

STRUCTURAL NOTES

GENERAL REQUIREMENTS

BUILDING CODE & REFERENCE STANDARDS: The "International Building Code" (IBC), 2015 Edition, as adopted and modified by the City of Kirkland, governs the design and construction of this project. Reference to a specific section in the Code does not relieve the contractor from compliance with the entire materials reference standards noted below. The latest edition of the materials reference standards shall be used.

SCOPE OF STRUCTURAL WORK: Structural engineering for a new office building located at 1029 Market Street in Kirkland, Washington. The scope of the work includes three levels of concrete post-tensioned slabs.

DEFINITIONS: The following definitions apply to these general notes:

- "Structural Engineer of Record" (EOR) - The structural Engineer who is legally responsible for stamping & signing the structural documents for the project. The EOR is responsible for the design of the Primary Structural System.
- "Specialty Structural Engineer" (SSE) - A licensed professional Engineer, not the EOR, who performs specialty structural engineering services necessary to complete the structure, who has experience and training in the specific specialty. The General Contractor, subcontractor, or supplier who is responsible for the design, fabrication and installation of specialty-engineered elements shall retain the SSE. Submittals shall be stamped and signed by the SSE. Documents stamped and signed by the SSE shall be completed by or under the direct supervision of the SSE with a PE license issued by the State of Washington.
- "Deferred Submittals - DeferredSubmittal is engineering work to be designed by others or bidder designed

NOTE PRIORITIES: Notes on the individual drawings shall govern over these general notes.

SPECIFICATIONS: Refer to the contract specifications for information in addition to that contained in these notes and the structural drawings.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work.

ARCHITECTURAL DRAWINGS: Refer to the Architectural drawings for information including, but not limited to: dimensions, elevations, slopes, door and window openings, non-bearing walls, curtain walls, stairs, elevators, curbs, drains, depressions, railings, waterproofing, finishes and other nonstructural items.

STRUCTURAL RESPONSIBILITIES: The EOR is responsible for the strength and stability of the Primary Structure in its completed state.

CONTRACTOR RESPONSIBILITIES: The contractor is responsible for the means and methods of construction and all job related safety standards such as OSHA and WSIA. The contractor is responsible to maintain stability until the structure is completed. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

The contractor shall submit plans showing the location, weight and size anchorage of all hangers supporting all mechanical, electrical, plumbing or sprinkler loads in excess of 400 pounds. All roof-mounted equipment shall be included on these plans and shall show the weights, sizes, mounting/attachment details, and locations. Submit plans to the Engineer for review prior to installation.

DISCREPANCIES: In case of discrepancies between these general notes, the contract drawings and specifications, and/or reference standards, the Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Engineer before proceeding with the work. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site prior to fabrication and/or construction. Conflicts between the drawings and actual site conditions shall be brought to the attention of the Engineer before proceeding with the work. All underground utilities shall be determined by the Contractor prior to excavation or drilling.

ADJACENT UTILITIES: The contractor shall determine the locations of all adjacent underground utilities prior to excavation. Any utility information shown on the drawings and details is approximate and not necessarily complete.

DESIGN CRITERIA

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads or the capacity of the partially completed construction.

SNOW LOAD: The roof snow load is determined by using Chapter 7 of ASCE 7-10 in accordance with IBC Section 1608 and with the following factors:

Minimum wind design load 25 psf without drift
Ground Snow Load, Pg = 20 psf
Importance Factor, Iw = 1.0
Flat Roof Snow Load, Pf = 19 psf
Thermal Factor, Ct = 1.0

WIND DESIGN: Wind load is determined using Chapter 27 of ASCE 7-10 in accordance with IBC Section 1609 with the following factors:

Basic Wind Speed (3-Second Gust) V = 110 MPH
Wind Importance Factor Iw = 1.0 Risk Category = II
Exposure Category = B CGI = C18.8
Components & Cladding Pressure = 12 PSF (ASD) Components & Cladding End Zone Pressure = 20 PSF (ASD)

Analysis Procedure - All Heights per ASCE 7, Table 27.2-1

For Components & Cladding as Deferred Submittal, the design wind pressures for determining forces on components and cladding shall be 30 psf unless otherwise determined using Chapter 20 of ASCE 7-10 in accordance with IBC Section 1609 by the Washington State Registered Professional Engineer who is responsible for the design of such elements.

SEISMIC DESIGN: Earthquake design is determined using Chapter 12 ASCE 7-10 in accordance with IBC Chapter 16 with the following factors:

Importance Factor Ie = 1.0
Risk Category - II
Ss = 1.25 g
S1 = 0.485 g
Site Class = C

Sds = 0.839 g
Sdi = 0.423 g
Seismic Design Category = D

- Basic Seismic Force Resisting System: A-1 (Bearing Wall Systems) Special reinforced concrete shearwalls
- Analysis Procedure: Modal response spectrum analysis, per ASCE 7-10, Section 12.9
- R-5
- Cs=0.168

DESIGN BASE SHEAR: Design Base Shear (Seismic Governed), V = 680K (E/W), 680K (N/S)

DEFLECTIONS:

Floor Total Load Deflection Limit: L/360
Floor Live load Deflection Limit: L/480
Roof Total Load Deflection Limit: L/240
Roof Live load Deflection Limit: L/360

LIVE LOADS:

Roof (Live) 20 PSF
Roof (Snow) 25 PSF
Balconies and Decks 1.5X occupancy served
Office Building, Lobby & First Floor Corridors 50 PSF + 15 PSF PARTITION
Office Building, Upper Floor Corridors 100 PSF
Stairs & Landings 80 PSF
Exit Corridors 100 PSF OR 300# (4'x4' SQR.)
Garages 100 PSF
Vehicle Barrier 40 PSF OR 3,000# (4.5'x4.5' SQR.)
Mechanical Rooms 75 PSF
Balcony Railings & Guardrails (Commercial) 50 PLF OR 200# (TOP RAIL)
Balcony Railings & Guardrails (Components) 50 PSF (12'x12' SQR.) (1)

(1) Component reactions need not be combined with top rail loadings.

DEFERRED SUBMITTAL LOADS: All pre-engineered, pre-fabricated, pre-manufactured, or other products designed by others shall be designed for the tributary dead and live loads plus wind, earthquake, component, and cladding loads when applicable. Design shall conform to the project drawings and specifications, reference standards, and governing code.

Curtain/Precast Wall Load @ Deck Edge 250 PLF

SUBMITTALS

SUBMITTALS: Shop Drawings shall be submitted to the Architect/Engineer prior to any fabrication or construction for all structural items as noted below. The contractor shall review and place a shop drawings stamp on the submittal before forwarding to the Engineer. Submittals shall be made in time to provide a minimum of one week for review by the Engineer. Additional submittals required for this project are specified in the specific sections below. Reference the individual material section for specific information to be included in the submittal.

If the shop drawings differ from or add to the design of the Structural drawings, they shall bear the seal and signature of the Washington State Registered Professional Engineer who is responsible for the design.

Concrete reinforcing
Steel Rails
Precast concrete items
Embedded steel items
Structural steel
Cold-formed steel
Re-shoring for P/T Slabs
PT cables
Elevator Rails and Bumper Supports

ALTERNATES: Product or manufacturer components specified in these drawings are used as the basis of design for this project. Alternates for specified items may be submitted to the Engineer for review. However, contractor shall submit a current ICC-ES report identifying that an alternative component has same or greater load capacity than the specified item.

SHOP DRAWING REVIEW: Review by the Architect/Engineer is for general compliance with the design concept and the contract documents. Dimensions and tolerances are not reviewed by the EOR, and therefore must be verified by the General Contractor. Markings or comments shall not be construed as relating the contractor from compliance with the project plans and specifications. Any departures therefrom, the contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions for selecting fabrication processes, for techniques of assembly, and for performing work in a secure manner. When shop drawings (component design drawings) differ from or add to the requirements of the Structural drawings they shall be designed and stamped by the responsible SSE. Allow one week for Engineer review time.

DEFERRED SUBMITTALS: Per IBC Section 107.3.4.1, drawings, calculations, and product data for the design and fabrication of items that are designed by others shall bear the seal and signature of the Washington State Registered Professional Engineer (SSE) who is responsible for the design and shall be submitted to the Architect/Engineer and the building department for review prior to fabrication. Allow one week for Engineer review time.

The SSE shall submit stamped and signed calculations and shop drawings to the EOR for review. Review of the SSE's shop drawings is for general compliance with design criteria and compatibility with the design of the primary structure and does not relieve the SSE of responsibility for that design. All necessary bracing, ties, anchorage, and proprietary products shall be furnished and installed per manufacturer's instructions or the SSE's design drawings and calculations. Submitted drawings shall indicate all reaction forces imparted to the primary structure. The design of the connection to the primary structure is the responsibility of the supplier and SSE. Submitted calculations are for cursory review only and will generally not be returned.

Deferred submittals include but are not limited to the following:

Curtaill Wall Systems
Precast Concrete Panels
Re-shoring for PT Slabs
Elevator Rails and Bumper Supports
Steel Stairs
Handrails & Guardrails
Site Shoring
Temporary Shoring Systems
Underpinning Vaults
Mechanical Equipment Anchorage (seismic)
Aluminum Handrails
MEP/Spinkles Anchorage
Free Standing Signage

NON-STRUCTURAL COMPONENTS: Design, detailing and anchorage of all nonstructural components shall be in accordance with ASCE 7-10, Chapter 13 and the project specifications. Nonstructural components designed by others shall not induce torsional loading into supporting steel structural members without additional bracing of those members to eliminate torsional forces. Torsional bracing shall be designed by the nonstructural component designer and approved by the Engineer. Anchorage to the primary structure is per the bidder design contractor or supplier.

TESTS & INSPECTIONS

INSPECTIONS: All construction is subject to inspection by the Building Official in accordance with IBC Sec 110. The contractor shall coordinate all required inspections with the Building Official. Submit copies of all inspection reports to the Architect/Engineer for review. The Building Official may accept inspection of and reports by approved inspection agencies in lieu of Building Officials inspections. The contractor shall obtain approval of Building Official to use the third-party inspection agency and contractor shall alert the Architect/Engineer as such.

SPECIAL INSPECTIONS: In addition to the inspections required by IBC Sec 110, a Special Inspector shall be hired by the Owner as an independent third-party inspector to perform the special inspections per IBC Ch. 17. Special inspections shall be performed by an approved testing agency as outlined in the Special Inspection Schedule, the contract documents, and/or the project specification. Special Inspectors shall meet the requirements outlined in the specific materials sections of IBC Sec 1705. The contractor is responsible for scheduling the inspections, per the city/Building Official requirements.

Reference plans for the Special Inspection Schedule for this project containing all inspection, special inspection, and structural observation requirements. The registered design professional in responsible charge shall prepare a Statement of Special Inspections in accordance with Section 1704.3.1 for submittal in accordance with Sec 1704.3.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to the inspection requirements of the same material or construction type used for this project.

STRUCTURAL OBSERVATIONS: When required by the provisions of Section 1704.6.1 or 1704.6.2, the Owner or the Owner's authorized agent shall employ the EOR to perform structural observations. Structural observations do not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other sections in the code.

The following structural observations are required to be completed by the EOR during construction. The EOR is to be notified when elements listed below are substantially complete and ready for observation. Contact the EOR a minimum of (2) business days prior to covering the work.

- Substantial completion of Concrete Foundation, Shear Walls & Columns prior to first pour.
- Each Post-tensioned Elevated Slab prior to pour. All embeds to be in place prior to the engineer's site walk.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in "Geotechnical Engineering Report 1029 Market Street Rockwall" report number 170888KEA by Associated Earth Sciences, Inc., dated February 28, 2017, were used for design.

GEOTECHNICAL INSPECTION: The Geotechnical Engineer or third-party inspector shall inspect all prepared soil bearing surfaces prior to placement of concrete and reinforcing steel and provide a letter to the Owner stating that soils are adequate to support the "Allowable Foundation Pressure" shown below. Soil compaction shall be supervised by an approved testing agency or Geotechnical Engineer. Site soil conditions, fill placement and load-bearing requirements shall be as required by Section 1705.6 and Table 1705.6. The Building Official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent area is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 - 1803.5.6 and Sections 1803.5.10 - 1803.5.11.

DESIGN SOIL VALUES:

Allowable Soil Bearing Pressure
5000 PSF DL + LL (for footing on undisturbed dense glacial sediments)

5000 PSF DL + LL + Seismic/wind

Retaining Walls

Passive Lateral Pressure 250 PSF/FT

Active Lateral Pressure (unrestrained) 35 PSF/FT

Active Lateral Pressure (restrained) 50 PSF/FT

Uniform Seismic (unrestrained) 5ft

Uniform Seismic (restrained) 10ft

Coefficient of Sliding Friction 0.30

The total length of cracking can be estimated at 0.009 feet of cracks per sq ft of slab area. The Owner should reserve funds for this one time maintenance program, which is to take place two years after the completion of construction.

Even though cracking is nominal and most often not structurally significant, when cracking occurs during construction the contractor shall contact the Engineer for review. The contractor should budget 0.004 ft of epoxy injected crack repair per sq ft of the slab.

FOUNDATION STEM WALLS: Unless otherwise noted on the drawings, the maximum unbalanced soil condition for all foundation stem walls (difference in elevation between interior and exterior soil grades) shall be 2'-6". Maintain a minimum 8" separation between finish grade and untreated wood framing.

BACKFILLING: Backfill behind retaining and foundation walls shall be of free-draining material placed in maximum loose lifts of 12" or as directed by the Geotechnical Report. Backfill behind walls shall not be placed before the wall is properly supported by the floor slab or temporary bracing. Backfill shall be compacted using hand-operated equipment only. The contractor shall refrain from operating heavy equipment behind retaining and foundation walls within a distance equal to or greater than the height of the wall, unless otherwise approved by the Engineer. All topsoil organic and loose surface soil shall be removed from beneath fill supporting concrete slab or paving.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conforms to the latest editions of the following:

- (1) ACI 318 "Building Code Requirements for Structural Concrete and Commentary".
- (2) IBC Chapter 19, Concrete.

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conforms to ACI 318 Chapter 19 "Concrete: Design and Durability Requirements."

MATERIALS: Conform to ACI 318 Chapters 19 & 20.

SUBMITTALS: Provide all submittals required by ACI 301 Sec 4.1.2. Submit mix designs for each mix in the table below.

TABLE OF MIX DESIGN REQUIREMENTS

Member	Strength (psi)	Test Age (days)	Maximum Aggregate	Exposure Classification	W/C Ratio	Minimum Air Content
Foundations	4500	28	1"	F1, C0	0.45 (0.55 max)	4.5%
Exterior Slabs-on-Grade	5000	28	1"	F3, C2	0.40 max	6.0%
Interior Slabs-on-Grade	3000	28	1"	F0, C0	0.45	-
Interior Elev. Beams & Slabs	5000	28	1"	F0	0.45	-
Exposed Elev. Beams & Slabs	5000	28	1"	F3, C2	0.40 max	6.0%
Parking Slabs						

STRUCTURAL NOTES (CONTINUED)

CORROSION INHIBITING COATING: Conform to PTI Specification Sec. 5 "Corrosion Inhibiting Coating."

OTHER MATERIALS: Conform to notes for CAST IN-PLACE CONCRETE and CONCRETE REINFORCEMENT sections this sheet, except all admixtures shall be chloride free unless approved by the EOR.

PRE-CONSTRUCTION MEETING: The contractor shall arrange a pre-construction meeting. The contractor, EOR, subcontractors involved with the post-tensioning work, the Building Official (if required) and representatives of the special inspection agency shall attend this meeting.

INSTALLATION REQUIREMENTS: Conform to PTI Specification Sec 6 "Installation Requirements."

- (1) DRAPE: Place tendons parabolic between supports and conform to controlling points shown on the drawings unless noted. Dimensions shown on drawings locate the center of gravity (e.g.) of the tendon from the bottom of the slab or beam. Low points are at mid-span unless noted otherwise.
- (2) SUPPORTS: Tendons shall be firmly supported at intervals not to exceed 4 ft. to prevent displacement during placing of concrete.
- (3) TENDON BUNDLES: Twisting or entwining of individual strands within the bundle will not be permitted.
- (4) TOLERANCES: Vertical deviations in tendon location shall not exceed:
 - (a) +/- 1/4" for member thickness less than 8"
 - (b) +/- 3/8" for member dimensions from 8" to 24"
 - (c) +/- 1/2" for member dimensions more than 24"

THE SHEATHING REPAIR: Conform to PTI Specification Sec 6.5 "Sheathing Inspection."

- (1) Restore tendon grease coating in damaged area.
- (2) Coat with grease outside of sheathing length of damaged area, plus 2" beyond each end of damage.
- (3) Place piece of longitudinally slit sheathing around greased tendon. Slit shall be on side of tendon opposite tear. Length of slit sheathing shall overlap greased area by 2" at each end.
- (4) Tape entire length of slit sheathing, spirally wrapping tape around sheathing to provide at least two layers of tape. Taping shall overlap slit sheathing by 2" at each end. Before taping, slit sheathing shall be dry and free of grease.

TENDON STRESSING: Conform to PTI Specification Sec 7 "Tendon Stressing."

SCHEDULE: Stressing shall be performed within 96 hours of concrete placement unless approved by the Engineer.

SEQUENCE: Stress temperature tendons first, followed by uniformly distributed tendons, additional slab tendons, and then beam or banded tendons.

SHORING: Shoring shall remain in place until tendons are stressed. Shoring at closure strips and pour strips shall remain in place until concrete in strip has attained design strength.

RESHORING: When reshoring is required, reference "DEFERRED SUBMITTAL" above in these notes.

CONCRETE STRENGTH: Compressive strength of field-cured specimens shall be not less than 3000 psi at time of stressing.

STRESSING JACKS: Conform to PTI Specification Sec 7.1 "General" and Sec 7.2 "Jack Calibration." Provide calibration certificates with each jack. Contractor shall keep certificates on file for duration of project.

ELONGATIONS: Conform to PTI Specification Sec 7.3 "Elongation Measurement." Measured elongations shall agree with calculated values within +/- 7%. Discrepancies exceeding 7% shall be resolved with the EOR prior to cutting and capping the tendons involved.

TENDON FORCES: Forces during and after stressing shall not exceed the following values:

- Force at Jacking 33.0 KIPS
- Force at Anchoring 28.9 KIPS
- Final Effective Force 26.8 KIPS

TENDON FINISHING: Conform to PTI Specification Sec 8 "Tendon Finishing." Finishing shall be completed within 3 days of acceptance of stressing records.

CUTTING APPROVAL: Excess strand shall not be cut without approval of the EOR. Fax the complete stressing reports to DEI as soon as possible after stressing has been completed. DEI will promptly review and send a memo approving cutting the tendons. Basic elongation tolerance is +/- 7% from calculated. Out of tolerance tendons will be approved by the EOR on a case by case basis.

CUTTING: Conform to PTI Specification Sec 8.1 "General." Tendons may be cut by means of oxyacetylene torch, abrasive wheel, or hydraulic shears. When using oxyacetylene cutting do not direct flame toward wedges.

COATING & CAPPING: Where "encapsulated system" is noted on the drawings, conform to PTI Specification Sec 8.2 "Aggressive Environments." Immediately after cutting the tendon, spray the exposed face of the anchor and wedges with Rustoleum or epoxy paint, being careful to avoid spraying the concrete faces of the stressing blockout. Install the grease-filled plastic caps as soon as possible.

STRESSING POCKETS: Conform to PTI Specification Sec 8.3 "Stressing Pockets."

- (1) Preparation: Clean the inside surfaces of the pocket to remove laitance and grease. Coat inside surfaces with a resin bonding agent after cleaning at the contractor's discretion.
- (2) Filling: Fill pockets with non-metallic non-shrink grout. Grout shall not contain chlorides or other chemicals deleterious to the prestressing steel.

EMBEDS AND FASTENERS: Embeds for support of all non-structural elements, mechanical and other equipment shall be cast into the slab. Drilled or powder-driven fasteners will not be permitted unless it can be shown that fasteners will not damage concrete or tendons. Contact EOR for approval prior to any drilling or driving of fasteners into the P-T slab. Marking of tendon locations on slab soffit will be required and will be the responsibility of the General Contractor.

CONCRETE CRACK REPAIR AND MAINTENANCE PROGRAM: Since concrete shrinks and continues to shrink for up to 2 years after construction, A crack repair and maintenance program is recommended to be implemented for those slabs exposed to water or chemicals. It is common for cracking due to shortening to occur. These cracks do not normally impair the structural integrity of the slab; however these slabs should have a one-time crack maintenance operation, which consists of:

- Inspection of slabs and supporting members two years after construction
- Determine cracks to be repaired
- Repairing cracks

The total length of cracking can be estimated at 0.009 ft of cracks per sqft of slab area. The Owner should reserve funds for this one time maintenance program, which is to take place two years after the completion of construction.

Even though cracking is nominal and most often not structurally significant, when cracking occurs during construction the contractor shall contact the EOR for review. The contractor should budget 0.004 ft of epoxy injected crack repair per sqft of the slab.

PRESTRESSED BARRIER CABLE: Reference the current "PTI Guide Specification for Seven-Wire Steel Strand Barrier Cable Applications." Barrier cable can be coated in plastic, epoxy or galvanized and shall be designed to meet the automobile restraint and the pedestrian protection requirements in the current IBC. Reference DEFERRED SUBMITTAL section for additional information required for the submittal.

STRUCTURAL STEEL

DESIGN STANDARDS: Structural steel for this project is designed in accordance with the latest edition of the AISC Steel Construction Manual

REFERENCE STANDARDS: Conform to:

- (1) AISI "Code of Standard Practice for Steel Buildings & Bridges."
- (2) RCSC "Specification for Structural Joints using ASTM A325 or A490 Bolts."
- (3) AWS D1.1 "Structural Welding Code - Steel."
- (4) AWS D1.3 "Structural Welding Code - Sheet Steel."
- (5) AWS D1.8 "Structural Welding Code - Seismic Supplement."
- (6) AISI 341 "Seismic Provisions for Structural Steel Buildings."
- (7) ASCE 3 "Standards for the Structural Design of Composite Slabs."

SUBMITTALS:

- (1) Submit shop drawings in accordance with AISC Specification Sec M1 "Shop and Erection Drawings."
- (2) Submit welder's certificates verifying qualification within past 12 months.
- (3) Submit manufacturer/supplier certifications for compliance with bolt/fastener specifications.
- (4) Submit mill test reports indicating physical and chemical properties for all structural steel required by the applicable ASTM material specification.

MATERIALS:

Structural Wf Shapes	ASTM A992, Fy = 50 ksi
Other Structural Shapes	ASTM A36, Fy = 36 ksi
Bars & Plates	ASTM A36, Fy = 36 ksi
Steel Pipe	ASTM A53, Grade B, Fy = 35 ksi
HSS Structural Tubing	ASTM A500, Grade B, Fy = 46 ksi
High-Strength Bolts	ASTM A325 or ASTM F1832, Type 1, Plain
Nuts	ASTM A563 or ASTM A194, Grade 2H
Washers (flat or beveled)	ASTM F438
Anchor Rods (hooked, headed, threaded/nutted)	ASTM F1154, Grade 36 (embedable)
Threaded Rods	ASTM A36, Fy = 36 ksi
Stainless Steel Threaded Rods	ASTM A304, Fy = 32 ksi
Welded Headed Studs (WHS)	ASTM A108
Headed Concrete Anchors (HCA)	ASTM A108
Welding Electrodes	E70XX, 70 ksi, low hydrogen, typical
Expansion Anchors	Hilti EVO Strong-Tie
Adhesive Anchors	Hilti HY-150 Max or Simpson SET-XP
Concrete Screws	Simpson TITEN HD

WELDING: Conform to AWS D1.1 & D1.3. Welders shall be certified in accordance with AWS and WABO requirements. Use E70 electrodes of type required for materials to be welded.

HIGH-STRENGTH BOLTING: High-strength bolts shall be installed per Joint Typ ST PT, SC - "slang tight" Pre-Tensioned, Slip Critical per RCSC Specification Sec 4. ASTM A325 bolts shall conform to the RCSC Specification Sec 2 designed with ASTM A325-N or A325-SC bolts - threads included in the shear plane "slip-critical". All bolt holes shall be standard size per code. Slotted or over-size holes must be approved by the EOR.

FABRICATION/ERCTION: Conform to AISC Specification Sec M2 "Fabrication", AISC Code Sec 6 "Fabrication and Delivery" and AISC Code Sec 8 "Quality Control." The fabricator and erector shall maintain a quality control program to the extent deemed necessary so that all of the work is performed in accordance with this Code, the AISC Specification, contract documents and project specifications. The fabricator has the option to use the AISC Quality Certification Program in establishing and administering the quality control program. When the Owner requires more extensive quality control or independent inspection by qualified personnel, or requires the fabricator to be certified by the AISC Quality Certifications Program, this shall be clearly noted on the contract documents including the scope of the inspection.

SHOP PAINTING: Conform to AISC 360, AISC Specification Sec M3, and AISC Code Sec 6.5. Do not paint steel to be embedded in concrete, fireproofed, or concealed by the interior building finish. Do not paint surfaces to be field welded or where slip-critical bolts are specified. All other interior steel shall be painted with one coat of grey shop primer. All exposed exterior steel shall be painted with an exterior multi-coat system as per the Architect or project specifications. Field touch-up painting shall be with primer for exposed interior surfaces and as per the Architect or project specifications for exposed exterior surfaces.

GALVANIZING: All exposed steel outside the building envelope shall be hot-dipped galvanized. Apply field touch-ups per project specifications.

ERCTION: Conform to AISC Specification Sec M4 "Erection" and AISC Code Sec 7 "Erection." Steel work shall be carried up true and plumb within the limits defined in AISC Code Sec 7.11.

BRACING: The contractor shall provide temporary bracing by AISC Specification Sec M4.2 "Bracing" and AISC Code Sec 7.10 "Temporary Support of Structural Steel Frames."

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL: Steel identified by the Architect on the architectural drawings as "Architecturally Exposed Structural Steel (AESS)" shall conform to AISC Sec 10.

COLD-FORMED STEEL FRAMING

REFERENCE STANDARDS: Conform to:

- (1) AISI "Specification for the Design of Cold-Formed Steel Structural Members."
- (2) IBC Section 2210 and 2211.
- (3) AWS D1.3 Structural Welding Code - Sheet Steel."

SUBMITTALS: Submit structural calculations and shop drawings stamped by the SSE. Reference DEFERRED SUBMITTALS above for additional information. Shop drawings shall indicate member sizes, spacing, and materials; shop and field assembly details and connections; type and location of bolts, welds and other fasteners; design live and wind loads; bracing or diaphragm design to resist lateral loads. Submit product data and proof of ICC approval for framing members and fasteners.

DEFERRED SUBMITTALS: Submit product data and proof of ICBO approval for framing members and fasteners that have been designed by others. Submit calculations prepared by the SSE in the state of Washington for all members and connections designed by others along with shop drawings. All necessary bridging, blocking, blocking panels and web stiffeners shall be detailed and furnished by the supplier. Temporary and permanent bridging shall be installed in conformance with the manufacturer's specifications. Deflection limits shall be as noted under DESIGN LOADS section. Products included are:

Prefabricated roof trusses: Shop drawings shall provide for shapes, bearing points, intersections, hips, and valleys shown on the drawings. The manufacturer shall provide specific hip, valley and intersection areas (step down trusses, jack trusses and girder trusses) unless specifically indicated on the plans. Provide all truss-to-truss and truss-to-support connection details and required connection materials. Specify temporary and permanent bracing and connections on the shop drawings. Provide all truss reactions on shop drawings.

MATERIALS:

Studs and Track	ASTM A563 Grade D or ASTM A1011 Grade 50, Min FY=50 KSI
16 gauge and heavier	ASTM A563 Grade A or ASTM A1011 Grade 33, Min FY=33 KSI
18 gauge and lighter	Crabber Wafer Self Drilling, #8x1/2"
Sheet Metal Screws	Hilti ESD 16 PBT
Track to Steel	Hilti Kwik-Bolt III Expansion Anchors
Track to Concrete	E30XX electrodes - conform to AWS D1.3
Weld Materials	Studs and Track shall be galvanized in accordance with ASTM A525, G60
Galvanizing	As recommended by the manufacturer
Fasteners not shown	

SIZE AND PROFILE: Cold-formed steel framing members shall be as specified in the Steel Stud Manufacturer's Association ICC ESR-3064P and of the size and profile as shown on the drawings. Alternate members' equivalent in shape, size, stiffness, and strength by manufacturers not current members of the Steel Stud Manufacturer's Association shall be subject to review and approval by the EOR.

EXTERIOR WALL STUDS DESIGN CRITERIA: The magnitude of the lateral force shall be calculated per Chapter 16 of the IBC. Reference DESIGN CRITERIA table on this sheet for loading criteria. Lateral load deflection criteria shall be L/300 for masonry or precast concrete veneers, L/300 for EIFS-type systems and L/300 for flexible finishes such as metal panels or siding. The studs shall be attached to the new structure so as to not interfere with other trades of the project. Steel plate embeds may need to be designed into the post-tensioned or cast-in-place slab. The quantity and placement of embeds will be the responsibility of the metal stud supplier.

INTERIOR WALL STUDS DESIGN CRITERIA: The lateral force and deflection limits on interior partition walls shall be per Chapter 16 of the IBC. Reference DESIGN CRITERIA on this sheet for loading criteria. The lateral load deflection criteria shall be 1/240 for plaster and drywall finishes. The studs shall be attached to the new structure so as to not interfere with other trades of the project. Steel plate embeds may need to be designed into the new structure so as to not interfere with other trades of the project. Steel plate embeds may need to be designed into the post-tensioned or cast-in-place slab. The quantity and placement of embeds will be the responsibility of the metal stud supplier.

BUNDLED STUDS/JOISTS: Stud or joist groups of three or more studs shall be shop welded together with 1/8" fillet welds x 2' long, both sides, at 48OC. Bundled joists that are framed in a box beam header style with a top and bottom track do not require welding. Box beam framing shall have #8 screws at 24OC in each of the four track corners.

CONNECTORS: Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, center the connector between the two members and place one half of the screws or bolts in each member. UNQ all screws all be #8x 1.25 Hex Washer Head

DEFORMATION: The design of stud walls shall consider the effect of differential floor vertical deflections under live loads and shrinkage of post-tensioned concrete slabs.

ERCTION: Erect framing in accordance with manufacturer's instructions and shop drawings.

ERCTION: Erect framing in accordance with manufacturer's instructions and shop drawings.

(1) Studs shall be seated into the top and bottom tracks with less than 1/16" gap between the end of the stud and the web of the track.

(2) Joists and end bearing stiffeners shall be located directly over axial bearing studs. The use of track as a load distribution member is not permitted.

(3) All axially loaded members shall be aligned vertically to allow for the full transfer of the loads down to the foundation.

FIELD CUTS AND NOTCHES: Field cuts or notches of any kind are not permitted in axial load bearing cold-formed steel members, or any member in the sheathing or drag struts. If a field cut is required, contractor shall contact the EOR prior to cutting. The EOR will provide direction to the contractor.

MEMBER CONDITIONS: All structural cold-formed framing members must maintain a good condition. Damaged members, members with cracking in the steel at the bend radius locations, and members with significant red rusting or scaling of the protective coating are unacceptable and must be replaced, unless approved by EOR. Handling and lifting of prefabricated panels shall not cause permanent distortion to any member or collateral member. Members not meeting tolerances listed above, must be replaced prior to any axial loading.

TOLERANCE: Axial load-bearing cold-formed steel framing members shall be erected true and plumb within the specified tolerance listed below. For purposes of this section, camber is defined as the deviation from straightness of a member or any portion of a member with respect to its major axis, and sweep is defined as the deviation from straightness of a member or any portion of a member with respect to its minor axis.

- (1) For axial load-bearing studs, out of plumb and out of straightness (camber and sweep) shall not exceed 1/100th of the member length.
- (2) For joists, out of straightness (camber and sweep) shall not exceed 1/100th of the member length.
- (3) For track, camber shall not exceed 1/100th of the member length.

PERMANENT BRACING & BRIDGING: Double flat strap or channel bridging as permitted on the structural drawings shall be installed at 4'-0" maximum unless noted otherwise on the drawings and adequately braced with permanent flat strap cross bracing prior to applying any axial

TABLE 1 REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS				
SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
SOILS				
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6	GEOTECHNICAL REPORT	Periodic	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6	GEOTECHNICAL REPORT	Periodic	
PERFORM CLASSIFICATION OF COMPACTED FILL MATERIALS	TABLE 1705.6, 1803.5.1	GEOTECHNICAL REPORT	Periodic	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6	GEOTECHNICAL REPORT	Continuous	BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SURGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	TABLE 1705.6	GEOTECHNICAL REPORT	Periodic	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
FABRICATION				
FABRICATORS (FIELD WELDING AND UNREGISTERED FABRICATOR SHOPS)	1704.2.5		Periodic	SPECIAL INSPECTIONS APPLY TO VERIFICATION OF DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES INCLUDING REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS
APPROVED FABRICATORS (REGISTERED AND APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTION)	1704.2.5.1			SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE STATE TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE				
INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	TABLE 1705.3, 1908.4	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	Periodic	
WELDING REINFORCING STEEL	TABLE 1705.3			
a) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	TABLE 1705.3	ACI 318: 26.6.4, AWS D1.4	Periodic	
b) SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	TABLE 1705.3	ACI 318: 26.6.4, AWS D1.4	Periodic	
c) ALL OTHER WELDS	TABLE 1705.3	ACI 318: 26.6.4, AWS D1.4	Continuous	
INSPECTION OF ANCHORS CAST IN CONCRETE	TABLE 1705.3, 1901.3	ACI 318: 17.8.2	Periodic	
INSPECTION OF POST-INSTALLED ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	TABLE 1705.3, 1901.3	ACI 318: 17.8.2.4, ICC EVALUATION REPORT	Continuous	ANCHOR INSTALLATION SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL.
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	TABLE 1705.3, 1901.3	ACI 318: 17.8.2, ICC EVALUATION REPORT	Periodic	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3, 1904.1, 1904.2, 1908.2, 1908.3	ACI 318: Ch. 19, 26.4.3, 26.4.4	Periodic	
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP & AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3, 1908.10	ASTM C 172, ASTM C 31, ACI 318: 26.4, 26.12	Continuous	
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	TABLE 1705.3, 1910.6, 1908.7, 1908.8	ACI 318: 26.5	Continuous	
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	TABLE 1705.3, 1908.9	ACI 318: 26.5.3-26.5.5	Periodic	
INSPECTION OF PRESTRESSED CONCRETE:				
1. APPLICATION OF PRESTRESSING FORCES	TABLE 1705.3	ACI 318: 26.10	Continuous	
2. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE-RESISTING SYSTEM	TABLE 1705.3	ACI 318: 26.10	Continuous	
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	TABLE 1705.3	ACI 318: Ch. 26.9	Periodic	ALL CONNECTIONS VISUALLY INSPECTED REFER TO ANCHOR BOLT WELDING REQUIREMENTS AND STRUCTURAL INTEGRITY PROVISIONS
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FOR BEAMS AND STRUCTURAL SLABS	TABLE 1705.3	ACI 318: 26.11.2	Periodic	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	TABLE 1705.3	ACI 318: 26.11.1.2(b)	Periodic	

STEEL				
FABRICATION OF STRUCTURAL ELEMENTS	1705.2		REFER TO INSPECTION OF FABRICATOR REQUIREMENTS	
WELDING				
1. INSPECTION TASKS PRIOR TO WELDING	AISC 360-10 TABLE N5.4-1			
A. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE				
B. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		Continuous		
C. MATERIAL IDENTIFICATION (TYPE/GRADE)		Periodic		
D. WELDER IDENTIFICATION SYSTEM		Periodic		
E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		Periodic		
1) JOINT PREPARATION		Periodic		
2) DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		Periodic		
3) CLEANLINESS (CONDITION OF STEEL SURFACES)		Periodic		
4) TACKING (TACK WELD QUALITY AND LOCATION)		Periodic		
5) BACKING TYPE AND FIT (IF APPLICABLE)		Periodic		
F. CONFIGURATION AND FINISH OF ACCESS HOLES		Periodic		
G. FIT-UP OF FILLET WELDS		Periodic		
1) DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		Periodic		
2) CLEANLINESS (CONDITION OF STEEL SURFACES)		Periodic		
3) TACKING (TACK WELD QUALITY AND LOCATION)		Periodic		
H. CHECK FIELD WELDING EQUIPMENT		Periodic		
2. INSPECTION TASKS DURING WELDING	AISC 360-10 TABLE N5.4-2			
A. USE OF QUALIFIED WELDERS		Periodic		
B. CONTROL AND HANDLING OF WELDING CONSUMABLES		Periodic		
1) PACKAGING		Periodic		
2) EXPOSURE CONTROL		Periodic		
C. NO WELDING OVER CRACKED TACK WELDS		Periodic		
D. ENVIRONMENTAL CONDITIONS		Periodic		
1) WIND SPEED WITHIN LIMITS		Periodic		
2) PRECIPITATION AND TEMPERATURE		Periodic		
E. WPS FOLLOWED		Periodic		
1) SETTINGS ON WELDING EQUIPMENT		Periodic		
2) TRAVEL SPEED		Periodic		
3) SELECTED WELDING MATERIALS		Periodic		
4) SHIELDING GAS TYPE/FLOW RATE		Periodic		
5) PREHEAT APPLIED		Periodic		
6) INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)		Periodic		
F. WELDING TECHNIQUES		Periodic		
1) INTERPASS AND FINAL CLEANING		Periodic		
2) EACH PASS WITHIN PROFILE LIMITATIONS		Periodic		
3) EACH PASS MEETS QUALITY REQUIREMENTS		Periodic		
3. INSPECTION TASKS AFTER WELDING	AISC 360-10 TABLE N5.4-3			
A. WELDS CLEANED		Periodic		
B. SIZE, LENGTH AND LOCATION OF WELDS		Continuous		
C. WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT & POROSITY		Continuous		
D. ARC STRIKES		Continuous		
E. WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS		Continuous		
F. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)		Continuous		
G. REPAIR ACTIVITIES		Continuous		
H. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER		Continuous		
BOLTS				
INSPECTION TASKS PRIOR TO BOLTING	AISC 360-10: TABLE N5.6-1			
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENERS MATERIALS		Continuous		
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		Periodic		
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		Periodic		
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		Periodic		
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FACING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		Periodic		
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED		Continuous		
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		Periodic		

TABLE 2 (CONTINUED)				
REQUIRED STRUCTURAL SPECIAL INSPECTIONS				
SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
BOLTS				
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	AISC 360-10: TABLE N5.6-2			Periodic
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION				Periodic
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				Periodic
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES				Periodic
INSPECTION TASKS AFTER BOLTING	AISC 360-10: TABLE N5.6-3			
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS				Continuous
TABLE 3 REQUIRED ARCHITECTURAL SPECIAL INSPECTIONS				
SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
SPRAYED FIRE-RESISTANT MATERIALS				
CONDITIONS OF SUBSTRATE		APPROVED CONSTRUCTION DOCUMENTS	Periodic	SPECIAL INSPECTIONS APPLY TO CLEANLINESS AND TEMPERATURE OF SUBSTRATE AND THE ACCEPTABILITY OF PRIMED, PAINTED

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

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INSPECTIONS

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TABLE 5 (CONTINUED)

SPRAYED FIRE-RESISTANT MATERIALS					
THICKNESS @ FLOOR, ROOF, AND WALL ASSEMBLIES	1705.14.4	ASTM E605	NOT LESS THAN (4) MEASUREMENTS FOR EACH 1000 SF OF SPRAYED AREA EACH FLOOR LEVEL		
THICKNESS @ STRUCTURAL MEMBERS	1705.14.4		THICKNESS DETERMINED FOR NOT LESS THAN 25% THE STRUCTURAL MEMBERS EACH FLOOR LEVEL		
DENSITY @ FLOOR, ROOF, AND WALL ASSEMBLIES	1705.14.5		DETERMINED FROM EACH FLOOR, ROOF, AND WALL ASSEMBLY AT A RATE OF NOT LESS THAN ONE SAMPLE FOR EVERY 2500 SF IN EACH STORY		
DENSITY @ BEAMS, GIRDERS, TRUSSES, AND COLUMNS	1705.14.5		DETERMINED FROM EACH TYPE OF STRUCTURAL MEMBER AT A RATE OF NOT LESS THAN ONE SAMPLE FOR EVERY 2500 SF IN EACH STORY		
BOND STRENGTH @ FLOOR, ROOF, AND WALL ASSEMBLIES	1705.14.6.1		ONE FOR EACH FLOOR, ROOF, AND WALL ASSEMBLY EVERY 2500 SF OF SPRAYED AREA FOR EACH FLOOR LEVEL		
BOND STRENGTH @ STRUCTURAL MEMBERS	1705.14.6.2	ASTM E736	EACH TYPE OF STRUCTURAL MEMBER FOR EACH 2500 SF OF FLOOR AREA FOR EACH FLOOR LEVEL		
MASTIC AND INTUMESCENT FIRE-RESISTIVE COATINGS					
THICKNESS	1705.15		AWC TECHNICAL MANUAL 12-B, ASTM D1186	ONE BAY PER FLOOR OR FOR EACH 10,000 SF OF FLOOR, WHICHEVER PROVIDES THE GREATEST NUMBER OF TESTS. TEST ONE COLUMN, ONE PRIMARY BEAM, ONE SECONDARY BEAM, AND ONE TRUSS	
EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS), WATER-RESISTIVE BARRIER COATING					
EXTERIOR INSULATION & FINISH SYSTEMS	1705.16	See ASTM	ASTM C297, ASTM D2247, ASTM D2898, ASTM F72, ASTM E96, ASTM E331, ASTM E1233, ASTM E2134, ASTM E2485, ASTM E2570	A WATER-RESISTIVE BARRIER COATING COMPLYING WITH ASTM E 2570 REQUIRES SPECIAL INSPECTION OF THE WATER-RESISTIVE BARRIER COATING WHEN INSTALLED OVER A SHEATHING SUBSTRATE.	
SMOKE CONTROL SYSTEMS					
LEAKAGE AND PRESSURE DIFFERENTIAL AND FLOW MEASUREMENT AND DETECTION AND CONTROL VERIFICATION	1704.18	DETERMINED BY JURISDICTION			
TABLE 6					
REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE					
SYSTEM or MATERIAL	INSPECTION		REMARKS		
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE		FREQUENCY	
GENERAL					
SEISMIC-FORCE-RESISTING SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORIES C, D, E, OR F	1704.3.2, 1705.12		Continuous	REFERENCE THE GENERAL STRUCTURAL NOTES FOR OUTLINE OF SEISMIC-FORCE-RESISTING SYSTEM	
DESIGNATED SEISMIC SYSTEMS (SECONDARY) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORIES C, D, E, OR F			Continuous		
CONCRETE					
MATERIAL VERIFICATION OF REINFORCING STEEL USED IN SPECIAL MOMENT RESISTING FRAMES AND SHEAR WALL BOUNDARY ELEMENTS	1705.12.1, TABLE 1705.2.2		Periodic		
REINFORCING STEEL AND CONCRETE PLACEMENT IN SPECIAL MOMENT RESISTING FRAMES	1705.11	ACI 318 26.13.1.4	Continuous	INSPECTORS ARE TO BE QUALIFIED TO PERFORM THESE INSPECTIONS WHICH INCLUDES, BUT IS NOT LIMITED TO, THE PLACEMENT, STIRRUPS PLACEMENT, LAP LOCATION AND SPLICES, JOINT REINFORCEMENT PLACEMENT, ETC.	
ARCHITECTURAL					
INSTALLATION OF ANCHORAGE OF ACCESS FLOORS	1705.12.5.1		Periodic	REQUIRED IN SEISMIC DESIGN CATEGORY D, E, OR F	
INSTALLATION OF ANCHORAGE OF CLADDING AND INTERIOR/EXTERIOR VENEER WEIGHING MORE THAN 5 PSF IN BUILDINGS MORE THAN 30 FEET IN HEIGHT	1704.3.2, 1705.12.5		Periodic		
ERCTION AND FASTENING OF INTERIOR NONBEARING WALLS WEIGHING MORE THAN 15 PSF IN BUILDINGS MORE THAN 30 FEET IN HEIGHT	1704.3.2, 1705.12.5		Periodic		
ERCTION AND FASTENING OF EXTERIOR NON-BEARING WALLS IN BUILDINGS MORE THAN 30 FEET IN HEIGHT	1704.3.2, 1705.12.5		Periodic		
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1704.3.2	ASCE 7-05 Section 13.5.6	Periodic	REFERENCE ARCHITECTURAL FOR INFORMATION	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1704.3.2, 1705.12.5		Periodic	REFERENCE ARCHITECTURAL FOR INFORMATION	
ELECTRICAL					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1704.3.2, 1705.12.6		Periodic	SEISMIC RESTRAINT OF ELECTRICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE ELECTRICAL FOR FURTHER INFORMATION.	
INSTALLATION OF ANCHORAGE OF ALL ELECTRICAL EQUIPMENT IN SDC E OR F	1705.12.6		Periodic		
INSTALLATION OF VIBRATION ISOLATION SYSTEMS IN STRUCTURES ASSIGNED TO SDC C, D, E OR F WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25 INCHES OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT	1705.12.6, 1705.12.8		Periodic		
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.12.6		Periodic		
PROCESS MECHANICAL					
INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS MEANT TO CARRY HAZARDOUS MATERIALS AND ITS ASSOCIATED MECHANICAL UNITS	1704.3.2, 1705.12.6		Periodic	SEISMIC RESTRAINT OF PROCESS MECHANICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE MECHANICAL FOR FURTHER INFORMATION.	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.12.4		Periodic		
BUILDING MECHANICAL					
INSTALLATION OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS	1704.3.2, 1705.12.6		Periodic		
INSTALLATION OF FIRE PROTECTION SPRINKLER SYSTEM	1705.12			INSPECTIONS AS REQUIRED BY LOCAL BUILDING OFFICIAL	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.12.4		Periodic		
INSTALLATION OF VIBRATION ISOLATION SYSTEMS IN STRUCTURES ASSIGNED TO SDC C, D, E OR F WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25 INCHES OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT	1705.12.6		Periodic		
DESIGNATED SEISMIC SYSTEM VERIFICATION					
DESIGNATED SEISMIC SYSTEM VERIFICATION - VERIFY LABEL ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE	1705.12.4		Periodic		

TABLE 7

REQUIRED TESTING for SEISMIC RESISTANCE SPECIAL INSPECTIONS				
SYSTEM or MATERIAL	TESTING			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
CONCRETE REINFORCEMENT				
TEST A615 REINFORCEMENT IN SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS, AND END COUPLING BEAMS CONNECTING STRUCTURAL WALLS IN STRUCTURE ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E AND F		ACI 318: 20.2.2.5	Periodic	CERTIFIED MILL TEST REPORTS ARE REQUIRED FOR EACH SHIPMENT OF REINFORCEMENT
TEST A615 REINFORCEMENT FOR WELDABILITY WHEN SUCH REINFORCEMENT IS TO BE WELDED	TABLE 1705.3	ACI 318: 20.2.1.3	Periodic	
ARCHITECTURAL, MECHANICAL AND ELECTRICAL				
COMPONENT TESTING INCLUDING MOUNTING SYSTEMS OR ANCHORAGE IF CERTIFICATES OF COMPLIANCE ARE NOT AVAILABLE IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, OR F	1705.13.2	ASCE 7 SECTION 13.2.1, 13.2.2	Periodic	

TABLE 8

REQUIRED SPECIAL INSPECTIONS for WIND RESISTANCE				
SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
GENERAL				
ROOF CLADDING AND WALL CLADDING SYSTEMS, COMPONENTS, AND CONNECTIONS	1705.11.3		Periodic	
VERTICAL WIND FORCE-RESISTING SYSTEMS, INCLUDING BRACED FRAMES, MOMENT FRAMES AND SHEAR WALLS	1705.11		Periodic	

TABLE 9

STRUCTURAL OBSERVATION				
SYSTEM or MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY	
AS REQUIRED BY THE DESIGN PROFESSIONAL	1704.6			
SEISMIC RESISTANCE	1704.6.1		Periodic	
WIND REQUIREMENTS	1704.6.2		Periodic	

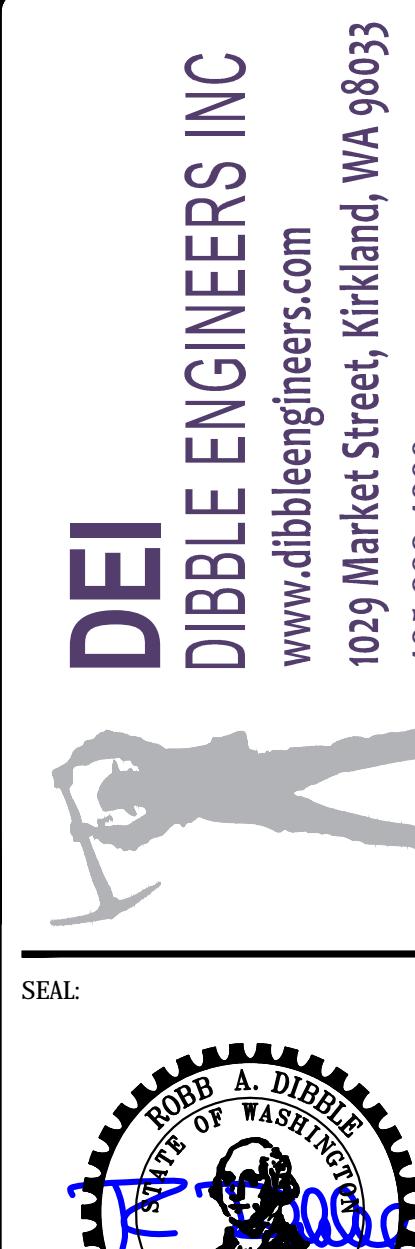
PROJECT #: 17-025
DRAWN BY: TTP / TLT
DESIGNED BY: RAD
DATE: DESCRIPTION
4.11.2017 PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

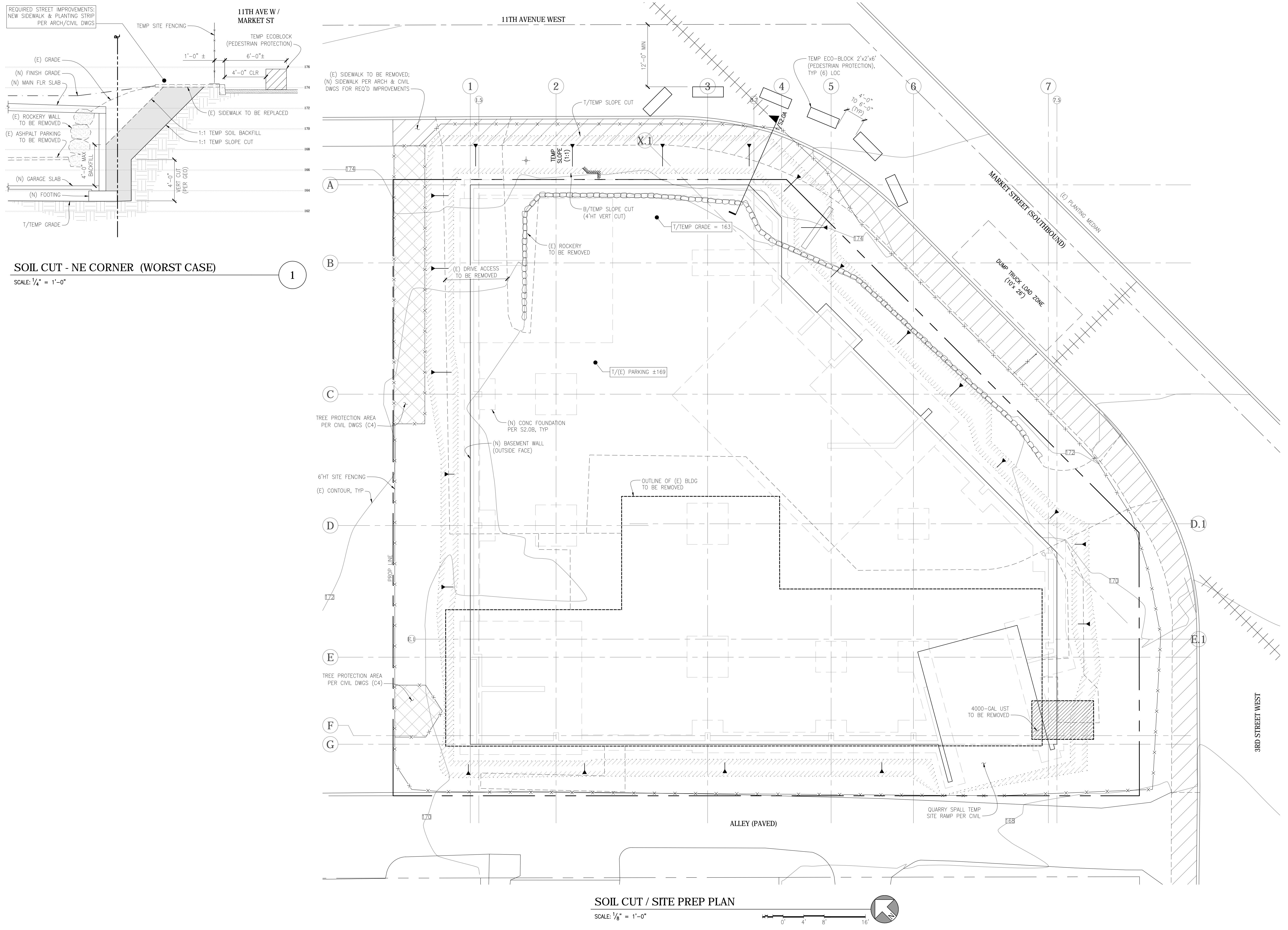
SHEET TITLE:
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INSPECTIONS

SHEET NUMBER:

S 1.3



4/26/17



The logo for Dibble Engineers Inc. features a central silhouette of a person in a dynamic pose, holding a compass. The background is a light gray map of the Pacific Northwest. The company name "DIBBLE ENGINEERS INC" is at the top in large, bold, black capital letters. Below it is the website "www.dibbleengineers.com". To the right is the address "1029 Market Street, Kirkland, WA 98033" and the phone number "425.828.4200". A purple "DEI" monogram is on the left. At the bottom is a circular seal for "ROBB A. DIBBLE, STATE OF WASHINGTON, NO. 37445, REGISTERED PROFESSIONAL ENGINEER". A blue signature "Rob Dibble" is written across the seal.

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

#: 17-025
Y: TTP / TLT
D BY: RAD

DESCRIPTION
PERMIT SUBMITTAL

NATIONAL STAMP:

TITLE:

STRUCTURAL E PREPARATION PLAN

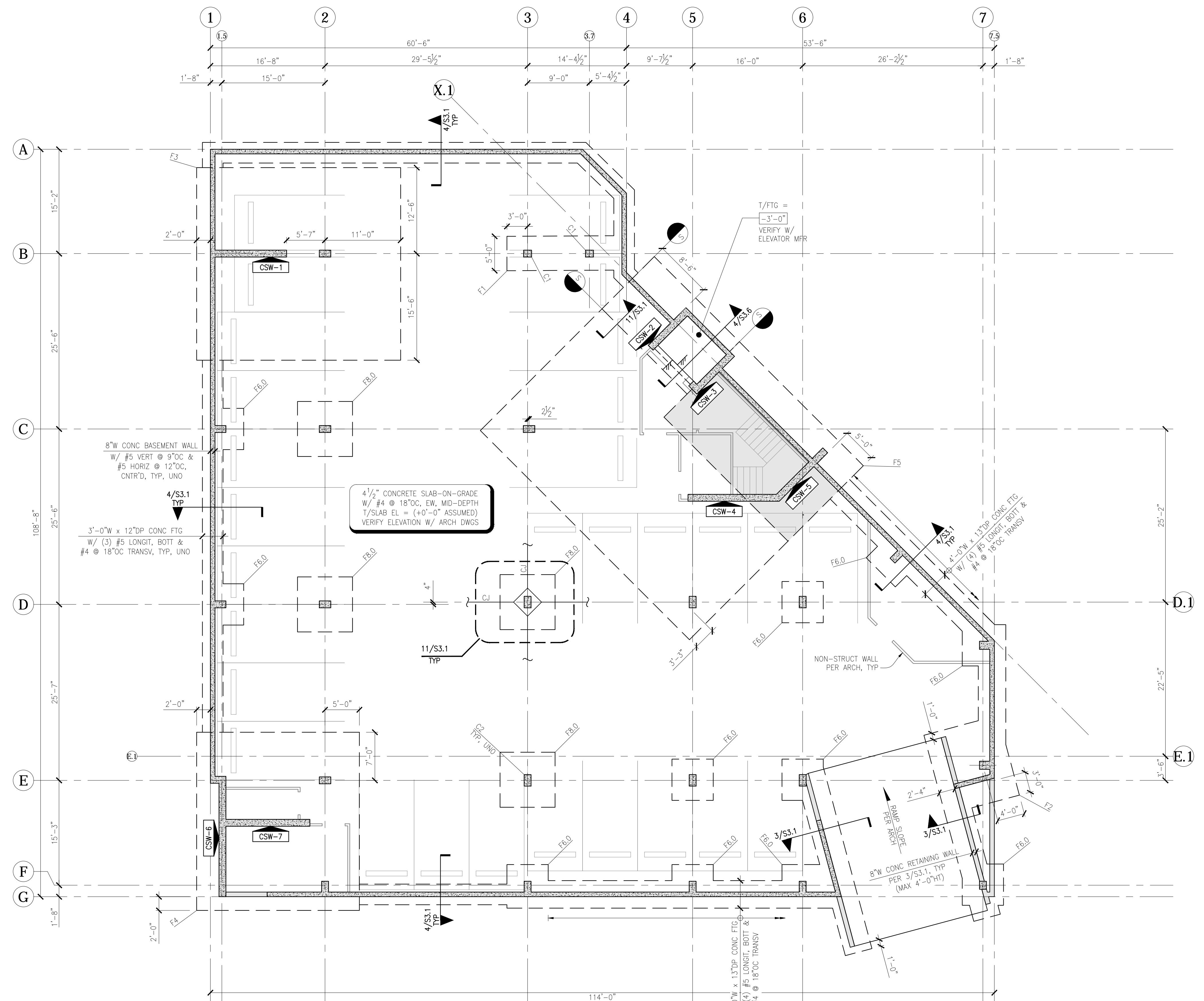
NUMBER:

S 2.0a

FOUNDATION PLAN NOTES

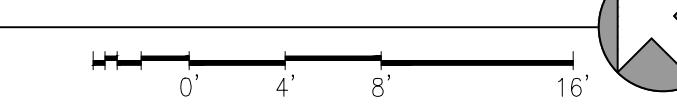
- REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS, CONCRETE SLAB LOADING DIAGRAMS, LEGEND AND SPECIAL INSPECTION TABLES.
- PREPARE SUBGRADE AND PROVIDE FOR SUBSURFACE DRAINAGE AS RECOMMENDED IN THE SOILS REPORT.
- VERIFY ALL DIMENSIONS AND ELEVATION WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL UNO. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID. COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL, UNO.
- PROVIDE TRIM REINFORCING AT ALL SLAB-ON-GRADE PENETRATIONS PER 5, 9, & 10/S3.2.
- CONTRACTOR SHALL COORDINATE ALL OPENING DIMENSIONS, SLAB PENETRATIONS, BLOCKOUTS, DEPRESSIONS AND EMBEDS WITH THE ARCHITECTURAL DRAWINGS.
- SEE DETAIL 2/S3.1 FOR SLAB CONTROL JOINT REQUIREMENTS. CONTRACTOR SHALL SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- ONLY STRUCTURAL WALLS ARE SHOWN ON PLAN. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL TYPES AND LOCATIONS.
- TOP OF FOOTING IS 6" BELOW TOP OF SLAB, TYPICAL UNO.
- INDICATES CONCRETE COLUMN TYPE. SEE SCHEDULE 9/S3.4.
- INDICATES FOOTING TYPE. SEE SCHEDULE BELOW.
- INDICATES CONCRETE WALL OR COLUMN ABOVE.
- INDICATES STEP OR SLOPE IN TOP OF SLAB.
- INDICATES CONCRETE SHEAR WALL ABOVE FRAMING. REFERENCE ELEVATIONS ON S3.0 FOR WALL THICKNESS & REINFORCING.
- INDICATES FOOTING STEP. REFERENCE DETAIL 11/S3.1

FOOTING SCHEDULE		
MARK	SIZE	REINFORCING / NOTES
F6.0	6'-0"SQ x 1'-2"DP	(8) #8 EW BOTT
F8.0	8'-0"SQ x 3'-0"DP	(10) #8 EW T&B
F1	DIM PER S2.0C x 1'-2"DP	LOCATED AT GRID B/3.5 REINF PER S2.0C (FTG NEAR GRID A/#)
F2	DIM PER S2.0C x 1'-0"DP	LOCATED AT GRID E/7 REINF PER S2.0C (FTG NEAR GRID A/#)
F3	DIM PER S2.0C x 2'-6"DP	LOCATED AT GRID B/1.5 REINF PER S2.0C (FTG NEAR GRID A/#)
F4	DIM PER S2.0C x 2'-6"DP	LOCATED AT GRID E/1-F/2 REINF PER S2.0C (FTG NEAR GRID A/#)
F5	DIM PER S2.0C x 2'-0"DP (AT SHADED AREA 3'-6"DP)	LOCATED AT GRID C/5 REINF PER S2.0C (FTG NEAR GRID A/#)



FOUNDATION PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



S 2.0B

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

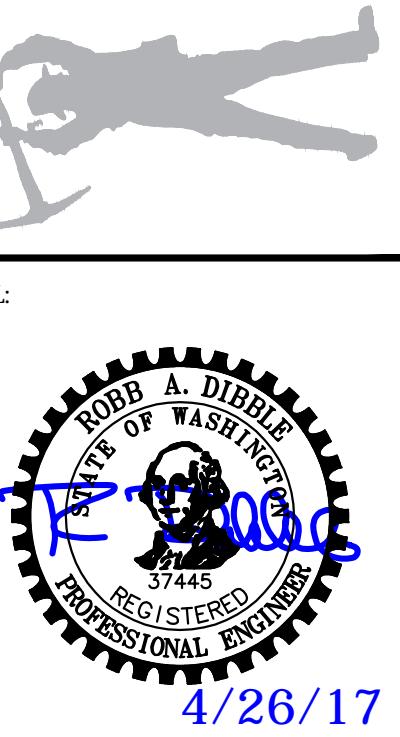
PROJECT #: 17-025
DRAWN BY: TTP/TIT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

STRUCTURAL FOUNDATION PLAN

SHEET NUMBER:

DEI
DIBBLE ENGINEERS INC
www.dibbleengineers.com
1029 Market Street, Kirkland, WA 98033
425.828.4200



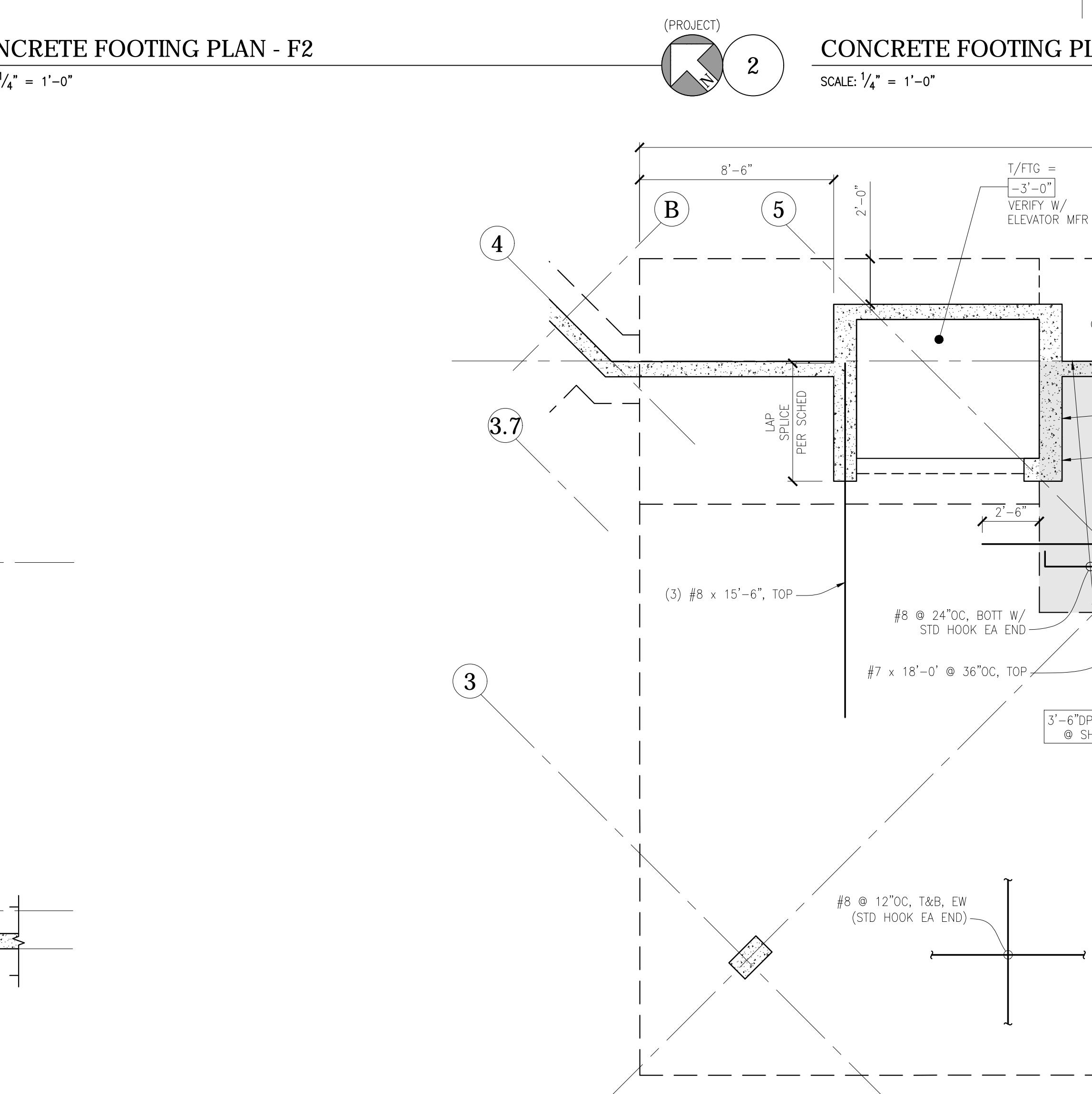
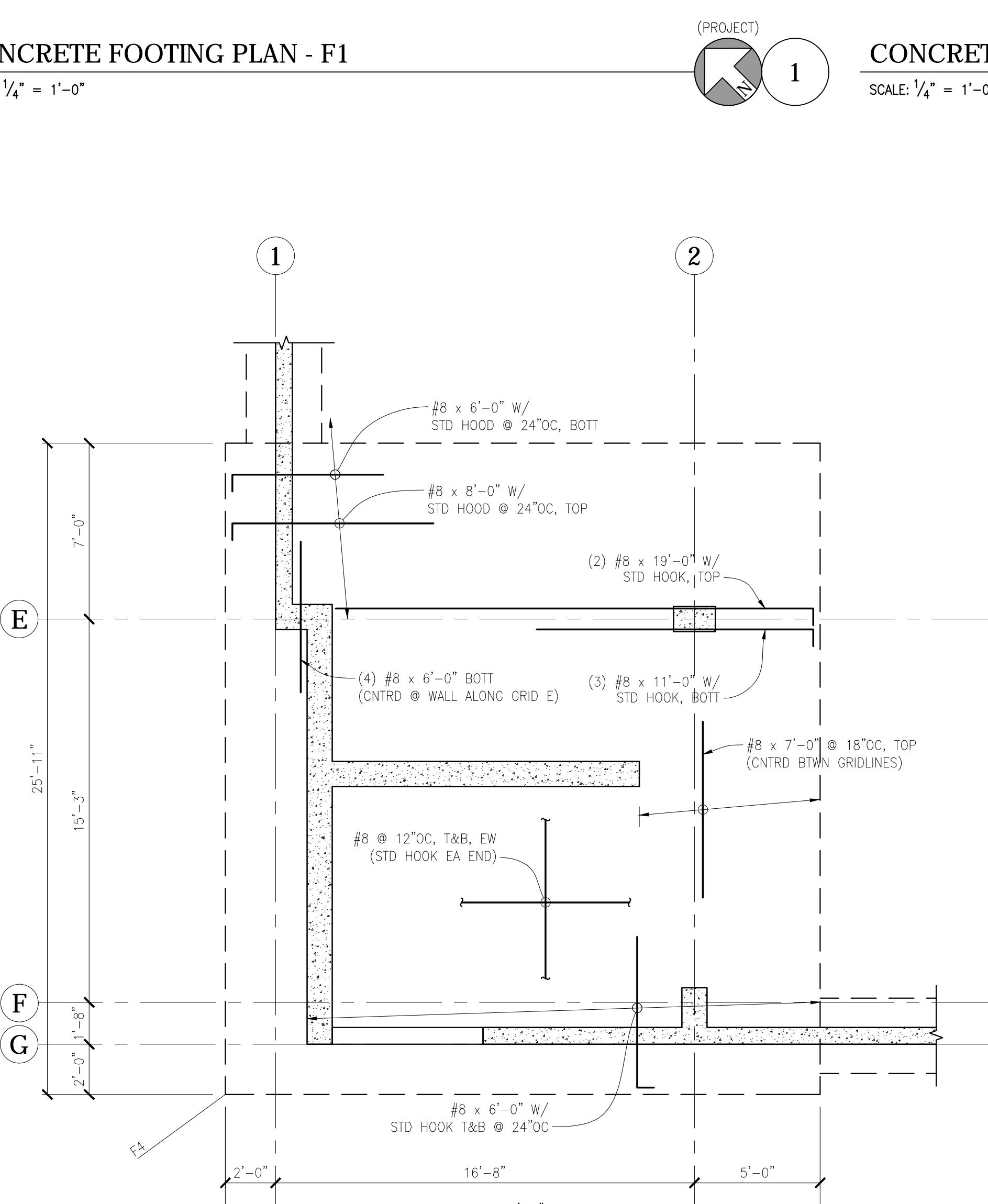
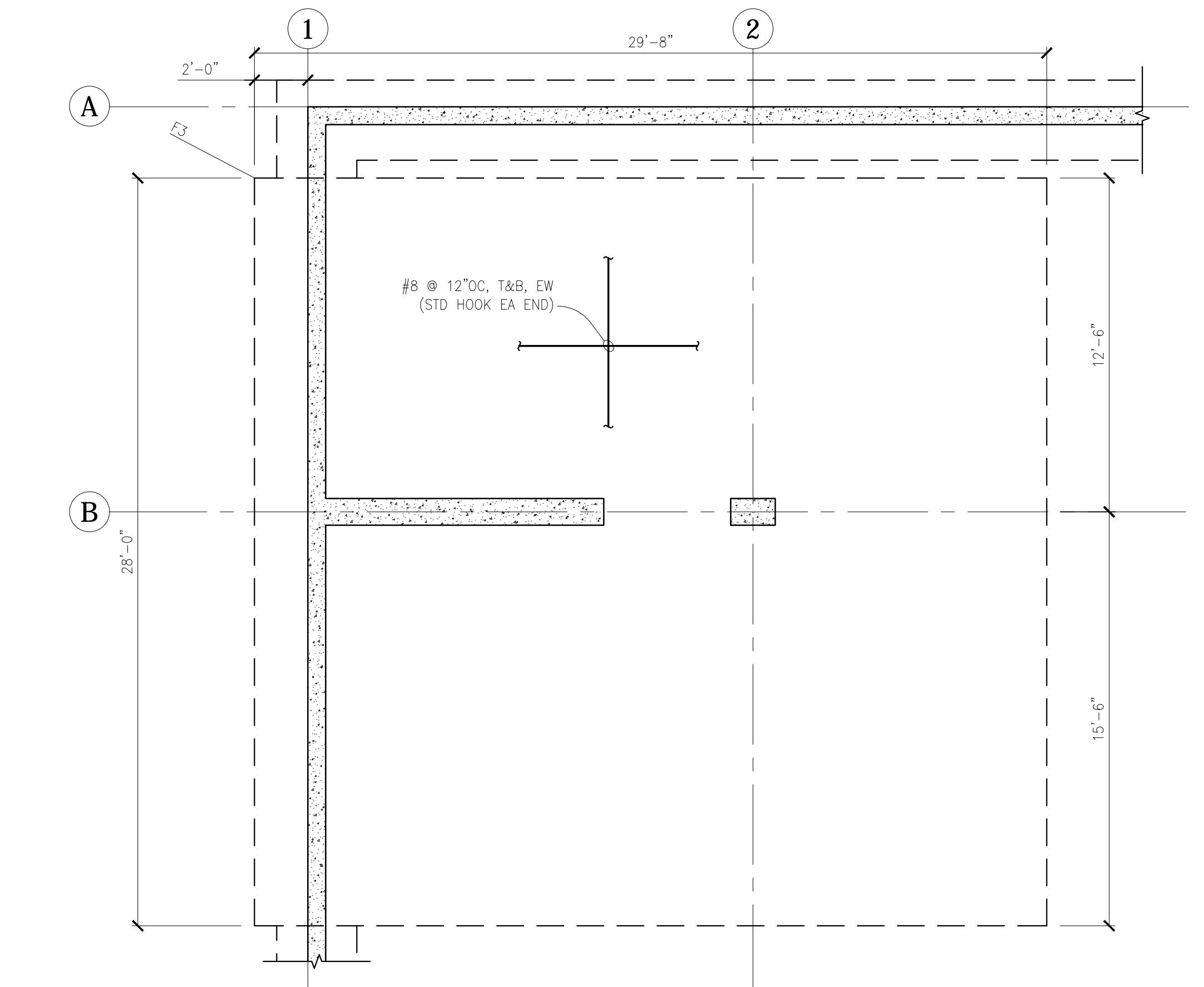
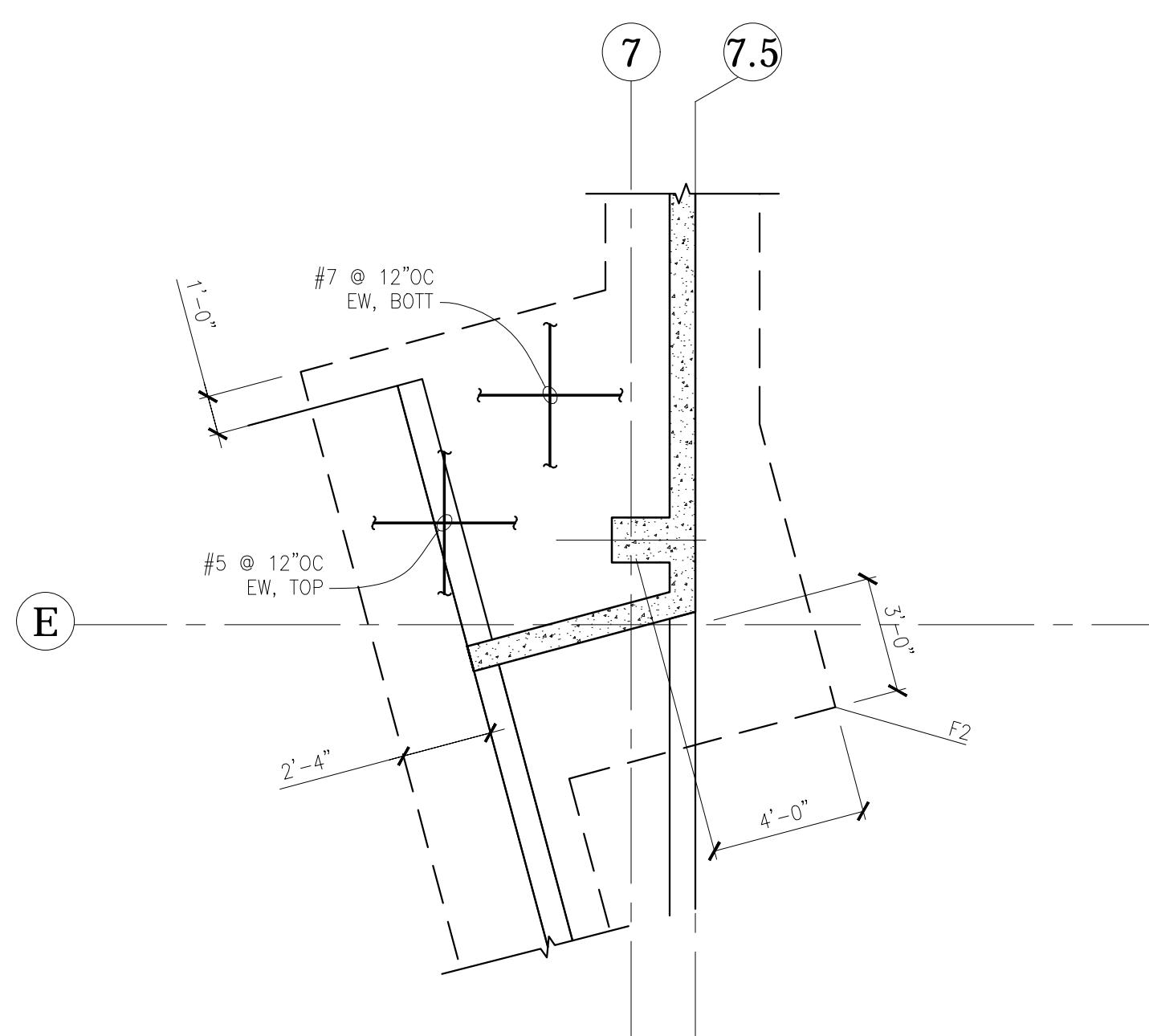
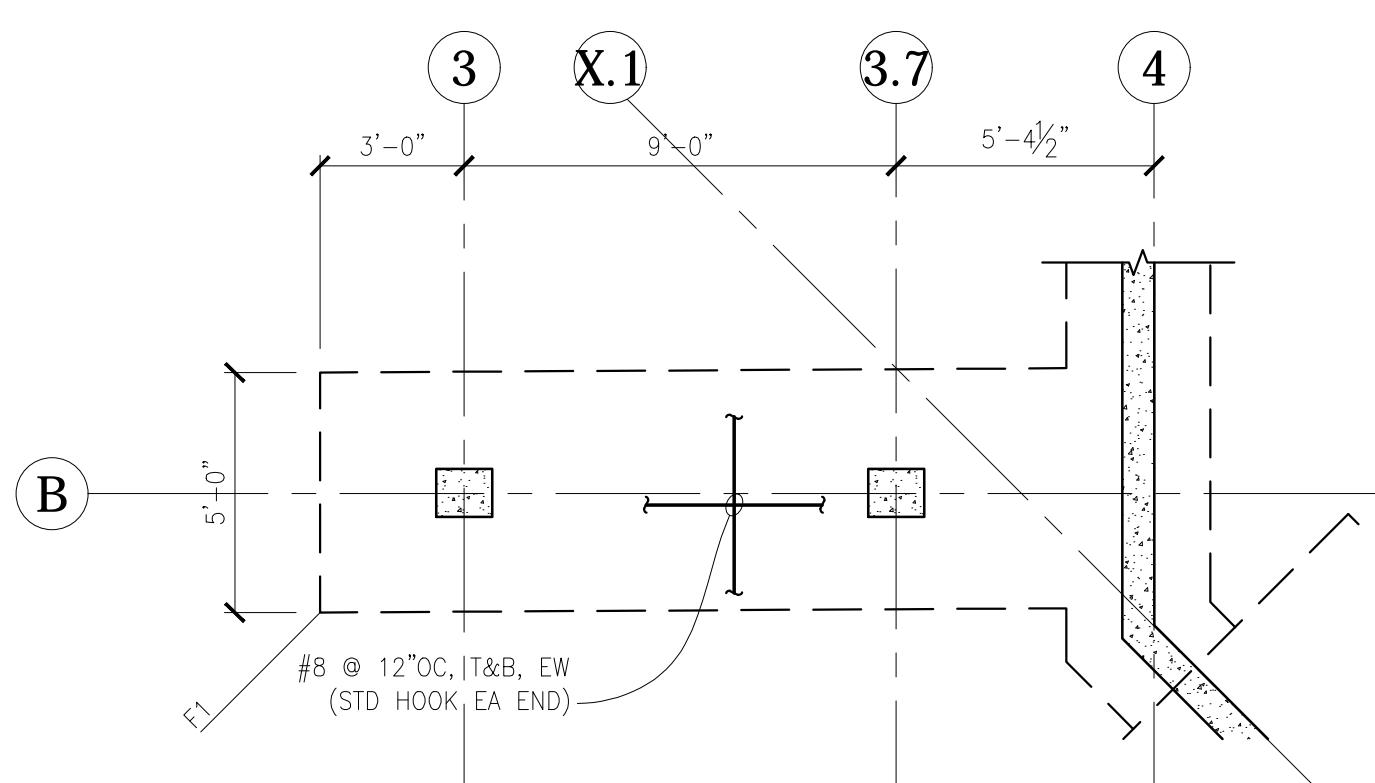
4/26/17

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

PROJECT #: 17-025
DRAWN BY: TTP/TIT
DESIGNED BY: RAD
DATE: 4.11.2017
DESCRIPTION: PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE: STRUCTURAL CONCRETE FOOTING PLANS
SHEET NUMBER: S2.0C



CONCRETE FOOTING PLAN - F4

SCALE: $\frac{1}{4}$ " = 1'-0"

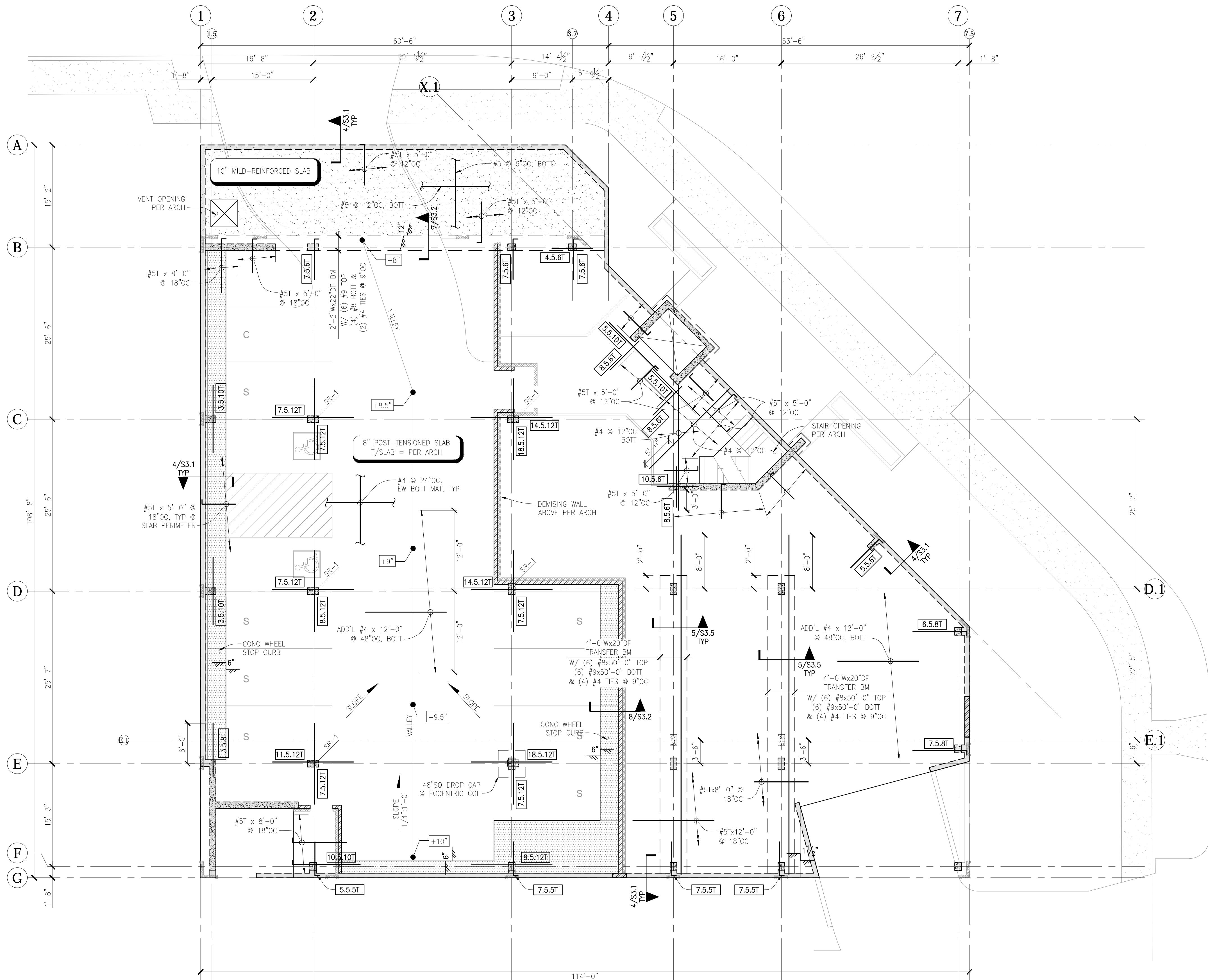
CONCRETE FOOTING PLAN - F5

SCALE: $\frac{1}{4}$ " = 1'-0"

(PROJECT)
5

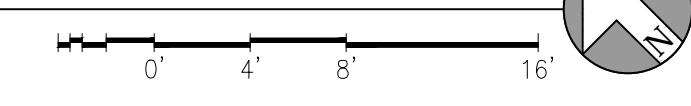
MILD REINFORCING SLAB PLAN NOTES

1. REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL UNO. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID. COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL, UNO.
3. PROVIDE TRIM REINFORCING AT ALL ELEVATED SLAB PENETRATIONS PER S3.2.
4. CONTRACTOR SHALL COORDINATE ALL OPENING DIMENSIONS, SLAB PENETRATIONS, BLOCKOUTS, DEPRESSIONS AND EMBEDS WITH THE ARCHITECTURAL DRAWINGS.
5. CONTRACTOR SHALL COORDINATE WITH SEOR REGARDING FORMWORK, POUR SEQUENCE AND LOADING OF SLABS PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR THE REQUIREMENTS REGARDING FOR REMOVAL AND RESHORING.
6. ONLY STRUCTURAL WALLS ARE SHOWN ON PLAN. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL TYPES AND LOCATIONS.
7. INDICATES CONCRETE COLUMN TYPE. SEE SCHEDULE 9/S3.4.
8. INDICATES CONCRETE WALL OR COLUMN ABOVE.
9. INDICATES CONCRETE WALL OR COLUMN BELOW.
10. INDICATES STEP OR SLOPE IN TOP OF SLAB.
11. INDICATES SLAB REINFORCEMENT. EXAMPLE: $8.4.10T$ BAR LENGTH IN FEET BAR SIZE NUMBER OF BARS
12. INDICATES STUD RAIL SLAB REINFORCEMENT AND CONFIGURATION. SEE SHEET S3.4 FOR STUD RAIL DETAILS.
13. INDICATES CONCRETE SHEAR WALL ABOVE FRAMING. REFERENCE ELEVATIONS ON S3.0 FOR WALL THICKNESS & REINFORCING.
14. REBAR SHOWN AS INDICATES REBAR WITH STANDARD HOOK AT END. CONCRETE SLAB & BEAMS ARE DESIGNED FOR 1-HR FIRE RATING.
15. PROVIDE $\frac{3}{4}$ " CLEAR FOR BOTTOM REINFORCING IN SLAB & $1\frac{1}{2}$ " CLEAR FOR BOTTOM REINFORCING IN BEAMS. PROVIDE $\frac{3}{4}$ " CLEAR FOR ALL TOP REINFORCING IN SLABS & BEAMS



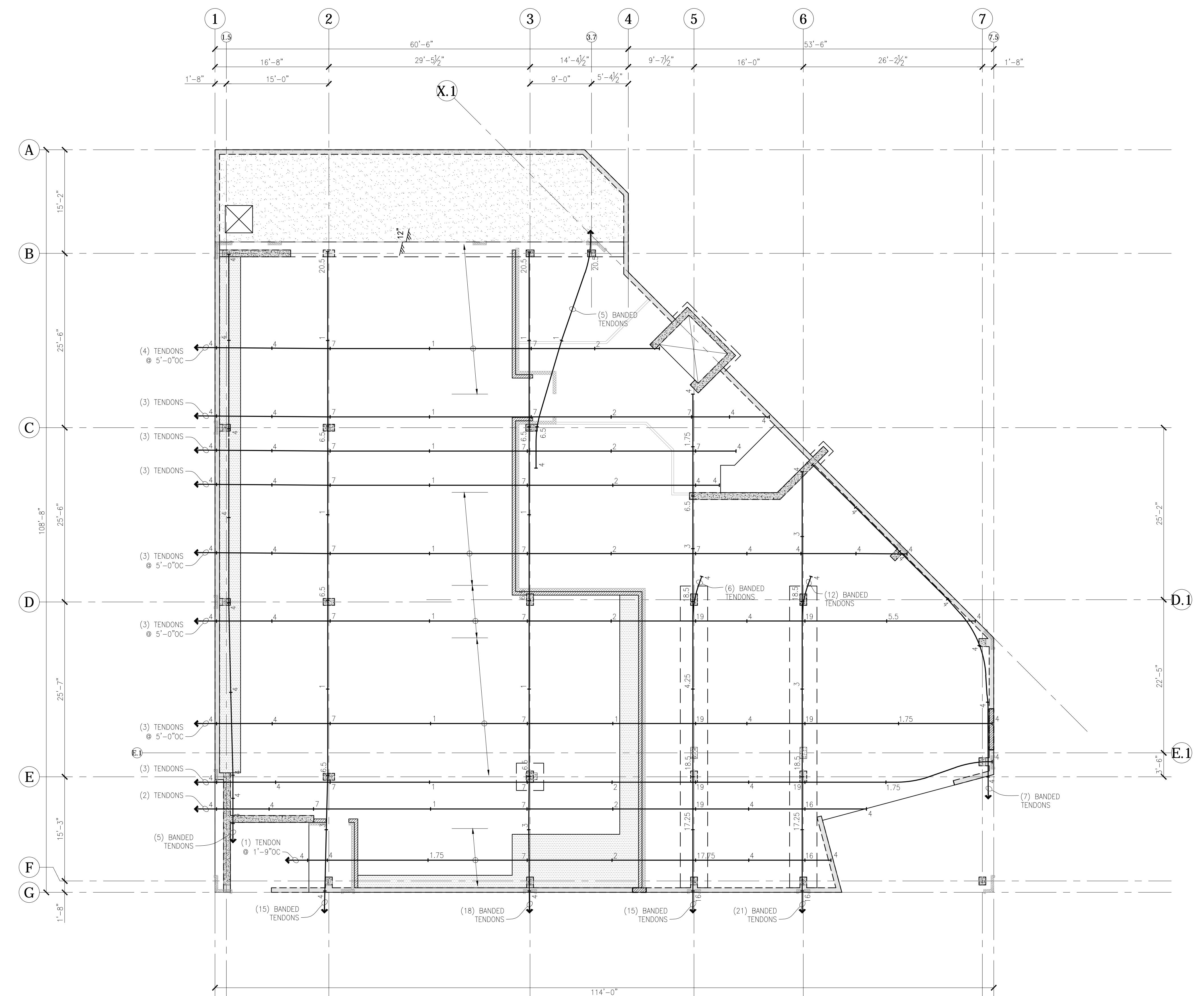
MAIN FLOOR MILD REINFORCING SLAB PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



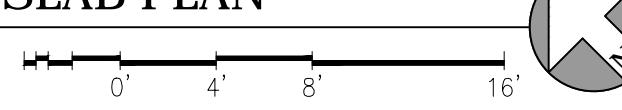
POST-TENSIONED SLAB PLAN NOTES

- REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
- VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND STAGING OF ALL SHORING AND RESHORING.
- COLUMN OR WALL OVER-POURS INTO POST-TENSIONED SLABS SHALL NOT BE GREATER THAN 1/2". REMOVE ANY EXCESSIVE COLUMN OR WALL OVER-POURS PRIOR TO PLACING REINFORCING BARS AND POST-TENSIONED TENDONS.
- DO NOT INSTALL EPOXY, EXPANSION, OR SCREW ANCHORS INTO THE POST-TENSIONED SLAB. DRILLING INTO THE POST-TENSIONED SLAB WITHOUT APPROVAL FROM EOR IS NOT PERMITTED. ALL BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, ETC.) SHALL PLACE DUCTS, CHASES, PIPES OR PIPE SUPPORTS, CONDUIT SLEEVES AND HANGER INSERTS, ETC. INTO THE POST-TENSIONED SLAB PRIOR TO POURING THE CONCRETE.
- FOR TENDON STRESSING SEQUENCE, REFERENCE GENERAL NOTES. STRESS A MINIMUM OF (2) TENDONS AT SLAB EDGES PERPENDICULAR TO THE BANDED TENDON ENDS BEFORE BANDED TENDONS ARE STRESSED.
- HORIZONTAL SWEEP OF THE TENDONS SHALL NOT BE GREATER THAN 1:6. TENDONS WITH HORIZONTAL SWEEP GREATER THAN 1:6 SHALL BE REVIEWED BY THE EOR FOR TENDON SPACING AND ADDITIONAL REINFORCING REQUIREMENTS PRIOR TO PLACING CONCRETE. FOR HORIZONTAL SWEEPS GREATER THAN 1:12, SEE DETAIL 5/S3.3.
- MILD REINFORCING BAR LAYOUT SHALL BE PER THE MILD REINFORCING PLAN.
- TENDON LOCATIONS SHALL BE PERMANENTLY MARKED; REFER TO POST-TENSIONING GENERAL NOTES.



MAIN FLOOR POST-TENSIONED SLAB PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



S 2.1b

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

PROJECT #: 17-025
DRAWN BY: TTP/TLT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

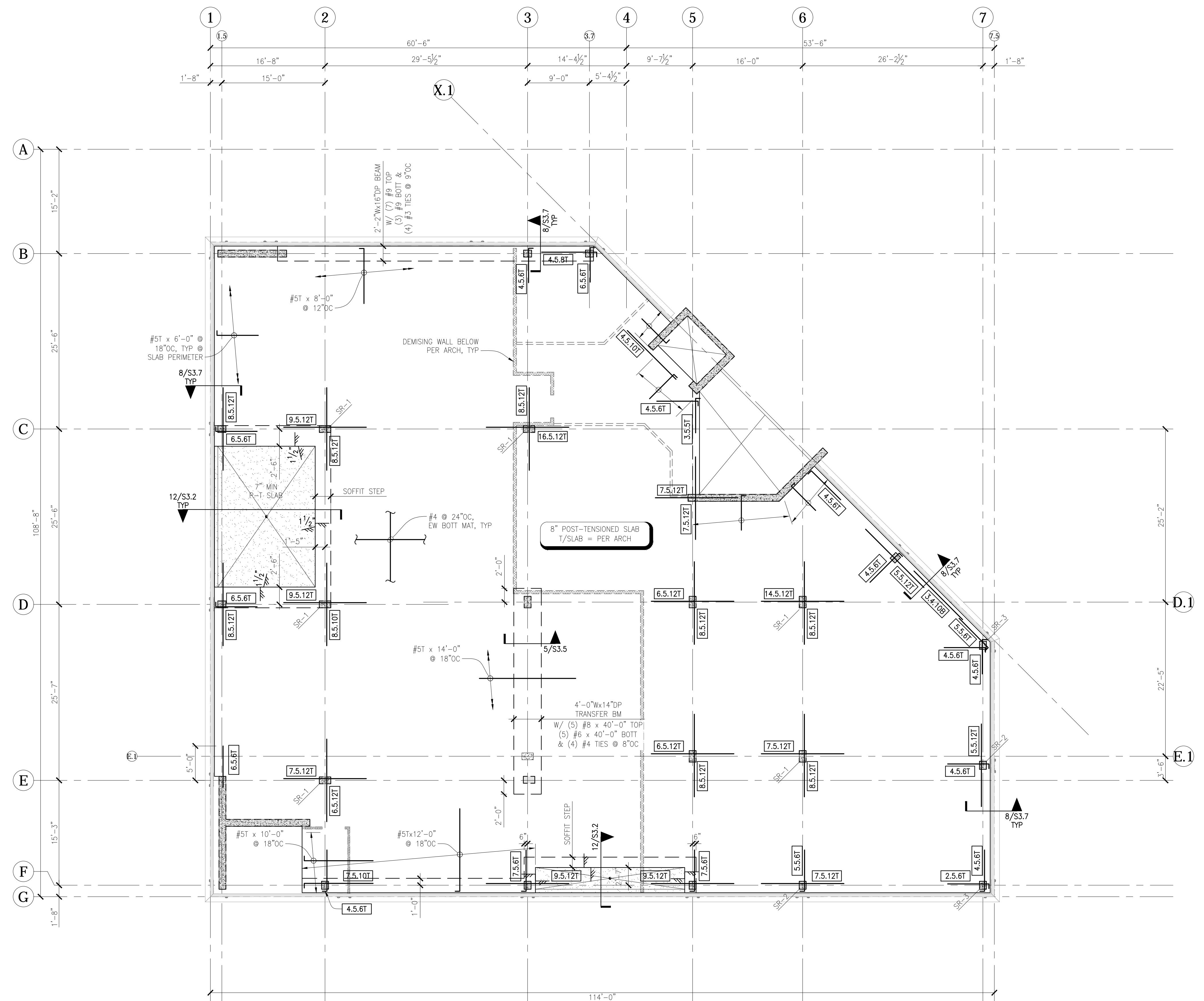
SHEET TITLE:
STRUCTURAL
MAIN FLOOR
P-T PLAN

SHEET NUMBER:



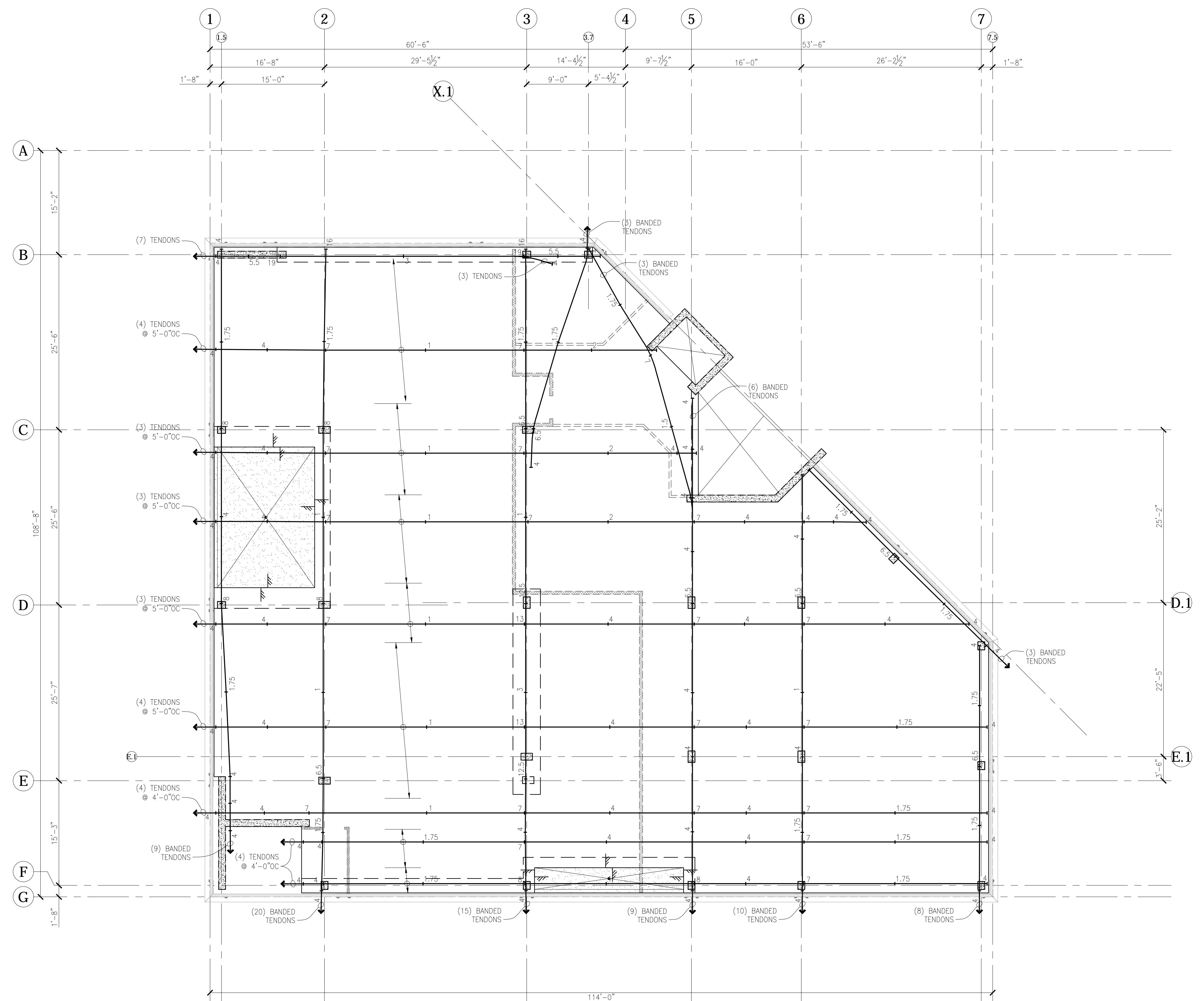
MILD REINFORCING SLAB PLAN NOTES

1. REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL UNO. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID. COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL, UNO.
3. PROVIDE TRIM REINFORCING AT ALL ELEVATED SLAB PENETRATIONS PER S3.2.
4. CONTRACTOR SHALL COORDINATE ALL OPENING DIMENSIONS, SLAB PENETRATIONS, BLOCKOUTS, DEPRESSIONS AND EMBEDS WITH THE ARCHITECTURAL DRAWINGS.
5. CONTRACTOR SHALL COORDINATE WITH SEOR REGARDING FORMWORK, POUR SEQUENCE AND LOADING OF SLABS PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR THE REQUIREMENTS REGARDING FOR REMOVAL AND RESHORING.
6. ONLY STRUCTURAL WALLS ARE SHOWN ON PLAN. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL TYPES AND LOCATIONS.
7. INDICATES CONCRETE COLUMN TYPE. SEE SCHEDULE 9/S3.4.
8. INDICATES CONCRETE WALL OR COLUMN ABOVE.
9. INDICATES CONCRETE WALL OR COLUMN BELOW.
10. INDICATES STEP OR SLOPE IN TOP OF SLAB.
11. INDICATES SLAB REINFORCEMENT. EXAMPLE: [XX.XXX] (8.4.10T) BAR LENGTH IN FEET BAR SIZE NUMBER OF BARS
12. INDICATES STUD RAIL SLAB REINFORCEMENT AND CONFIGURATION. SEE SHEET S3.4 FOR STUD RAIL DETAILS.
13. CSW-# INDICATES CONCRETE SHEAR WALL ABOVE FRAMING. REFERENCE ELEVATIONS ON S3.0 FOR WALL THICKNESS & REINFORCING.
14. REBAR SHOWN AS INDICATES REBAR WITH STANDARD HOOK AT END. CONCRETE SLAB & BEAMS ARE DESIGNED FOR 1-HR FIRE RATING.
15. PROVIDE $\frac{3}{4}$ " CLEAR FOR BOTTOM REINFORCING IN SLAB & $1\frac{1}{2}$ " CLEAR FOR BOTTOM REINFORCING IN BEAMS. PROVIDE $\frac{3}{4}$ " CLEAR FOR ALL TOP REINFORCING IN SLABS & BEAMS



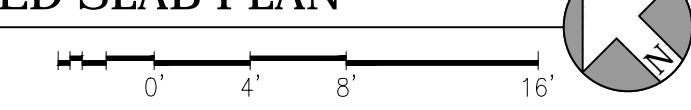
POST-TENSIONED SLAB PLAN NOTES

- REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
- VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND STAGING OF ALL SHORING AND RESHORING.
- COLUMN OR WALL OVER-POURS INTO POST-TENSIONED SLABS SHALL NOT BE GREATER THAN 1/2". REMOVE ANY EXCESSIVE COLUMN OR WALL OVER-POURS PRIOR TO PLACING REINFORCING BARS AND POST-TENSIONED TENDONS.
- DO NOT INSTALL EPOXY, EXPANSION, OR SCREW ANCHORS INTO THE POST-TENSIONED SLAB. DRILLING INTO THE POST-TENSIONED SLAB WITHOUT APPROVAL FROM EOR IS NOT PERMITTED. ALL BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, ETC.) SHALL PLACE DUCTS, CHASES, PIPES OR PIPE SUPPORTS, CONDUIT SLEEVES AND HANGER INSERTS, ETC. INTO THE POST-TENSIONED SLAB PRIOR TO POURING THE CONCRETE.
- FOR TENDON STRESSING SEQUENCE, REFERENCE GENERAL NOTES. STRESS A MINIMUM OF (2) TENDONS AT SLAB EDGES PERPENDICULAR TO THE BANDED TENDON ENDS BEFORE BANDED TENDONS ARE STRESSED.
- HORIZONTAL SWEEP OF THE TENDONS SHALL NOT BE GREATER THAN 1:6. TENDONS WITH HORIZONTAL SWEEP GREATER THAN 1:6 SHALL BE REVIEWED BY THE EOR FOR TENDON SPACING AND ADDITIONAL REINFORCING REQUIREMENTS PRIOR TO PLACING CONCRETE. FOR HORIZONTAL SWEEPS GREATER THAN 1:12, SEE DETAIL 5/S3.3.
- MILD REINFORCING BAR LAYOUT SHALL BE PER THE MILD REINFORCING PLAN.
- TENDON LOCATIONS SHALL BE PERMANENTLY MARKED; REFER TO POST-TENSIONING GENERAL NOTES.



UPPER FLOOR POST-TENSIONED SLAB PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



S 2.2b

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

PROJECT #: 17-025
DRAWN BY: TTP/TLT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION
PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE:
STRUCTURAL
UPPER FLOOR
P-T PLAN

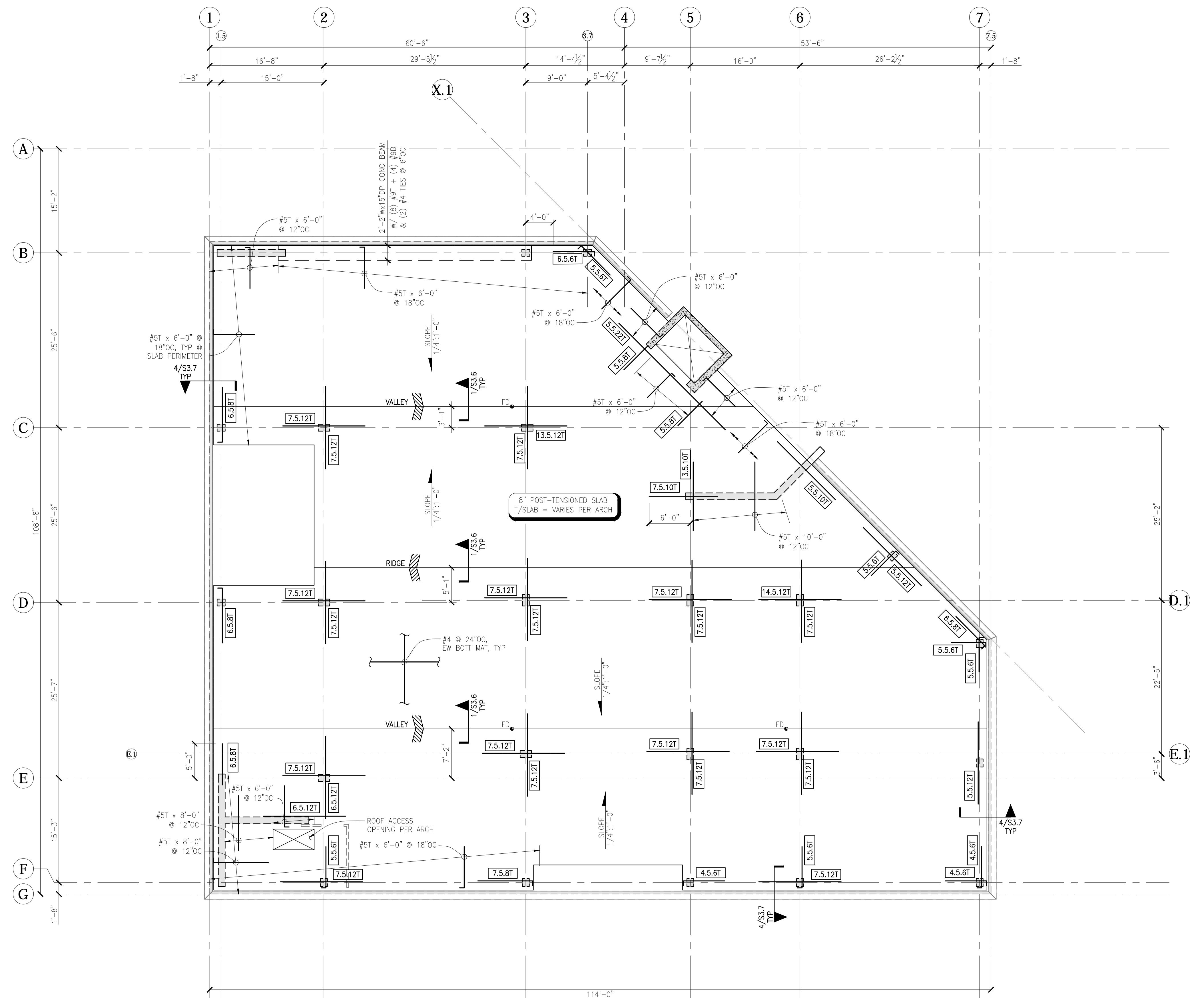
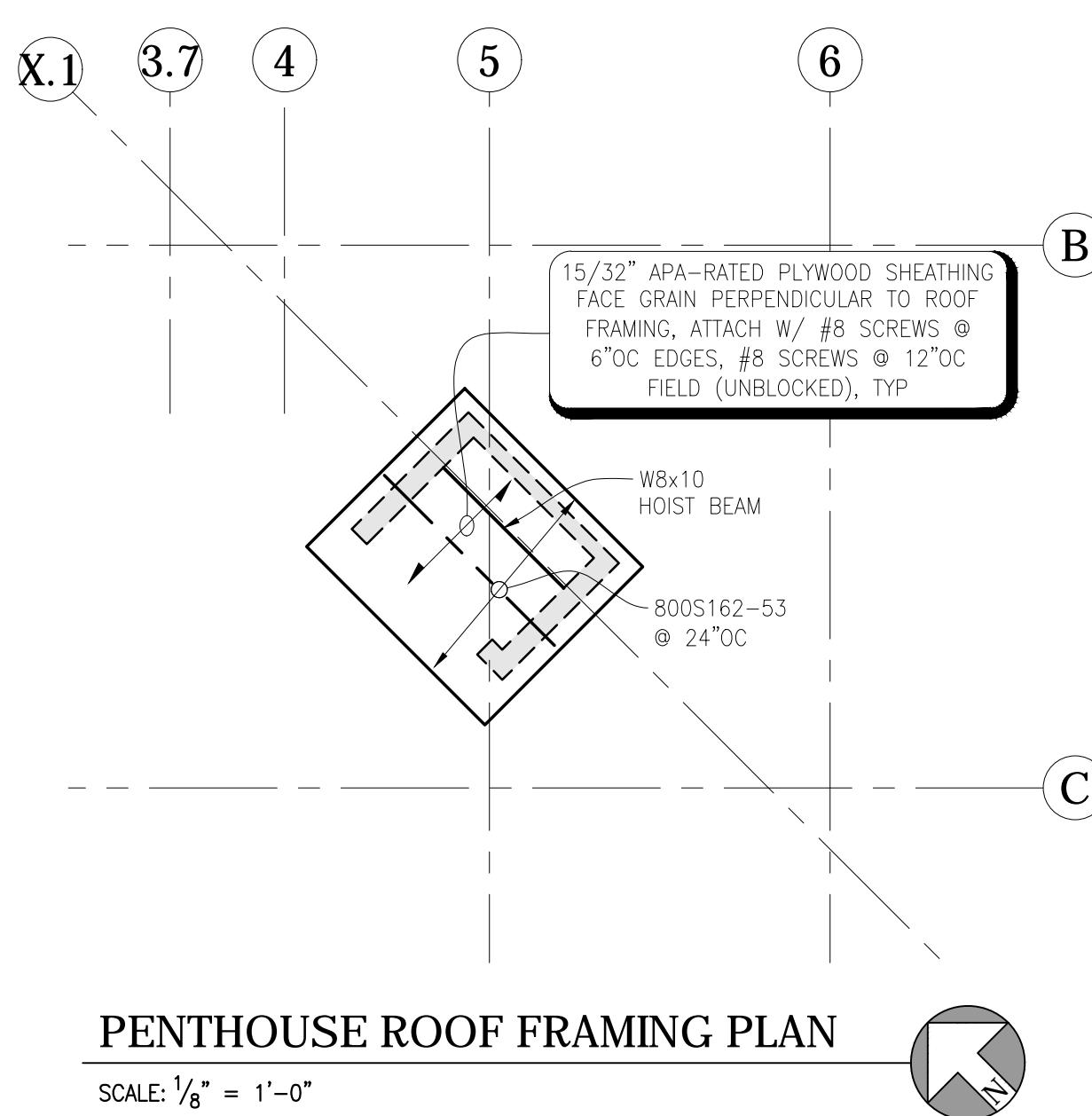
SHEET NUMBER:



DEI
DIBBLE ENGINEERS INC
www.dibbleengineers.com
1029 Market Street, Kirkland, WA 98033
425.828.4200

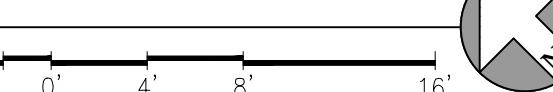
MILD REINFORCING SLAB PLAN NOTES

1. REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL UNO. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID. COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL, UNO.
3. PROVIDE TRIM REINFORCING AT ALL ELEVATED SLAB PENETRATIONS PER S3.2.
4. CONTRACTOR SHALL COORDINATE ALL OPENING DIMENSIONS, SLAB PENETRATIONS, BLOCKOUTS, DEPRESSIONS AND EMBEDS WITH THE ARCHITECTURAL DRAWINGS.
5. CONTRACTOR SHALL COORDINATE WITH SEOR REGARDING FORMWORK, POUR SEQUENCE AND LOADING OF SLABS PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR THE REQUIREMENTS REGARDING FOR REMOVAL AND RESHORING.
6. ONLY STRUCTURAL WALLS ARE SHOWN ON PLAN. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL TYPES AND LOCATIONS.
7. INDICATES CONCRETE COLUMN TYPE. SEE SCHEDULE 9/S3.4.
8. INDICATES CONCRETE WALL OR COLUMN ABOVE.
9. INDICATES CONCRETE WALL OR COLUMN BELOW.
10. INDICATES STEP OR SLOPE IN TOP OF SLAB.
11. INDICATES SLAB REINFORCEMENT. EXAMPLE: $8.4.10T$ (8) #4x10'-0" TOP (B=BOTTOM)
BAR LENGTH IN FEET
BAR SIZE
NUMBER OF BARS
12. INDICATES STUD RAIL SLAB REINFORCEMENT AND CONFIGURATION. SEE SHEET S3.4 FOR STUD RAIL DETAILS.
13. INDICATES CONCRETE SHEAR WALL ABOVE FRAMING. REFERENCE ELEVATIONS ON S3.0 FOR WALL THICKNESS & REINFORCING.
14. REBAR SHOWN AS INDICATES REBAR WITH STANDARD HOOK AT END. CONCRETE SLAB & BEAMS ARE DESIGNED FOR 1-HR FIRE RATING.
15. PROVIDE $\frac{3}{4}$ " CLEAR FOR BOTTOM REINFORCING IN SLAB & $1\frac{1}{2}$ " CLEAR FOR BOTTOM REINFORCING IN BEAMS. PROVIDE $\frac{3}{4}$ " CLEAR FOR ALL TOP REINFORCING IN SLABS & BEAMS



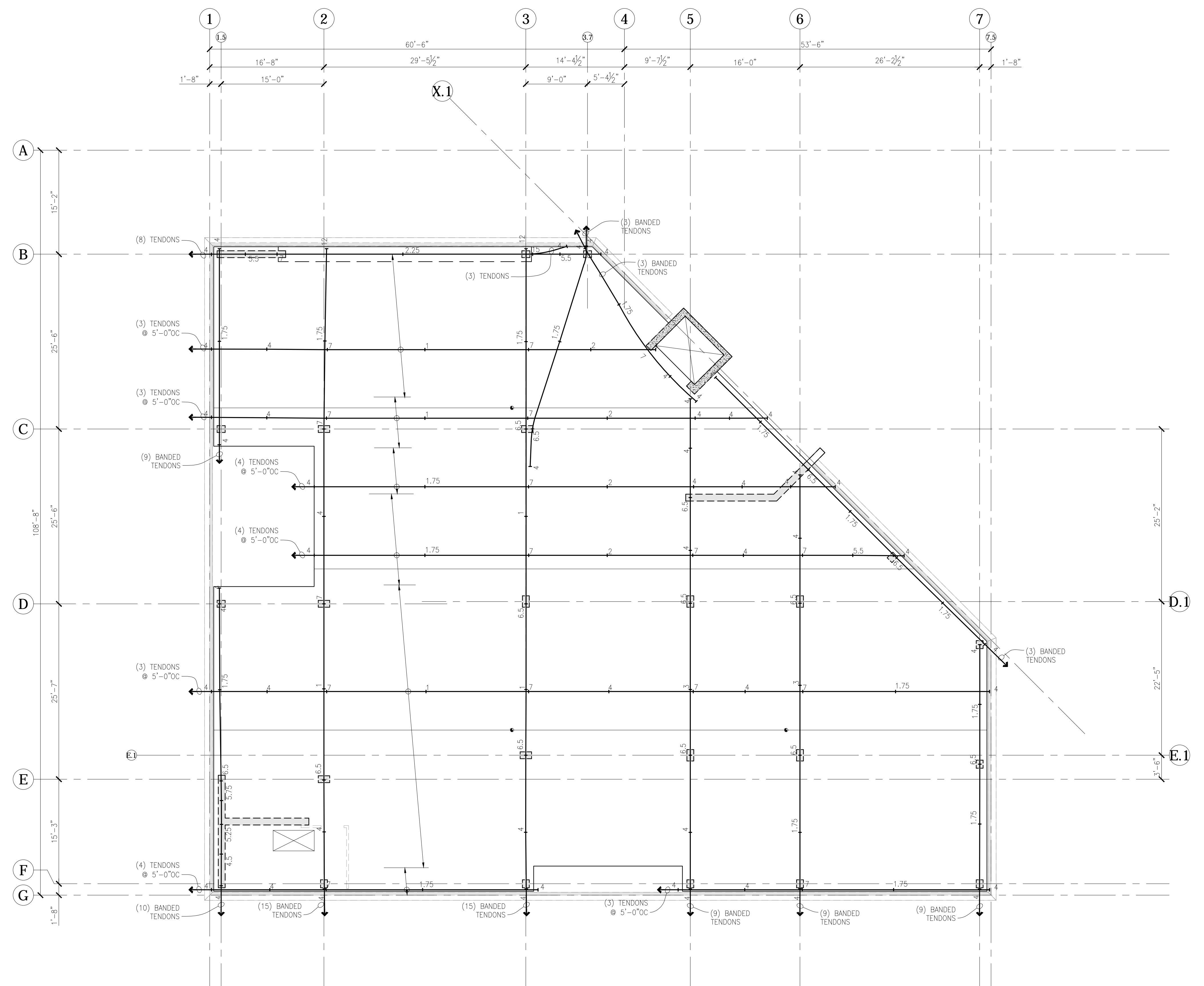
ROOF MILD REINF SLAB PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



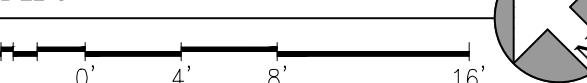
POST-TENSIONED SLAB PLAN NOTES

- REFERENCE S1.0-S1.3 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, ABBREVIATIONS AND SPECIAL INSPECTION TABLES.
- VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND STAGING OF ALL SHORING AND RESHORING.
- COLUMN OR WALL OVER-POURS INTO POST-TENSIONED SLABS SHALL NOT BE GREATER THAN 1/2". REMOVE ANY EXCESSIVE COLUMN OR WALL OVER-POURS PRIOR TO PLACING REINFORCING BARS AND POST-TENSIONED TENDONS.
- DO NOT INSTALL EPOXY, EXPANSION, OR SCREW ANCHORS INTO THE POST-TENSIONED SLAB. DRILLING INTO THE POST-TENSIONED SLAB WITHOUT APPROVAL FROM EOR IS NOT PERMITTED. ALL BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, ETC.) SHALL PLACE DUCTS, CHASES, PIPES OR PIPE SUPPORTS, CONDUIT SLEEVES AND HANGER INSERTS, ETC. INTO THE POST-TENSIONED SLAB PRIOR TO POURING THE CONCRETE.
- FOR TENDON STRESSING SEQUENCE, REFERENCE GENERAL NOTES. STRESS A MINIMUM OF (2) TENDONS AT SLAB EDGES PERPENDICULAR TO THE BANDED TENDON ENDS BEFORE BANDED TENDONS ARE STRESSED.
- HORIZONTAL SWEEP OF THE TENDONS SHALL NOT BE GREATER THAN 1:6. TENDONS WITH HORIZONTAL SWEEP GREATER THAN 1:6 SHALL BE REVIEWED BY THE EOR FOR TENDON SPACING AND ADDITIONAL REINFORCING REQUIREMENTS PRIOR TO PLACING CONCRETE. FOR HORIZONTAL SWEEPS GREATER THAN 1:12, SEE DETAIL 5/S3.3.
- MILD REINFORCING BAR LAYOUT SHALL BE PER THE MILD REINFORCING PLAN.
- TENDON LOCATIONS SHALL BE PERMANENTLY MARKED; REFER TO POST-TENSIONING GENERAL NOTES.



ROOF POST-TENSIONED SLAB PLAN

SCALE: $\frac{1}{8}$ " = 1'-0"



S 2.3b

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

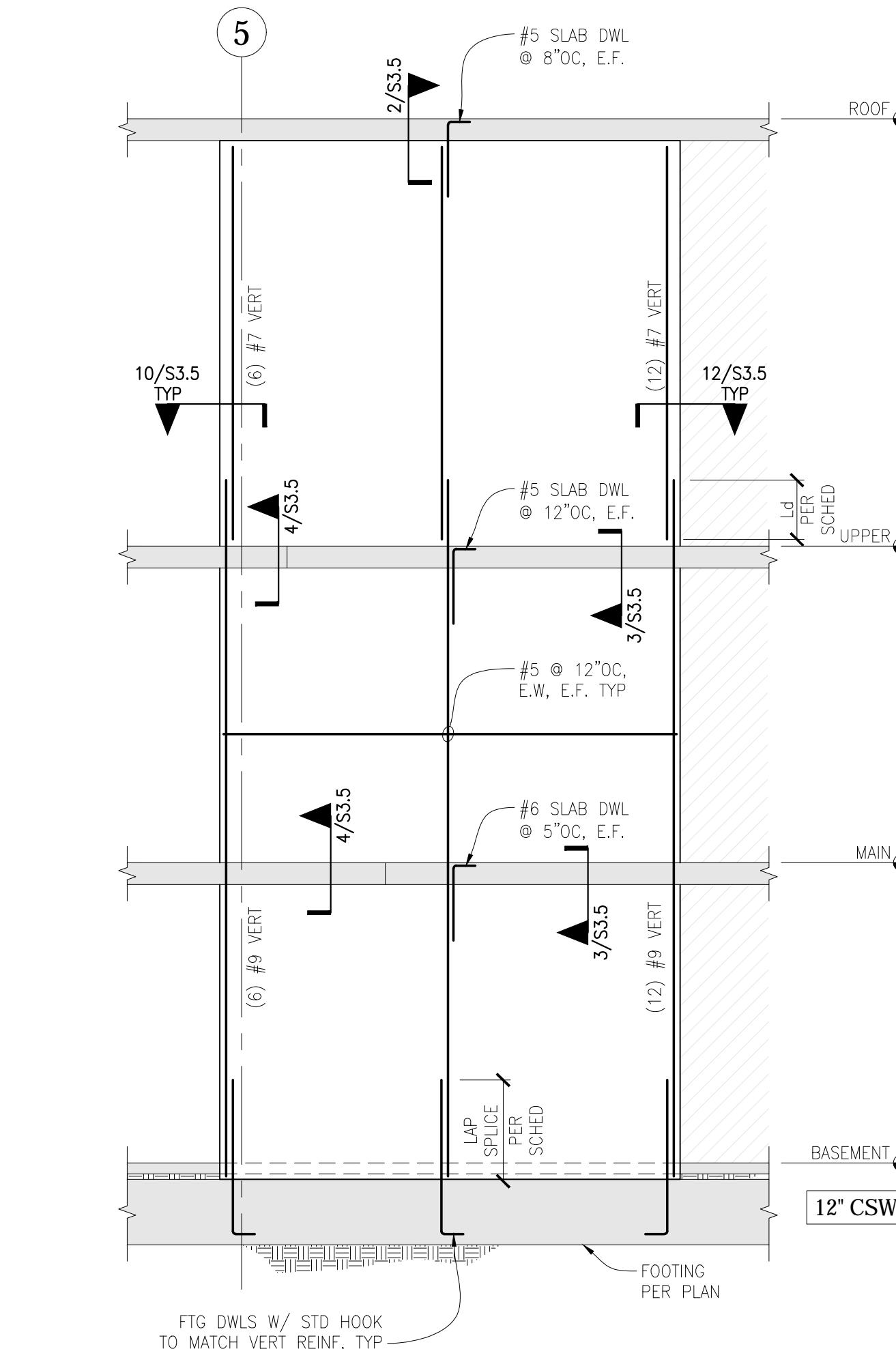
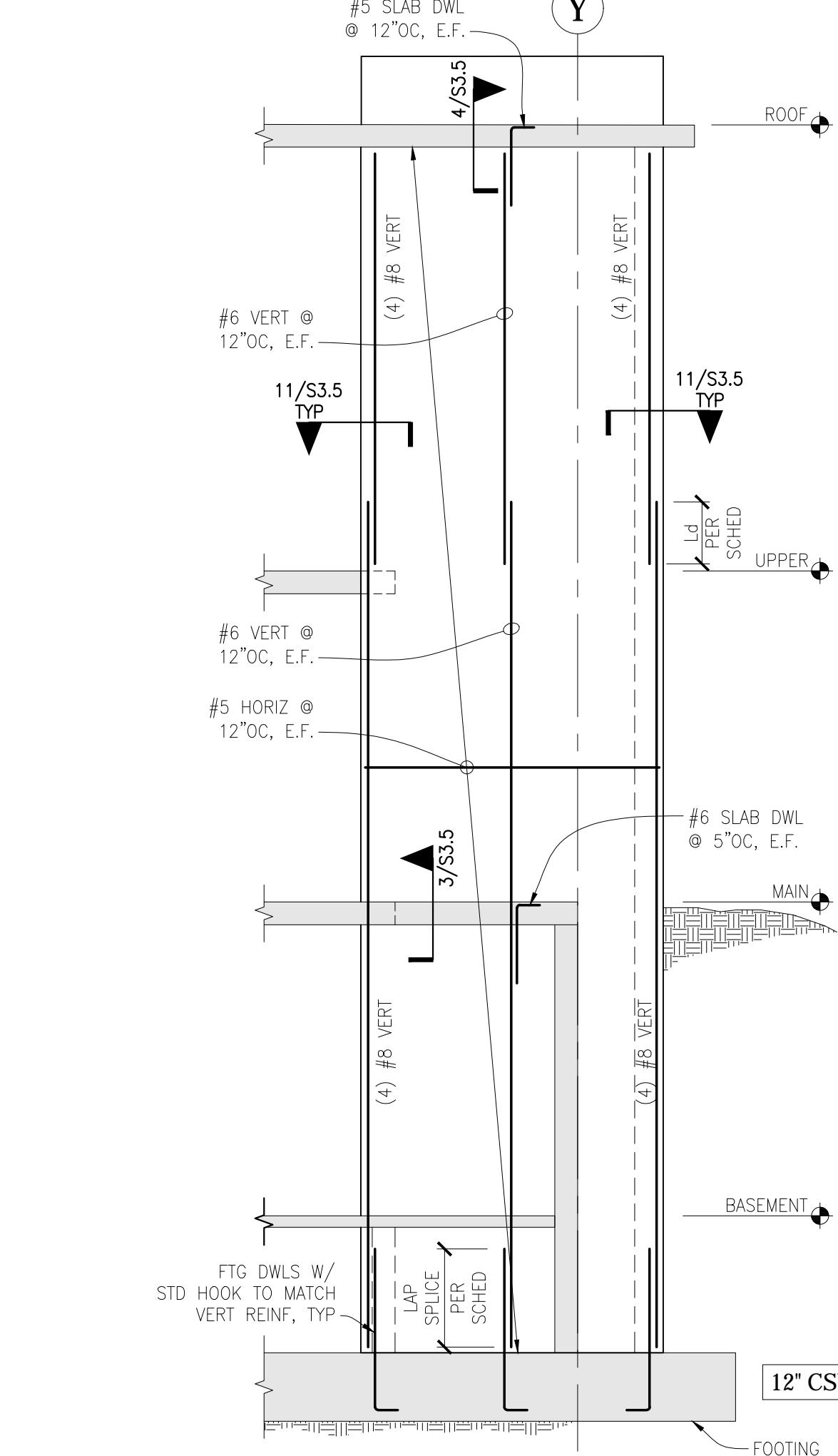
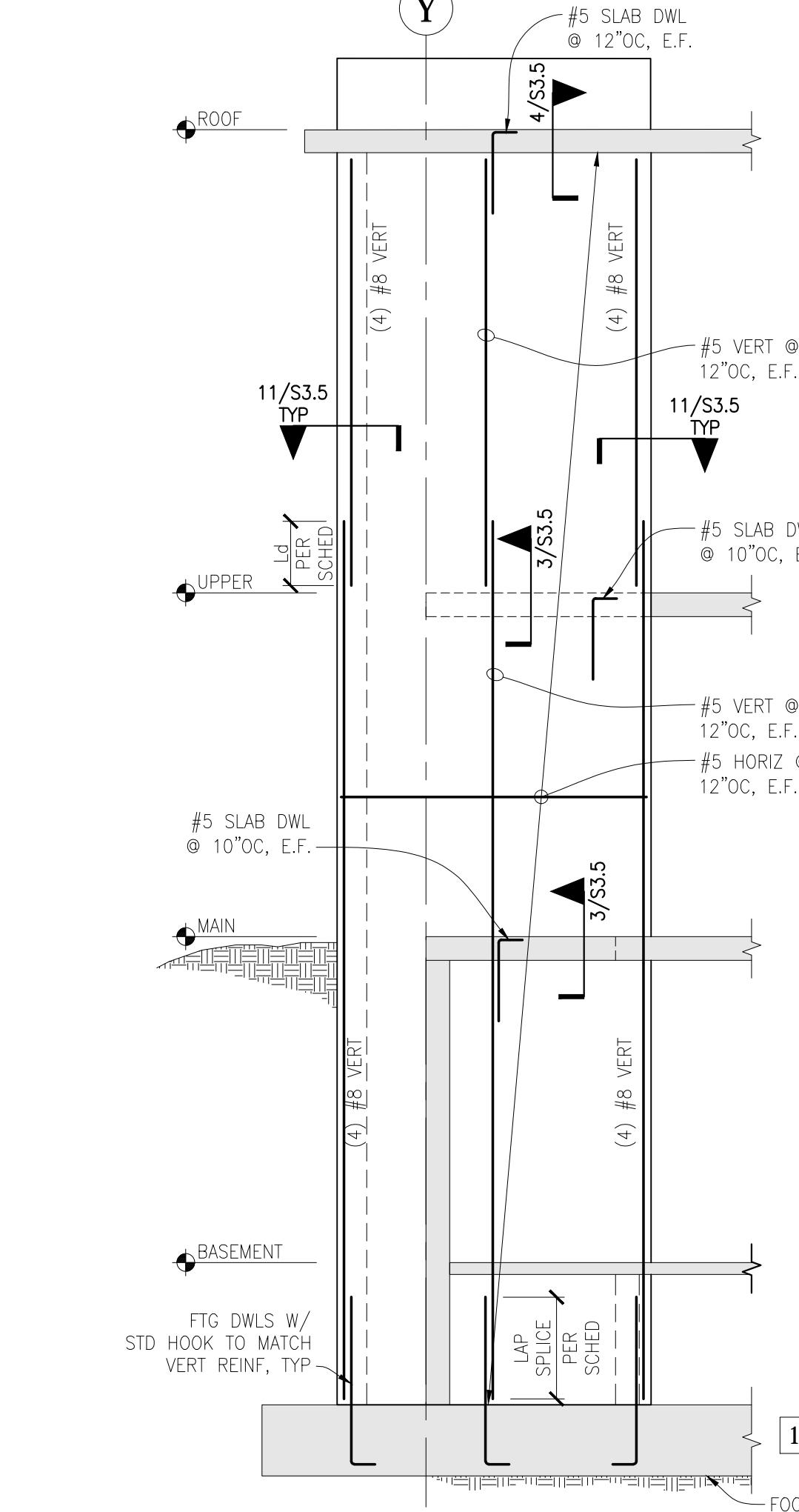
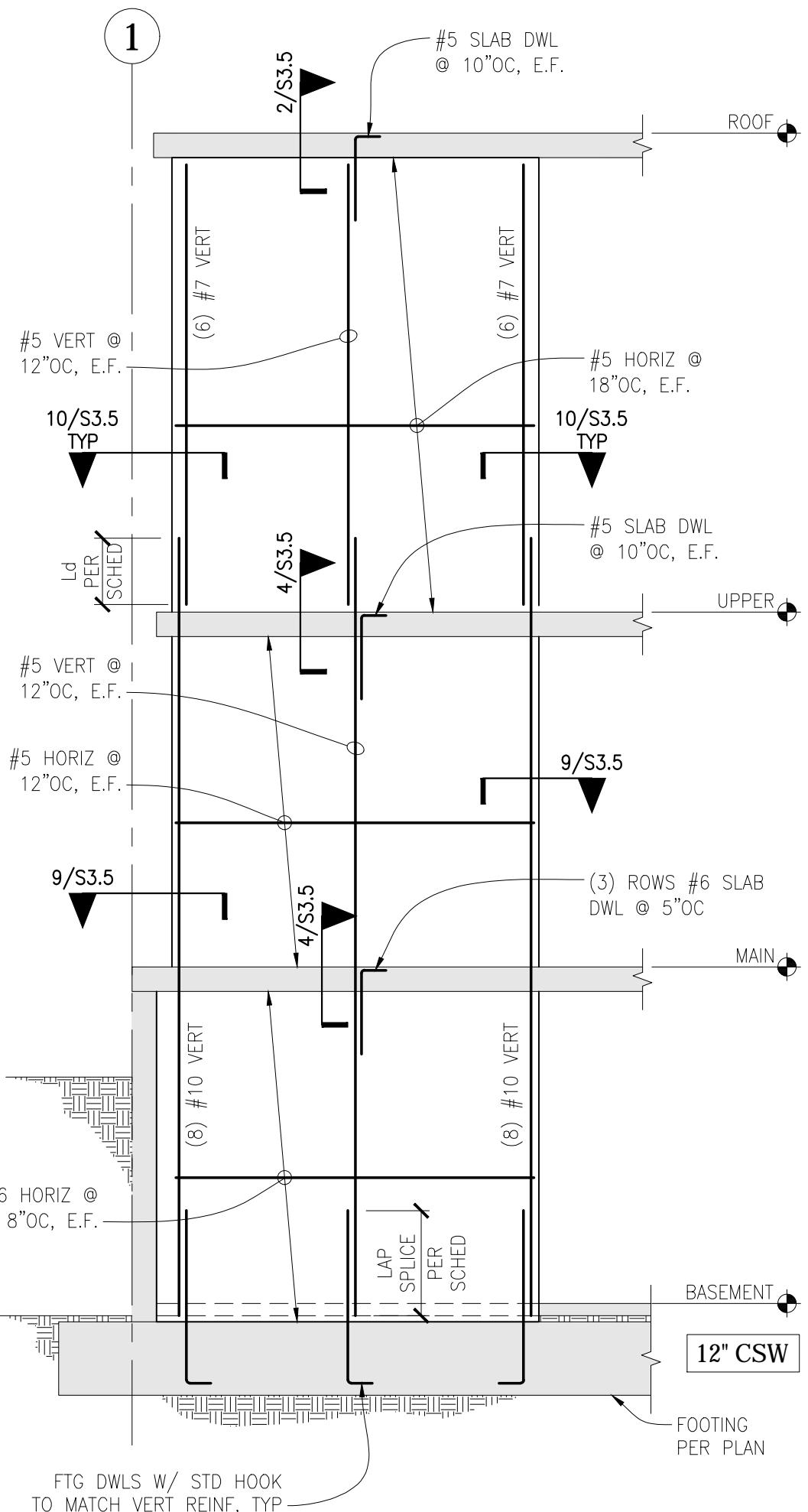
PROJECT #: 17-025
DRAWN BY: TTP / TLT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION
PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE:
STRUCTURAL
ROOF
P-T PLAN

SHEET NUMBER:





1

2

3

4

CONCRETE SHEAR WALL AT GRID C.4

SCALE: $\frac{1}{4}'' = 1'-0''$

CONCRETE SHEAR WALL AT GRID 1.5

SCALE: $\frac{1}{4}'' = 1'-0''$

CONCRETE SHEAR WALL AT GRID E.4

SCALE: $\frac{1}{4}'' = 1'-0''$

CONCRETE SHEAR WALL - KEY PLAN

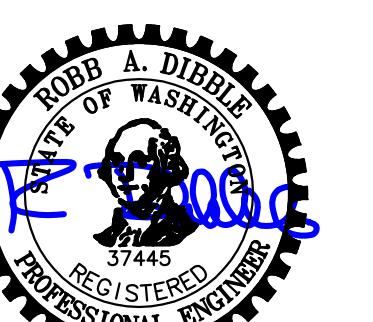
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5

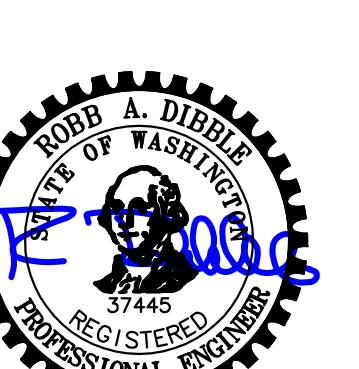
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7

8



4/26/17



1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

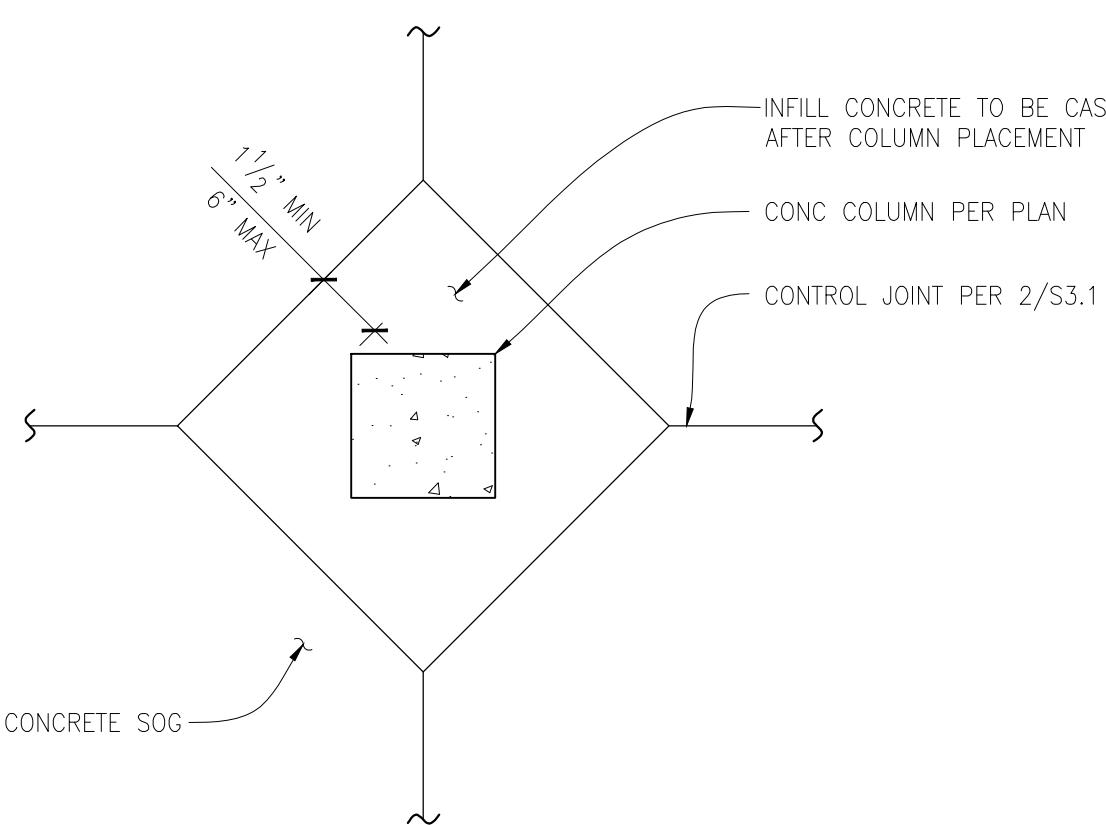
PROJECT #: 17-025
DRAWN BY: TTP/TIT
DESIGNED BY: RAD
DATE: 4.11.2017
DESCRIPTION: PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE:
STRUCTURAL
SECTIONS & DETAILS

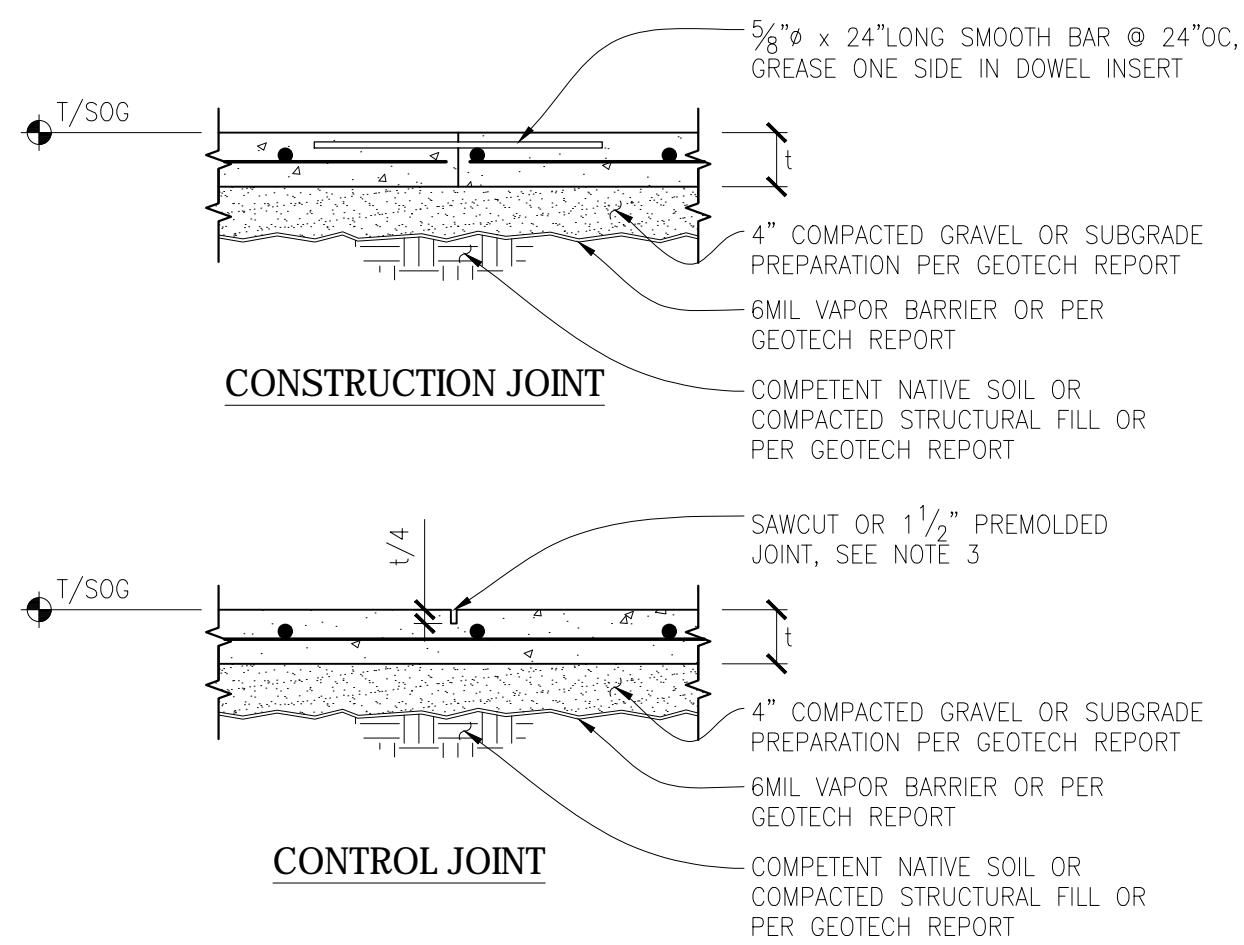
SHEET NUMBER:

S 3.1



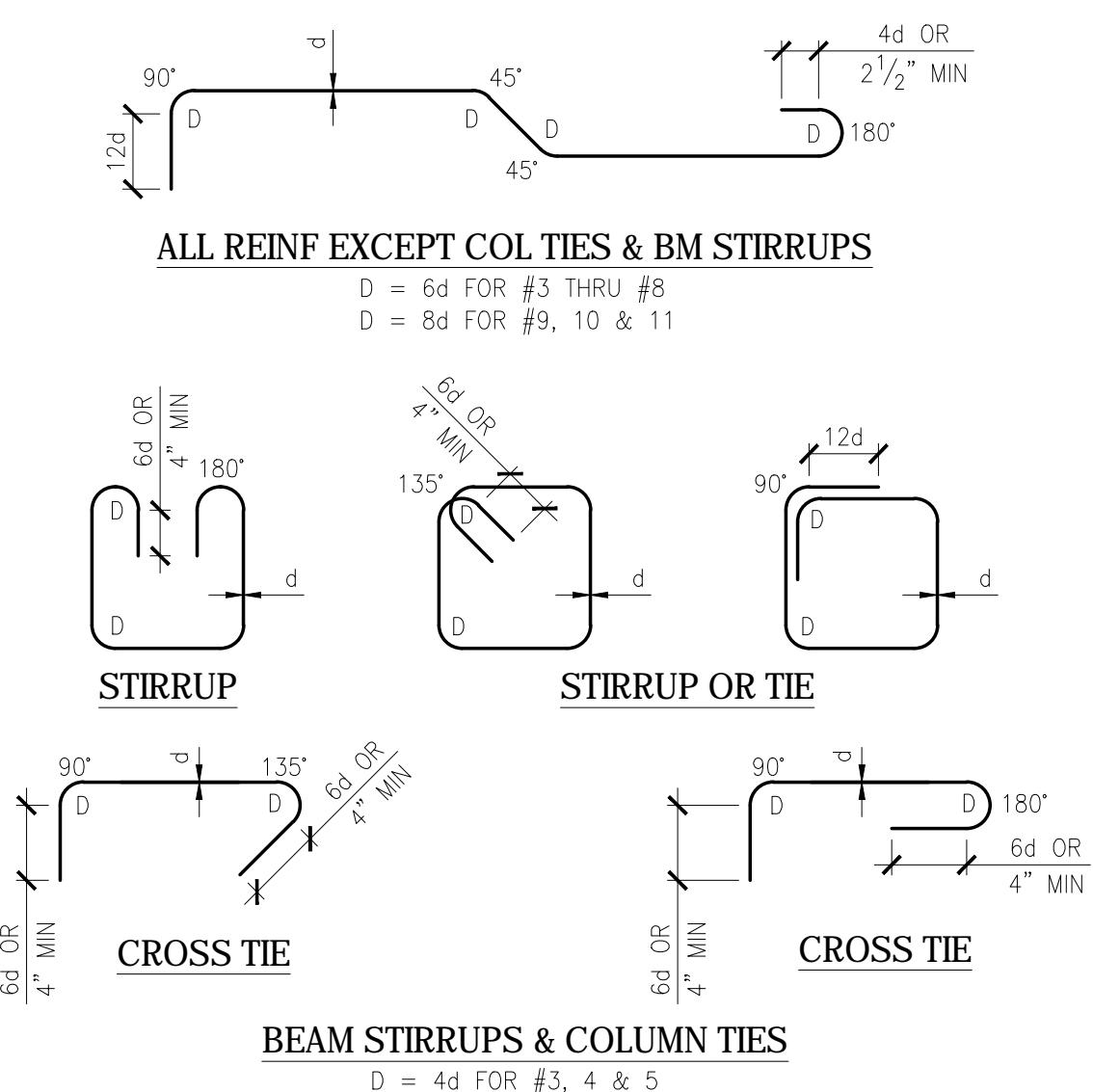
TYPICAL CONTROL JOINT AT CONCRETE COLUMN

SCALE: $\frac{3}{4}'' = 1'-0''$



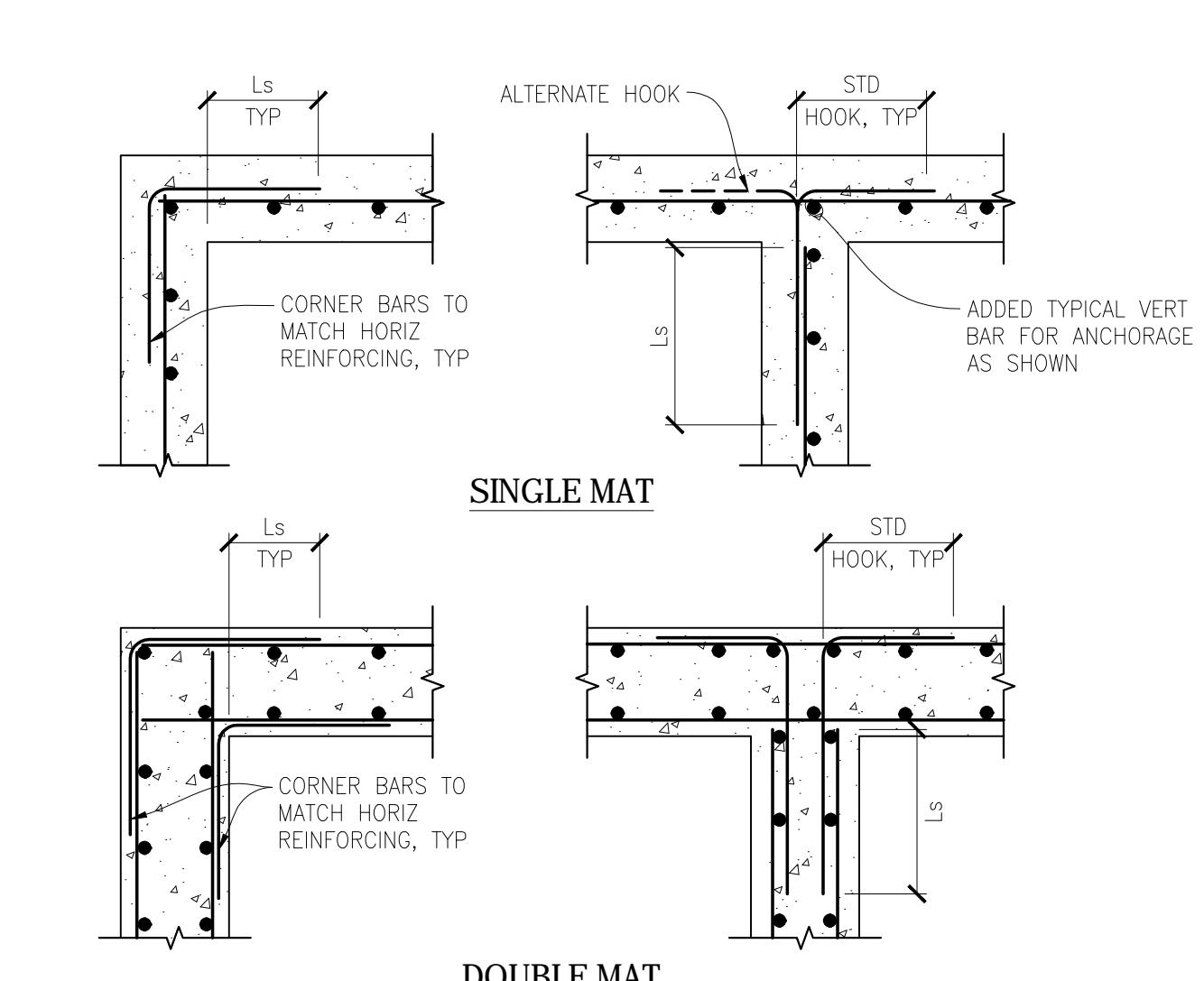
TYPICAL SLAB ON GRADE JOINT DETAILS

SCALE: N.T.S.



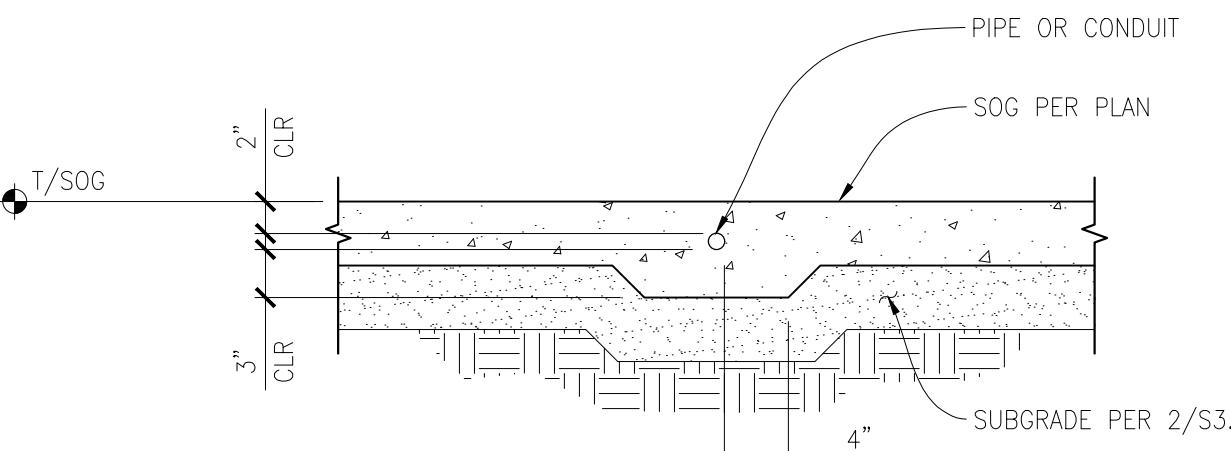
TYPICAL REBAR BEND SCHEDULE

SCALE: N.T.S.



TYPICAL CONCRETE MEMBER INTERSECTIONS

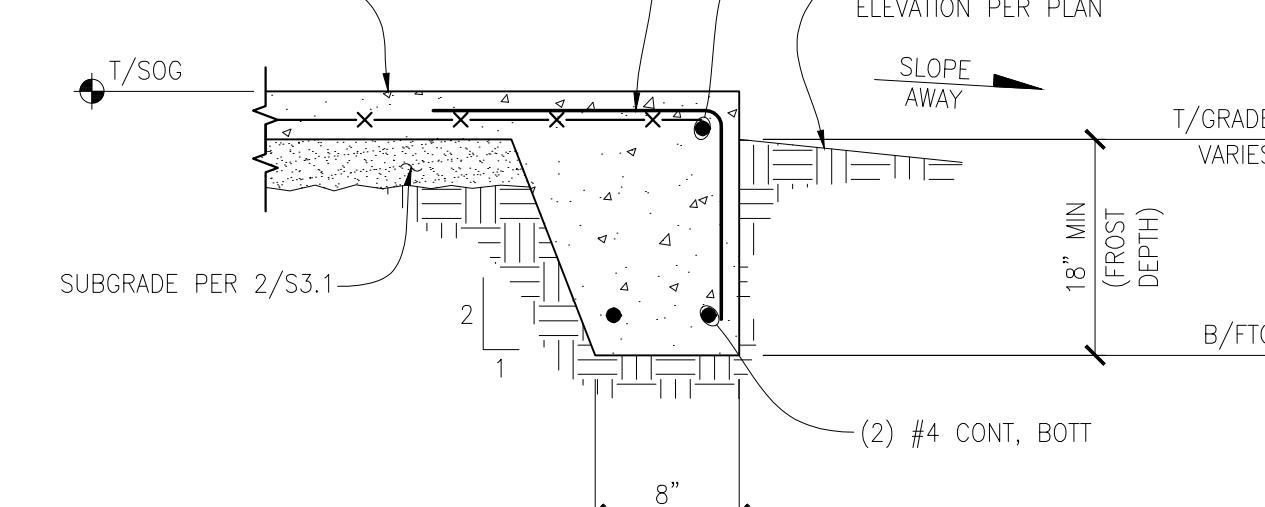
SCALE: N.T.S.



NOTE:
1. ALUMINUM MATERIALS SHALL NOT BE EMBEDDED IN CONCRETE.
2. CONTRACTOR TO COORDINATE FIELD CONDITIONS.

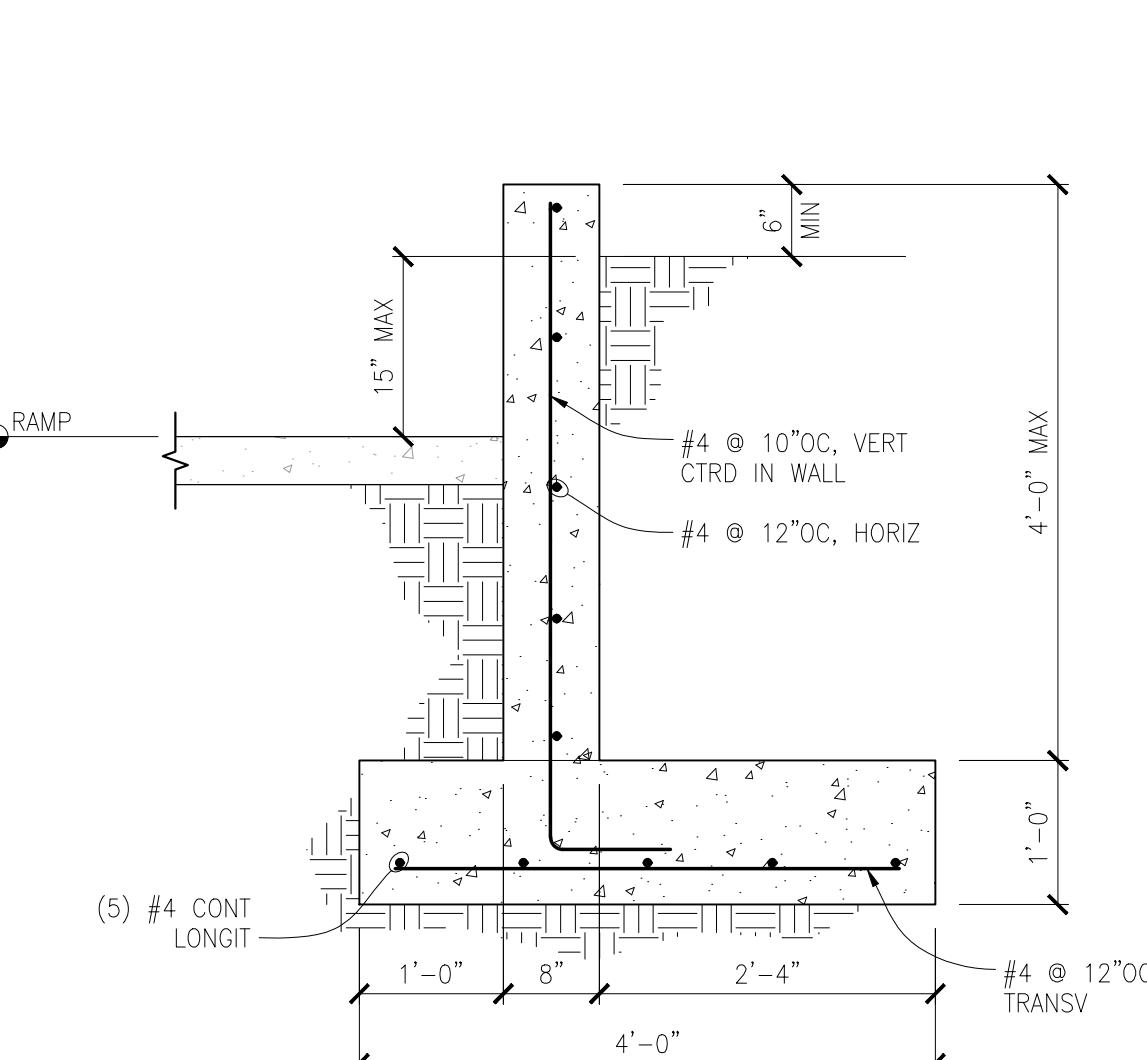
PIPE/CONDUIT IN SLAB-ON-GRADE

SCALE: $1'' = 1'-0''$



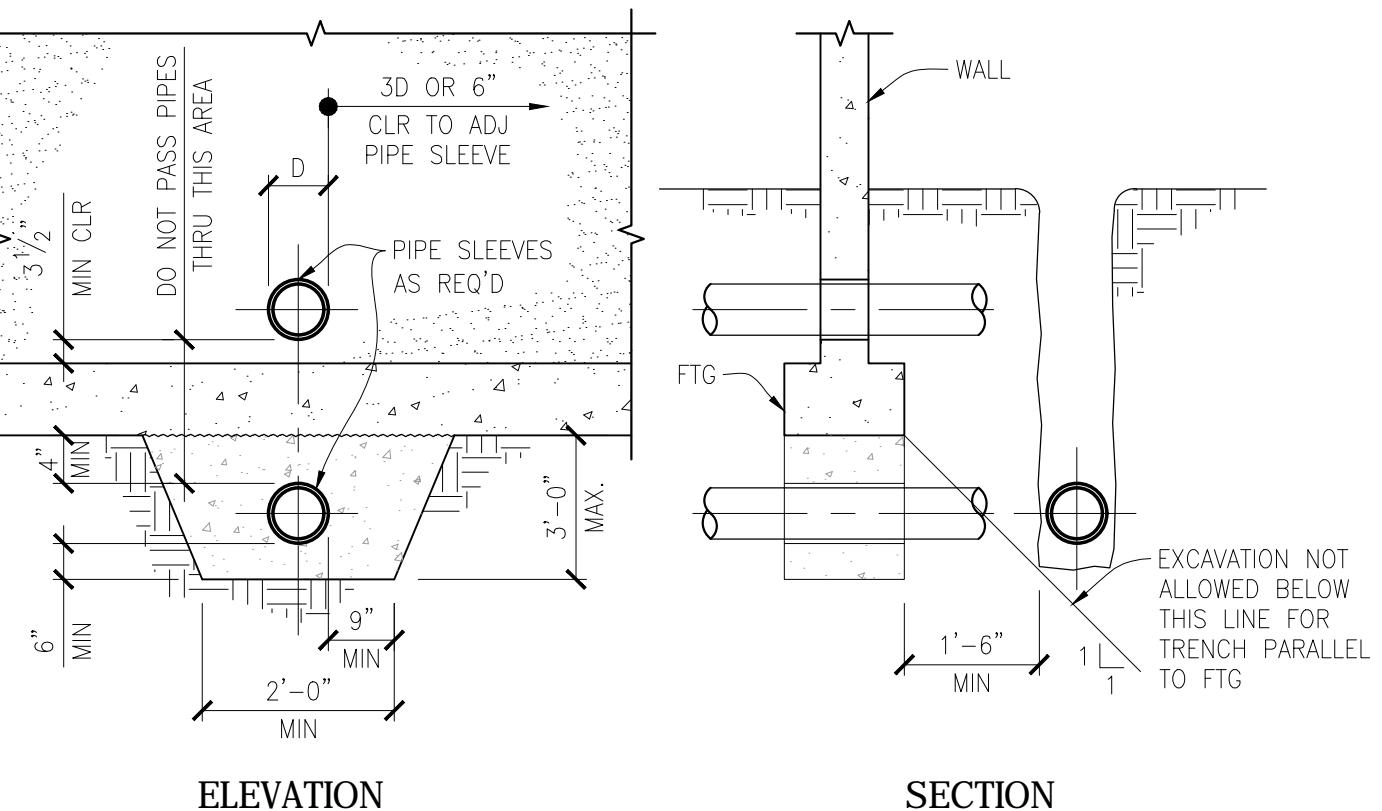
TYPICAL THICKENED SLAB EDGE FOOTING

SCALE: N.T.S.



TYPICAL RETAINING WALL (4'-0" MAX)

SCALE: $\frac{3}{4}'' = 1'-0''$

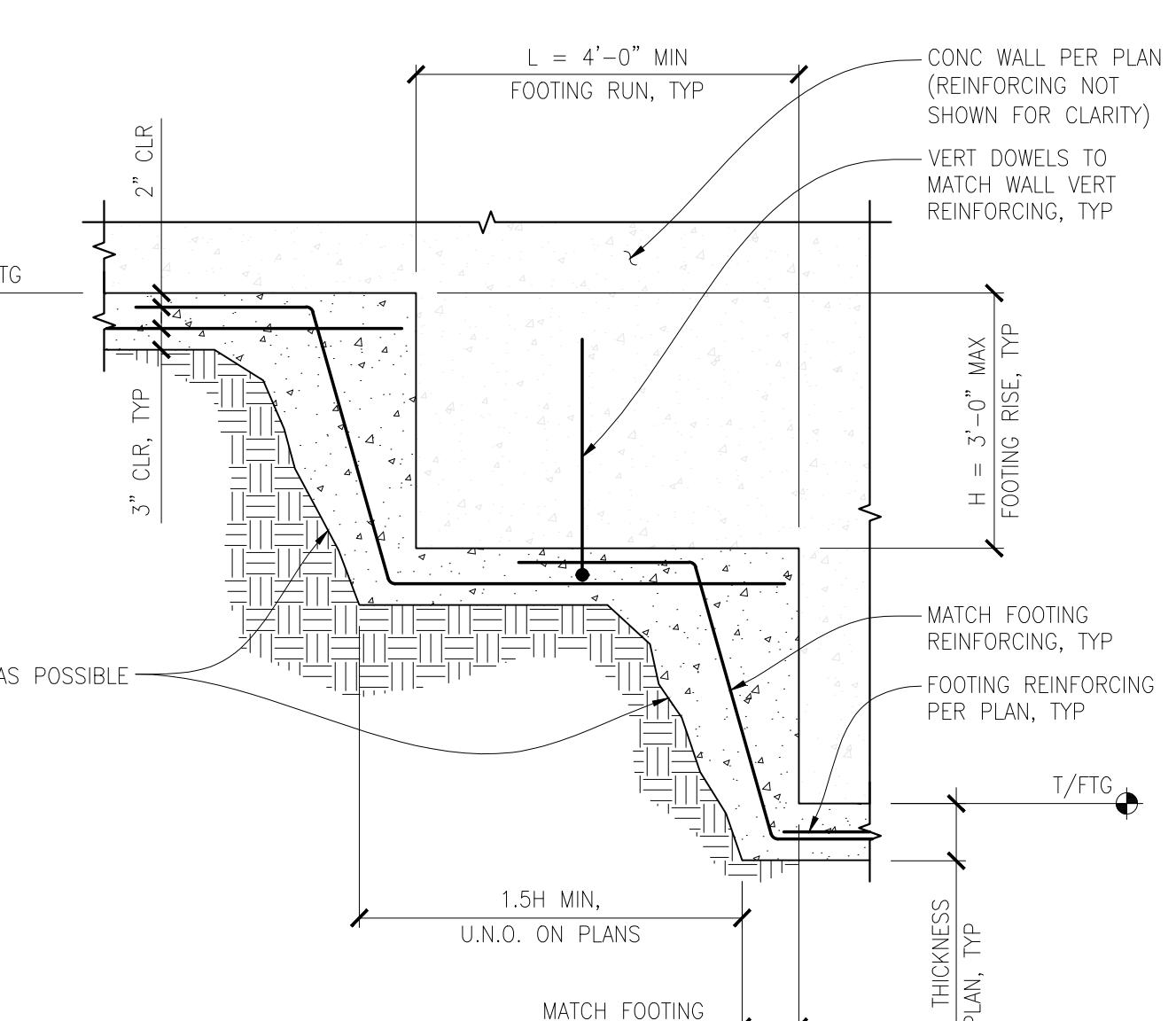


TYPICAL BASEMENT CONCRETE WALL

SCALE: $\frac{3}{4}'' = 1'-0''$

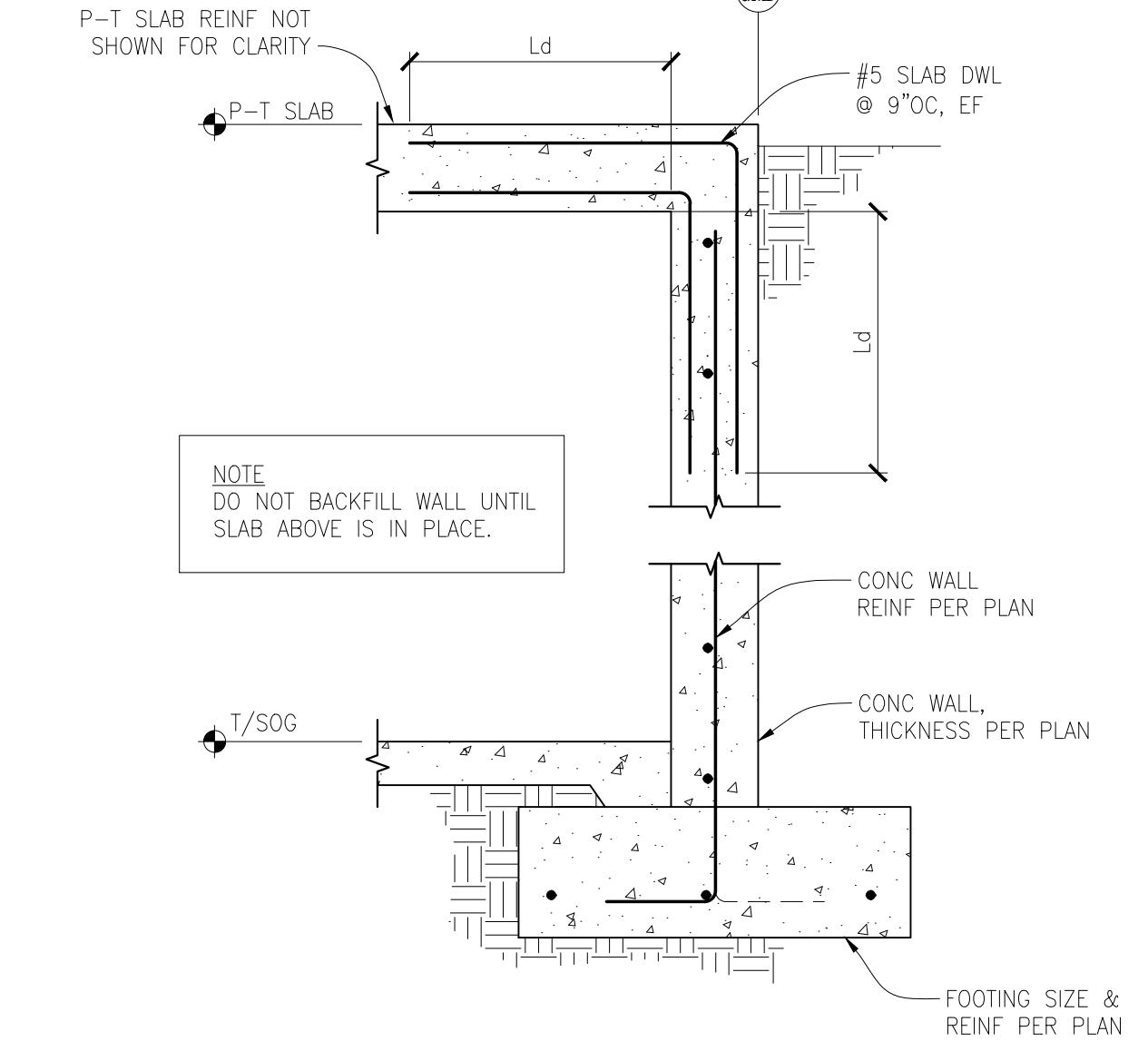
BAR SIZE	DEVELOPMENT LENGTH, Ld		CLASS B SPLICE, Ls		Ldh	
	STANDARD	TOP	(3)	STANDARD	TOP	
<i>fc = 3000 psi / 3500 psi</i>						
#3	17	22	23	29	9	
#4	22	29	29	38	11	
#5	28	36	37	47	14	
#6	33	43	43	56	17	
#7	48	63	63	82	20	
#8	55	72	72	94	22	
#9	62	81	81	106	25	
#10	70	91	91	119	28	
#11	78	101	102	132	31	

BAR SIZE	DEVELOPMENT LENGTH, Ld		CLASS B SPLICE, Ls		Ldh	
	STANDARD	TOP	(3)	STANDARD	TOP	
<i>fc = 4000 psi / 4500 psi</i>						
#3	15	19	20	25	8	
#4	19	25	25	33	10	
#5	24	31	32	41	12	
#6	29	37	38	49	15	
#7	42	54	55	71	17	
#8	48	62	63	81	19	
#9	54	70	71	91	22	
#10	61	79	80	103	25	
#11	67	87	88	114	27	



TYPICAL STEPPED FOOTING DETAIL

SCALE: N.T.S.



TYPICAL BASEMENT CONCRETE WALL

SCALE: $\frac{3}{4}'' = 1'-0''$

BAR SIZE	DEVELOPMENT LENGTH, Ld		CLASS B SPLICE, Ls		Ldh	
	STANDARD	TOP	(3)	STANDARD	TOP	
<i>fc = 3000 psi / 3500 psi</i>						
#3	17	22	23	29	9	
#4	22	29	29	38	11	
#5	28	36	37	47	14	
#6	33	43	43	56	17	
#7	48	63	63	82	20	
#8	55	72	72	94	22	
#9	62	81	81	106	25	
#10	70	91	91	119	28	
#11	78	101	102	132	31	

BAR SIZE	DEVELOPMENT LENGTH, Ld		CLASS B SPLICE, Ls		Ldh	
	STANDARD	TOP	(3)	STANDARD	TOP	
<i>fc = 4000 psi / 4500 psi</i>						
#3	15	19	20	25	8	
#4	19	25	25	33	10	
#5	24	31	32	41	12	
#6	29	37	38	49	15	
#7	42	54	55	71	17	
#8	48	62	63	81	19	
#9	54	70	71	91	22	
#10	61	79	80	103	25	
#11	67	87	88	114	27	

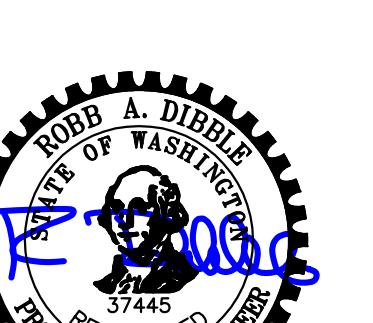
BAR SIZE	DEVELOPMENT LENGTH, Ld		CLASS B SPLICE, Ls		Ldh	
	STANDARD	TOP	(3)	STANDARD	TOP	
<i>fc = 5000 psi</i>						
#3	13	17	17	23	7	
#4	17	23	23	30	9	
#5	22	28	29	37	11	
#6	26	34	34	45	13	
#7	38	49	50	64	15	
#8	43	56	56	73	17	
#9	48	63	63	82	20	
#10	54	71	71	93	22	
#11	60	78	78	102	24	

1. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING $> db$, CLEAR COVER $> db$ AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING $> 2db$.
2. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
3. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
4. UNO, ALL LAPS SHALL BE MINIMUM CLASS B.
5. ALL TABULATED VALUES ARE IN INCHES.
6. Ldh = HOOKED BAR DEVELOPMENT LENGTH.

TYPICAL LAP SPLICE &
DEVELOPMENT LENGTH SCHEDULE

SCALE: N.T.S.

12



1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

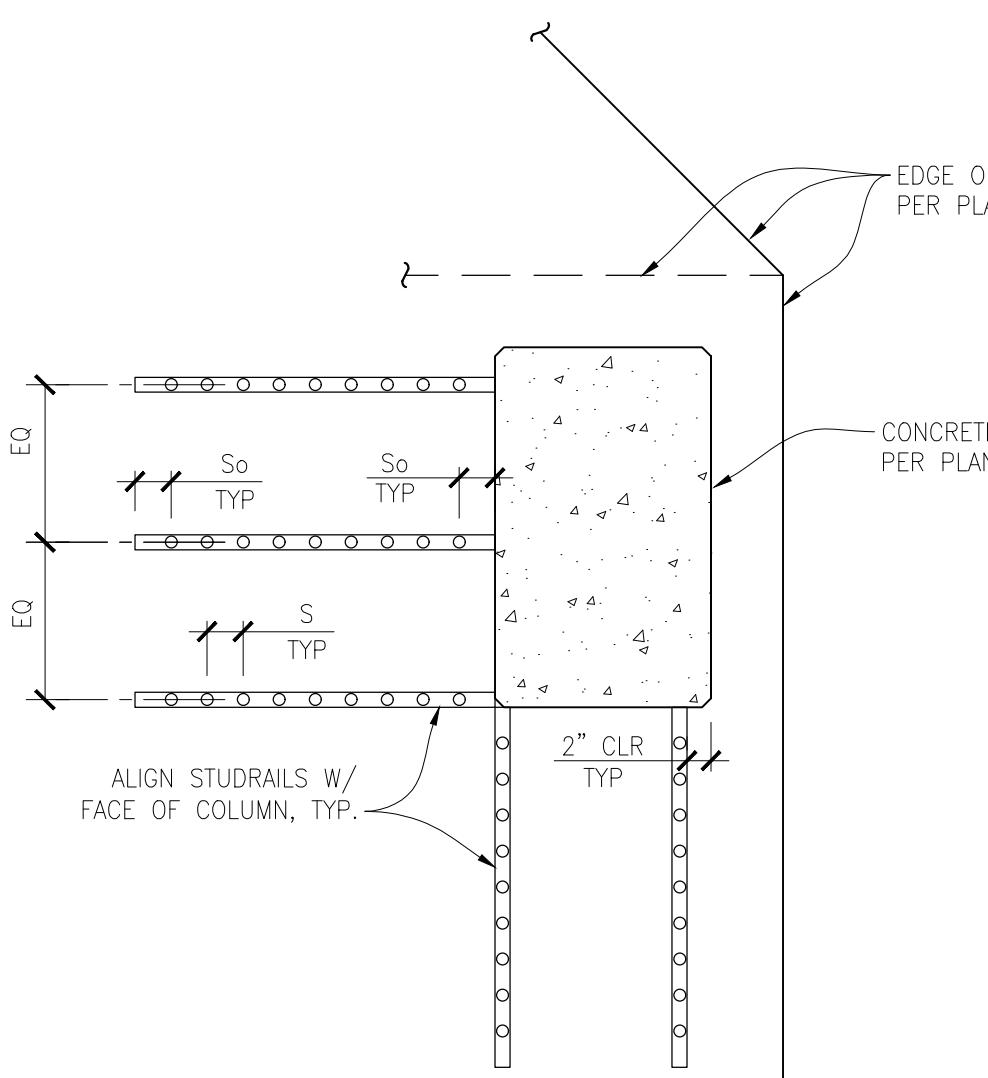
PROJECT #: 17-025
DRAWN BY: TIP / TIT
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DATE: 4.11.2017
DESCRIPTION: PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

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STRUCTURAL
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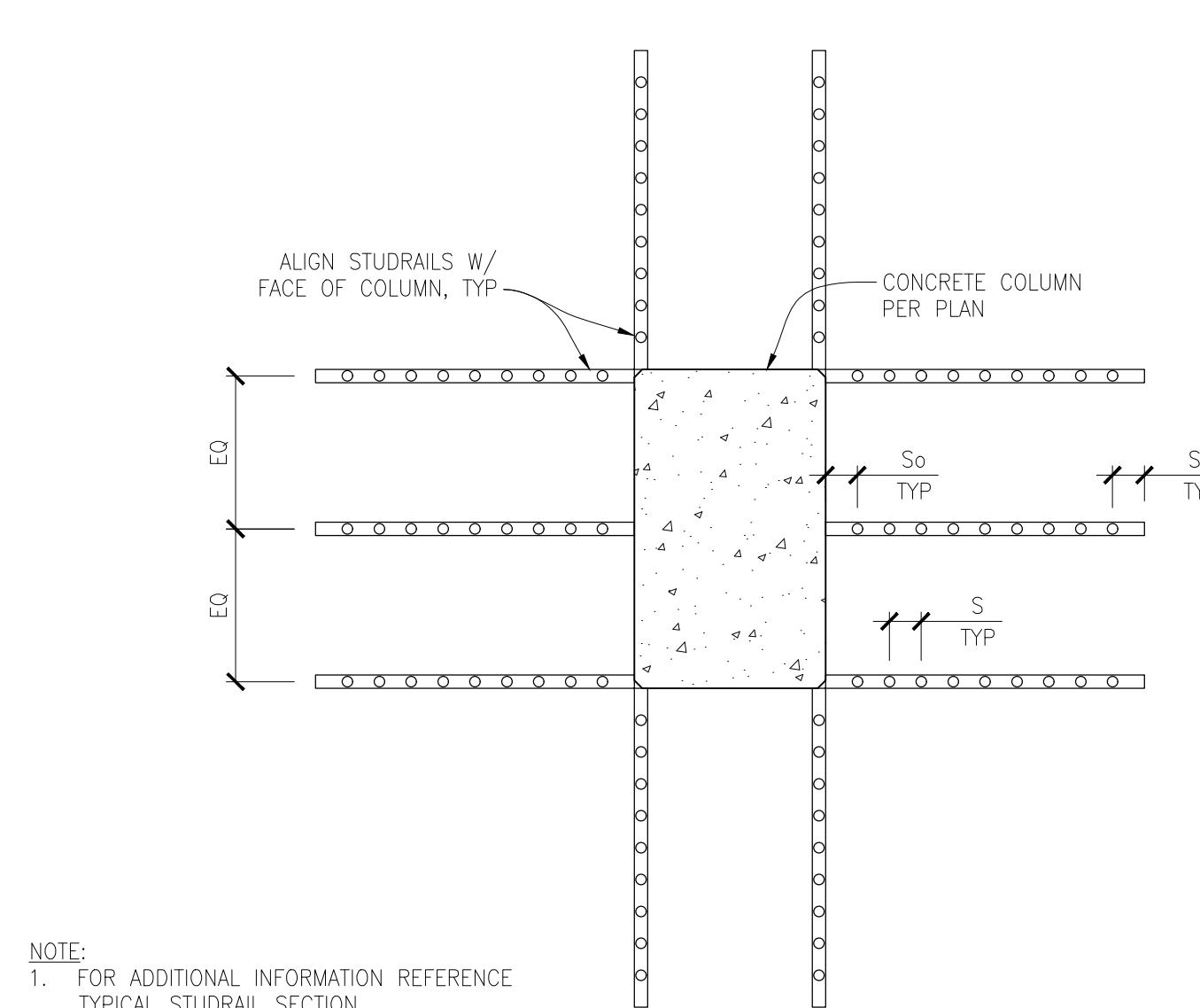
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S 3.4



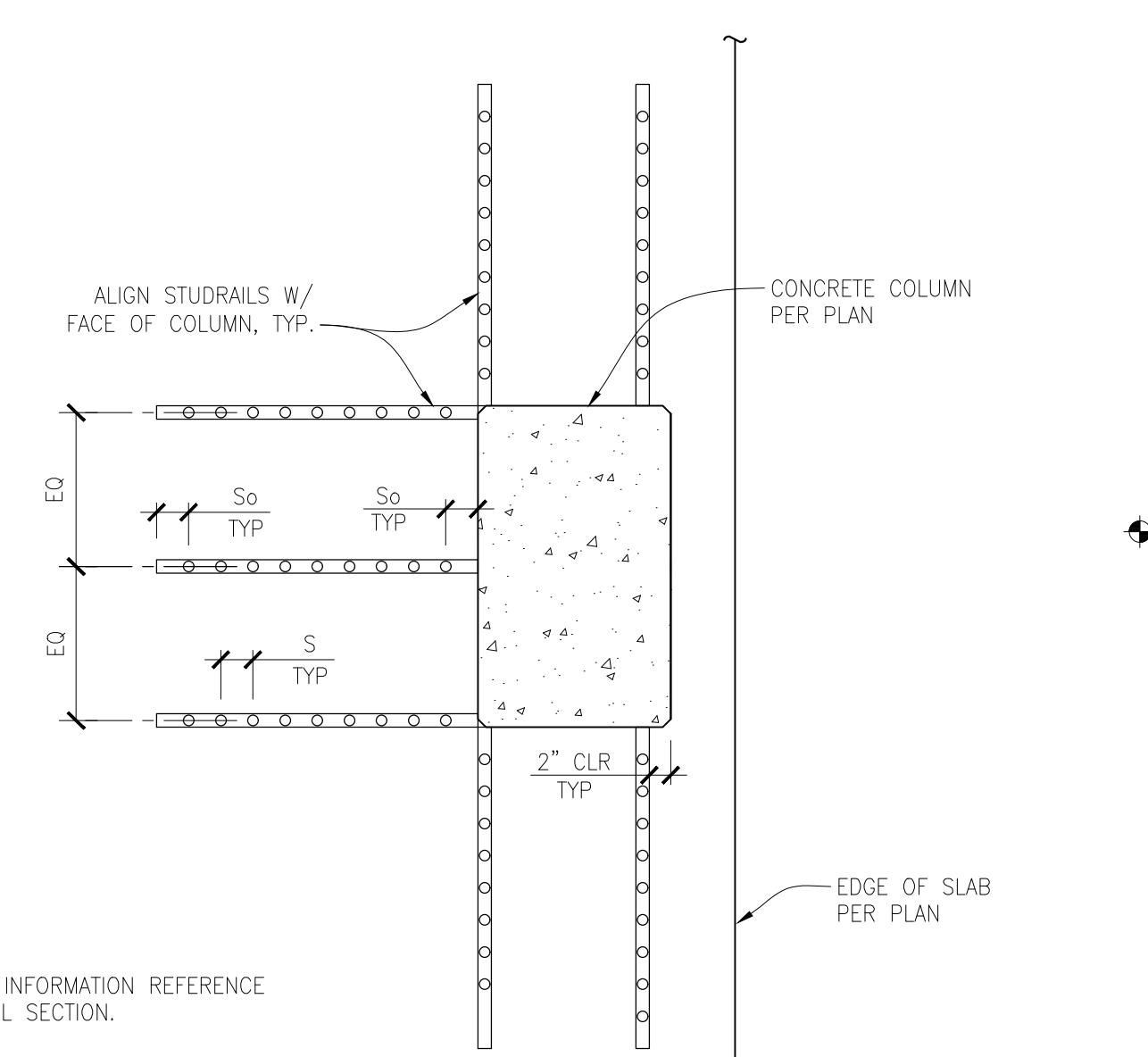
STUDRAIL LAYOUT - CORNER COLUMN

SCALE: $\frac{3}{4}'' = 1'-0''$



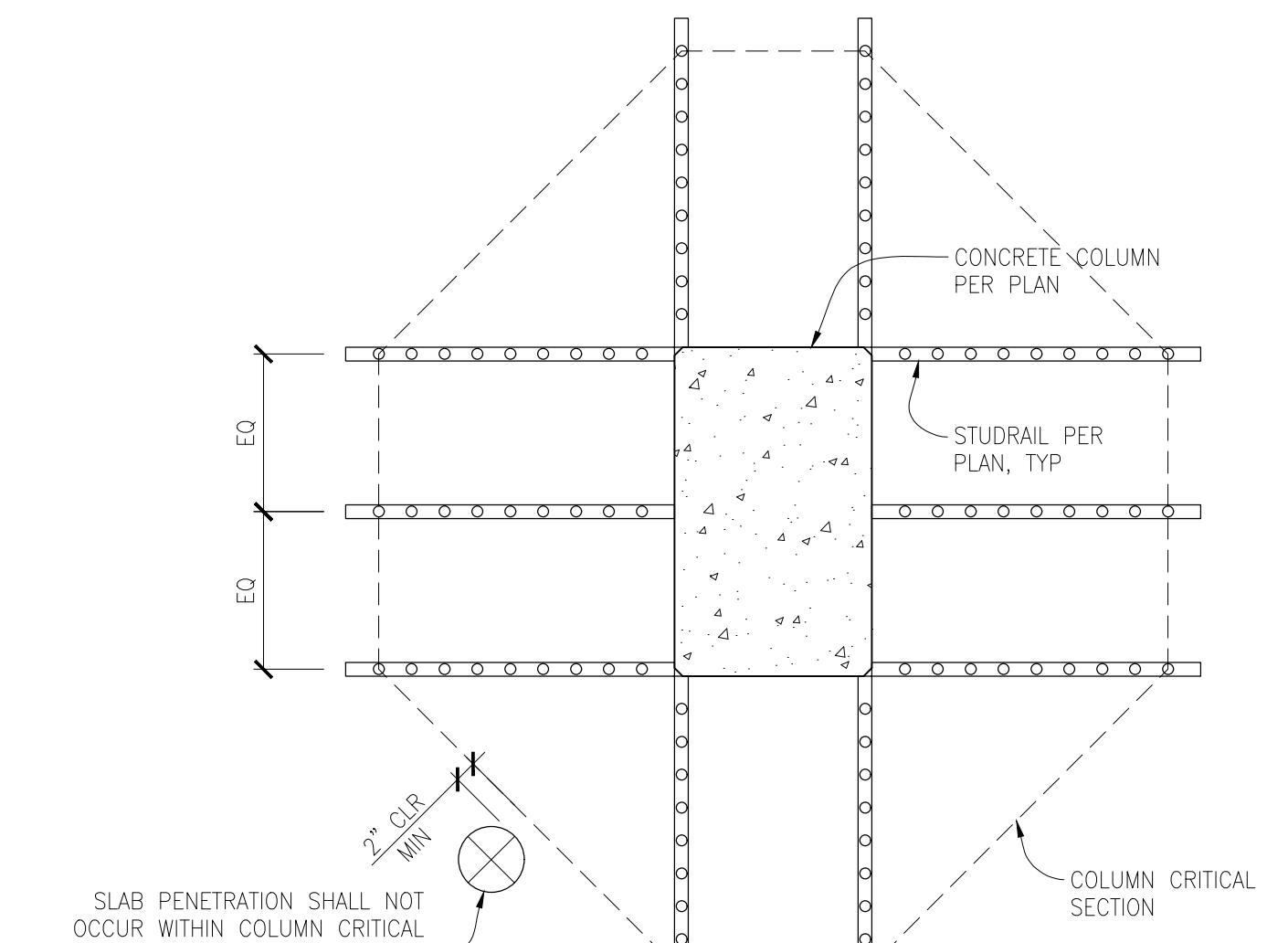
STUDRAIL LAYOUT - INTERIOR COLUMN

SCALE: N.T.S.



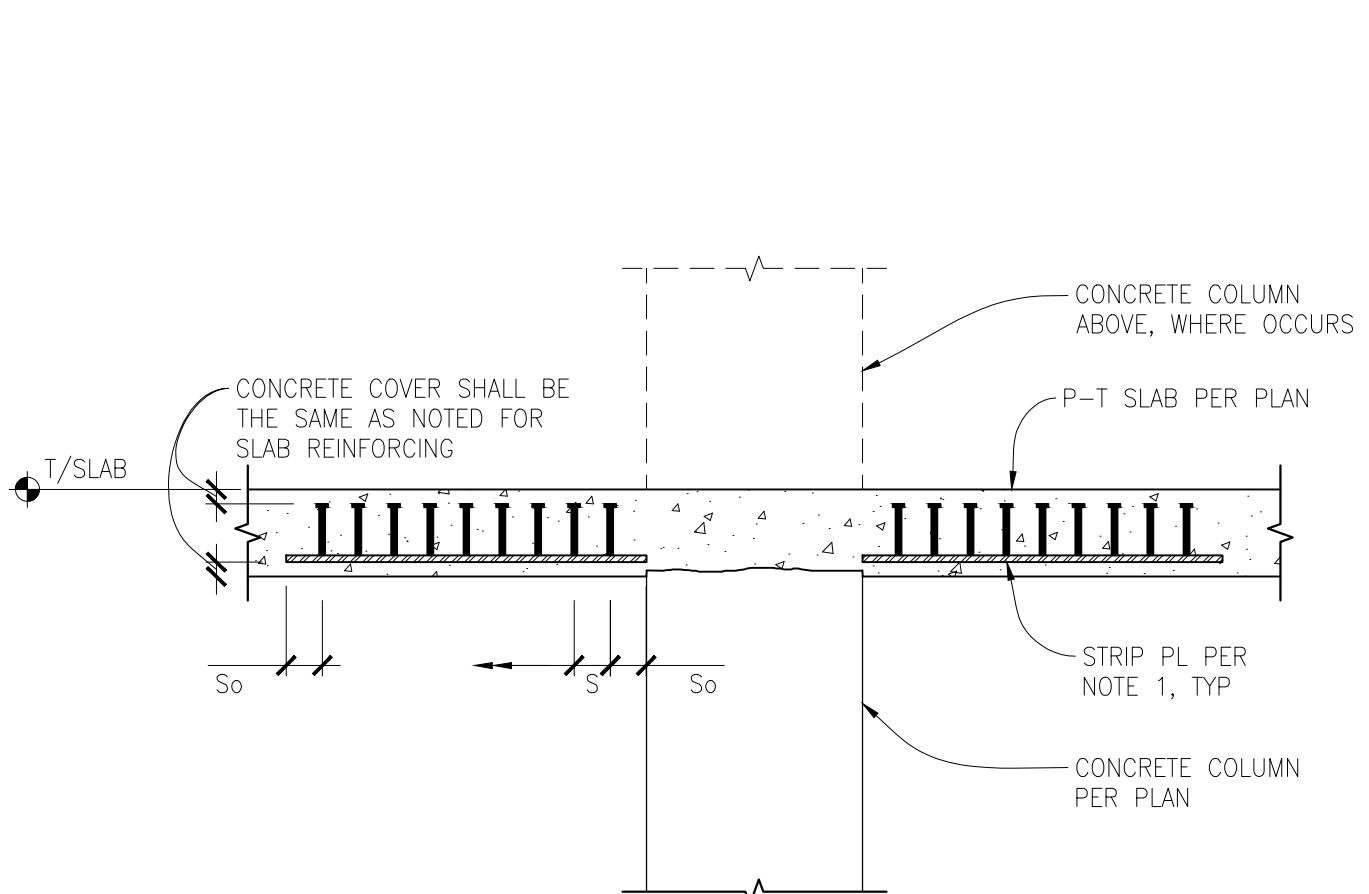
STUDRAIL LAYOUT - EDGE COLUMN

SCALE: $\frac{3}{4}'' = 1'-0''$



TYPICAL OPENINGS AT CONCRETE COLUMNS

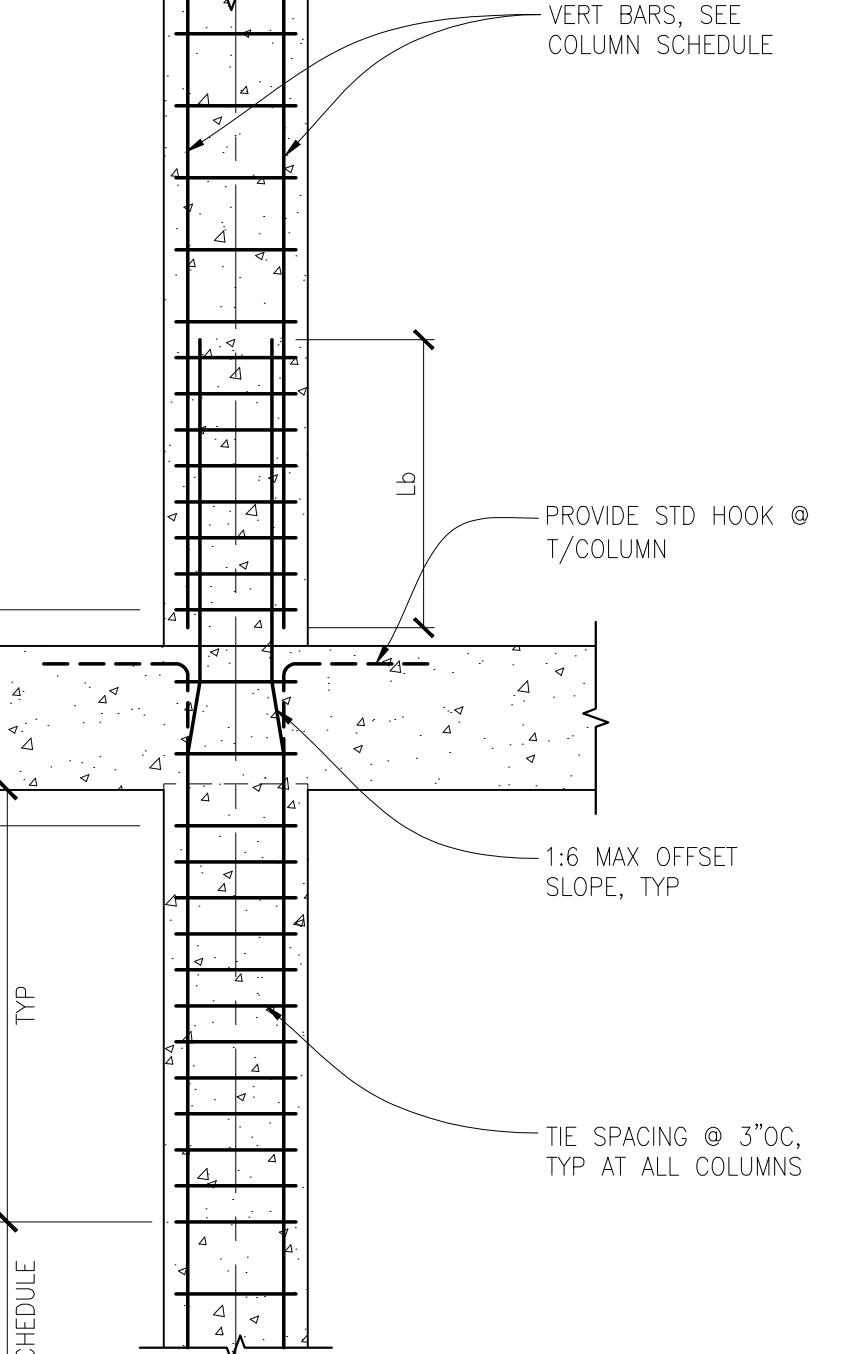
SCALE: N.T.S.



TYPICAL STUDRAIL SECTION

SCALE: N.T.S.

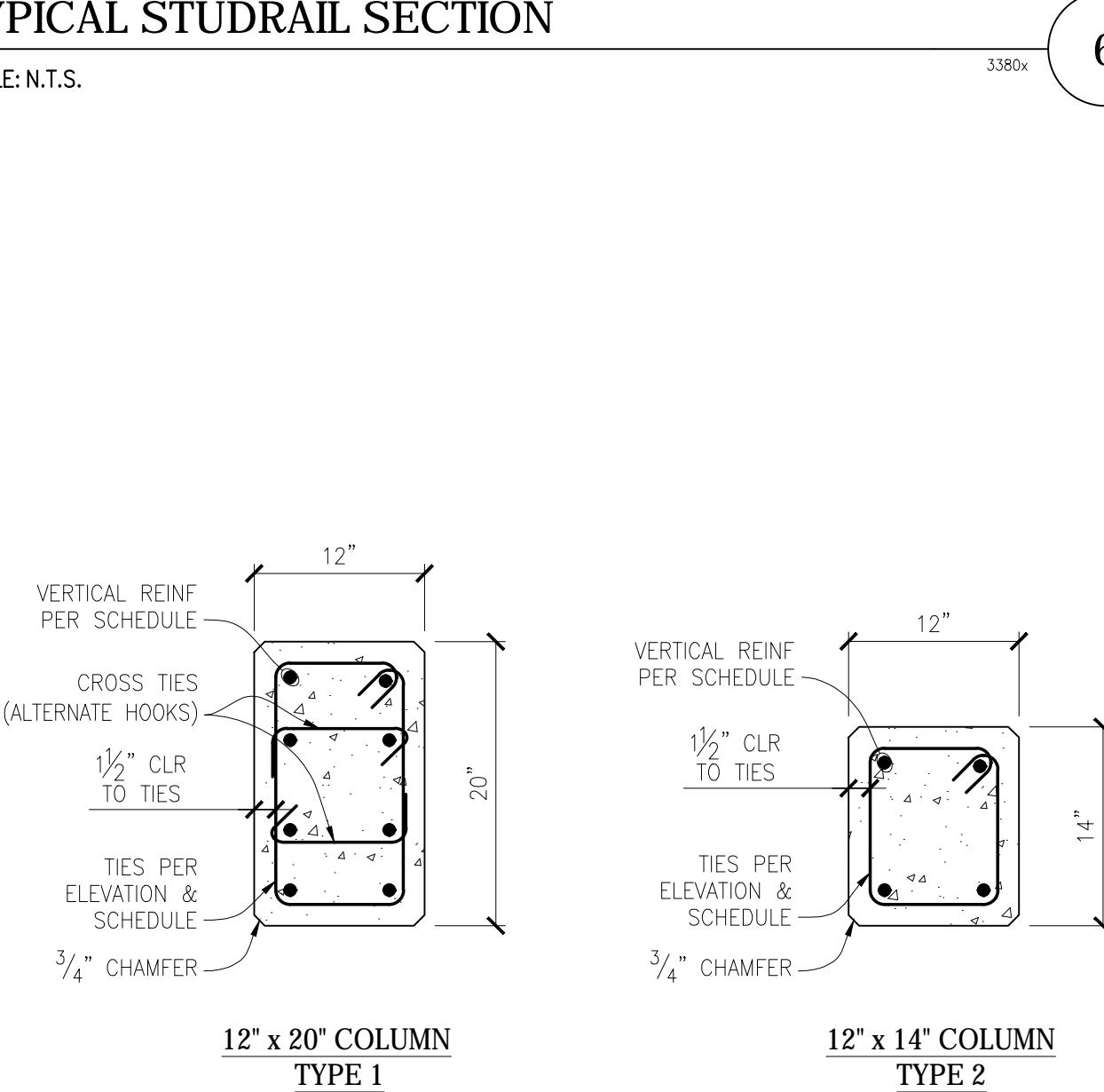
STUD RAIL SCHEDULE						
	(SIZE (DIAMETER))	So	S	# OF RAILS PER COLUMN	# OF STUDS PER RAIL	DETAIL
SR-1	$\frac{1}{2}''$	$2\frac{1}{2}''$	$3''$	10	10	2/S3.4
SR-2	$\frac{1}{2}''$	$2\frac{1}{2}''$	$3''$	6	8	3/S3.4
SR-3	$\frac{1}{2}''$	$2\frac{1}{2}''$	$3''$	4	10	1/S3.4



STUD RAIL SCHEDULE

SCALE: N.T.S.

COLUMN GRID	C1	C2
ROOF		
UPPER FLOOR	12x20	12x20
MAIN FLOOR	(8) #8 TIES @ 3' OC	(8) #8 TIES @ 3' OC
BASEMENT		
COLUMN SIZE:		
TIES:		
VERTICAL REINF:		
COLUMN SIZE:		
TIES:		
VERTICAL REINF:		

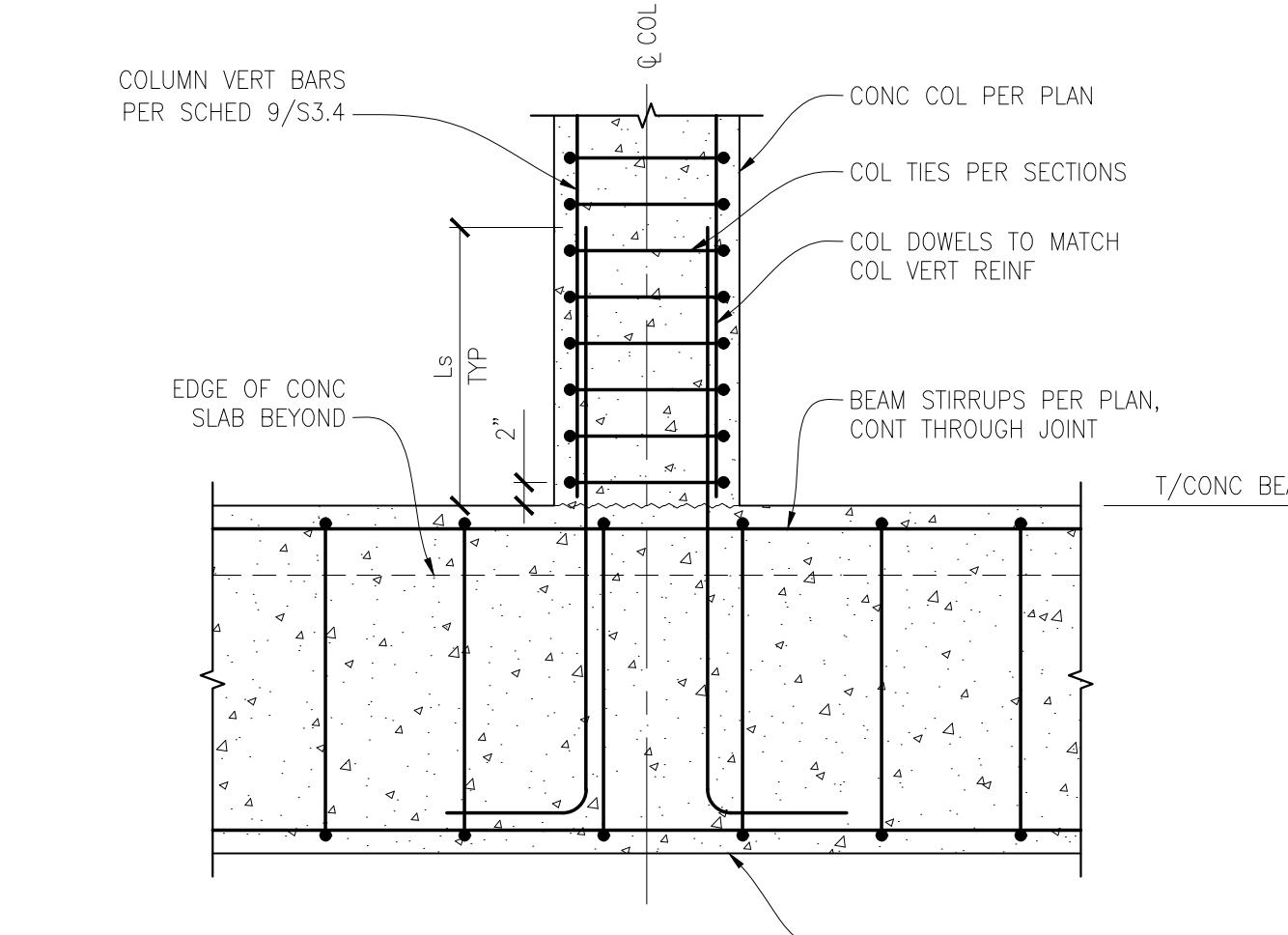


CONCRETE COLUMN SCHEDULE

SCALE: N.T.S.

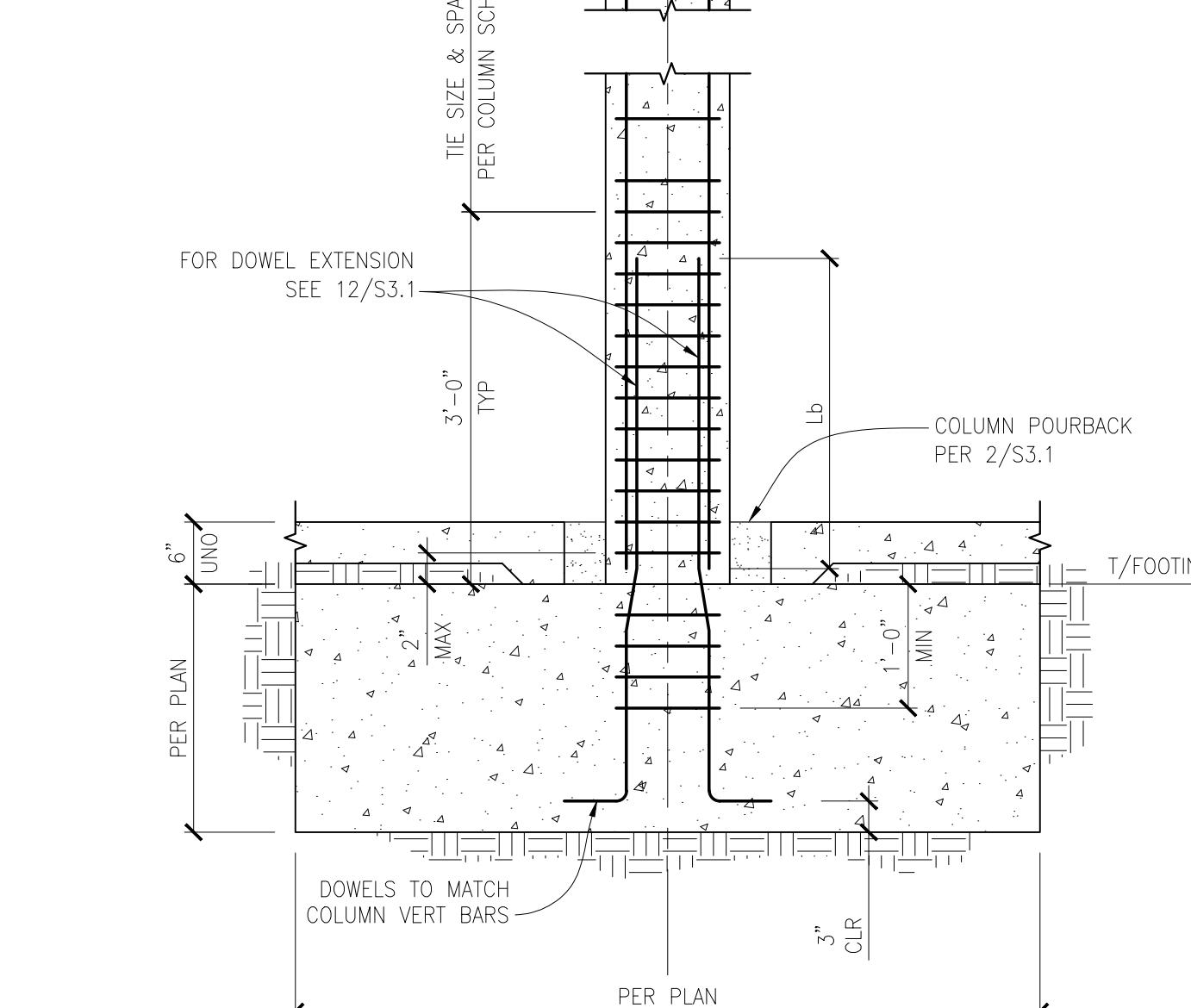
CONCRETE COLUMN SECTION

SCALE: N.T.S.



TYPICAL COLUMN AT TRANSFER BEAM

SCALE: $\frac{3}{4}'' = 1'-0''$

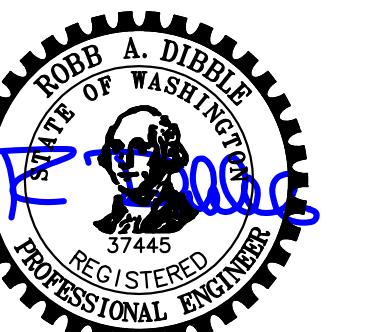


TYPICAL COLUMN ELEVATION

SCALE: N.T.S.

NOTES:
1. SEE COLUMN SCHEDULE 9/S3.4 FOR COLUMN VERTICAL BARS AND COLUMN CROSS SECTIONS.
2. COLUMN VERTICAL BAR SPLICE MAY BE OMITTED AND FULL HEIGHT COLUMN CAGE USED AT CONTRACTOR'S OPTION.

12



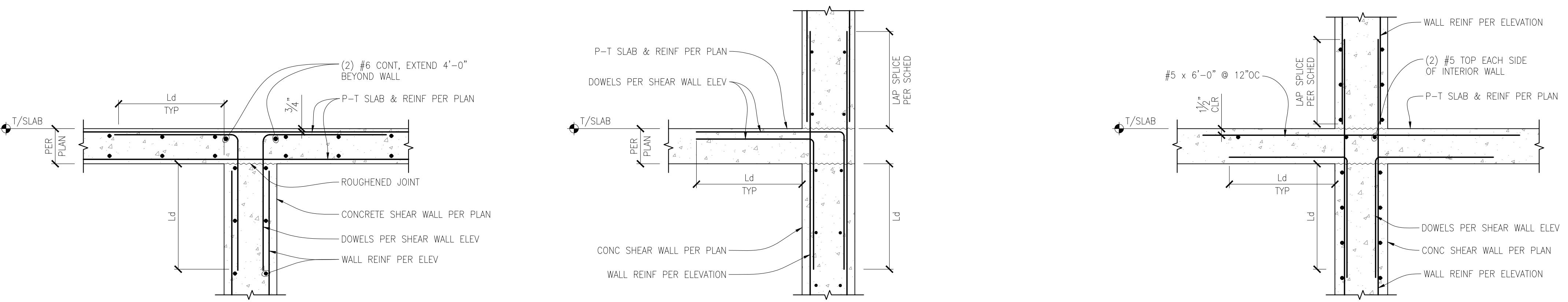
1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

PROJECT #: 17-025
DRAWN BY: TTP/TIT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE: STRUCTURAL SECTIONS & DETAILS

SHEET NUMBER: S 3.5



CSW SLAB REINF DEVELOPMENT - TOP AT SLAB

SCALE: N.T.S.

CSW SLAB REINF DEVELOPMENT - SLAB ONE SIDE

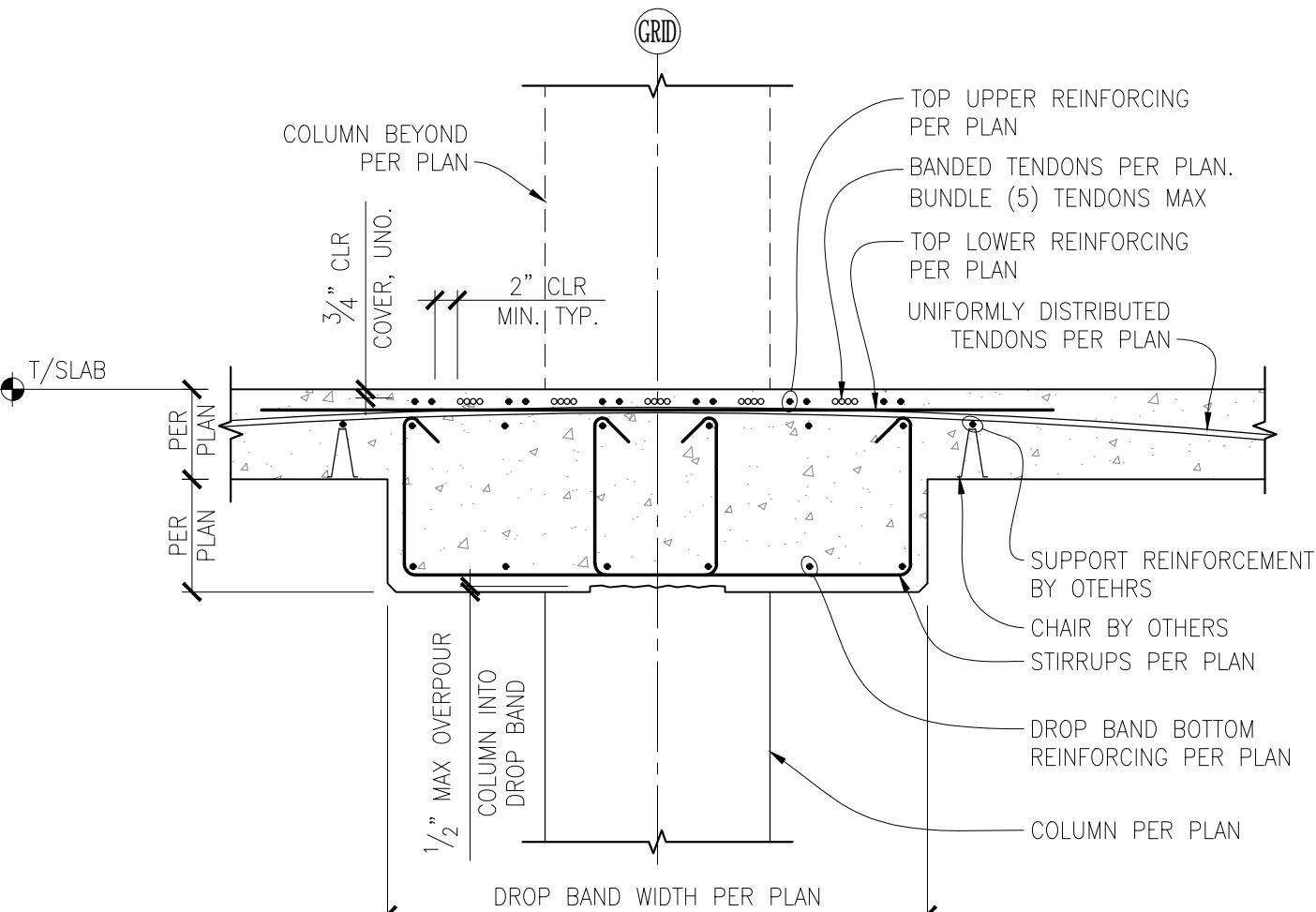
3

SCALE: N.T.S.

CSW SLAB REINF DEVELOPMENT - SLAB EA SIDE

4

SCALE: N.T.S.



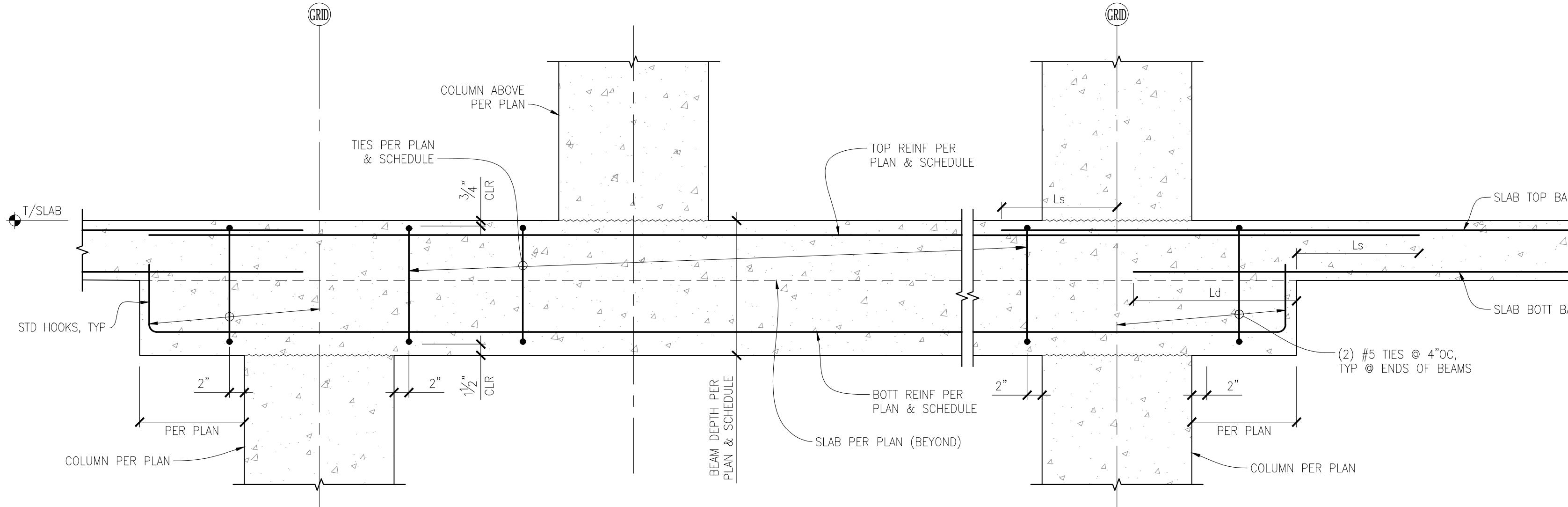
NOTES:
1. ALTERNATE TENDON AND REINFORCING GROUPS.
2. FOR QUANTITY AND LENGTH OF REINFORCING, REFERENCE PLAN.
3. FOR REINFORCING STAGGER, REFERENCE TYPICAL DETAILS.
4. MINIMUM OF (2) TENDONS SHALL BE PLACED DIRECTLY OVER COLUMNS IN BOTH DIRECTIONS, UNO.

TYPICAL SLAB/DROP BAND SECTION AT COLUMN

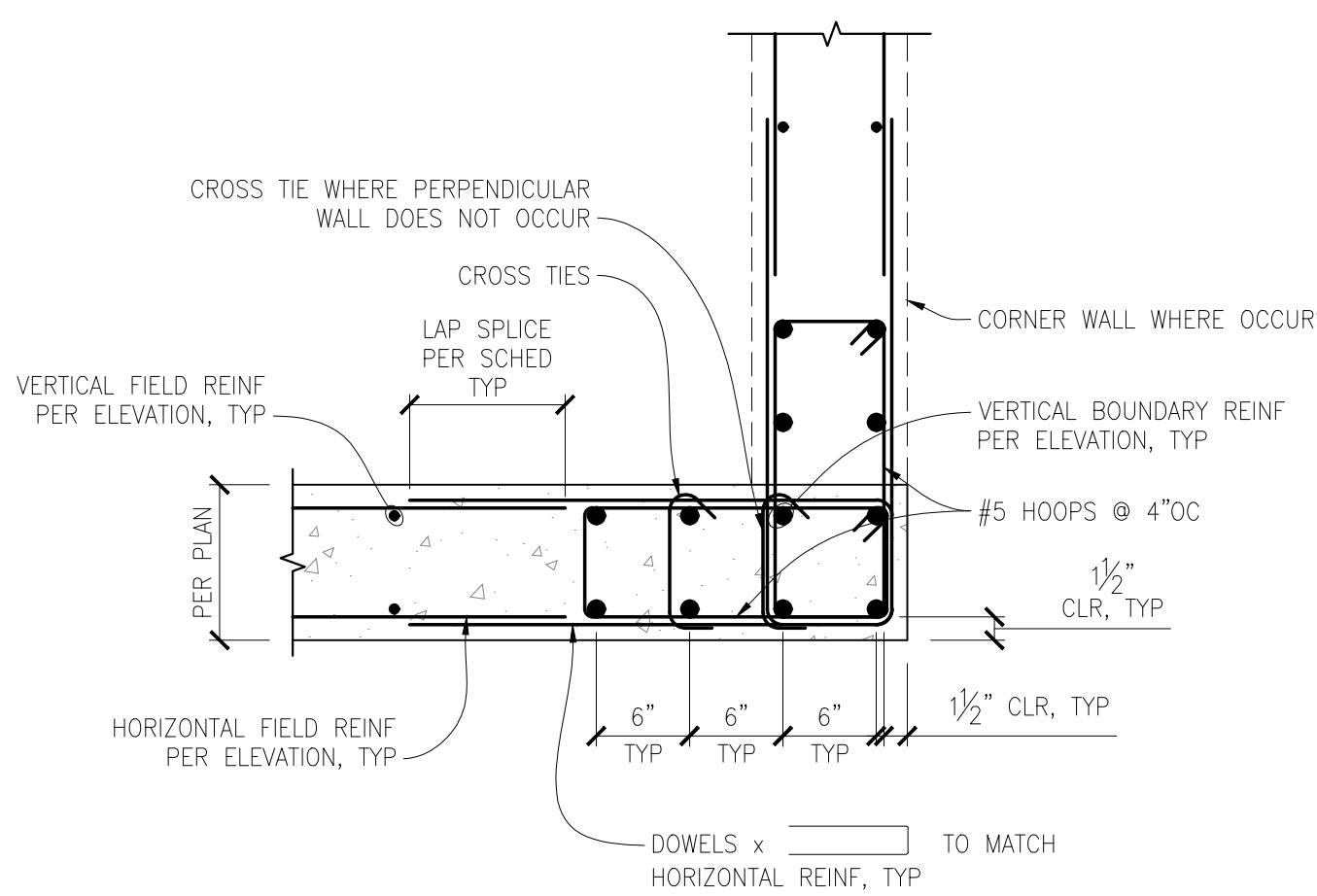
SCALE: N.T.S.

TRANSFER BEAM ELEVATION

SCALE: N.T.S.

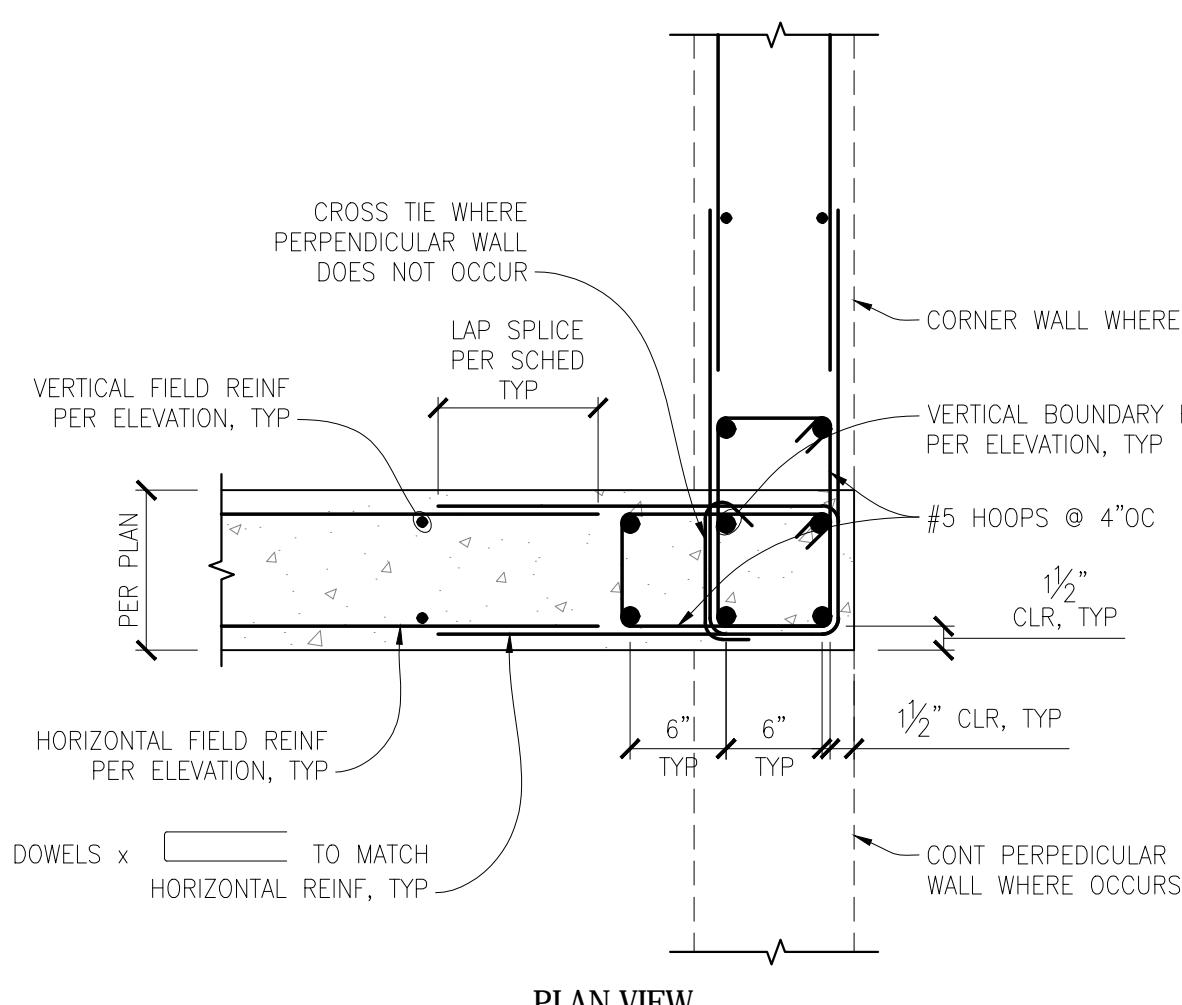


8



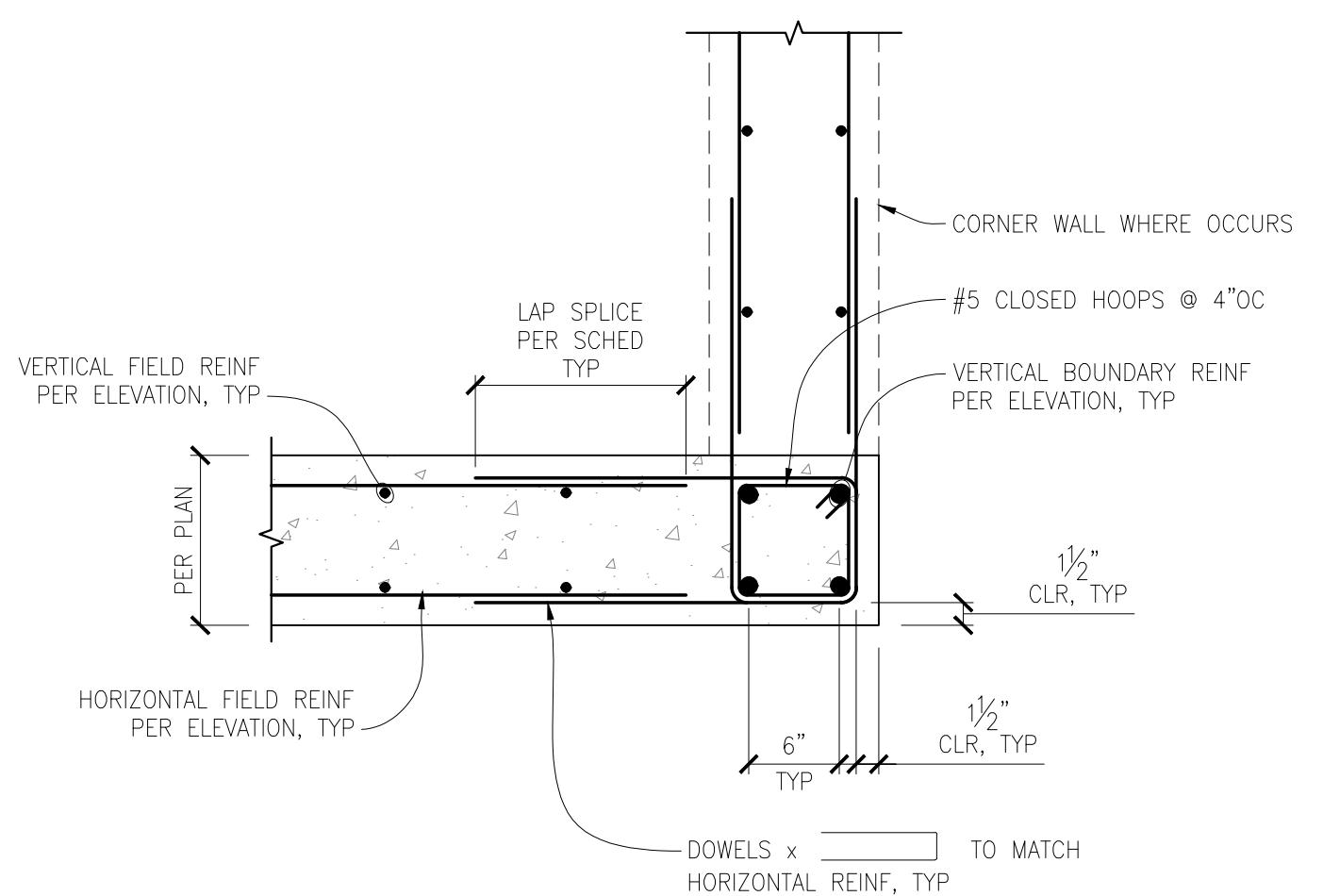
8 BAR CONCRETE SHEAR WALL BOUNDARY

SCALE: N.T.S.



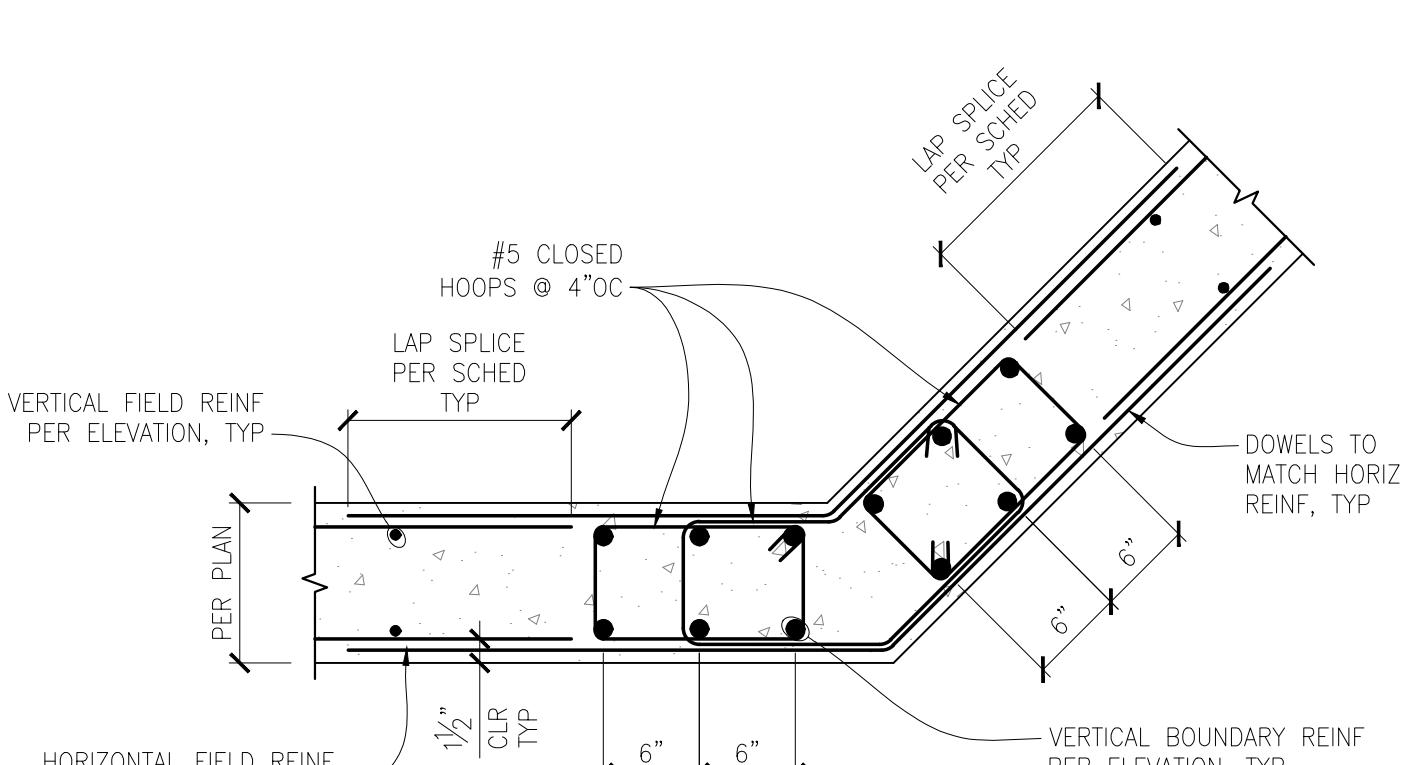
6 BAR CONCRETE SHEAR WALL BOUNDARY

SCALE: N.T.S.



4 BAR CONCRETE SHEAR WALL BOUNDARY

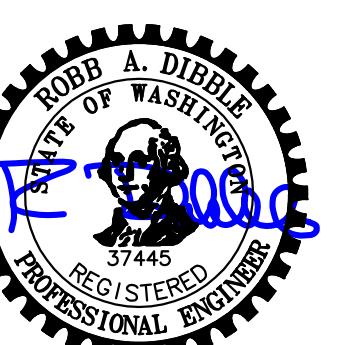
SCALE: N.T.S.



12 BAR CONCRETE SHEAR WALL BOUNDARY

SCALE: N.T.S.

12



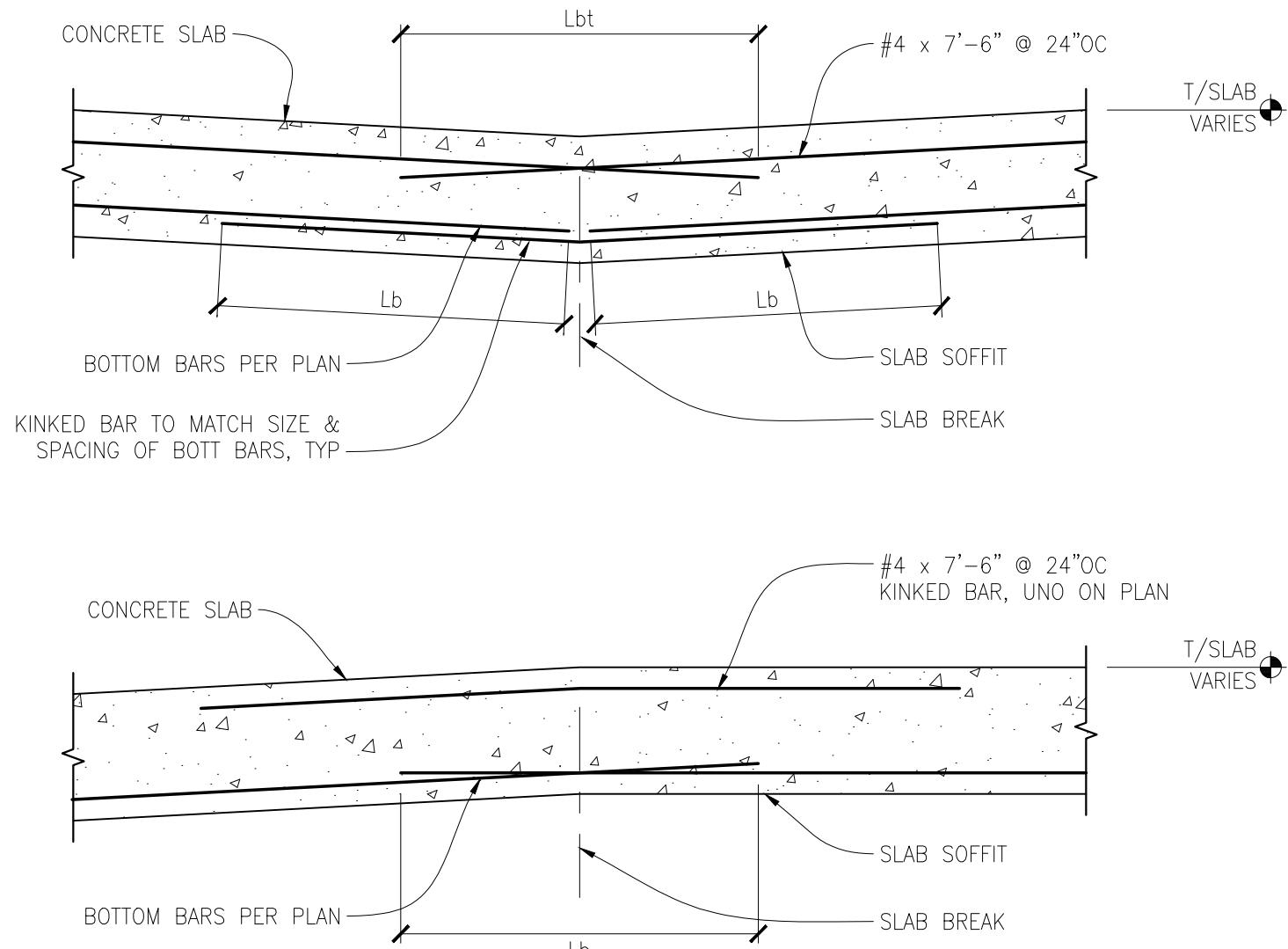
1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

JURISDICTIONAL STAMP:

STRUCTURAL
SECTIONS & DETAILS

SHEET NUMBER:

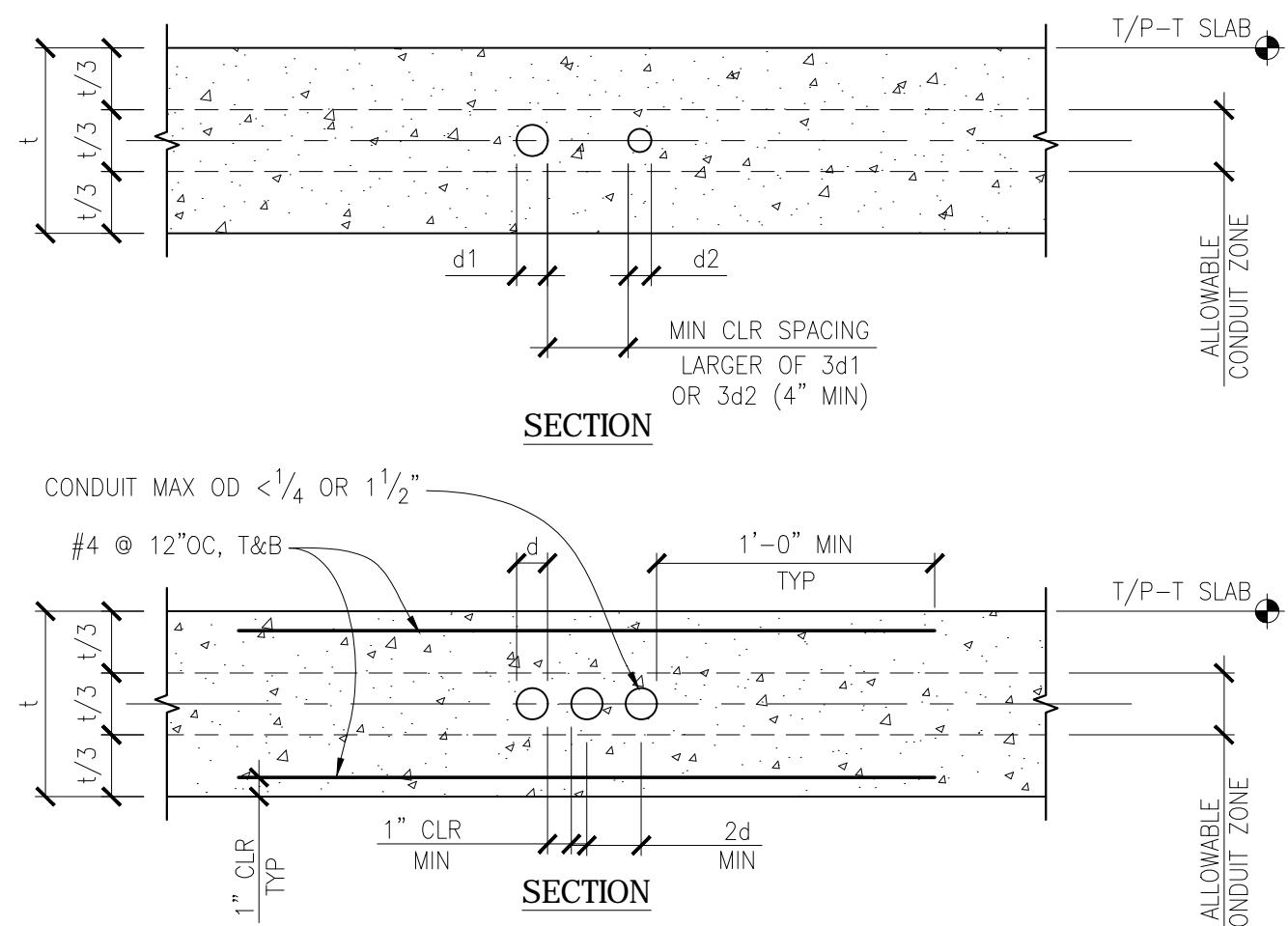
S 3.6



SLOPING SLAB TRANSITION

SCALE: N.T.S.

1

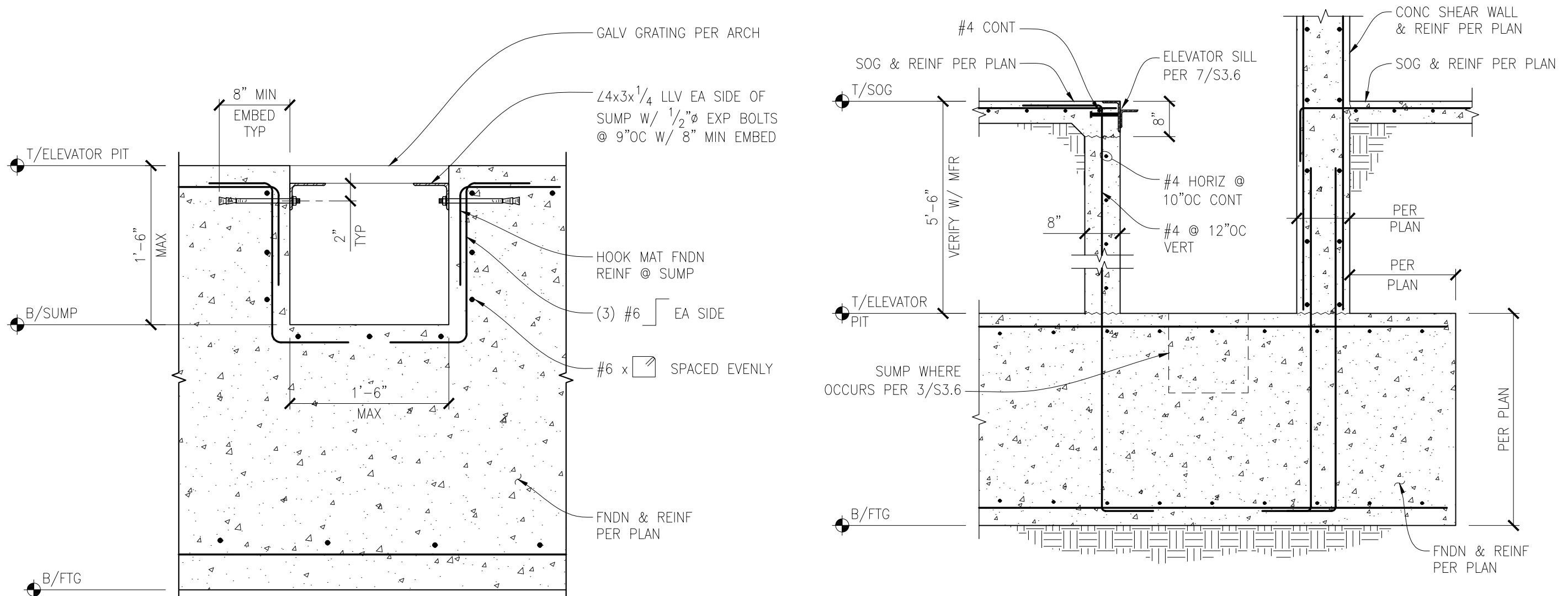


NOTES:
1. REINFORCING REQUIRED WHEREVER CONDUIT SPACED AT LESS THAN 4" OR 3d CLEAR.
2. PROVIDE 2" MIN CLEAR BETWEEN CONDUITS & TENDONS.
3. TENDON AND MILD REINFORCING LOCATIONS TAKE PRECEDENCE OVER CONDUIT LOCATIONS.
4. STACKING OF CONDUIT IS PROHIBITED.
5. CONDUITS SHALL CROSS AT AN ANGLE NO LESS THAN 45 DEGREES. THE COMBINED DIAMETER SHALL NOT EXCEED $\frac{1}{3}$ THE SLAB DEPTH.

CONDUIT IN P-T SLAB

SCALE: N.T.S.

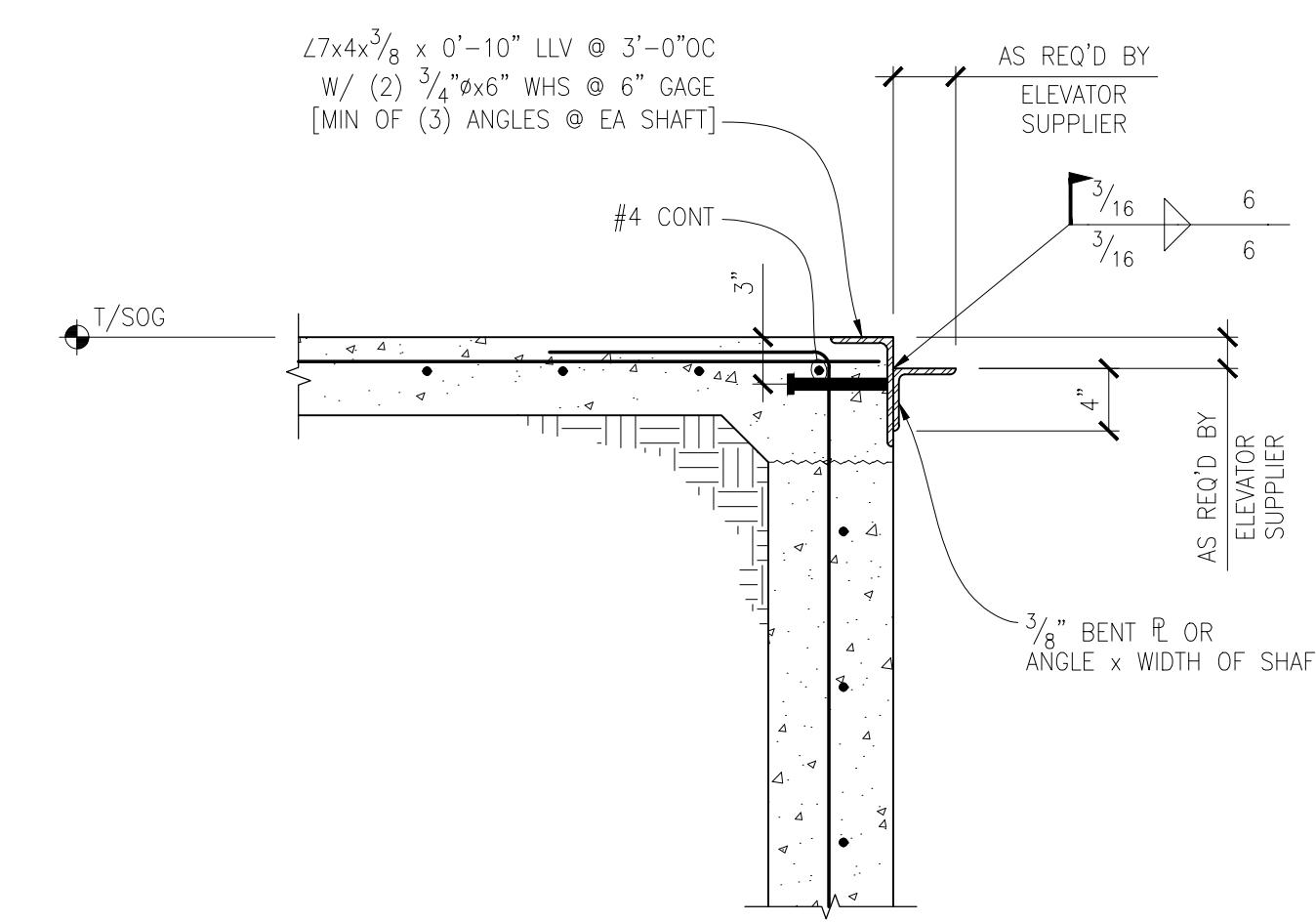
5



SUMP AT ELEVATOR PIT

SCALE: 1" = 1'-0"

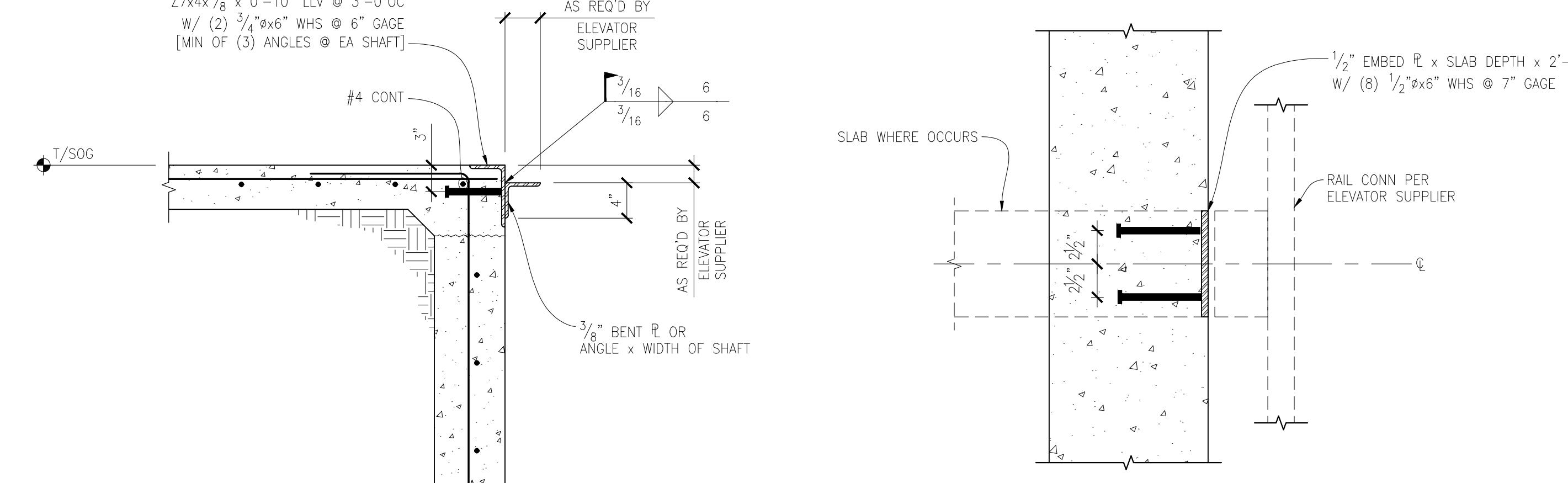
3



ELEVATOR SILL DETAIL AT ELEVATOR PIT

SCALE: 1" = 1'-0"

7



ELEVATOR RAIL EMBED

SCALE: N.T.S.

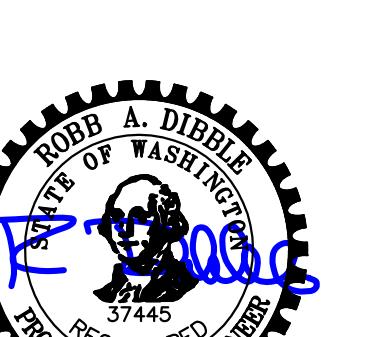
PROJECT #:	17025
DRAWN BY:	TTP / TIT
DESIGNED BY:	RAD
DATE:	4.11.2017
DESCRIPTION:	PERMIT SUBMITTAL

SHEET TITLE:

STRUCTURAL
SECTIONS & DETAILS

SHEET NUMBER:

S 3.6



4/26/17

1029 MARKET LLC
1029 MARKET STREET
KIRKLAND, WA 98033

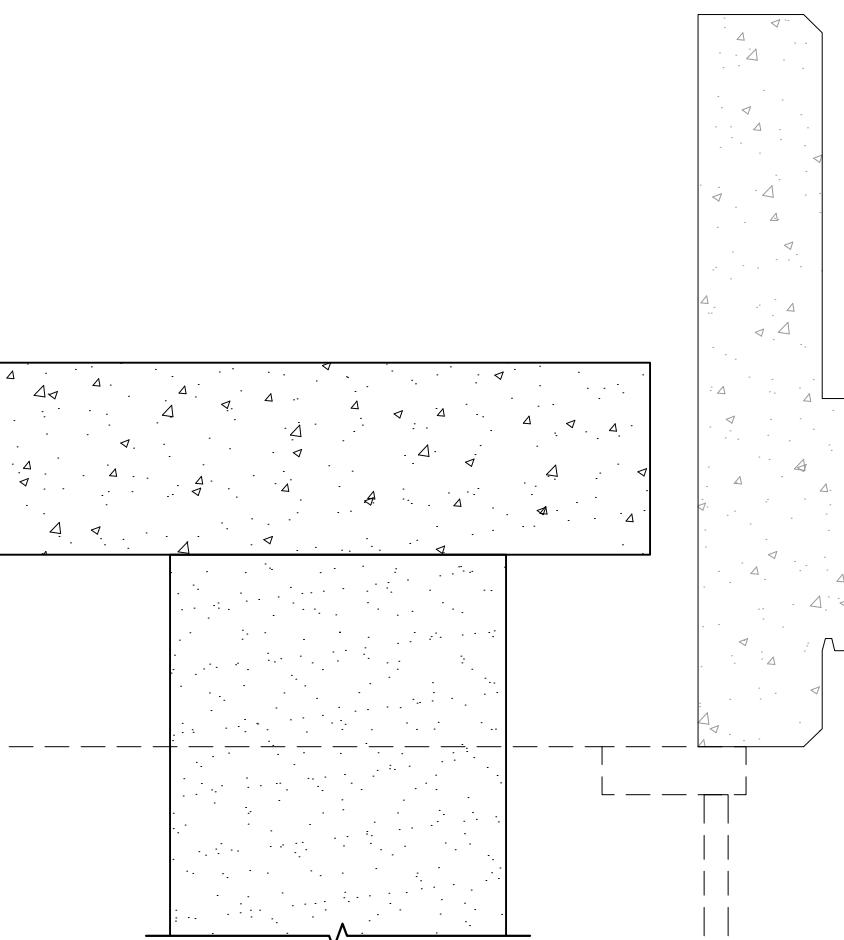
PROJECT #: 17025
DRAWN BY: TTP / TIT
DESIGNED BY: RAD
DATE: 4.11.2017 DESCRIPTION PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

SHEET TITLE:
**STRUCTURAL
PRECAST
DETAILS**

SHEET NUMBER:

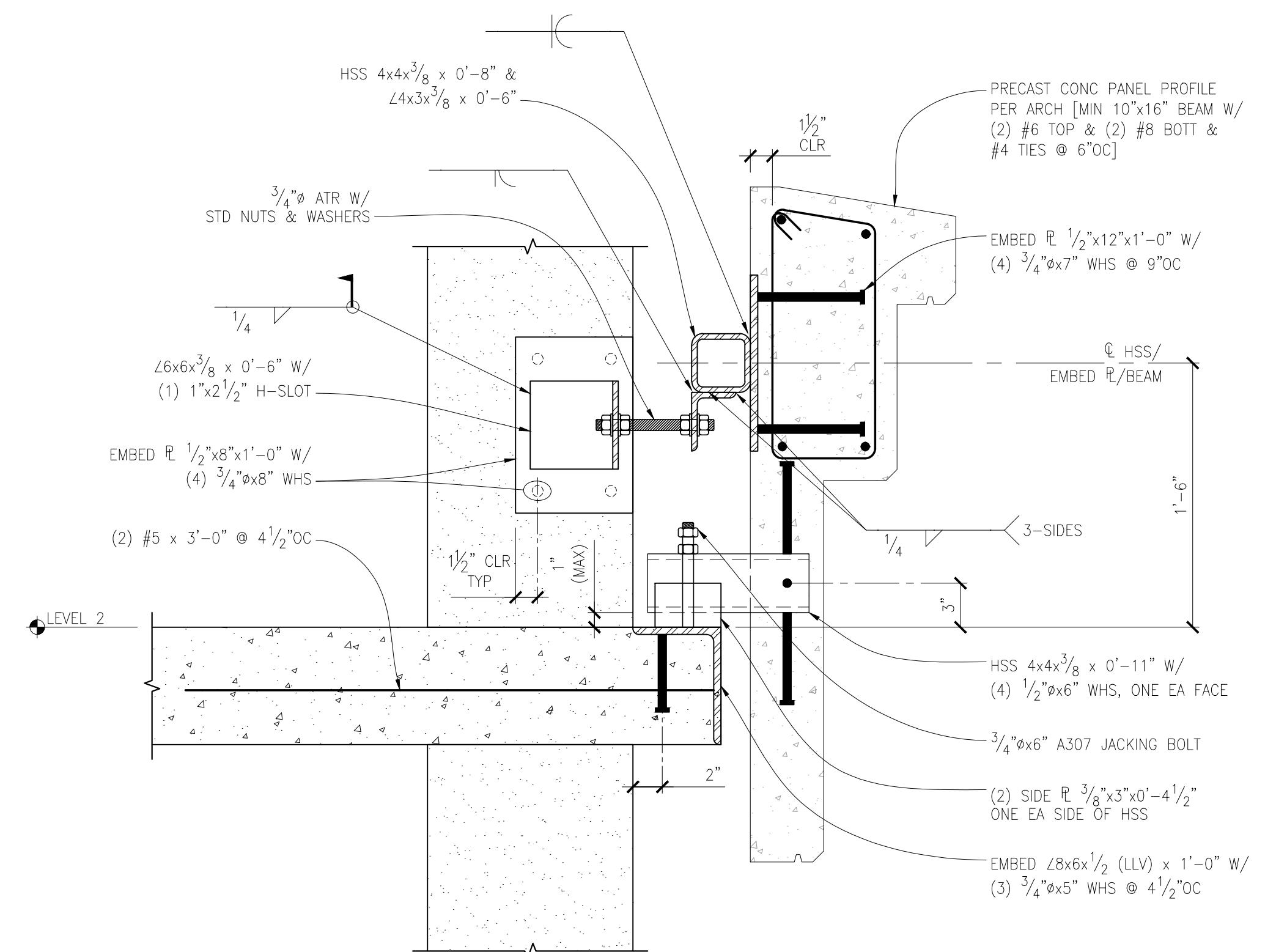
S 3.7



ROOF SLAB -
TYPICAL PANEL CONNECTION AT CONC COLUMN

SCALE: $1\frac{1}{2}'' = 1'-0''$

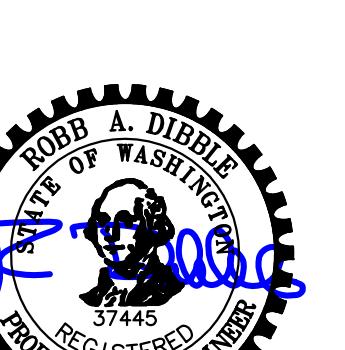
4



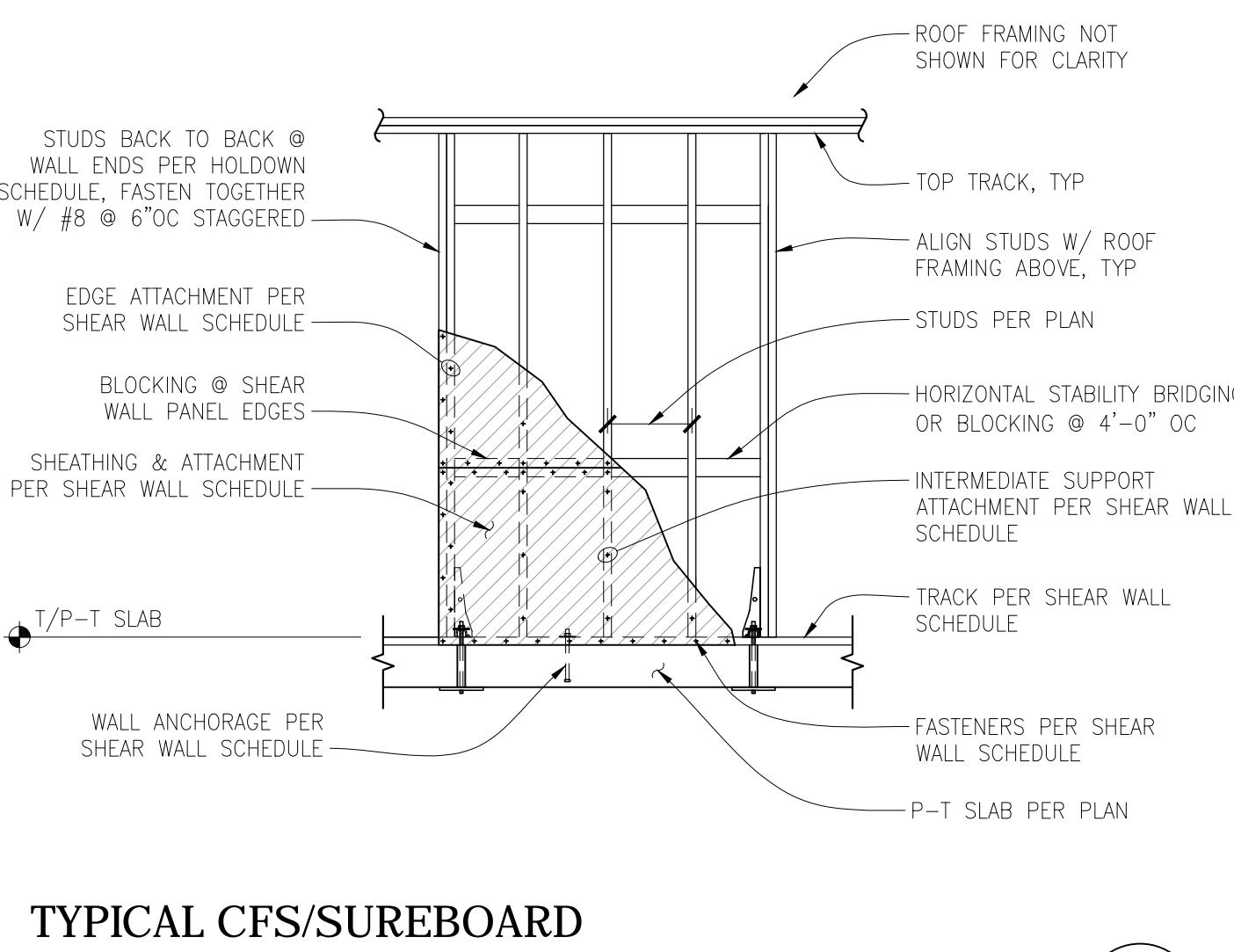
UPPER SLAB -
TYPICAL PANEL CONNECTION AT CONC COLUMN

SCALE: $1\frac{1}{2}'' = 1'-0''$

8



4/26/17



TYPICAL CFS/SUREBOARD SHEAR WALL ELEVATION

SCALE: N.T.S.

1252x MOD

6

TYPICAL EXTERIOR NON-BEARING WALL

SCALE: N.T.S.

TYPICAL EXTERIOR NON-BEARING WALL JAMB SCHEDULE

SCALE: N.T.S.

11

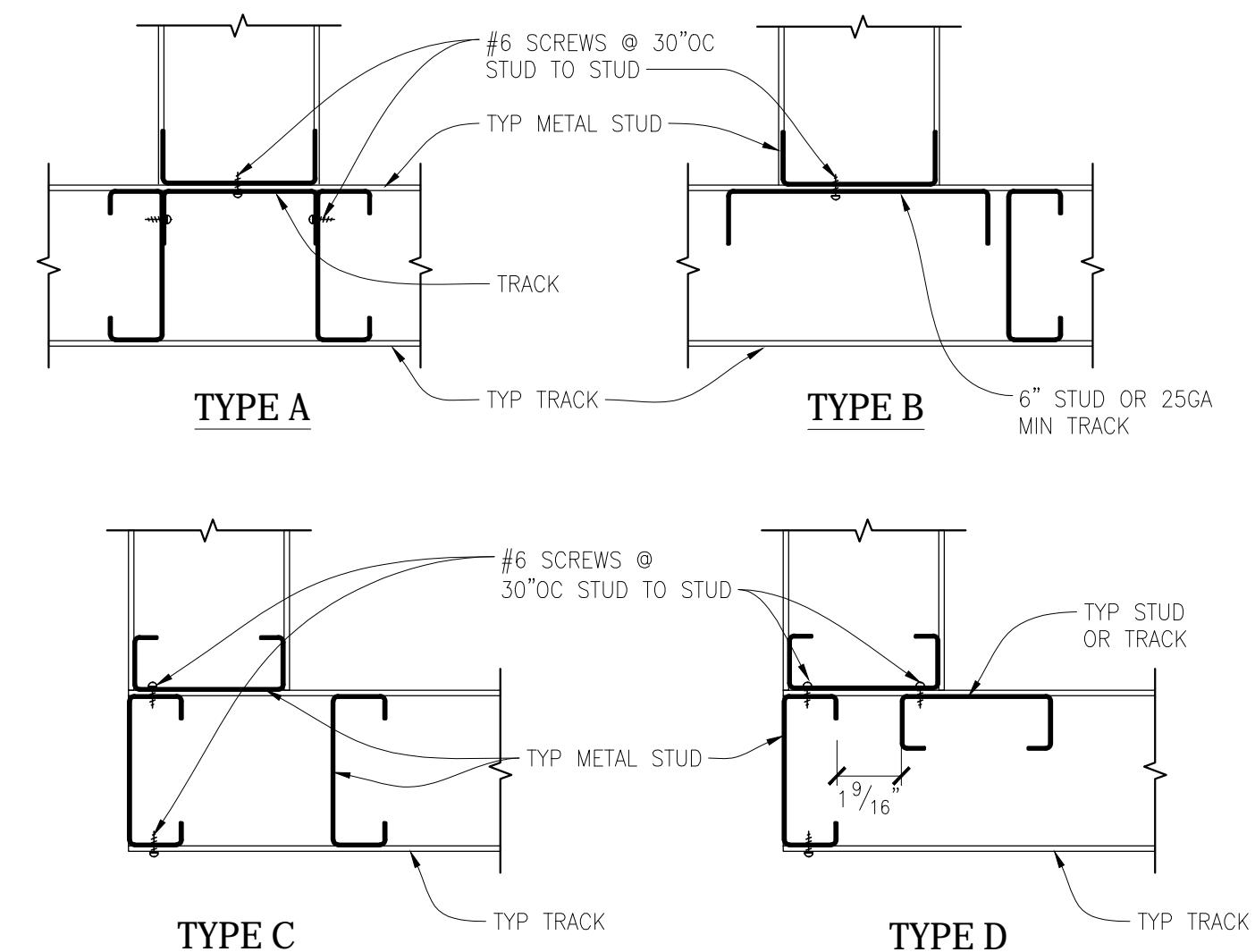
BOTTOM TRACK AT DOOR OPENING

SCALE: N.T.S.

TYPICAL EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

12



METAL STUD CORNER FRAMING

SCALE: N.T.S.

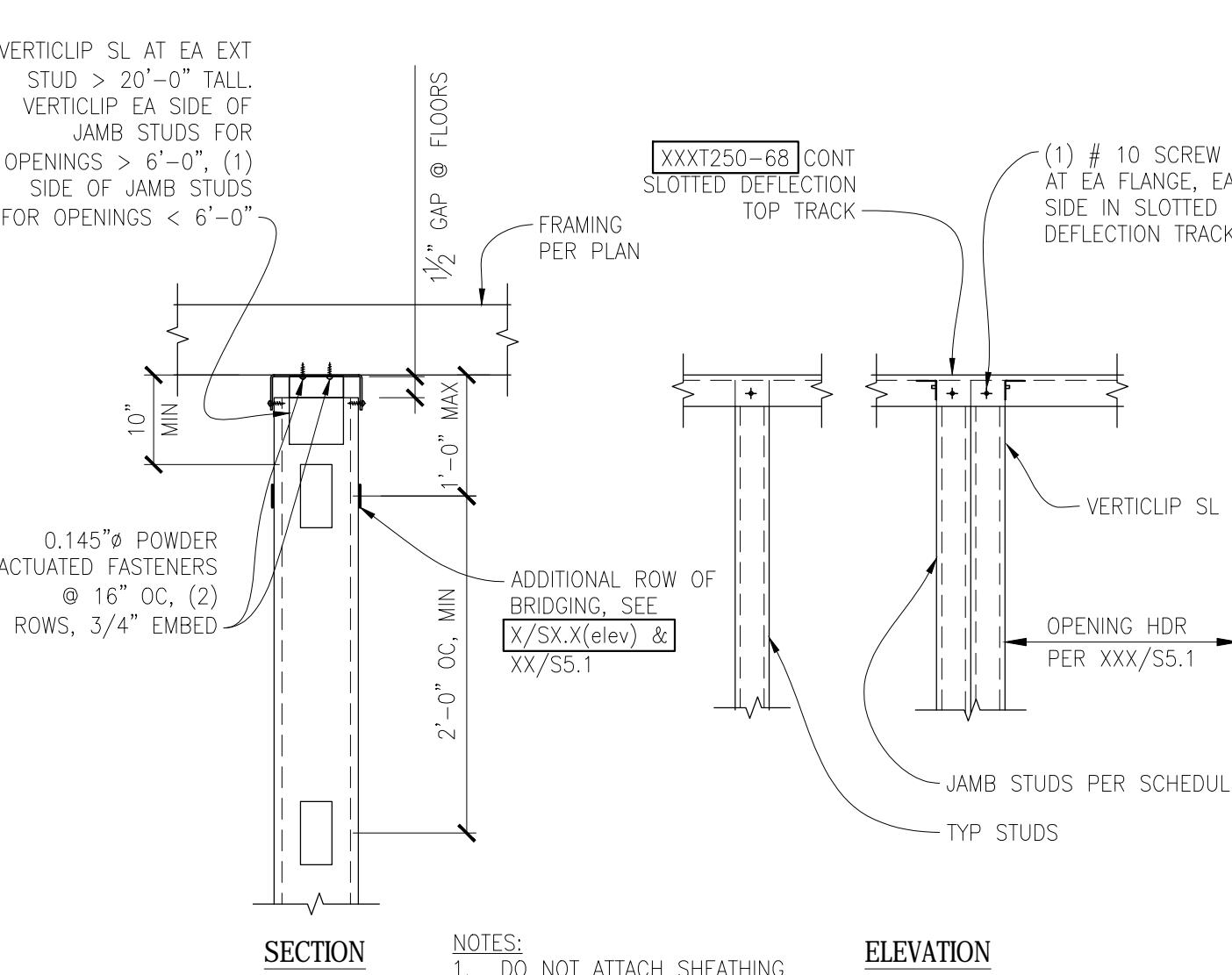
5402x

5

TYPICAL TOP/BOTTOM TRACK SPLICE

SCALE: N.T.S.

6



DETAIL AT WALL HEAD - NON BEARING

SCALE: N.T.S.

9

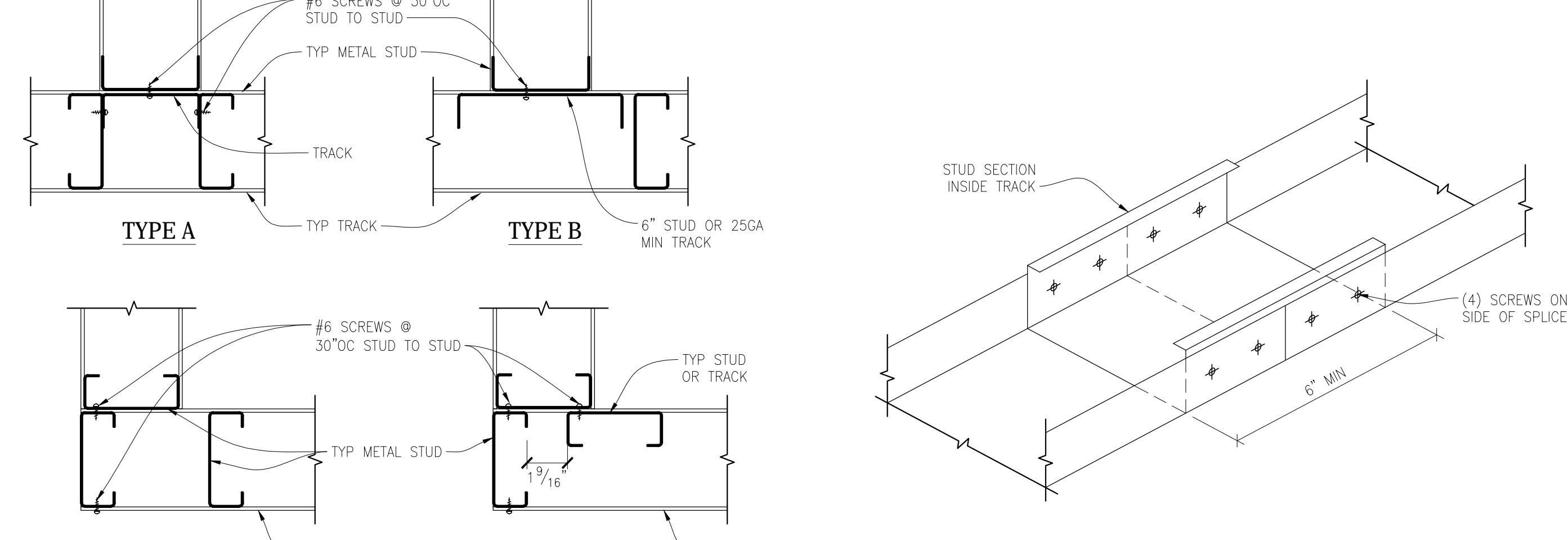
BOTTOM TRACK AT DOOR OPENING

SCALE: N.T.S.

TYPICAL EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

10



METAL STUD CORNER FRAMING

SCALE: N.T.S.

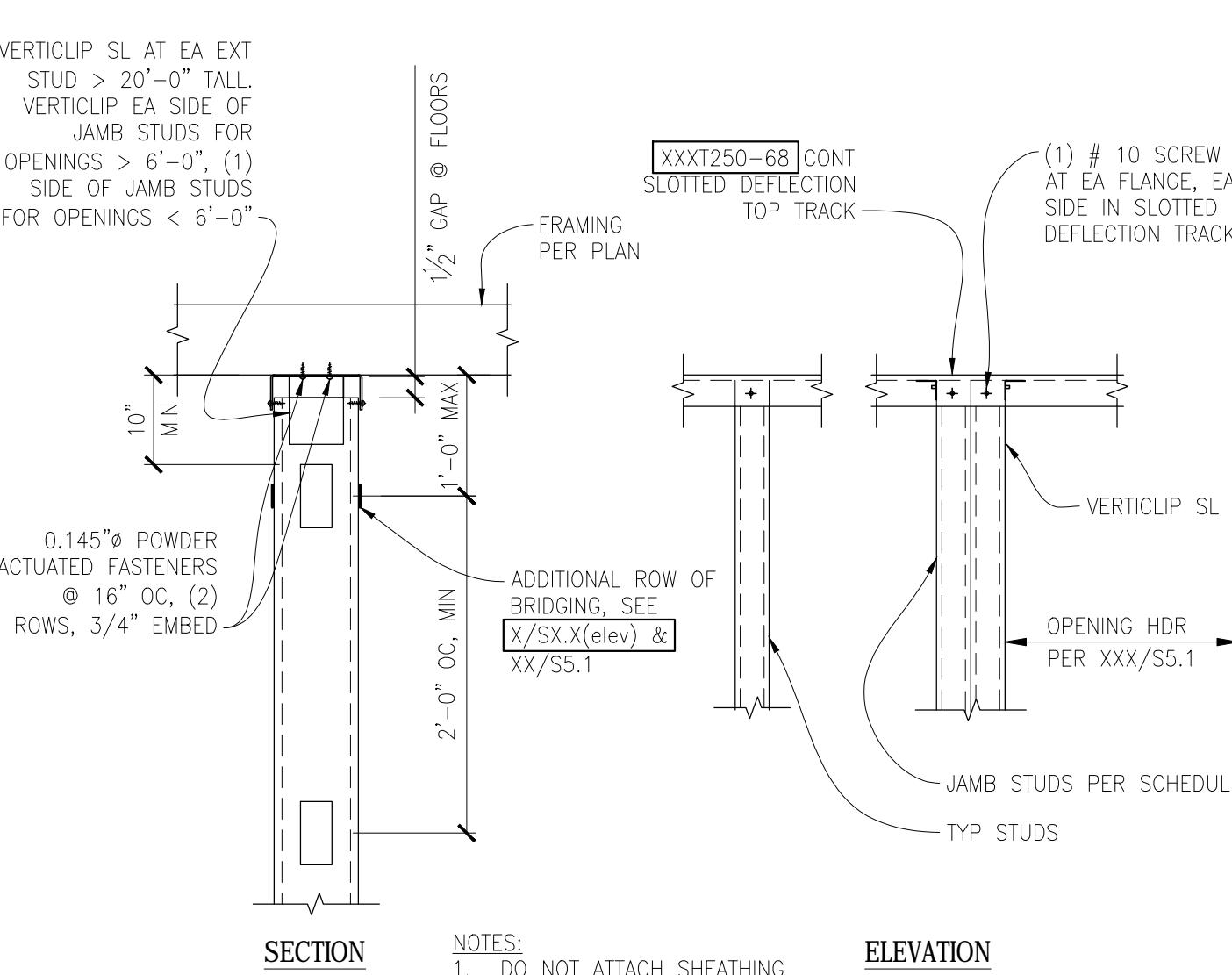
5401x

6

TYPICAL TOP/BOTTOM TRACK SPLICE

SCALE: N.T.S.

6



EXTERIOR NON-BEARING WALL JAMB SCHEDULE

SCALE: N.T.S.

9

BOTTOM TRACK AT DOOR OPENING

SCALE: N.T.S.

EXTERIOR NON-BEARING WALL JAMB SCHEDULE PER WALL AND PENETRATION SIZE L/600 DEFLECTION LIMIT					
STUD SIZE	STUD SIZE AND GAUGE	MAXIMUM PENETRATION SIZE (FT)	MIN NUMBER OF STUDS AT JAMB		
			(1)	(2)	(3)
NOTES:					
3	8'-0" 10'-6"	12'-0" 13'-0"	(1)	(2)	(3)
4	- 9'-6"	10'-6" 12'-0"	(4)		
6	- 8'-0"	9'-6" 10'-6"			
8	-	8'-6" 9'-6"			
3	10'-6" 13'-0"	15'-0" 16'-6"	(4)		
4	9'-6" 12'-0"	13'-6" 15'-0"			
6	8'-0" 10'-6"	12'-0" 13'-0"			
8	- 9'-6"	10'-6" 12'-0"			

EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

10

BOTTOM TRACK AT DOOR OPENING

SCALE: N.T.S.

TYPICAL EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

11

EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

12

STRUCTURAL COLD-FORM STEEL DETAILS

SCALE: N.T.S.

TYPICAL EXTERIOR NON-BEARING METAL STUDS SCHEDULE

SCALE: N.T.S.

12

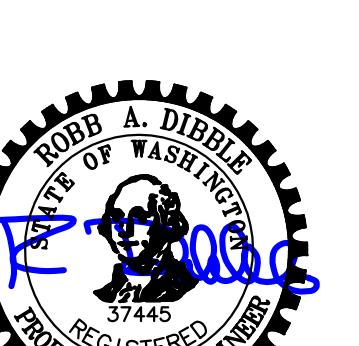
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DRAWN BY:	TIP/TIT
DESIGNED BY:	RAD
DATE:	4.11.2017
DESCRIPTION:	PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

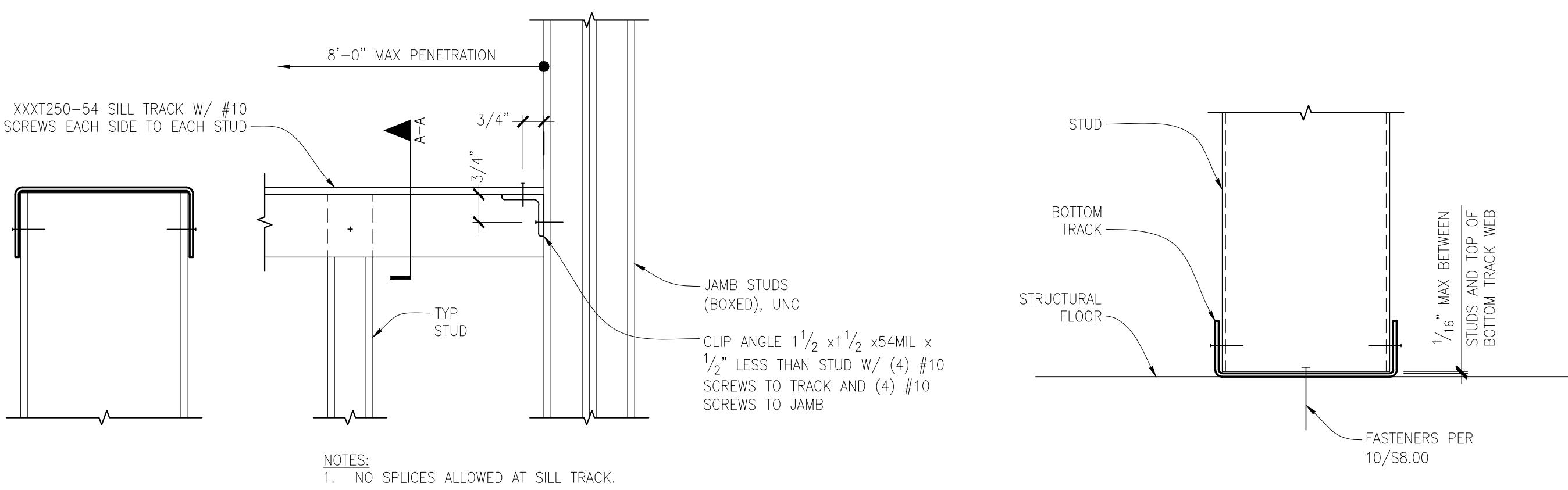
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STRUCTURAL COLD-FORM STEEL DETAILS

SHEET NUMBER:

S 4.0



4/26/17

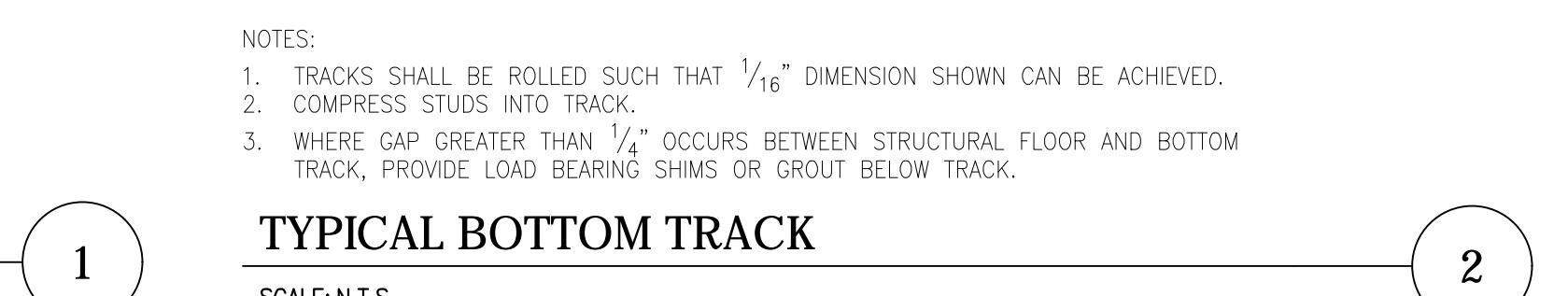


SECTION A-A

ELEVATION

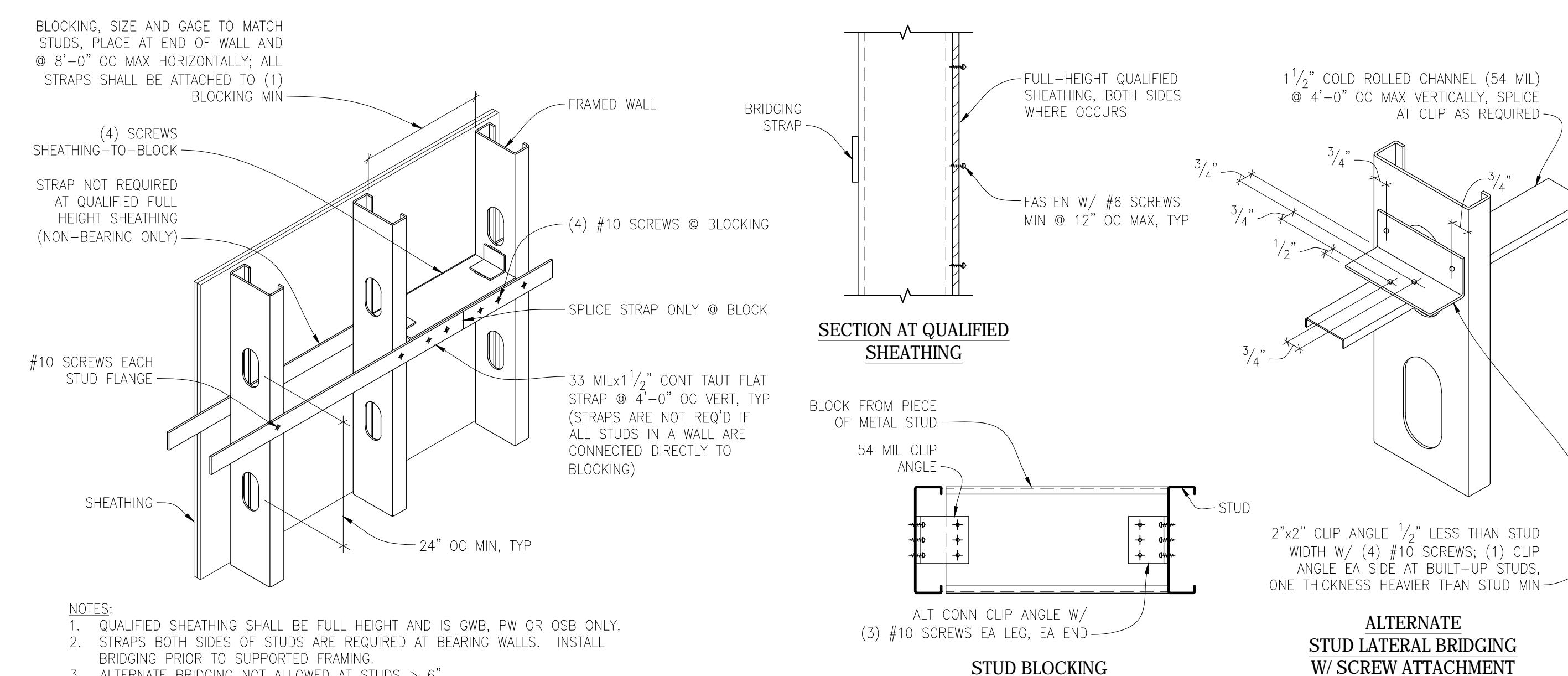
DETAIL AT BOTTOM TRACK

SCALE: N.T.S.



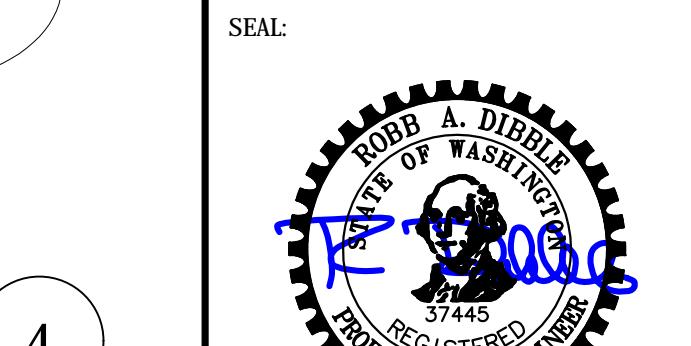
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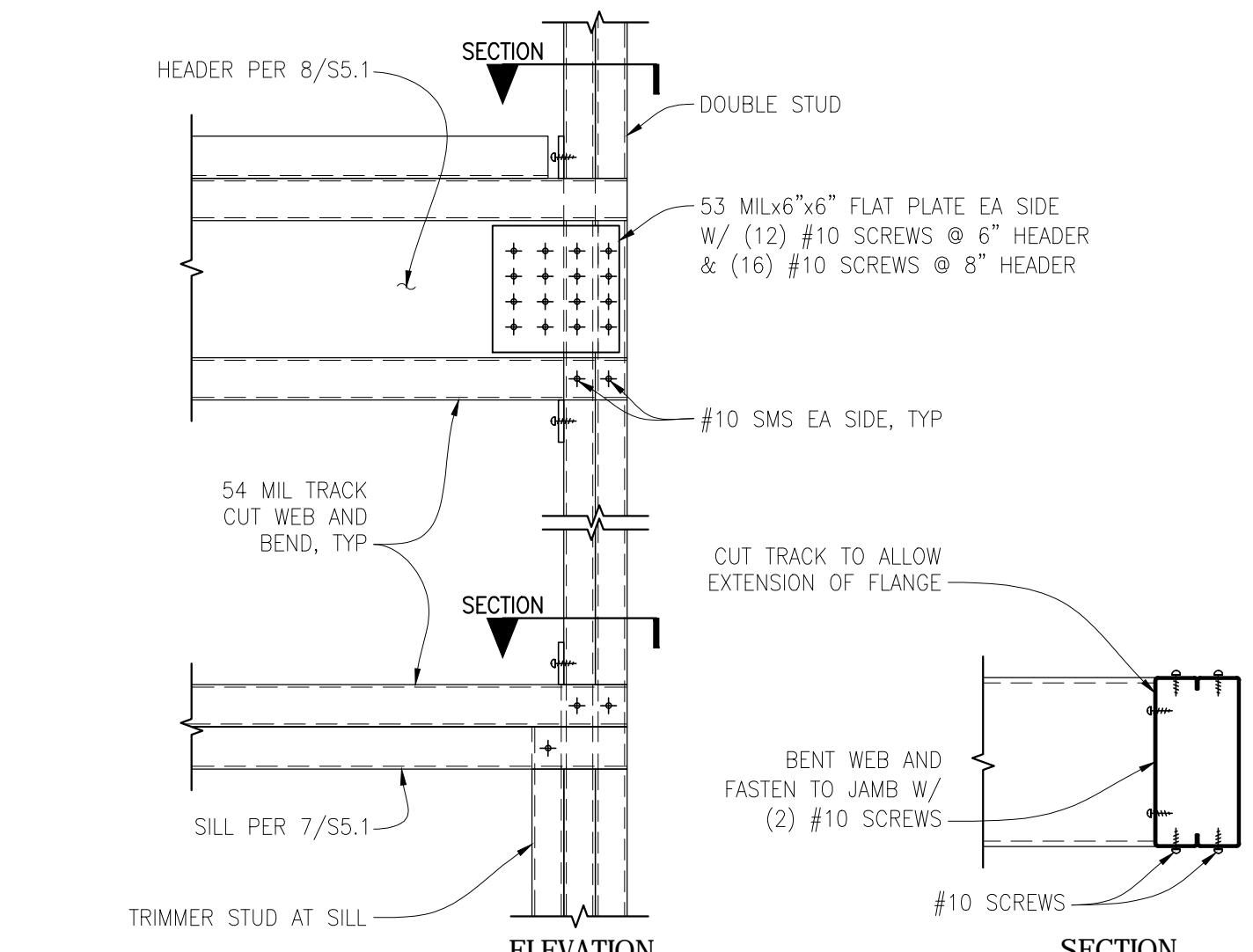


TYPICAL STUD WALL BRIDGING

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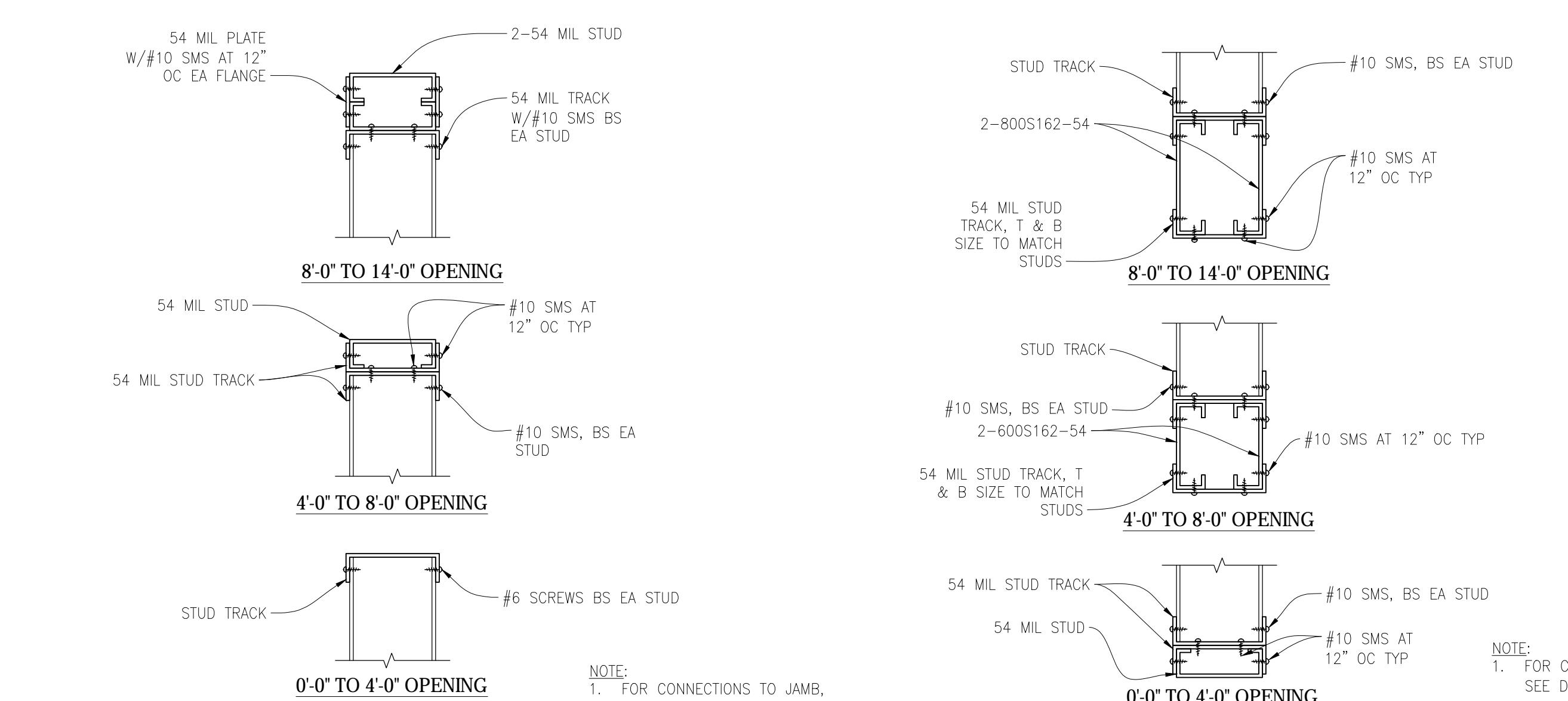


1029 MARKET LLC
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KIRKLAND, WA 98033



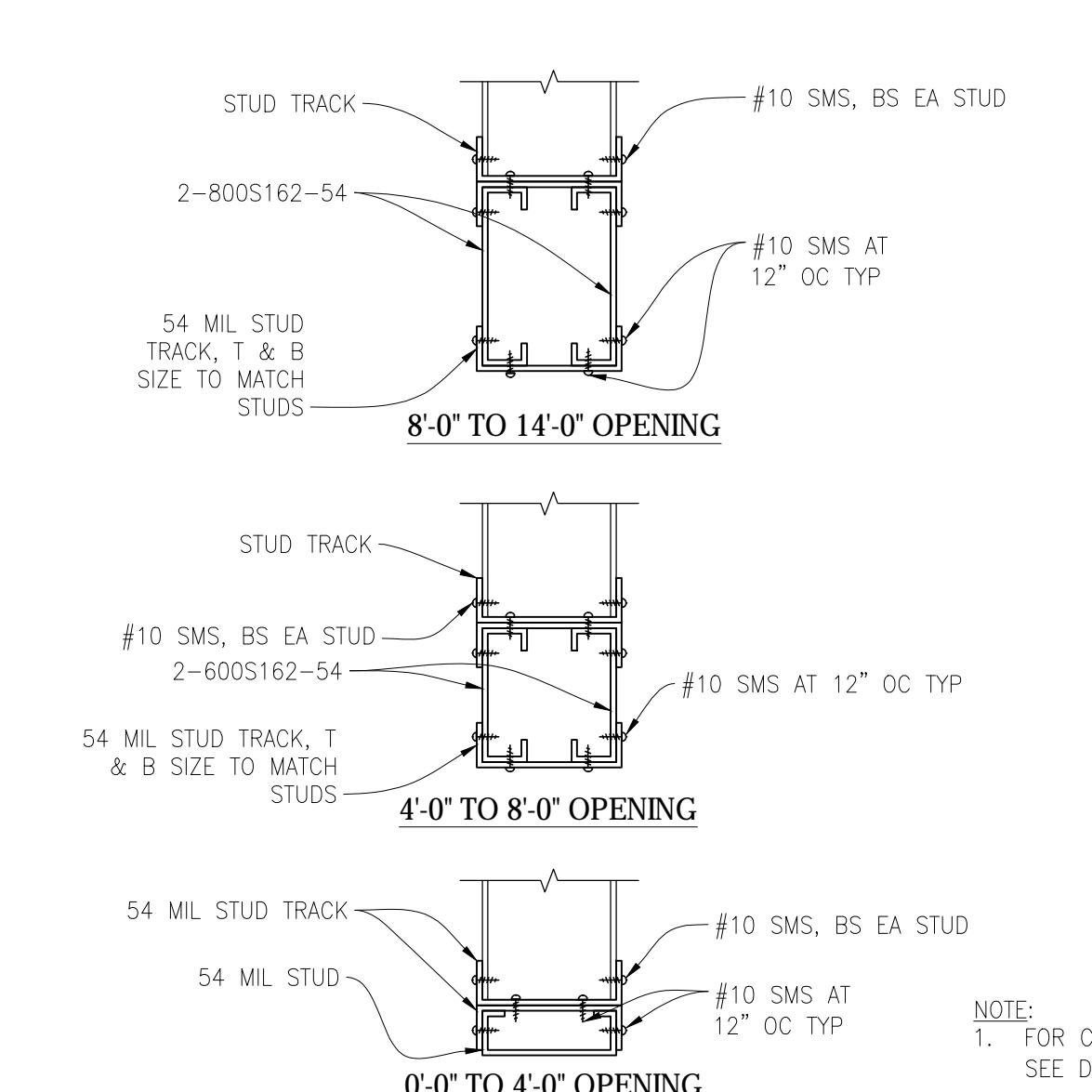
TYPICAL HEAD AND SILL DETAILS
AT JAMB NON-BEARING WALL

SCALE: N.T.S.



TYPICAL SILL SCHEDULE DETAILS

SCALE: N.T.S.



TYPICAL HEADER SCHEDULE DETAILS

SCALE: N.T.S.

PROJECT #: 17-025
DRAWN BY: TTP / ITT
DESIGNED BY: RAD
DATE: 4.11.2017
DESCRIPTION: PERMIT SUBMITTAL

JURISDICTIONAL STAMP:

STRUCTURAL
COLD-FORM STEEL
DETAILS

SHEET NUMBER: