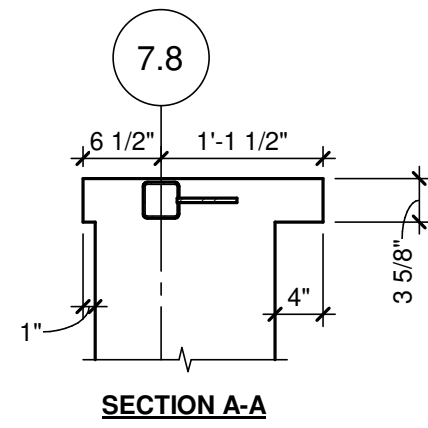
# S5.1



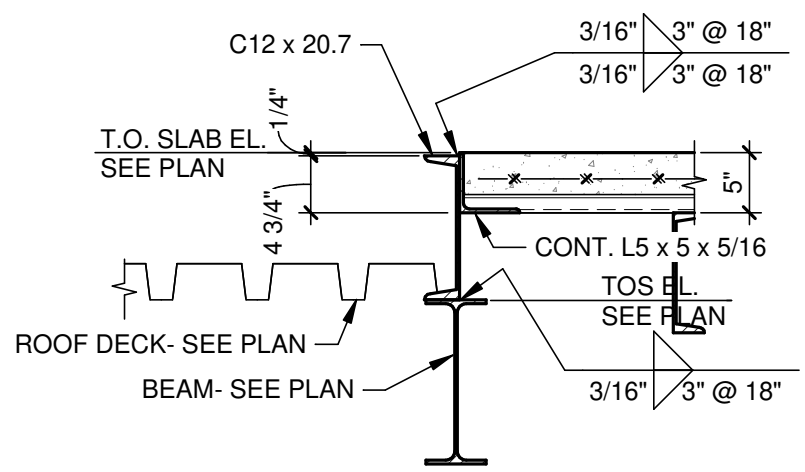
**1 SECTION**  
3/4" = 1'-0"



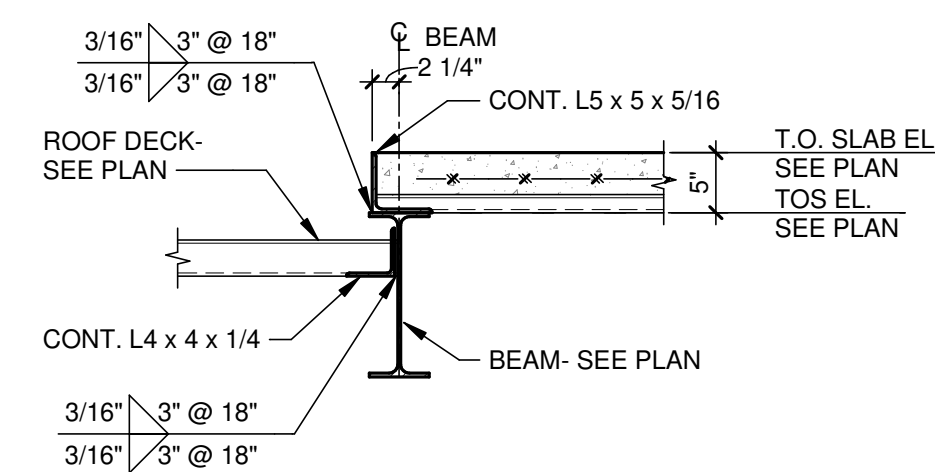
**2 SECTION**  
3/4" = 1'-0"



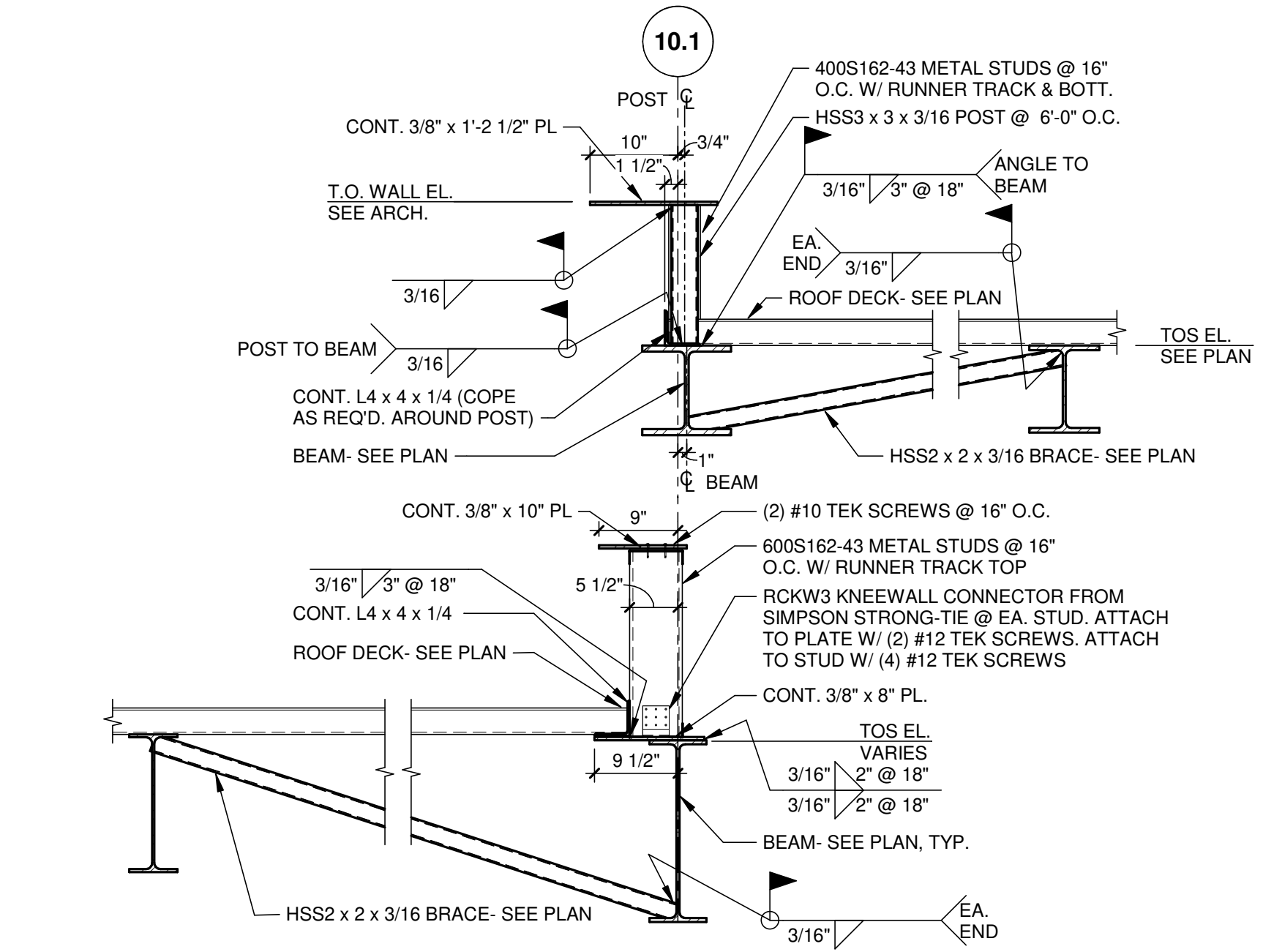
**3 SECTION**  
3/4" = 1'-0"



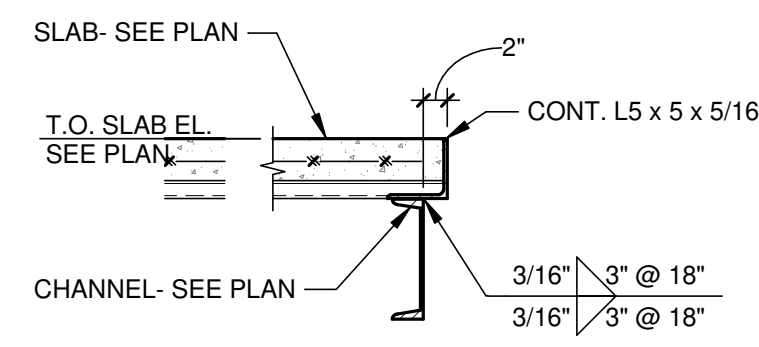
**4 SECTION**  
3/4" = 1'-0"



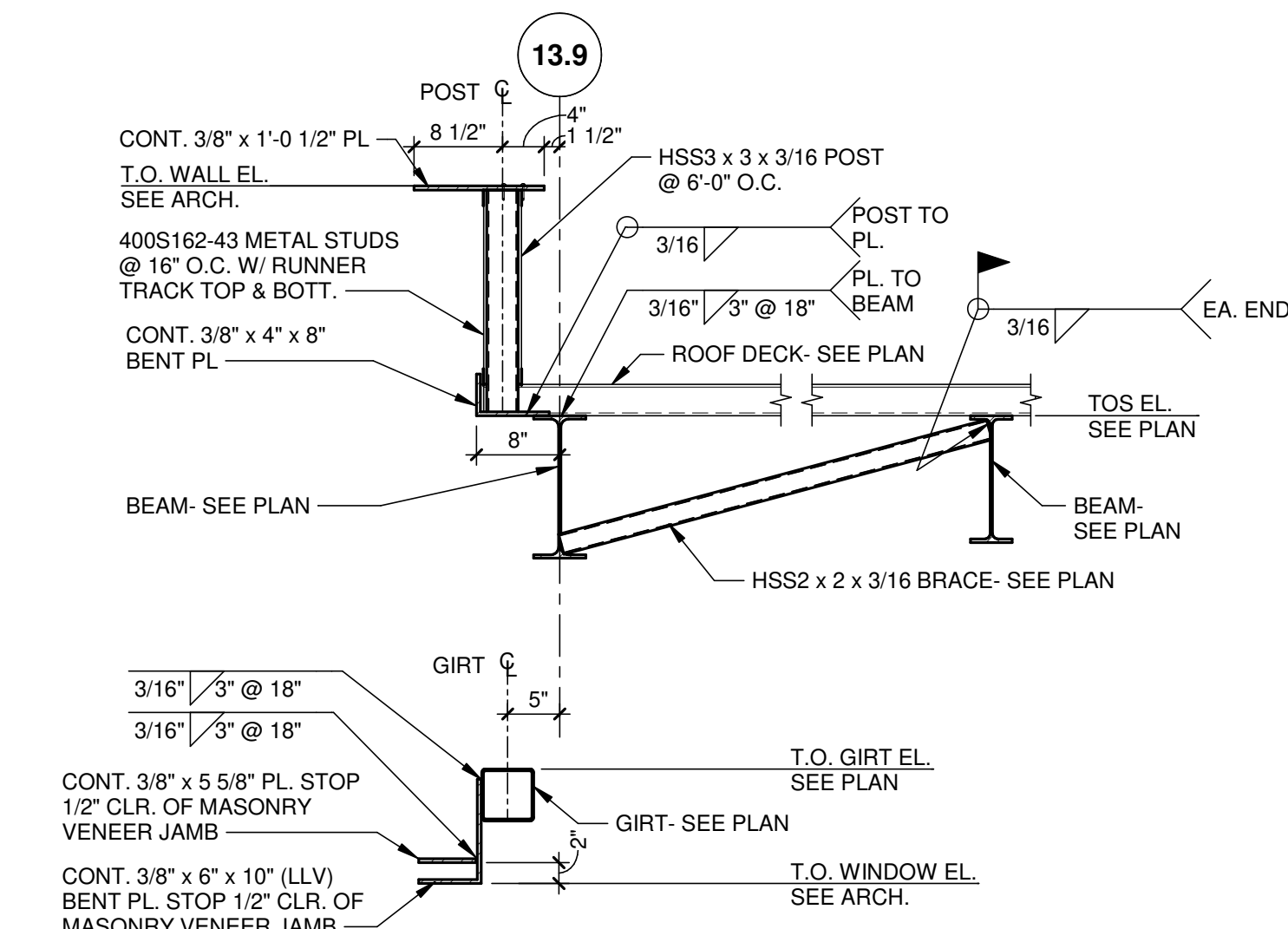
**5 SECTION**  
3/4" = 1'-0"



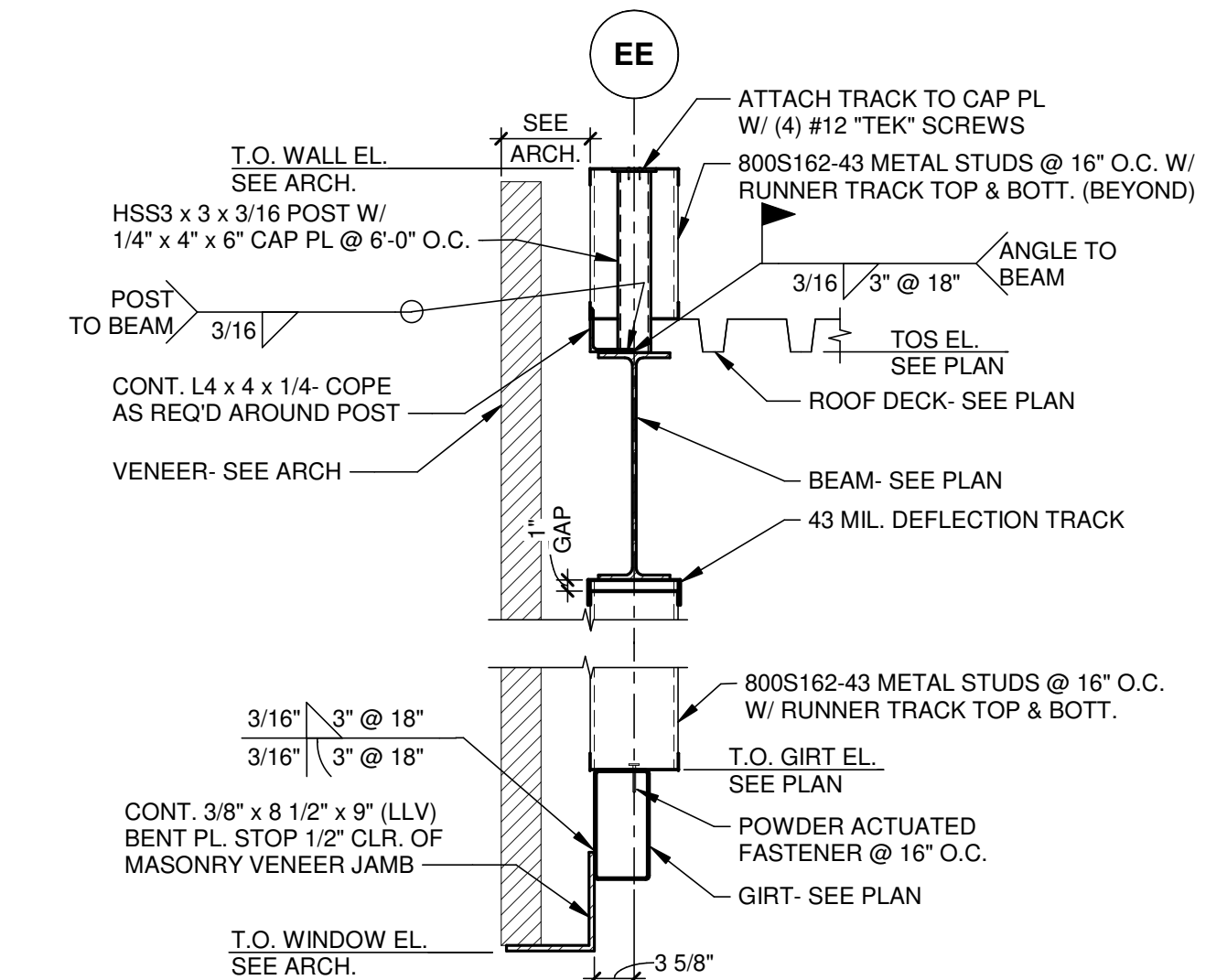
**6 SECTION**  
3/4" = 1'-0"



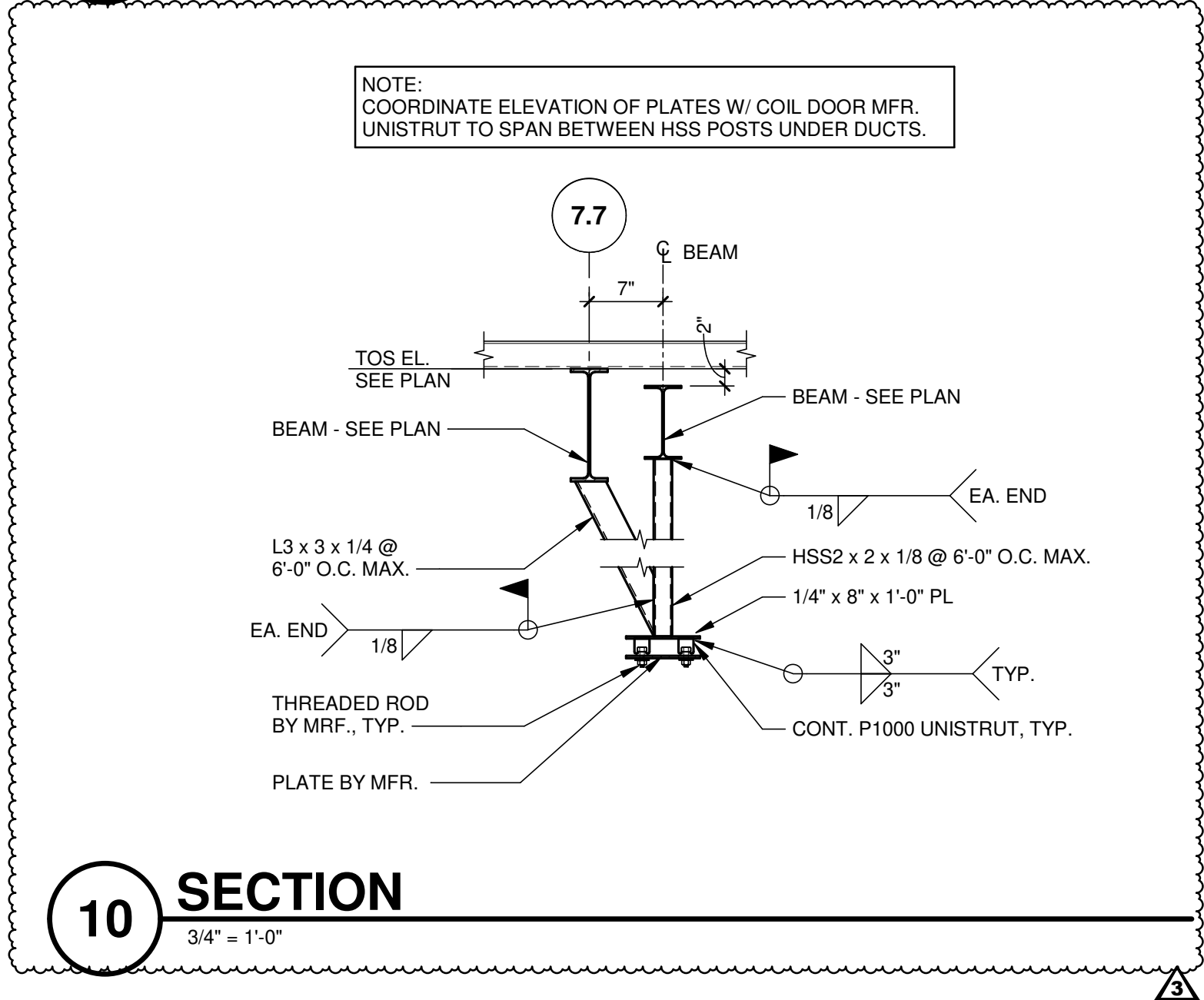
**7 SECTION**  
3/4" = 1'-0"



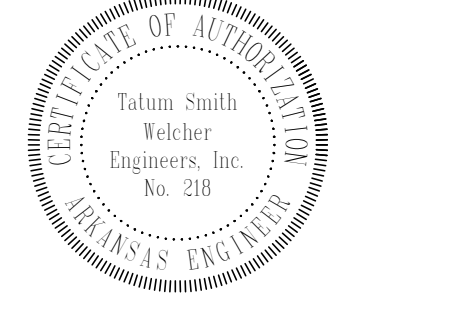
**8 SECTION**  
3/4" = 1'-0"



**9 SECTION**  
3/4" = 1'-0"



**10 SECTION**  
3/4" = 1'-0"



Mark	Date	Description
121	12/10/2021	SCHEMATIC DESIGN PRICING
0622	06/22/2022	DESIGN DEVELOPMENT PRICING
1024	10/24/2022	60% CD PRICING
1221	12/21/2022	PERMIT SET
0106	01/06/2023	BID SET
3	05/30/2023	ASH-03