

STRUCTURAL NOTES

STRUCTURAL NOTES:

A. ELECTRONIC VERSIONS OF STRUCTURAL DRAWINGS ARE THE SOLE, COPYRIGHTED PROPERTY OF TRC WORLDWIDE ENGINEERING. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF TRC WORLDWIDE ENGINEERING.

1010 GENERAL:

- A. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR DEPRESSIONS, DIMENSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- B. DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- C. WHERE DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT RESTRICTIONS AND REQUIREMENTS SHALL GOVERN.
- D. PLAN NOTES, DETAILS AND SECTIONS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES. TYPICAL DETAILS AND SECTIONS NOT CUT ON PLANS SHALL APPLY UNLESS NOTED OTHERWISE.
- E. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE-DOWNS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION COMPLIES WITH OSHA REGULATION INCLUDING DESIGN OF CONNECTIONS OF MEMBERS THAT WILL NOT BE FULLY COMPLETED AT THE TIME OF INSTALLATION.
- F. TOWER CRANES ARE A CONTRACTOR RESPONSIBILITY AND SHALL BE DESIGNED FOR APPLICABLE CRITERIA INCLUDING BUT NOT LIMITED TO INSURANCE REQUIREMENTS AND APPLICABLE BUILDING CODES AT THE PROJECT LOCATION. THE CONTRACTOR SHALL SUBMIT A CRANE LAYOUT, SHOP DRAWINGS, CALCULATIONS AND REACTION FOR BOTH FOUNDATIONS AND CRANE TIE-IN LOCATIONS, SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER. THE ENGINEER OF RECORD SHALL BE RETAINED BY THE CONTRACTOR TO EVALUATE COSEIN FORCES ON THE BUILDING STRUCTURE AND TO PROVIDE CRANE FOUNDATION DESIGN.

1011 CONTRACTOR PROPOSED CHANGES AND SUBSTITUTIONS:

A. PROPOSED CHANGES OR SUBSTITUTIONS TO STRUCTURAL DETAILS OR PLANS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) FOR REVIEW AND APPROVAL. SUBMITTALS SHALL CONTAIN FULL DOCUMENTATION OF CHANGES OR SUBSTITUTIONS WITH SUPPORTING, SEALED CALCULATIONS (WHERE APPLICABLE). THE REVIEW OF CHANGES AND SUBSTITUTIONS, RE-ANALYSIS AND/OR RE-DRAFTING TO INCORPORATE CHANGES OR SUBSTITUTIONS INTO CONTRACT DOCUMENTS ARE ADDITIONAL SERVICES FOR EOR. EOR IS NOT RESPONSIBLE FOR DETERMINING THE COST EFFECTIVENESS OF PROPOSED CHANGES.

1012 CONTRACTOR REQUIRED REMEDIAL WORK:

A. DESIGN OF REMEDIAL WORK RELATED TO CONSTRUCTION ERRORS, INSTALLATIONS NOT IN CONFORMANCE WITH CONTRACT DOCUMENTS, OR IN ANY WAY BROUGHT ABOUT BY ACTIVITIES OF THE CONTRACTOR, IS NOT WITHIN THE SCOPE OF CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY TRC WORLDWIDE ENGINEERING. THE CONTRACTOR SHALL CARRY IN THEIR BASE BID THE COSTS FOR ENGINEERING WORK ASSOCIATED TRC PROVIDING ADDITIONAL SERVICES IN REACTION TO NON-CONFORMING WORK.

1060 DESIGN AND CONSTRUCTION STANDARDS:

A. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES AND REFERENCED STANDARDS:

- (FBC 2023) FLORIDA BUILDING CODE 8th EDITION BY THE INTERNATIONAL CODE COUNCIL, INC
- (ADM1-2020) 2020 EDITION OF THE ALUMINUM DESIGN MANUAL
- (ACI 318-19) 2019 EDITION OF AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- (AISC 15 ED) FIFTEENTH EDITION OF THE STEEL CONSTRUCTION MANUAL BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- (ANSI S100-16) NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH SUPPLEMENT 2 (2020)
- (ASCE 7-22) MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS
- (NDS-18) 2018 EDITION OF NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION WITH 2018 SUPPLEMENT BY AMERICAN FOREST & PAPER ASSOCIATION
- (SDI) STEEL DECK INSTITUTE FLOOR DECK DESIGN MANUAL (2ND EDITION), FLOOR DECK DESIGN MANUAL (2ND EDITION), AND DIAPHRAGM DESIGN MANUAL (4TH EDITION)
- (TMS 402-2016) BUILDING CODE FOR MASONRY STRUCTURES
- B. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ABOVE REFERENCED CODES AND STANDARDS AND THE FOLLOWING:
 - (ACI 117-10) SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION MATERIALS
 - (ACI 301-16) SPECIFICATIONS FOR TOLERANCES FOR STRUCTURAL CONCRETE CONSTRUCTION MATERIALS
 - (ACI 304R-00) RECOMMENDED PRACTICES FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
 - (ACI 306R-10) HOT WEATHER CONCRETING
 - (ACI 309R-05) GUIDE FOR CONSOLIDATION OF CONCRETE
 - (ACI 315-18) DETAILS AND DETAILING OF CONCRETE REINFORCING
 - (MNL-15 (16)) FIELD REFERENCE MANUAL: SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301-16) WITH SELECTED ACI AND ASTM REFERENCES
 - (AWS D1-1:20) STRUCTURAL WELDING CODE - STEEL
 - (AWS D1-4:17) STRUCTURAL WELDING CODE - REINFORCING STEEL
 - (FMVITCA BCSI-18 (W/ 2020 UPDATES)) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES

1061 DESIGN LOADS:

A. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2023 FLORIDA BUILDING CODE, 8TH EDITION.

B. THE FOLLOWING SUPERIMPOSED DEAD, LIVE AND WIND LOADS HAVE BEEN UTILIZED:

GRAVITY LOADS		
LOCATION	SUPERIMPOSED DEAD LOAD	UNIFORM LIVE LOAD
SECOND FLOOR	30	100
STAIRS	15	100
ROOF	30	20

LIVE LOAD REDUCTION ON SUPPORTING ELEMENTS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. NO LIVE LOAD REDUCTION OF ROOF LOADING IS PERMITTED. UNIFORMED DEAD LOAD IS ADDITIVE TO ACTUAL STRUCTURAL WEIGHTS.

WIND LOADS	
ULT. WIND SPEED (3 SECOND GUST)	190 MPH
ASD WIND SPEED (3 SECOND GUST)	90 MPH
TORNADO WIND SPEED (3 SECOND GUST)	100 MPH
TORNADO PLAN AREA	100,000 SF
BUILDING RISK CATEGORY	IV
WIND EXPOSURE	C
BUILDING CLASSIFICATION	ENCLOSED
INTERNAL PRESSURE COEFFICIENTS	-0.18 / +0.18
TORNADO INTERNAL PRESSURE COEFFICIENTS	-0.18 / +0.55
VELOCITY PRESSURE	82 PSF

WIND LOAD NOTES:
1. SEE BUILDING'S ROOF UPLIFT PLAN AND WALL WIND LOAD TABLES FOR APPLICABLE PRESSURES.

1120 SHOP DRAWING REVIEW:

- A. SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL COMPONENTS SHOWN ON THESE STRUCTURAL CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
 - a. CONCRETE MIXES
 - b. CONCRETE AND MASONRY REINFORCING
 - c. STRUCTURAL STEEL AND CONNECTIONS
 - d. STEEL DECK
 - e. LIGHT GAGE FRAMING
 - f. WOOD ROOF TRUSS FRAMING
 - g. NEW PLYWOOD
 - h. ALL FASTENERS, ANCHORS, BOLTS, EPOXY ADHESIVES
 - i. WOOD FRAMING CONNECTORS
 - j. STEEL SHOP DRAWINGS FOR MISC STEEL
 - k. ENGINEERED ROOF ATTACHMENT DRAWINGS AND CALCULATIONS
 - l. ALUMINUM SHOP DRAWINGS
 - m. WELDER QUALIFICATIONS/CERTIFICATIONS FOR STEEL AND ALUMINUM
- B. SHOP DRAWINGS SHALL PROVIDE ACCURATE, DETAILED DIMENSIONAL INFORMATION INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF CONTRACT DOCUMENTS NECESSARY FOR FABRICATION AND INSTALLATION OF COMPONENT.
- C. SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR'S FIELD ENGINEER PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED.
- D. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.
- E. SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED IN ELECTRONIC PDF FILE FORMAT ONLY.
- F. SHOP DRAWINGS SHALL NOT CONTAIN DETAILS COPIED OR REPRODUCED FROM THE CONTRACT DOCUMENTS. REPRODUCTION OF THE CONTRACT DOCUMENTS WILL RESULT IN A REJECTION OF THE SHOP DRAWINGS
- G. ELECTRONIC VERSIONS OF STRUCTURAL CONTRACT DOCUMENTS ARE THE SOLE, COPYRIGHTED PROPERTY OF TRC WORLDWIDE ENGINEERING. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF TRC WORLDWIDE ENGINEERING. USERS WILL SIGN A RELEASE AND REIMBURSE TRC WORLDWIDE ENGINEERING FOR EXPENSES INCURRED IN PREPARING AND TRANSMITTING ELECTRONIC DRAWINGS AT THE RATE TO BE DETERMINED UPON REQUEST.
- H. THE CONTRACT DOCUMENTS SHALL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.
- I. CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS SHALL BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. ENGINEER REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL.
- J. ELECTRONIC SUBMITTALS OF SHOP DRAWINGS WILL ONLY BE ACCEPTED AND REVIEWED PENDING ABOVE CONDITIONS ARE MET. TRC WORLDWIDE ENGINEERING WILL ELECTRONICALLY RETURN SUBMITTAL IN PDF FORMAT AND WILL NOT BE RESPONSIBLE FOR PRINTING MULTIPLE COPIES FOR DISTRIBUTION.

1121 RFI REVIEW:
A. FOR THE CONTRACTOR'S REQUEST(S) FOR INFORMATION (RFI) SHALL STATE CONTRACTOR'S SUGGESTIONS FOR RESOLUTION AND COST IMPLICATIONS FOR SUGGESTIONS. ENGINEER OF RECORD IS NOT RESPONSIBLE FOR DETERMINING COST OR COST EFFECTIVENESS OF RFI RESPONSES.

2011 FOUNDATIONS:
A. SEE THE FOLLOWING REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES:
REPORT NO.: 23-303
PREPARED BY: VELOCITY ENGINEERING SERVICES
TITLED: SANIBEL FIRE STATION 172
DATED: AUGUST 25, 2023
THIS REPORT SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

B. NO APPROVAL OR VERIFICATION OF RECOMMENDATIONS MADE WITHIN THE ABOVE NOTED GEOTECHNICAL REPORT IS IMPLIED THROUGH REFERENCE OR USE BY TRC.

C. A GEOTECHNICAL ENGINEER, LICENSED WITHIN THE JURISDICTION OF THE PROJECT, SHALL VERIFY IN THE FIELD THAT ALL SITE PREPARATION FILL OPERATIONS, BEARING CONDITIONS, FOUNDATION TESTING AND INSTALLATION COMPLY WITH THE SOILS REPORT.

D. FOUNDATION DESIGN FOR SHALLOW FOUNDATIONS SYSTEMS ARE BASED UPON AN ALLOWABLE NET SOIL BEARING PRESSURE 2,500 PSF AS PROVIDED BY ABOVE GEOTECHNICAL REPORT.

E. FOUNDATION WALLS ARE DESIGNED FOR THE FOLLOWING DESIGN LOADS:

- a. SOIL WEIGHT:.....120 PCF
- b. AT-REST PRESSURE: (BRACED AT TOP)..... 60 PCF
- c. ACTIVE PRESSURE:..... 40 PCF
- d. PASSIVE PRESSURE:.....240 PCF
- e. FRICTION COEFFICIENT:.....0.35

F. SUBGRADE PREPARATION AND VAPOR BARRIER INSTALLATION FOR SLAB-ON-GRADE SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT.

G. CONCRETE FOR FOOTINGS SHALL BE PLACED IMMEDIATELY AFTER FINAL INSPECTION AND ACCEPTANCE BY THE GEOTECHNICAL ENGINEER. IN NO CASE SHALL FOOTING EXCAVATIONS BE ALLOWED TO STAND OPEN OVERNIGHT OR DURING RAIN.

H. FOUNDATION WALLS WITHOUT CANTILEVERED FOOTINGS SHALL NOT BE BACKFILLED UNTIL SHORED OR PERMANENTLY SUPPORTED AT THE TOP OF WALL.

I. BACKFILLING OF WALLS AND PIERS SHALL BE PLACED SUCH THAT SYMMETRICAL LOADING SHALL BE MAINTAINED ON BOTH SIDES. WHERE DESIGN CONDITIONS REQUIRE BACKFILLING EACH SIDE TO UNEQUAL HEIGHTS, WALLS OR PIERS SHALL BE FIRMLY SHORED ON POSITION, AND SHORES SHALL REMAIN UNTIL FLOORS OR OTHER PERMANENT BRACING ELEMENTS ARE PLACED AND PROPERLY SET TO PROVIDE FULL SUPPORT.

J. GRADE SHALL BE SUCH THAT THICKNESS OF FOUNDATION, SLAB ON GRADE, ETC. IS NOT REDUCED BY MORE THAN 5% OF THAT SHOWN ON DRAWINGS.

3101 FORMWORK AND SHORING (CONCRETE SLABS AND BEAMS):

- A. NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH & ALL TENDONS STRESSED FOR PT SLABS). A MINIMUM OF 3 STORIES OF SHORING AND (OR) RESHORING SHALL BE USED WHICH SHALL CONSIST OF ONE COMPLETE SET OF VERTICAL SHORES AND TWO SETS OF VERTICAL SHORES THAT COMPRISE AT LEAST 50% OF A COMPLETE SET.
- B. DRAWINGS FOR SHORING AND RESHORING SHALL BE PREPARED BY AN ENGINEER LICENSED WITHIN THE JURISDICTION OF THE PROJECT.
- C. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301.
- D. SUBMIT SIGNED & SEALED SHOP DRAWINGS INCLUDING POUR SEQUENCE AND CALCULATIONS, WHERE NECESSARY, TO DEMONSTRATE THAT THE POUR SEQUENCE AND SHORING/RE-SHORING METHODS DO NOT OVERSTRESS THE STRUCTURE. THIS ANALYSIS SHALL INCLUDE FOR STRESSES CAUSED BY SHRINKAGE OF STRUCTURAL SLAB. PROVIDE LOCATION AND DETAIL OF POUR STRIPS IF REQUIRED TO REDUCE SHRINKAGE AND RESTRAINT CRACKS.
- E. SHORING INSPECTIONS SHALL BE PERFORMED BY THE SHORING ENGINEER.
- F. UNLESS ARCHITECT SPECIFIES OTHERWISE, CONSTRUCT FORMWORK SO CONCRETE SURFACES CONFORM TO THE TOLERANCE LIMITS OF ACI 117 (STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION MATERIALS). THE CLASS OF SERVICE FOR CONTACT BETWEEN ADJACENT PIECES OF FORMWORK FACING MATERIAL SHALL BE CLASS B FOR SURFACES PERMANENTLY EXPOSED TO PUBLIC VIEW AND CLASS D FOR SURFACES THAT WILL BE PERMANENTLY CONCEALED.

3102 PLUMBING SLEEVES AND EMBEDDED CONDUITS:

- A. LOCATION DRAWINGS FOR ALL SLEEVES AND BLOCKOUTS IN THE CONCRETE SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
- B. ALL CONDUIT, SLEEVES, AND PIPES EMBEDDED IN OR PASSING THRU CONCRETE SHALL CONFORM TO SECTION 207.0 OF ACI 318 AND THE FOLLOWING:
 - a. SLEEVES AND PIPES SHALL BE PLACED SO THAT REINFORCING STEEL CAN BE PLACED WITH THE SPECIFIED COVER AND CLEAR DISTANCE BETWEEN BARS.
 - b. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER.
 - c. SLEEVES OR GROUPS OF SLEEVES 16 INCH IN DIAMETER AND LARGER SHALL BE TREATED AS A SLAB OPENING AND REINFORCED PER TYPICAL OPENING REINFORCING DETAILS.
 - d. CONDUIT AND PIPES PLACED WITHIN SLABS, BEAMS, WALLS AND TOPPING OVER SLABS SHALL OCCUPY ONLY THE MIDDLE ONE THIRD OF THE MEMBER DEPTH OR THICKNESS. MAXIMUM CONDUIT O.D. FOR SINGLE CONDUITS OR SUM OF O.D.'S FOR MULTIPLE CONDUITS THAT CROSS SHALL BE NO LARGER THAN ONE THIRD THE MEMBER DEPTH. PARALLEL CONDUITS SHALL BE SPACED WITH A MINIMUM OF 3 DIAMETERS CLEAR. CONDUITS SHALL BE A MINIMUM OF ONE DIAMETER AWAY FROM AND SHALL NOT INTERFERE WITH OR DISPLACE ANY TENDONS OR REINFORCING. CONDUIT SHALL NOT BE TIED TO REINFORCING OR TENDONS. CONDUITS SHALL NOT OCCUR WITHIN TRANSFER GIRDERS OR COLUMN ZONES OF SLABS.
 - e. CONDUITS AND PIPES PLACED IN COLUMNS SHALL NOT DISPLACE MORE THAN 4% OF THE CROSS SECTIONAL AREA OF COLUMN AND SHALL BE LOCATED ON THE CENTER LINE OF COLUMN. OUTLET BOXES IN COLUMNS SHALL BE APPROVED BY THE ENGINEER. SHALL NOT DISPLACE REINFORCING AND SHALL NOT BE DEEPER THAN REQUIRED CLEARANCE FOR REINF.

3104 CONSTRUCTION JOINTS AND CONTROL JOINTS:

- A. CONSTRUCTION JOINTS AND CONTROL JOINTS SHALL BE LOCATED AS SHOWN IN PLAN OR SECTION.
- B. UNLESS NOTED OTHERWISE, CONTROL JOINTS IN SLABS ON GRADE SHALL BE PROVIDED SO THAT THE MAXIMUM DISTANCE BETWEEN JOINTS SHALL BE NO MORE THAN 3 TIMES THE SLAB THICKNESS IN FEET (OR AS SHOWN ON PLANS). SAWCUT CONTROL JOINTS SHALL BE MADE AS SOON AS SLAB WILL SAFELY SUPPORT MEN AND EQUIPMENT. THE SLAB WILL NOT BE DAMAGED BY EQUIPMENT. ASPECT RATIO (LONGSIDE TO SHORTSIDE OF CONCRETE AREA) SHALL NOT EXCEED 1.5.
- C. DEVIATION FROM OR ADDITION TO CONSTRUCTION OR CONTROL JOINT LOCATIONS SHOWN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL AND ARE ACCEPTABLE ONLY AS A CHANGE ORDER THAT WILL INCLUDE ENGINEERING CHARGES BY THE ENGINEER OF RECORD FOR REDESIGN OF THE STRUCTURE AS REQUIRED. SHORING REQUIREMENTS TO IMPLEMENT REVISED CONSTRUCTION JOINTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3201 REINFORCING STEEL:

- A. CONTRACTOR SHALL CARRY AN ALLOWANCE IN THEIR BID FOR SUPPLYING AND INSTALLING (2) TONS OF REINFORCING STEEL IN ADDITION TO THAT SHOWN ON PLANS AND WITHIN SECTIONS, DETAIL AND SCHEDULES TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER.
- B. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 DEFORMED BARS (WELDABLE REINFORCING "DBA" SHALL CONFORM TO ASTM A706 GRADE 60). FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION. REINFORCING BAR DETAILING SHALL COMPLY WITH ACI 318 MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES AND CRSI MANUAL OF STANDARD PRACTICE.
- C. CLEAR COVER TO REINFORCING SHALL BE AS INDICATED BELOW, WHERE A SPECIFIC CONDITION IS NOT NOTED, REFER TO ACI REQUIREMENTS FOR COVER:

	TOP	BOTTOM	SIDES/EDGES
FRAMED SLABS ON GRADE.....1"	3"	NA	NA
FOUNDATION WALL/PILASTER.....NA	2" EXTERIOR	1 1/2" INTERIOR	NA
SPREAD FOOTINGS.....2"	3"	3"	3"
COLUMNS & WALLS.....NA	NA	2" AGAINT SOIL	1 1/2" TYPICAL

ELEVATED FRAMED SLAB

INTERIOR	3/4"	3/4"	1"
EXTERIOR	1"	1 1/2"	2"
#5 AND SMALLER	1"	1 1/2"	2"
#6 AND LARGER	2"	2"	2"

BEAMS

(INTERIOR)	1 1/2"	1 1/2"	1 1/2"
(EXTERIOR EXPOSURE)	2"	1 1/2"	1 1/2"
- D. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. SEE NOTES ON EMBEDDED ITEMS FOR ADDITIONAL LIMITATIONS.
- E. PROVIDE CONTINUOUS REINFORCING WHERE POSSIBLE. SPLICE ONLY AS SHOWN ON DRAWINGS OR AS APPROVED BY STRUCTURAL ENGINEER. PROVIDE CORNER BARS AT ALL WALL, GRADE BEAM AND STRIP FOOTING CORNERS. BARS SHALL BE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING. INTERSECTING WALLS, GRADE BEAMS AND STRIP FOOTINGS SHALL BE DOWELED TOGETHER IN THE SAME MANNER. PROVIDE 2 NO. 4 TOP DIAGONAL BARS 4'-0" LONG AT ALL REINTRANT CORNERS IN ALL SLABS ON GRADE AND ELEVATED SLABS.
- F. SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. SHOP DRAWINGS SHALL INCLUDE ADEQUATE SECTIONS, ELEVATIONS AND DETAILS. WRITTEN DESCRIPTIONS ARE NOT ACCEPTABLE. ALL CONCRETE WALLS SHALL BE DETAILED IN ELEVATION.
- G. SPLICING OF REINFORCING SHALL BE AS SHOWN OR AS INDICATED IN SCHEDULE. MECHANICAL SPLICING DEVICES SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH (FY) OF THE BAR. STAGGER MECHANICAL SPLICES WHERE POSSIBLE. ALL STEEL NOTED AS CONTINUOUS SHALL BE A CLASS "B" SPLICE PER SCHEDULE.
- H. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED OR DIRECTED BY THE STRUCTURAL ENGINEER.
- I. THE ALL REINFORCING AND EMBEDS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCING AND EMBEDS WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.
- J. THE SHOP DRAWINGS FOR REINFORCING STEEL SHALL INCLUDE SCALE ELEVATIONS OF ALL CONCRETE WALLS.
- K. OPENINGS THROUGH CONCRETE WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS MUST BE LOCATED AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS MUST BE REVIEWED BY THE A/E BEFORE THE CONCRETE IS POURED.

NOTE: MAXIMUM DEVIATION IN BAR PLACEMENT SHALL BE AS DICTATED BY ACI.

- D. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. SEE NOTES ON EMBEDDED ITEMS FOR ADDITIONAL LIMITATIONS.

E. PROVIDE CONTINUOUS REINFORCING WHERE POSSIBLE. SPLICE ONLY AS SHOWN ON DRAWINGS OR AS APPROVED BY STRUCTURAL ENGINEER. PROVIDE CORNER BARS AT ALL WALL, GRADE BEAM AND STRIP FOOTING CORNERS. BARS SHALL BE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING. INTERSECTING WALLS, GRADE BEAMS AND STRIP FOOTINGS SHALL BE DOWELED TOGETHER IN THE SAME MANNER. PROVIDE 2 NO. 4 TOP DIAGONAL BARS 4'-0" LONG AT ALL REINTRANT CORNERS IN ALL SLABS ON GRADE AND ELEVATED SLABS.

F. SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. SHOP DRAWINGS SHALL INCLUDE ADEQUATE SECTIONS, ELEVATIONS AND DETAILS. WRITTEN DESCRIPTIONS ARE NOT ACCEPTABLE. ALL CONCRETE WALLS SHALL BE DETAILED IN ELEVATION.

G. SPLICING OF REINFORCING SHALL BE AS SHOWN OR AS INDICATED IN SCHEDULE. MECHANICAL SPLICING DEVICES SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH (FY) OF THE BAR. STAGGER MECHANICAL SPLICES WHERE POSSIBLE. ALL STEEL NOTED AS CONTINUOUS SHALL BE A CLASS "B" SPLICE PER SCHEDULE.

H. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED OR DIRECTED BY THE STRUCTURAL ENGINEER.

I. THE ALL REINFORCING AND EMBEDS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCING AND EMBEDS WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.

J. THE SHOP DRAWINGS FOR REINFORCING STEEL SHALL INCLUDE SCALE ELEVATIONS OF ALL CONCRETE WALLS.

K. OPENINGS THROUGH CONCRETE WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS MUST BE LOCATED AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS MUST BE REVIEWED BY THE A/E BEFORE THE CONCRETE IS POURED.

3202 WELDED WIRE REINFORCING:

- A. WELDED WIRE REINFORCING (WWR) SHALL CONFORM TO ASTM A-185. FREE FROM OIL, SCALE AND RUST, AND PLACED IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. MINIMUM PLACED SHALL BE ONE SPACE PLUS TWO INCHES. USE OF FLAT MANUFACTURED SHEETS IS REQUIRED.
- B. THE WELDED WIRE REINFORCING IN THE COMPOSITE ELEVATED SLAB SHALL BE SUPPORTED BY PLACING CONTINUOUS HEAVY BOLSTERS @ 2'-0" OC MAXIMUM OVER THE COMPOSITE METAL DECK.
- C. THE WELDED WIRE REINFORCING IN THE CONCRETE SLAB-ON-GRADE SHALL BE SUPPORTED BY CONTINUOUS #4 SUPPORT BARS @ 2'-0" OC MAXIMUM. THE #4 BARS SHALL BE TIED AND SUPPORTED BY CONCRETE BRICKS OR CHAIRS AS REQUIRED FOR THE CORRECT POSITIONING OF REINFORCING AS SPECIFIED ON THE DRAWINGS (2'-0" OC MAXIMUM).

3301 CAST-IN-PLACE CONCRETE:

A. ALL CAST-IN-PLACE CONCRETE SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE DESIGN STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

CONCRETE DESIGN CRITERIA		
MINIMUM 28-DAY COMPRESSIVE STRENGTH	MAXIMUM SLUMP	USED FOR:
4000 PSI	4 (4")	FOUNDATIONS, SLAB-ON-GRADE
5000 PSI	4 (4")	CONCRETE COLUMNS AND BEAMS

* HIGHER SLUMPS ARE PERMITTED WHEN HIGH RANGE WATER REDUCER (HWRW) ADMIXTURES (SUPER PLASTICIZER) ARE USED PENDING ENGINEER OF RECORD APPROVAL OF MIX DESIGN.

- B. CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI 301(16) STANDARDS AND SPECIFICATIONS.
- C. PRIOR TO CONCRETE PLACEMENT, MIX DESIGN SHALL BE SUBMITTED AND ACCEPTED BY ENGINEER FOR USE. MIX DESIGN SHALL INCLUDE THE FOLLOWING:
 - a. MIX DESIGN WHICH SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER ACI 301, ARTICLE 4.2.3
 - b. ONLY TYPE II CEMENT SHALL BE USED FOR SLAB-ON GRADE CONCRETE.
 - c. CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. FAILURE TO COMPLY MAY RESULT IN REJECTION OF THE MIX. IF ACCEPTED, PEAK RATIO PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM POURS LESS THAN 90' LINEAL FEET PER POUR.
 - d. MIX DESIGN SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE.
 - e. CALIUM CHLORIDES SHALL NOT BE UTILIZED.
 - f. OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
 - g. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING STRUCTURAL DRAWINGS AND SPECIFYING THE USE OF WATER REDUCERS WHERE REINFORCING CONGESTION WARRANTS.
- D. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1 1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT LISTED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.
- E. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C897. IDENTIFYING SHALL HAVE A FLUORIDE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
- F. WATER/CEMENT/RITIOUS MATERIAL RATIO FOR CONCRETE BELOW OR AT GRADE AND FOR CONCRETE SLABS SHALL HAVE A FLUORIDE DYE. THE COMPOUND SHALL NOT EXCEED 0.45 BY WEIGHT. MAXIMUM PERMISSIBLE W/C RATIO: 0.50 FOR ALL OTHER CONCRETE AND CONCRETE BELOW GRADE SUBJECT TO FREEZETHAW.
- G. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED. FOR SURFACE FINISHES AND OTHER REQUIREMENTS, REFER TO THE CONCRETE SPECIFICATIONS.
- H. WHERE SPECIFIED COLUMN CONCRETE STRENGTH IS 1.4 TIMES THE SPECIFIED SLAB CONCRETE STRENGTH, SEE COLUMN SCHEDULE FOR PUDDLING REQUIREMENTS. IF REQUIRED, THE STRENGTH OF THE PUDDLED CONCRETE SHALL BE AT LEAST EQUAL TO THE STRENGTH OF THE COLUMN CONCRETE. PUDDLING SHALL EXTEND 2'-0" MINIMUM FROM FACE OF COLUMN IN ALL DIRECTIONS.
- I. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. LOCATION DRAWINGS FOR ALL SLEEVES AND BLOCKOUTS IN THE CONCRETE SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
- J. CONCRETE WALLS SHALL BE CAST MONOLITHIC WITH ADJOINING COLUMNS UNLESS SPECIFICALLY NOTED OTHERWISE. CONCRETE FOR SUCH WALLS SHALL BE THE SAME TYPE AND STRENGTH AS SPECIFIED COLUMNS.
- K. CONTRACTOR SHALL CONFORM TO ACI 306R FOR COLD WEATHER CONCRETING AND ACI 308R FOR HOT WEATHER CONCRETING WHEN ANY COMBINATION OF HIGH TEMPERATURE, LOW RELATIVE HUMIDITY AND WIND VELOCITY TEND TO IMPAIR THE QUALITY OF THE CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 90°F OR ABOVE. PROTECT SURFACES OF EXPOSED CONCRETE FROM PRECIPITATION DAMAGE UNTIL ADEQUATE STRENGTH IS GAINED TO PREVENT DAMAGE.
- L. CONCRETE SHALL BE VIBRATED BY MECHANICAL VIBRATORS.
- M. A PRE-CONCRETE CONFERENCE SHALL BE HELD BY THE CONTRACTOR WITH SUBCONTRACTORS, TESTING LAB PERSONNEL, ARCHITECT AND ENGINEERS. THESE CONFERENCES SHALL BE HELD WELL IN ADVANCE OF CONSTRUCTION TO ENSURE PROPER INTERPRETATION OF DESIGN INTENT. STEEL ERECTOR SHALL FIELD VERIFY CORRECTNESS OF FOUNDATION, ANCHOR RODS, OR OTHER EXISTING WORK AFFECTING THE STEEL BEFORE STARTING ERECTION.

D. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1 1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT LISTED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.

E. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C897. IDENTIFYING SHALL HAVE A FLUORIDE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.

F. WATER/CEMENT/RITIOUS MATERIAL RATIO FOR CONCRETE BELOW OR AT GRADE AND FOR CONCRETE SLABS SHALL HAVE A FLUORIDE DYE. THE COMPOUND SHALL NOT EXCEED 0.45 BY WEIGHT. MAXIMUM PERMISSIBLE W/C RATIO: 0.50 FOR ALL OTHER CONCRETE AND CONCRETE BELOW GRADE SUBJECT TO FREEZETHAW.

G. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED. FOR SURFACE FINISHES AND OTHER REQUIREMENTS, REFER TO THE CONCRETE SPECIFICATIONS.

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I. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. LOCATION DRAWINGS FOR ALL SLEEVES AND BLOCKOUTS IN THE CONCRETE SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.

J. CONCRETE WALLS SHALL BE CAST MONOLITHIC WITH ADJOINING COLUMNS UNLESS SPECIFICALLY NOTED OTHERWISE. CONCRETE FOR SUCH WALLS SHALL BE THE SAME TYPE AND STRENGTH AS SPECIFIED COLUMNS.

K. CONTRACTOR SHALL CONFORM TO ACI 306R FOR COLD WEATHER CONCRETING AND ACI 308R FOR HOT WEATHER CONCRETING WHEN ANY COMBINATION OF HIGH TEMPERATURE, LOW RELATIVE HUMIDITY AND WIND VELOCITY TEND TO IMPAIR THE QUALITY OF THE CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 90°F OR ABOVE. PROTECT SURFACES OF EXPOSED CONCRETE FROM PRECIPITATION DAMAGE UNTIL ADEQUATE STRENGTH IS GAINED TO PREVENT DAMAGE.

L. CONCRETE SHALL BE VIBRATED BY MECHANICAL VIBRATORS.

M. A PRE-CONCRETE CONFERENCE SHALL BE HELD BY THE CONTRACTOR WITH SUBCONTRACTORS, TESTING LAB PERSONNEL, ARCHITECT AND ENGINEERS. THESE CONFERENCES SHALL BE HELD WELL IN ADVANCE OF CONSTRUCTION TO ENSURE PROPER INTERPRETATION OF DESIGN INTENT. STEEL ERECTOR SHALL FIELD VERIFY CORRECTNESS OF FOUNDATION, ANCHOR RODS, OR OTHER EXISTING WORK AFFECTING THE STEEL BEFORE STARTING ERECTION.

3304 CONCRETE TESTING:

- A. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:
 - a. ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE"
 - b. ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS. FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDERS(S) QUANTITIES AND TEST AGE AS FOLLOWS:
 - 28 DAY SPEC:
 - 1. EARLY CYLINDERS (AS NEEDED): 1, 2, AND 3 DAY BREAKS ARE A GOOD RANGE TO HAVE FOR STRESSING OR OTHER EARLY NEEDS. EACH TEST REQUIRES (3) CYLINDERS
 - 2. (3) 7 DAY CYLINDERS
 - 3. (3) 28 DAY CONFORMANCE CYLINDERS
 - 4. (3) 90 DAY HOLD CYLINDERS (TO BE TESTED IF THE 28 DAY CYLINDERS DO NOT MEET SPEC AND CAN BE TESTED AT ANY TIME AT THE REQUEST/DISCRETION OF THE ENGINEER/CONTRACTOR)
 - 56 DAY SPEC:
 - 1. EARLY CYLINDERS (AS NEEDED): 1, 2 AND 3 DAY BREAKS ARE A GOOD RANGE TO HAVE FOR STRESSING OR OTHER EARLY NEEDS. EACH TEST REQUIRES (3) CYLINDERS
 - 2. (3) 7 DAY CYLINDERS
 - 3. (2) 28 DAY CYLINDERS
 - 4. (3) 56 DAY CONFORMANCE CYLINDERS
 - 5. (3) 90 DAY HOLD CYLINDERS (TO BE TESTED IF THE 56 DAY CYLINDERS DO NOT MEET SPEC AND CAN BE TESTED AT ANY TIME AT THE REQUEST/DISCRETION OF THE ENGINEER/CONTRACTOR)

28 DAY SPEC:
1. EARLY CYLINDERS (AS NEEDED): 1, 2, AND 3 DAY BREAKS ARE A GOOD RANGE TO HAVE FOR STRESSING OR OTHER EARLY NEEDS. EACH TEST REQUIRES (3) CYLINDERS

56 DAY



**SANIBEL FIRE AND RESCUE
STATION 172**

PROJECT LOCATION:
5171 SANIBEL-CAPTIVA
SANIBEL, FLORIDA 33957



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Estero, FL 33928
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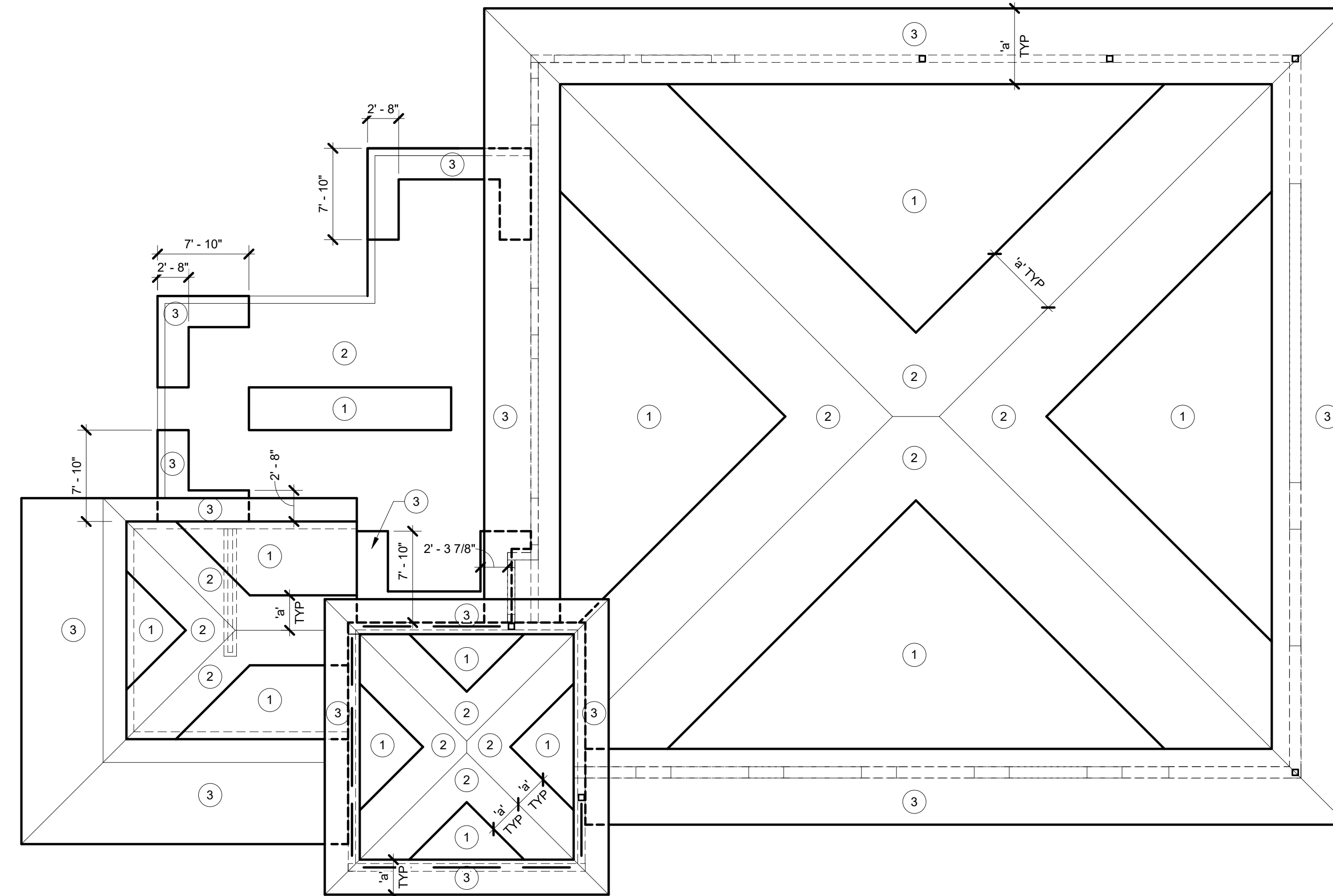
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REVISIONS		
MARK	DESCRIPTION	DATE

COMPONENT & CLADDING NOMINAL WIND PRESSURES (PER ASCE 7-22)									
ULTIMATE WIND SPEED, VULT	190 MPH	RISK CATEGORY		IV	EDGE DISTANCE, "a"		3'-0"		
NOMINAL WIND SPEED, VASD	147 MPH	EXPOSURE		D	ROOF SLOPE		4.00/12		
HIP ROOF 7° < 0 ≤ 20° AND h ≤ 60 FT		DIRECTIONALITY FACTOR, Kd		0.85					
COMPONENT LOCATION	POSITIVE PRESSURES (PSF)				NEGATIVE PRESSURES (PSF)				
EFFECTIVE AREA, Ae	10 ft²	20 ft²	50 ft²	100 ft²	10 ft²	20 ft²	50 ft²	100 ft²	
ROOFS	ZONE 1: INTERIOR WITHIN "a" ft FROM EAVES TO "a" ft FROM HIPS AND RIDGES	+48.70	+42.03	+33.22	+26.56	-109.56	-96.76	-79.83	-67.03
	ZONE 2: WITHIN "a" ft FROM HIPS AND RIDGES	+48.70	+42.03	+33.22	+26.56	-142.76	-128.68	-110.06	-95.98
	ZONE 3: WITHIN "a" ft FROM EAVES	+48.70	+42.03	+33.22	+26.56	-153.83	-138.47	-118.16	-102.80
	OVERHANG: ZONE 3: OVERHANGS WITHIN "a" ft FROM CORNERS	N/A	N/A	N/A	N/A	-199.20	-180.90	-156.70	-138.40
WALLS	ZONE 4: INTERIOR	+85.76	+82.82	+78.94	+76.00	-91.30	-88.36	-84.47	-81.53
	ZONE 5: EXTERIOR	+85.76	+82.82	+78.94	+76.00	-107.90	-102.02	-94.24	-88.36

- NOTES:
1. "Ae" INDICATES EFFECTIVE AREA AS DEFINED BY SECTION 26.2 OF ASCE 7.
2. PRESSURE VALUES IN ABOVE TABLE ARE BASED ON THE PARAMETERS LISTED AT THE TOP OF THE TABLE.
3. PRESSURE VALUES IN ABOVE TABLE ARE FOR:
ROOF - ENCLOSED BUILDING, GCPI = ± 0.18
WALL - PARTIALLY ENCLOSED BUILDING, GCPI = ± 0.55
4. GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 26.10.3 OF ASCE 7.
5. POSITIVE OR NEGATIVE DESIGN PRESSURES SHALL NOT BE TAKEN LESS THAN 16 psf (ULTIMATE VALUE) OR 10 PSF (NOMINAL VALUE).
6. POSITIVE WIND PRESSURES ACT TOWARD THE SURFACE AND NEGATIVE PRESSURES ACT AWAY FROM THE SURFACE.
7. PRESSURES IN TABLE ARE ALLOWABLE PRESSURES. NO FURTHER REDUCTIONS PERMITTED.

2 TOWER ROOF WIND TABLE
S003 12" = 1'-0"



1 ROOF UPLIFT DIAGRAM
S003 1/8" = 1'-0"

COMPONENT & CLADDING NOMINAL WIND PRESSURES (PER ASCE 7-22)									
ULTIMATE WIND SPEED, VULT	190 MPH	RISK CATEGORY		IV	EDGE DISTANCE, "a"		6'-6"		
NOMINAL WIND SPEED, VASD	147 MPH	EXPOSURE		D	ROOF SLOPE		3.00/12		
HIP ROOF 7° < 0 ≤ 20° AND h ≤ 60 FT		DIRECTIONALITY FACTOR, Kd		0.85					
COMPONENT LOCATION	POSITIVE PRESSURES (PSF)				NEGATIVE PRESSURES (PSF)				
EFFECTIVE AREA, Ae	10 ft²	20 ft²	50 ft²	100 ft²	10 ft²	20 ft²	50 ft²	100 ft²	
ROOFS	ZONE 1: FROM 0.6 TO 1.2h DISTANCE FROM HIPS, RIDGES AND EDGES	+23.42	+21.95	+20.00	+18.54	-91.71	-85.66	-77.66	-71.61
	ZONE 2: WITHIN 0.6h DISTANCE FROM HIPS, RIDGES AND EDGES	+23.42	+21.95	+20.00	+18.54	-120.98	-113.20	-102.92	-95.14
	ZONE 3: WITHIN 0.6h FROM CORNERS AND 0.2h WIDE	+23.42	+21.95	+20.00	+18.54	-120.98	-113.20	-102.92	-95.14
	OVERHANG: ZONE 1 & 1'	N/A	N/A	N/A	N/A	-82.93	-81.46	-79.52	-78.05
OVERHANG: ZONE 2	N/A	N/A	N/A	N/A	-112.20	-101.83	-88.12	-77.74	
OVERHANG: ZONE 3	N/A	N/A	N/A	N/A	-156.10	-137.95	-113.96	-95.81	
WALLS	ZONE 4: INTERIOR	+75.61	+73.02	+69.59	+67.00	-80.49	-77.90	-74.47	-71.87
	ZONE 5: EXTERIOR	+75.61	+73.02	+69.59	+67.00	-95.12	-89.94	-83.08	-77.90
PARAPETS	CASE A				CASE B				
	INTERIOR ZONE	+182.51	+171.91	+157.89	+147.28	-122.67	-117.37	-110.36	-105.05
CORNER ZONE	+182.51	+171.91	+157.89	+147.28	-137.63	-129.68	-119.17	-111.21	

- NOTES:
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3. PRESSURE VALUES IN ABOVE TABLE ARE FOR:
ROOF - ENCLOSED BUILDING, GCPI = ± 0.18
WALL - PARTIALLY ENCLOSED BUILDING, GCPI = ± 0.55
4. GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 26.10.3 OF ASCE 7.
5. POSITIVE OR NEGATIVE DESIGN PRESSURES SHALL NOT BE TAKEN LESS THAN 16 psf (ULTIMATE VALUE) OR 10 PSF (NOMINAL VALUE).
6. POSITIVE WIND PRESSURES ACT TOWARD THE SURFACE AND NEGATIVE PRESSURES ACT AWAY FROM THE SURFACE.
7. PRESSURES IN TABLE ARE ALLOWABLE PRESSURES. NO FURTHER REDUCTIONS PERMITTED.

5 TRAINING ROOF WIND TABLE
S003 12" = 1'-0"

COMPONENT & CLADDING NOMINAL WIND PRESSURES (PER ASCE 7-22)									
ULTIMATE WIND SPEED, VULT	190 MPH	RISK CATEGORY		IV	EDGE DISTANCE, "a"		3'-0"		
NOMINAL WIND SPEED, VASD	147 MPH	EXPOSURE		D	ROOF SLOPE		6.00/12		
HIP ROOF 7° < 0 ≤ 20° AND h ≤ 60 FT		DIRECTIONALITY FACTOR, Kd		0.85					
COMPONENT LOCATION	POSITIVE PRESSURES (PSF)				NEGATIVE PRESSURES (PSF)				
EFFECTIVE AREA, Ae	10 ft²	20 ft²	50 ft²	100 ft²	10 ft²	20 ft²	50 ft²	100 ft²	
ROOFS	ZONE 1: INTERIOR WITHIN "a" ft FROM EAVES TO "a" ft FROM HIPS AND RIDGES	+43.88	+37.88	+29.94	+23.93	-78.79	-69.78	-57.88	-48.87
	ZONE 2: WITHIN "a" ft FROM HIPS AND RIDGES	+43.88	+37.88	+29.94	+23.93	-108.71	-93.70	-73.85	-58.84
	ZONE 3: WITHIN "a" ft FROM EAVES	+43.88	+37.88	+29.94	+23.93	-108.71	-93.70	-73.85	-58.84
	OVERHANG: ZONE 3: OVERHANGS WITHIN "a" ft FROM CORNERS	N/A	N/A	N/A	N/A	-158.57	-140.91	-117.56	-99.90
WALLS	ZONE 4: INTERIOR	+77.29	+74.64	+71.14	+68.48	-82.28	-79.63	-76.12	-73.47
	ZONE 5: EXTERIOR	+77.29	+74.64	+71.14	+68.48	-97.24	-91.94	-84.93	-79.63

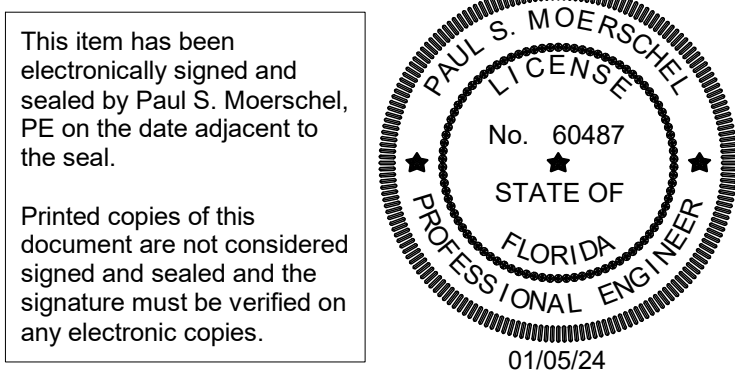
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2. PRESSURE VALUES IN ABOVE TABLE ARE BASED ON THE PARAMETERS LISTED AT THE TOP OF THE TABLE.
3. PRESSURE VALUES IN ABOVE TABLE ARE FOR:
ROOF - ENCLOSED BUILDING, GCPI = ± 0.18
WALL - PARTIALLY ENCLOSED BUILDING, GCPI = ± 0.55
4. GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 26.10.3 OF ASCE 7.
5. POSITIVE OR NEGATIVE DESIGN PRESSURES SHALL NOT BE TAKEN LESS THAN 16 psf (ULTIMATE VALUE) OR 10 PSF (NOMINAL VALUE).
6. POSITIVE WIND PRESSURES ACT TOWARD THE SURFACE AND NEGATIVE PRESSURES ACT AWAY FROM THE SURFACE.
7. PRESSURES IN TABLE ARE ALLOWABLE PRESSURES. NO FURTHER REDUCTIONS PERMITTED.

4 PORCH ROOF WIND TABLE
S003 12" = 1'-0"

COMPONENT & CLADDING NOMINAL WIND PRESSURES (PER ASCE 7-22)									
ULTIMATE WIND SPEED, VULT	190 MPH	RISK CATEGORY		IV	EDGE DISTANCE, "a"		6'-6"		
NOMINAL WIND SPEED, VASD	147 MPH	EXPOSURE		D	ROOF SLOPE		3.00/12		
HIP ROOF 7° < 0 ≤ 20° AND h ≤ 60 FT		DIRECTIONALITY FACTOR, Kd		0.85					
COMPONENT LOCATION	POSITIVE PRESSURES (PSF)				NEGATIVE PRESSURES (PSF)				
EFFECTIVE AREA, Ae	10 ft²	20 ft²	50 ft²	100 ft²	10 ft²	20 ft²	50 ft²	100 ft²	
ROOFS	ZONE 1: INTERIOR WITHIN "a" ft FROM EAVES TO "a" ft FROM HIPS AND RIDGES	+47.86	+41.32	+32.66	+26.11	-107.69	-95.11	-78.47	-65.89
	ZONE 2: WITHIN "a" ft FROM HIPS AND RIDGES	+47.86	+41.32	+32.66	+26.11	-140.33	-126.49	-108.19	-94.34
	ZONE 3: WITHIN "a" ft FROM EAVES	+47.86	+41.32	+32.66	+26.11	-151.21	-136.11	-116.15	-101.05
	OVERHANG: ZONE 3: OVERHANGS WITHIN "a" ft FROM CORNERS	N/A	N/A	N/A	N/A	-195.80	-177.82	-154.03	-136.04
WALLS	ZONE 4: INTERIOR	+84.31	+81.41	+77.59	+74.70	-89.74	-86.85	-83.03	-80.14
	ZONE 5: EXTERIOR	+84.31	+81.41	+77.59	+74.70	-106.06	-100.28	-92.63	-86.85

- NOTES:
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6. POSITIVE WIND PRESSURES ACT TOWARD THE SURFACE AND NEGATIVE PRESSURES ACT AWAY FROM THE SURFACE.
7. PRESSURES IN TABLE ARE ALLOWABLE PRESSURES. NO FURTHER REDUCTIONS PERMITTED.

3 MAIN ROOF WIND TABLE
S003 12" = 1'-0"



COMM. NO.: 23FTM232
ISSUE DATE: 12.22.23

DRAWN BY: RHE

WIND PRESSURES

S003

100% CONSTRUCTION DOCUMENTS



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION:
5171 SANIBEL CAPTIVA
SANIBEL, FLORIDA 33957



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Estaro, FL 33928
voice (239) 208-4846

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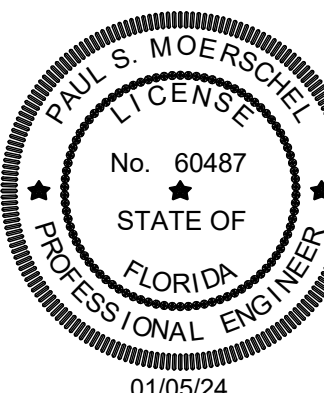
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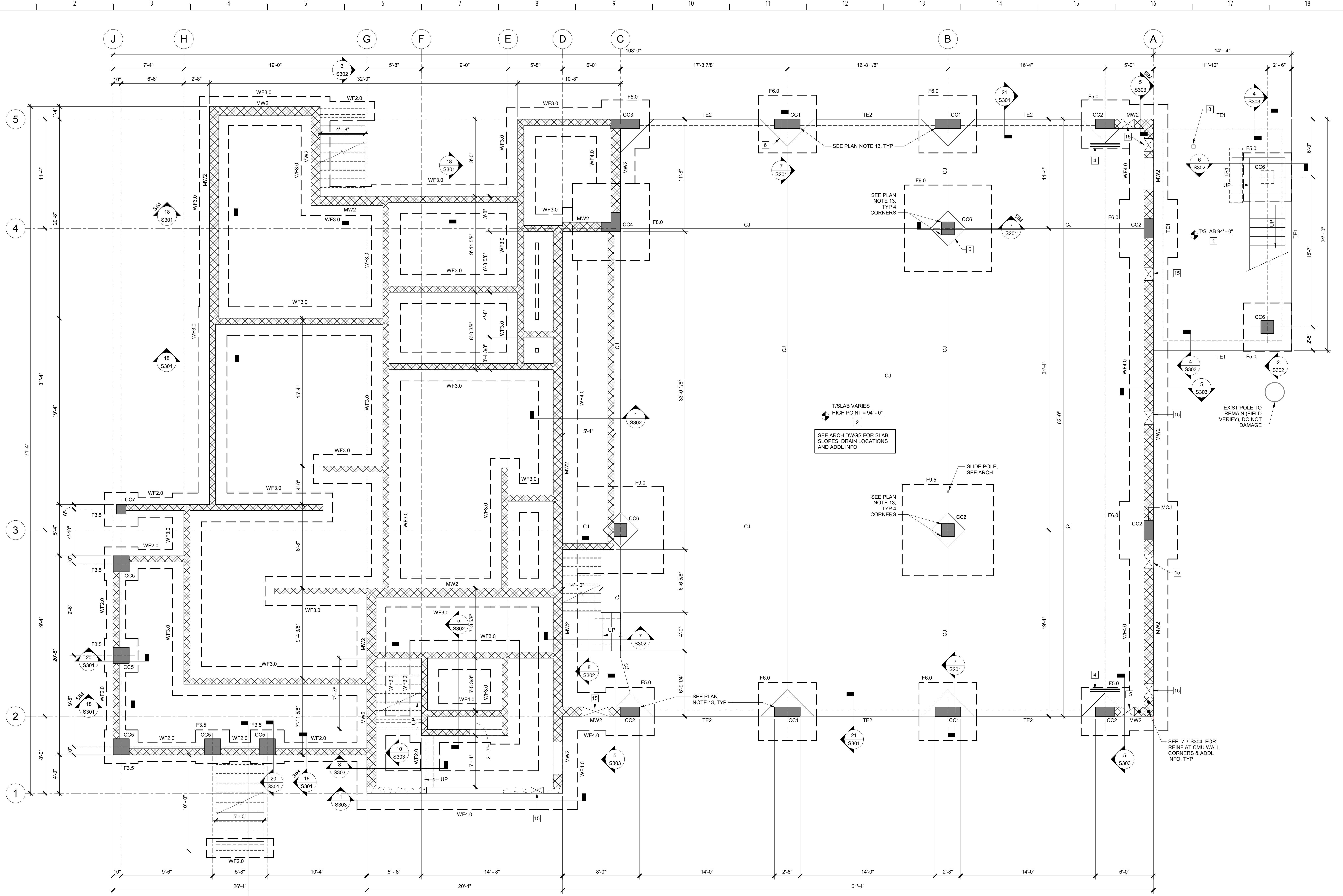
REVISIONS		
MARK	DESCRIPTION	DATE

This item has been electronically signed and sealed by Paul S. Moerschel, PE on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



COMM. NO.: 23FTM232
ISSUE DATE: 12.22.23
DRAWN BY: SEGR/RHE

FOUNDATION AND APPARATUS FLOOR PLAN



FOUNDATION & APPARATUS FLOOR PLAN NOTES:

- ELEVATIONS ARE BASED ON A FIRST FLOOR SLAB REFERENCE ELEVATION 100'-0", 13'-0" NAVD.
- SEE SHEETS S001 - S003 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
- VERIFY ALL DIMENSIONS, ELEVATIONS, SLOPES AND FINISHES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OR FABRICATION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- TOP OF ALL FOOTINGS SHALL BE 92'-0", UNLESS NOTED OTHERWISE.
- CONTINUOUS WALL FOOTINGS SHALL EXTEND LENGTH WISE 1/2 THE FOOTING WIDTH BEYOND WALL ENDS.
- FOOTING CENTERLINES SHALL COINCIDE WITH WALL AND COLUMN CENTERLINES UNLESS NOTED OTHERWISE.
- FOR REINFORCING AT FOOTING CORNERS AND INTERSECTIONS SEE 4 / S301.
- STEP TOP OF CONTINUOUS WALL FOOTINGS AS NECESSARY FOR PIPES OR CONDUIT, SEE 3 / S301.
- SEE ARCHITECTURAL AND MEP DRAWINGS FOR SLAB ON GRADE PENETRATIONS AND ADDITIONAL INFORMATION.
- SEE 12 / S301 FOR WELDED WIRE REINFORCING (WWR) AT SLAB ON GRADE.
- CONTROL JOINTS (CJ ON PLAN) ARE REQUIRED. CONSTRUCTION JOINTS MAY BE PLACED IN LIEU OF CONTROL JOINTS AT CONTRACTOR'S DISCRETION. SEE 11 / S301.
- ALL MASONRY (CMU) WALLS TO BE TYPE MW1, UNLESS NOTED OTHERWISE. SEE SHEET S302 FOR CMU WALL SCHEDULE AND ADDITIONAL INFORMATION.
- SEE 6 / S201 FOR APPARATUS REQUIREMENTS AT BAY COLUMNS.

FOUNDATION & APPARATUS FLOOR LEGEND

- F# & WF# CONCRETE FOOTING TYPES, SEE FOOTING SCHEDULE THIS SHEET
- TS1 THICKENED SLAB EDGE TYPE, SEE 6 / S302
- TE# THICKENED SLAB EDGE TYPE, SEE 21 / S301 FOR TE2 AND 4 / S303 FOR TE1
- CJ CONTROL JOINT, SEE 10 / S301 AND PLAN NOTE 11
- CC# CONCRETE COLUMN TYPE, SEE SHEET S201
- MASONRY (CMU) WALLS, SEE NOTE 12
- CMU CONTROL JOINT, SEE 2 / S304

KEYNOTES

KEY	DESCRIPTION
1	4" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB ON GRADE W/ 4% DOSE OF EUCLID EUCON CONEX ADMIXTURE. PROVIDE 6@14W14W4 WELDED WIRE REINFORCING (WWR) IN SHEETS NOT ROLLS CHAIRED TO TOP OF SLAB. PLACE CONCRETE ON 10 MIL VAPOR RETARDER, TAPE ALL SEAMS. PREPARE SUBGRADE IN ACCORDANCE WITH GEOTECH REPORT.
2	8" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB ON GRADE W/ #4@12"OC EA WAY CHAIRED 2" UP FROM BOTTOM OF SLAB W/ 4% DOSE OF EUCLID EUCON CONEX ADMIXTURE. PLACE CONCRETE ON 10 MIL VAPOR RETARDER, TAPE ALL SEAMS. PREPARE SUBGRADE IN ACCORDANCE WITH GEOTECH REPORT. SEE ARCH FOR SLOPES AND FINISHES.
4	PROVIDE (2) #5 x 3'-0" TOP AT RE-ENTRANT CORNERS AND CJ TERMINATION LOCATIONS, SEE 16/S301 & 16/S301
6	ISOLATION JOINTS REQUIRED AROUND CONCRETE COLUMNS, SEE 17/S301
8	PRE-ENGINEERED ALUMINUM STAIRS BY DELEGATE ENGINEER INCLUDING ALL LANDING SUPPORTS, RAILINGS AND CONNECTIONS TO STRUCTURE - SEE ARCH FOR DETAILS. PROVIDE 2'-0" x 2'-11" DEEP THICKENED SLAB WHEN POST DOES NOT FALL ON TE1. COORDINATE LOCATION W/ STAIR SHOP DRAWINGS
15	FLOOR VENT, SEE ARCH AND 6/S303



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION:
5171 SANIBEL-CAPTIVA
SANIBEL, FLORIDA 33957



9510 Corkscrew Palms
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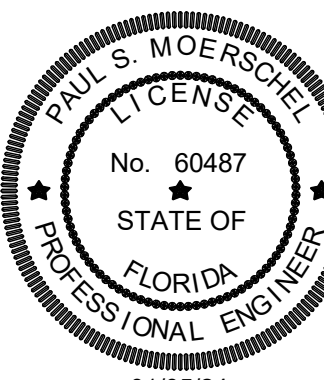


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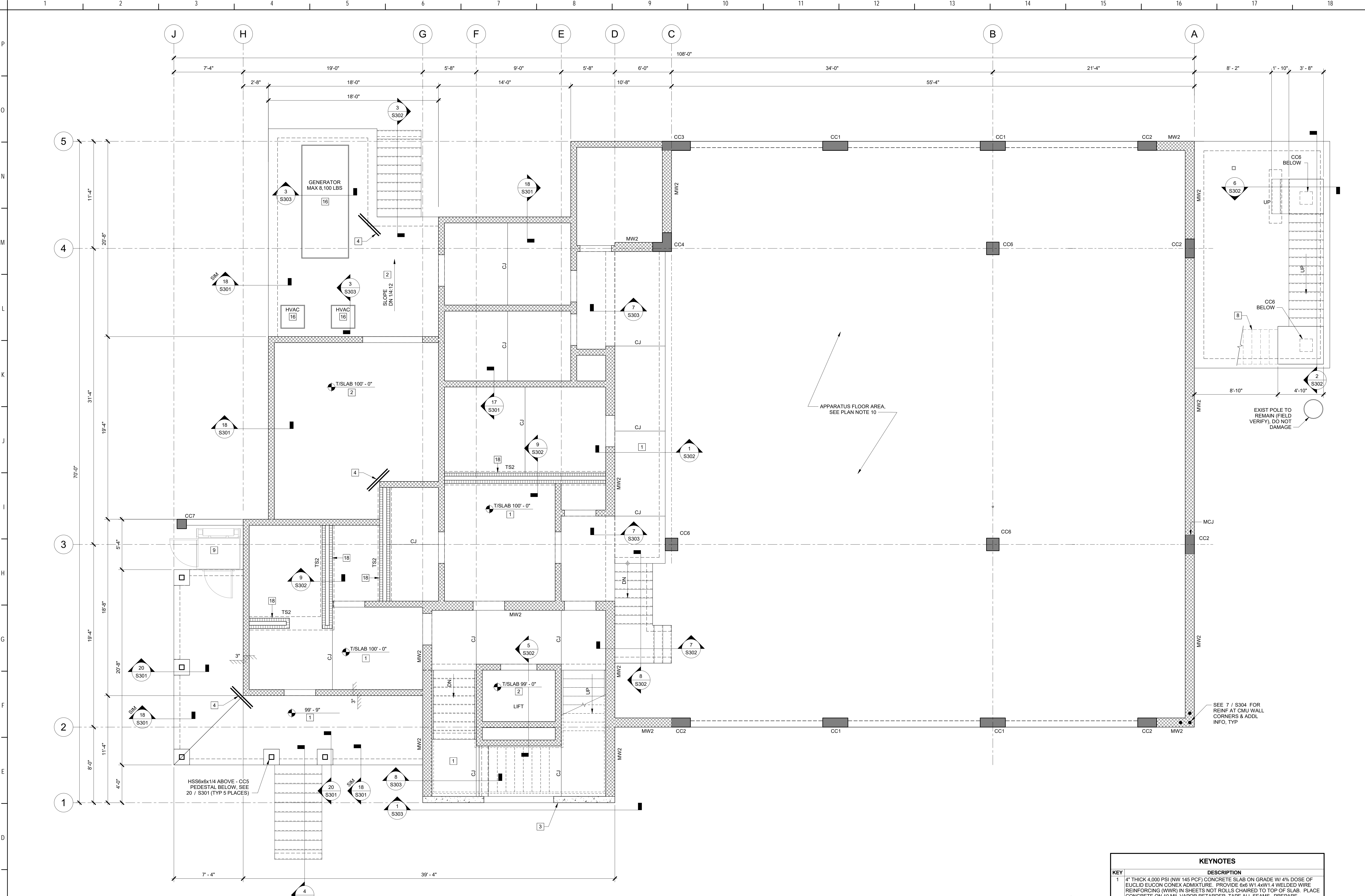


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FIRST FLOOR PLAN

S101

100% CONSTRUCTION DOCUMENTS



1 FIRST FLOOR PLAN S101 1/4" = 1'-0"

- FIRST FLOOR PLAN NOTES:**
1. FIRST FLOOR SLAB = REFERENCE ELEVATION 100'-0".
 2. SEE SHEETS S001 - S003 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
 3. VERIFY ALL DIMENSIONS, ELEVATIONS, SLOPES AND FINISHES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OR FABRICATION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
 4. SEE ARCHITECTURAL AND MEP DRAWINGS FOR SLAB ON GRADE PENETRATIONS AND ADDITIONAL INFORMATION.
 5. CONTROL JOINTS (CJ ON PLAN) ARE REQUIRED. CONSTRUCTION JOINTS MAY BE PLACED IN LIEU OF CONTROL JOINTS AT CONTRACTOR'S DISCRETION. SEE 11 / S301.
 6. ALL MASONRY (CMU) WALLS TO BE TYPE MW1, UNLESS NOTED OTHERWISE. SEE SHEET S302 FOR CMU WALL SCHEDULE AND ADDITIONAL INFORMATION.
 7. SEE SHEET S100 FOR FOUNDATIONS AND APPARATUS FLOOR PLAN.

- FIRST FLOOR LEGEND**
- CJ CONTROL JOINT, SEE 10 / S301 AND PLAN NOTE 5
 - CC# CONCRETE COLUMN TYPE, SEE SHEET S201
 - MASONRY (CMU) WALLS, SEE NOTE 6
 - MCJ CMU CONTROL JOINT, SEE 2 / S304
 - TS2 THICKENED SLAB TYPE, SEE 9 / S302

KEYNOTES	
KEY	DESCRIPTION
1	4" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB ON GRADE W/ 4% DOSE OF EUCLID EUCON CONEX ADMIXTURE. PROVIDE 6x6 W1.4W1.4 WELDED WIRE REINFORCING (WWR) IN SHEETS NOT ROLLS CHAIRED TO TOP OF SLAB. PLACE CONCRETE ON 10 MIL VAPOR RETARDER, TAPE ALL SEAMS. PREPARE SUBGRADE IN ACCORDANCE WITH GEOTECH REPORT.
2	8" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB ON GRADE W/ 4% DOSE OF EUCLID EUCON CONEX ADMIXTURE. PLACE CONCRETE ON 10 MIL VAPOR RETARDER, TAPE ALL SEAMS. PREPARE SUBGRADE IN ACCORDANCE WITH GEOTECH REPORT. SEE ARCH FOR SLOPES AND FINISHES.
3	8" THICK 4,000 PSI (NW 145 PCF) CONCRETE WALL
4	PROVIDE (2) #5 x 3'-0" TOP AT RE-ENTRANT CORNERS AND CJ TERMINATION LOCATIONS. SEE 19/S301 & 18/S301
8	PRE-ENGINEERED ALUMINUM STAIRS BY DELEGATE ENGINEER INCLUDING ALL LANDING SUPPORTS, RAILINGS AND CONNECTIONS TO STRUCTURE - SEE ARCH FOR DETAILS. PROVIDE 2'-0" DEEP THICKENED SLAB WHEN POST DOES NOT FALL ON TEL. COORDINATE LOCATION W/ STAIR SHOP DRAWINGS
9	LIFT BY OTHERS, SEE ARCH FOR DETAILS
16	12" THICK MINIMUM HOUSEKEEPING PAD W/ #5@10" OC EACH WAY TOP & BOTTOM. VERIFY EXACT SIZE AND LOCATIONS W/ MEP
18	4" NON-LOAD BEARING CMU PARTITION WALLS. SEE ARCH FOR LOCATIONS AND ADDITIONAL INFORMATION



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION: 5171 SANIBEL CAPTIVA SANIBEL, FLORIDA 33957

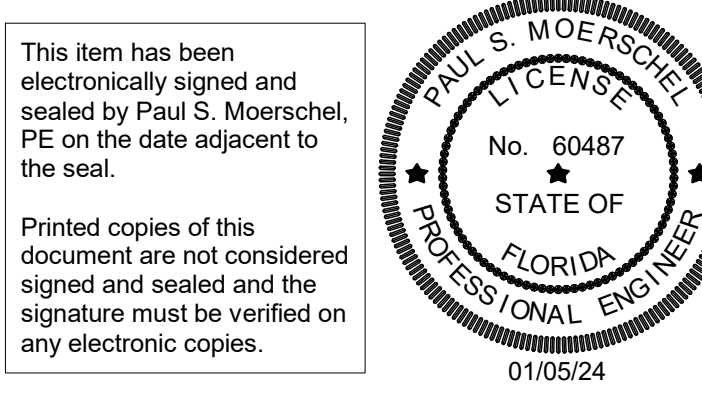


9510 Corkscrew Palms Circle, Unit 1 Estero, FL 33928 voice (239) 208-4846



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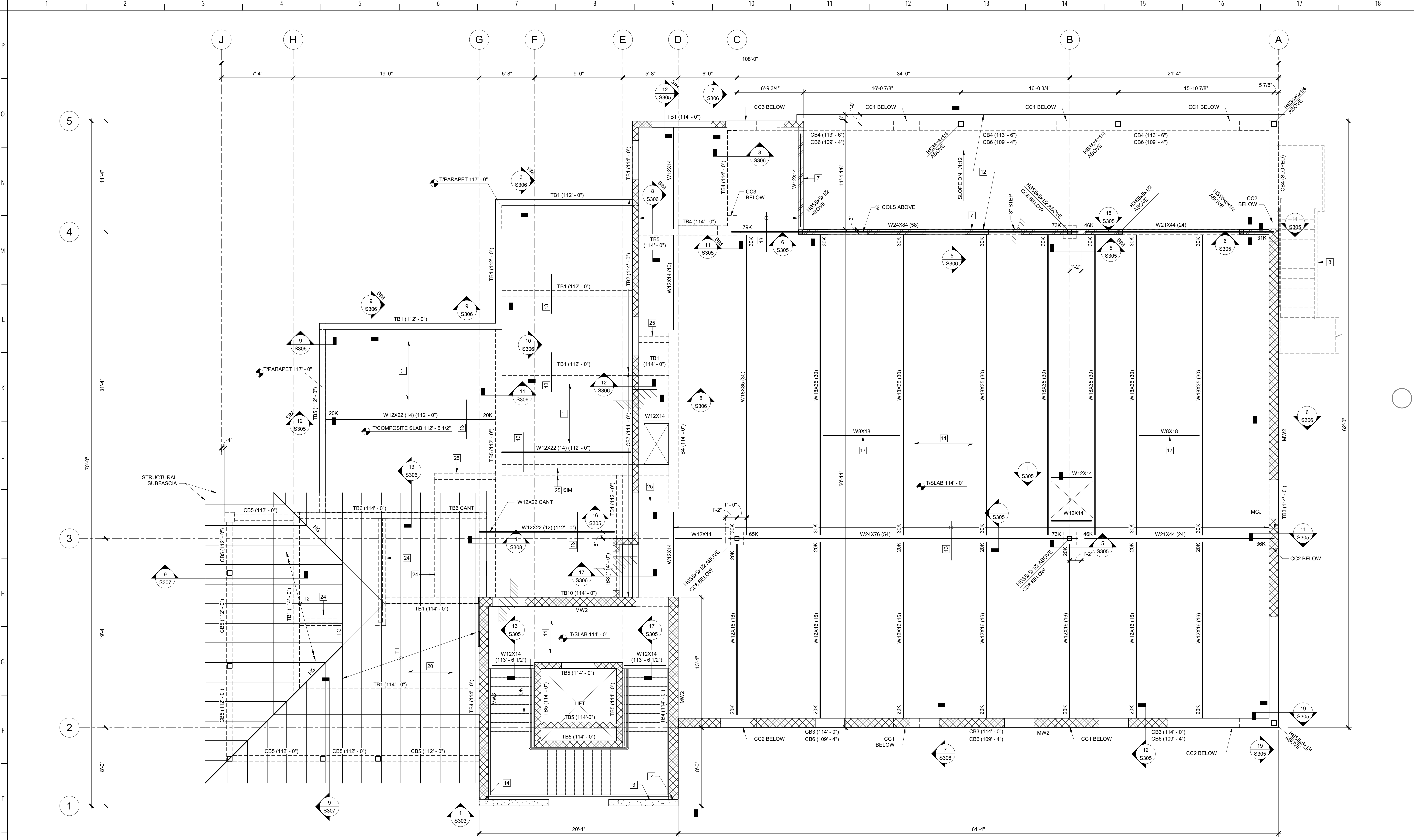


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SECOND FLOOR AND LOW ROOF FRAMING PLAN

S121

100% CONSTRUCTION DOCUMENTS



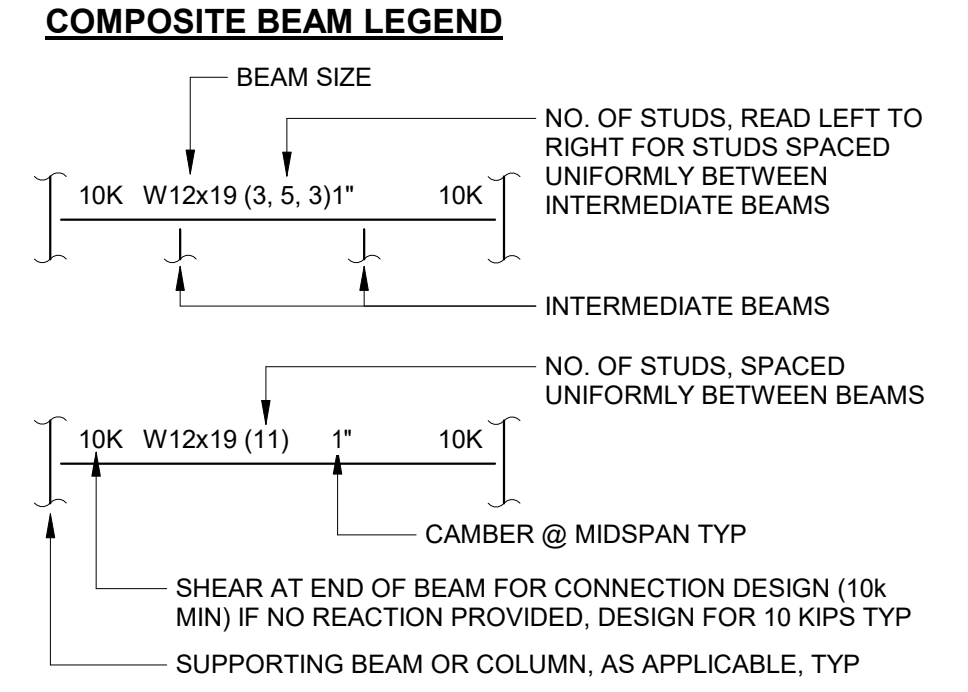
1 SECOND FLOOR AND LOW ROOF FRAMING PLAN S121 114'-0" x 11'-0"

- SECOND FLOOR & LOW ROOF PLAN NOTES: 1. THIS PLAN IS BASED ON A TOP OF FIRST FLOOR SLAB REFERENCE ELEVATION 0'-0". 2. SEE SHEET S001 - S003 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.

- SECOND FLOOR & LOW ROOF LEGEND: CB# & TB# CONCRETE BEAM & TIE BEAM TYPE, SEE SHEET S2.1 FOR BEAM SCHEDULE. T1 PRE-ENGINEERED WOOD TRUSSES AT 2'-0" OC MAXIMUM SPACING.

SIMPSON STRONGTIE TRUSS TIE DOWN SCHEDULE table with columns: MARK, CONNECTOR TYPE, CAPACITY, NOTES

- KEYNOTES: 3 8" THICK 4,000 PSI (NW 145 PCF) CONCRETE WALL. 7 6" COLD FORMED STEEL (CFS) STUD WALL BY DELEGATE ENGINEER.



- NOTES: 1. SEE PLAN NOTES FOR STUD SIZE. 2. SEE 1 / S306 FOR STUD PLACEMENT.



**SANIBEL FIRE AND RESCUE
STATION 172**

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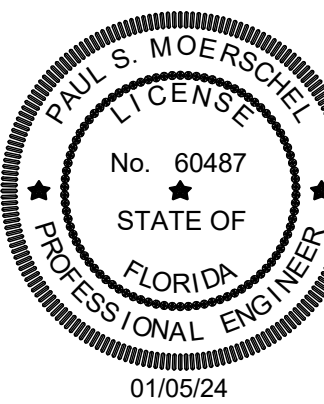
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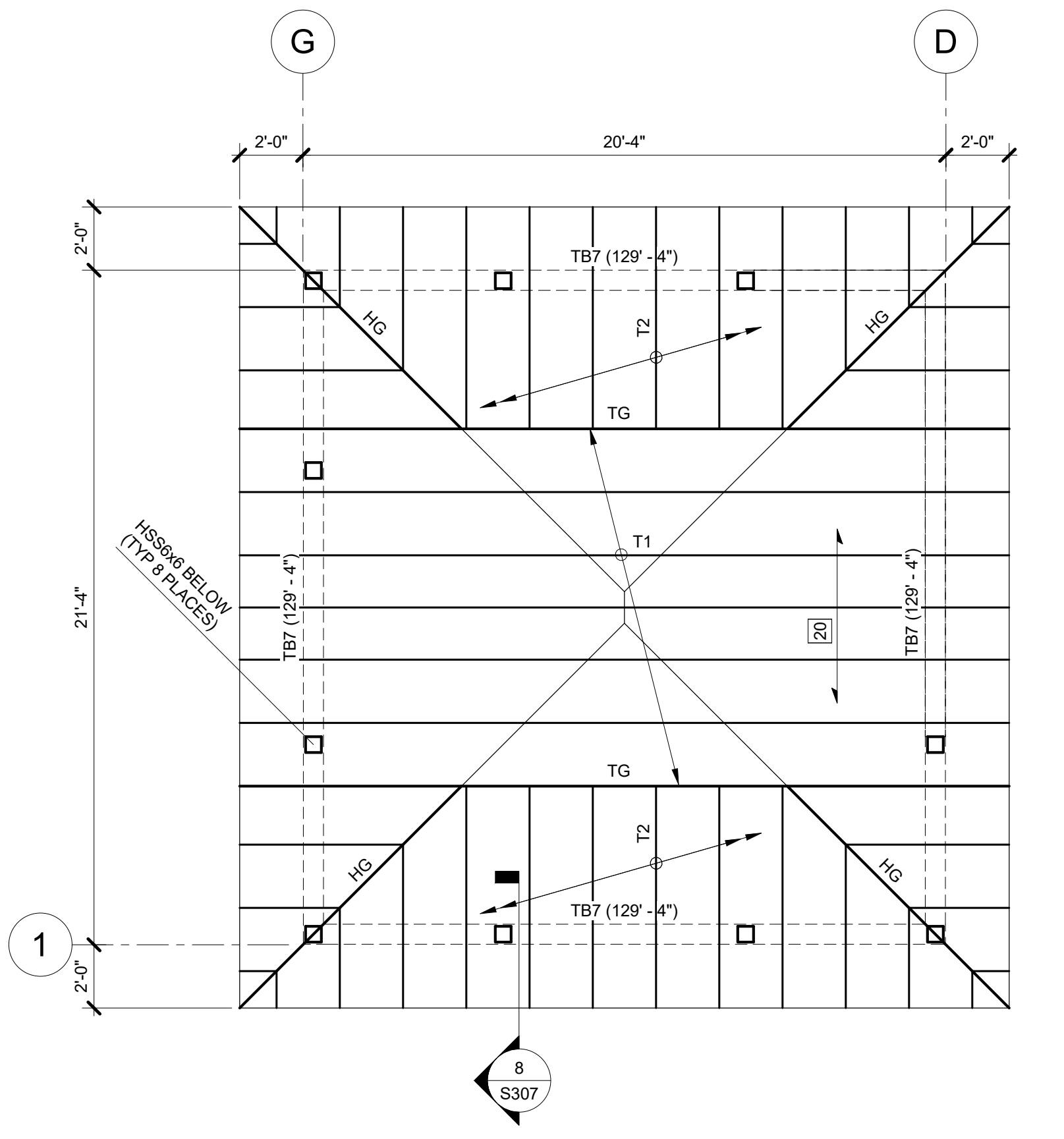
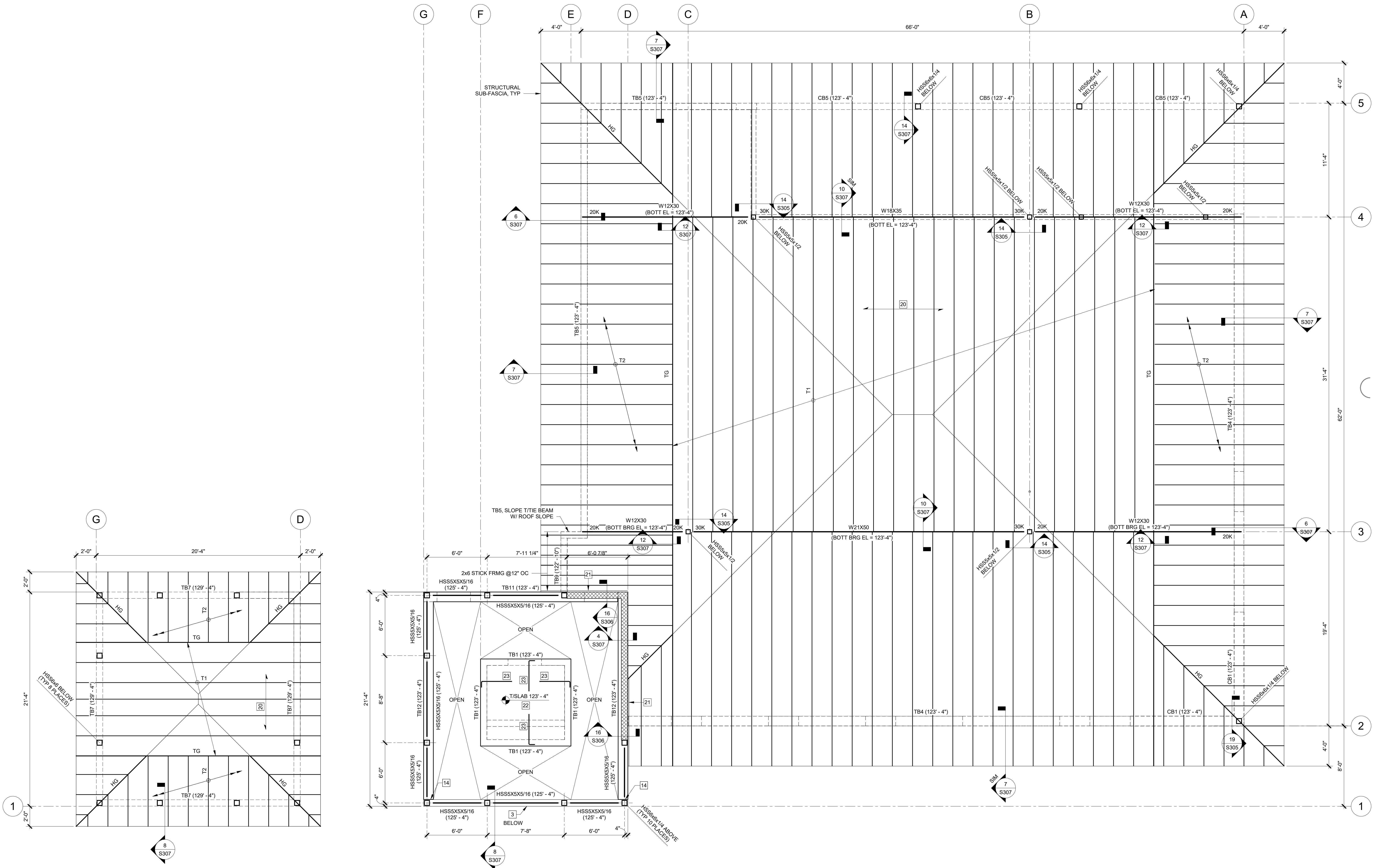


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**MAIN ROOF AND TOWER
ROOF FRAMING PLANS**

S131

100% CONSTRUCTION DOCUMENTS



2 TOWER ROOF FRAMING PLAN
S131 1/4" = 1'-0"

1 MAIN ROOF FRAMING PLAN
S131 1/4" = 1'-0"

SIMPSON STRONGTIE TRUSS TIE DOWN SCHEDULE			
MARK	CONNECTOR TYPE	CAPACITY	NOTES
[A]	HHETA16	2,120#	TYPICAL TIE DOWN UNLESS NOTED OTHERWISE
[B]	(2) VGT	7,185#	(2) PLY TRUSS MIN. VGT ON EA SIDE OF TRUSS TYPICAL HIP AND TRUSS GIRDER TIE DOWN

- ROOF FRAMING PLAN NOTES:**
- SEE SHEET S001 - S003 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
 - VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OR FABRICATION. SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPES, TRUSS CONFIGURATIONS, FINISHES AND ADDITIONAL INFORMATION.
 - ALL SIMPSON STRONG TIE CONNECTORS TO BE HOT DIPPED GALVANIZED STEEL.
 - ANY SIMPSON STRONG TIE HANGER MAY HAVE A SLOPED SEAT AS REQUIRED TO MAINTAIN ROOF SLOPE SPECIFIED BY ARCHITECT.
 - ALL SIMPSON CONNECTORS MUST BE INSTALLED AS PER SIMPSON STRONG-TIE'S INSTRUCTIONS AND RECOMMENDATIONS. ALL TIE DOWNS ARE TO BE INSTALLED WITH THE MAXIMUM NUMBER OF FASTENERS POSSIBLE, AS DEFINED BY SIMPSON STRONG-TIE.
 - PROVIDE A MOISTURE BARRIER BETWEEN WOOD TRUSSES / RAFTERS AND CONCRETE / MASONRY PER ARCHITECTURAL SPECIFICATIONS.
 - ↔ DENOTES DECK SPAN DIRECTION.
 - ALL MASONRY (CMU) WALLS TO BE TYPE MW1. SEE SHEET S302 FOR CMU WALL SCHEDULE AND ADDITIONAL INFORMATION.
 - BEAM REACTIONS SHOWN ARE SERVICE LEVEL (ASD).

- ROOF LEGEND**
- CB# & TB# CONCRETE BEAM & TIE BEAM TYPE, SEE SHEET S2.1 FOR BEAM SCHEDULE
 - T1 PRE-ENGINEERED WOOD TRUSSES AT 2'-0" OC MAXIMUM SPACING. PROVIDE HOLDOWN [A] AT SUPPORTS, TYP UNO
 - T2 PRE-ENGINEERED WOOD JACK TRUSSES AT 2'-0" OC MAXIMUM SPACING. PROVIDE HOLDOWN [A] AT SUPPORTS, TYP UNO
 - HG PRE-ENGINEERED HIP TRUSS GIRDER. PROVIDE HOLDOWN [B] AT SUPPORTS, TYP UNO
 - TG PRE-ENGINEERED TRUSS GIRDER. PROVIDE HOLDOWN [B] AT SUPPORTS, TYP UNO
 - ▣ MASONRY (CMU) WALLS. SEE NOTE 8

KEYNOTES	
KEY	DESCRIPTION
3	8" THICK 4,000 PSI (NW 145 PCF) CONCRETE WALL
14	TIE BEAM HORIZONTAL REINFORCING TO HOOK AT FAR SIDE OF CONCRETE WALL
20	15/32" STRUCTURAL I OSB ROOF DECK. NAIL TO ALL ROOF SUPPORTS W/ 10d NAILS @ 6" OC AT INTERIOR SUPPORTS AND @ 6" OC AT EDGES. SEE 1/S307 FOR ADDITIONAL INFORMATION
21	2x6 CONT PT LEDGER. SEE 16/S306
22	6" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB W/ #5@10" OC EACH WAY BOTTOM
23	#5@10" OC TOP x3'-0" W/ 90 DEGREE HOOK, TYP AROUND PERIMETER



**SANIBEL FIRE AND RESCUE
STATION 172**

PROJECT LOCATION:
5171 SANIBEL CAPTIVA
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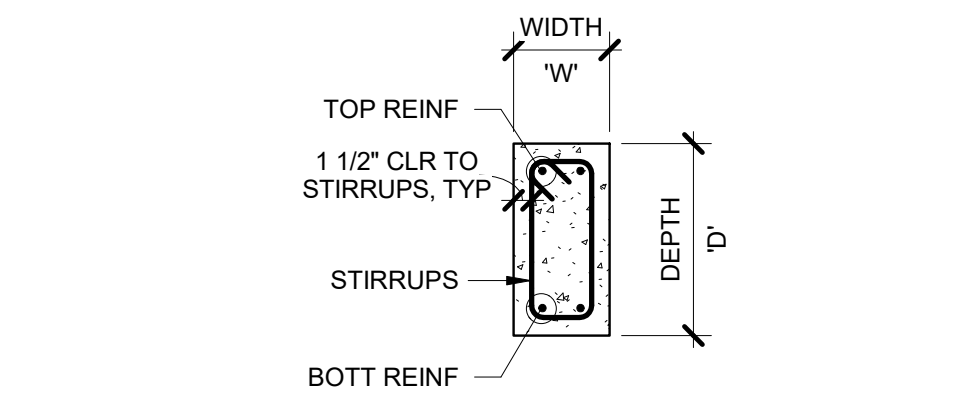
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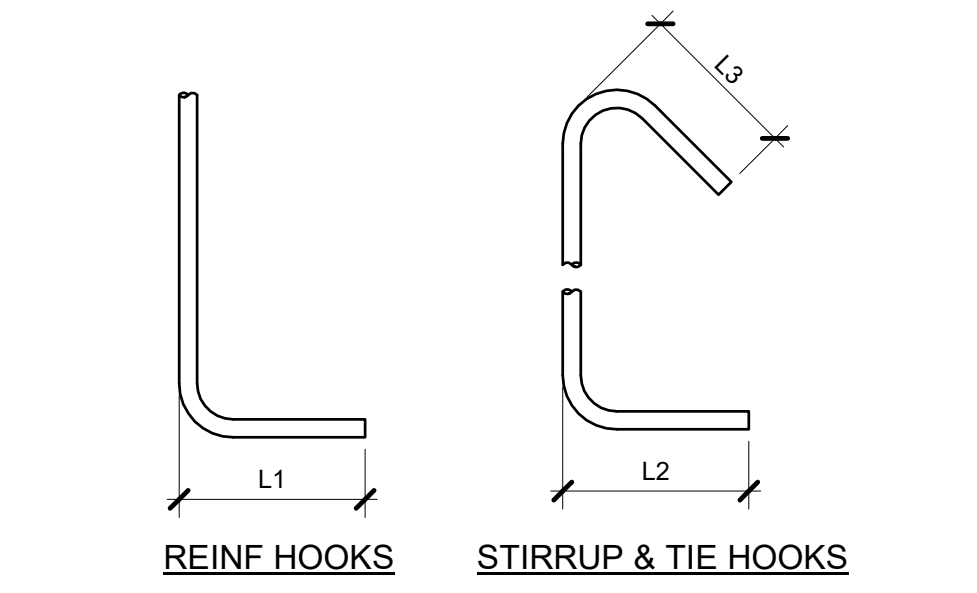


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MARK	DESCRIPTION	DATE



4 TIE BEAM REINFORCING DETAIL
S201 3/4" = 1'-0"



BAR SIZE	SCHEDULE		
	REIN HOOK	STIRRUP & TIE HOOKS	
	L1	L2	L3
#3	6"	4"	2 1/2"
#4	8"	4 1/2"	3"
#5	10"	-	-
#6	1'-0"	-	-
#7	1'-2"	-	-
#8	1'-4"	-	-
#9	1'-7"	-	-
#10	1'-10"	-	-
#11	2'-0"	-	-

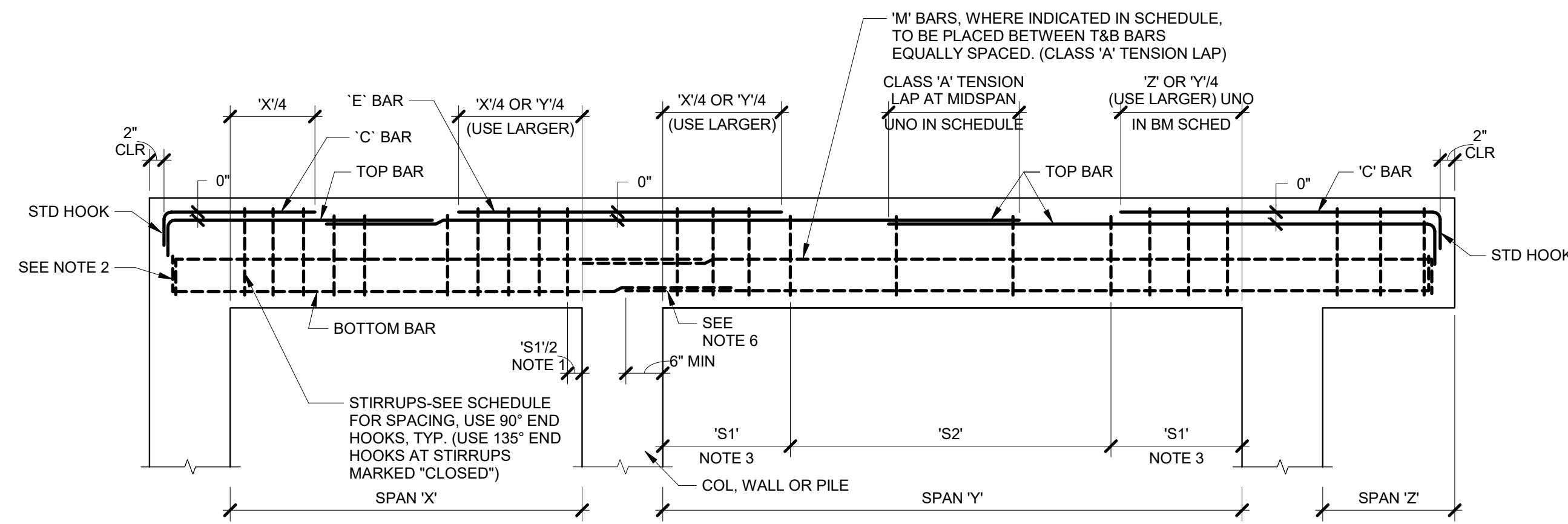
3 STD HOOK LENGTHS
S201 1" = 1'-0"

CLASS 'B' SPLICE SCHEDULE								
DEVELOPMENT LENGTH SHALL BE PER FOLLOWING TABLE MODIFIED PER NOTES BELOW								
GRADE 60 STEEL								
NORMAL WEIGHT CONCRETE STRENGTH								
BAR	3000 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI	8000 PSI	9000 PSI	10000 PSI AND HIGHER
#3	1'-9"	1'-6"	1'-5"	1'-3"	1'-2"	1'-1"	1'-0"	1'-0"
#4	2'-4"	2'-1"	1'-10"	1'-8"	1'-7"	1'-5"	1'-4"	1'-4"
#5	3'-3"	2'-7"	2'-4"	2'-1"	2'-0"	1'-10"	1'-9"	1'-8"
#6	3'-7"	3'-1"	2'-9"	2'-6"	2'-4"	2'-2"	2'-1"	2'-0"
#7	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"	2'-10"
#8	6'-0"	5'-2"	4'-7"	4'-2"	4'-0"	3'-8"	3'-5"	3'-3"
#9	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"	3'-8"
#10	7'-6"	6'-6"	5'-10"	5'-4"	5'-0"	4'-7"	4'-4"	4'-2"
#11	8'-4"	7'-3"	6'-8"	6'-0"	5'-6"	5'-1"	4'-10"	4'-7"

GRADE 75 STEEL								
NORMAL WEIGHT CONCRETE STRENGTH								
BAR	3000 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI	8000 PSI	9000 PSI	10000 PSI AND HIGHER
#3	2'-3"	2'-0"	1'-9"	1'-7"	1'-5"	1'-4"	1'-3"	1'-3"
#4	3'-0"	2'-7"	2'-4"	2'-1"	2'-0"	1'-10"	1'-9"	1'-8"
#5	3'-9"	3'-3"	2'-10"	2'-7"	2'-5"	2'-3"	2'-2"	2'-0"
#6	4'-5"	3'-10"	3'-5"	3'-2"	3'-0"	2'-9"	2'-7"	2'-5"
#7	6'-6"	5'-7"	5'-0"	4'-7"	4'-3"	4'-0"	3'-9"	2'-9"
#8	7'-5"	6'-5"	5'-9"	5'-3"	4'-10"	4'-7"	4'-3"	4'-1"
#9	8'-4"	7'-3"	6'-6"	6'-0"	5'-6"	5'-1"	4'-10"	4'-7"
#10	9'-5"	8'-2"	7'-4"	6'-8"	6'-2"	5'-9"	5'-5"	5'-2"
#11	10'-5"	9'-1"	8'-1"	7'-5"	6'-10"	6'-5"	6'-0"	5'-9"

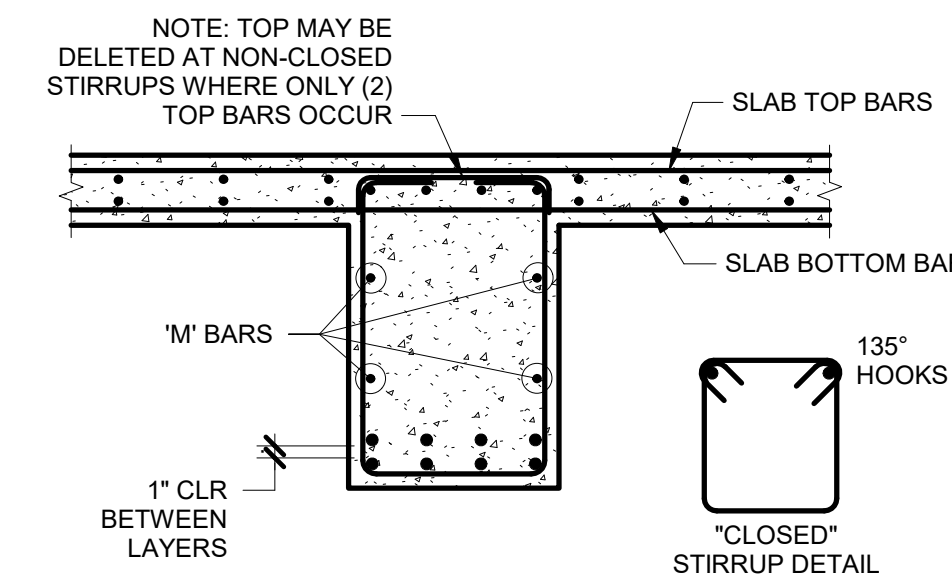
NOTES:
1. FOR CLEAR SPACING BETWEEN BARS d_b AND/OR CLEAR COVER c_{db}, MULTIPLY BY 1.5.
2. FOR TOP BARS MULTIPLY BY 1.3.
3. FOR EPOXY COATED BARS, IF SPECIFIED OR APPROVED AS AN ALTERNATE, MULTIPLY BY 1.3.
4. FOR MMFX BARS, IF SPECIFIED OR USED, USE GRADE 75 KSI VALUES.
5. WHERE MORE THAN ONE FACTOR APPLIES, PRODUCT OF ALL APPLICABLE FACTORS SHALL BE APPLIED.
6. IF DETAILER IS TO USE A DIFFERENT SCHEDULE, HE/SHE MUST SUBMIT A SEALED LETTER INDICATING THAT HIS/HER VALUES CORRESPOND TO CURRENT ACI 318 CODE.

2 CLASS 'B' SPLICE SCHEDULE
S201 1/2" = 1'-0"



TYPICAL BENDING DIAGRAM FOR BEAMS & ONE WAY SLABS

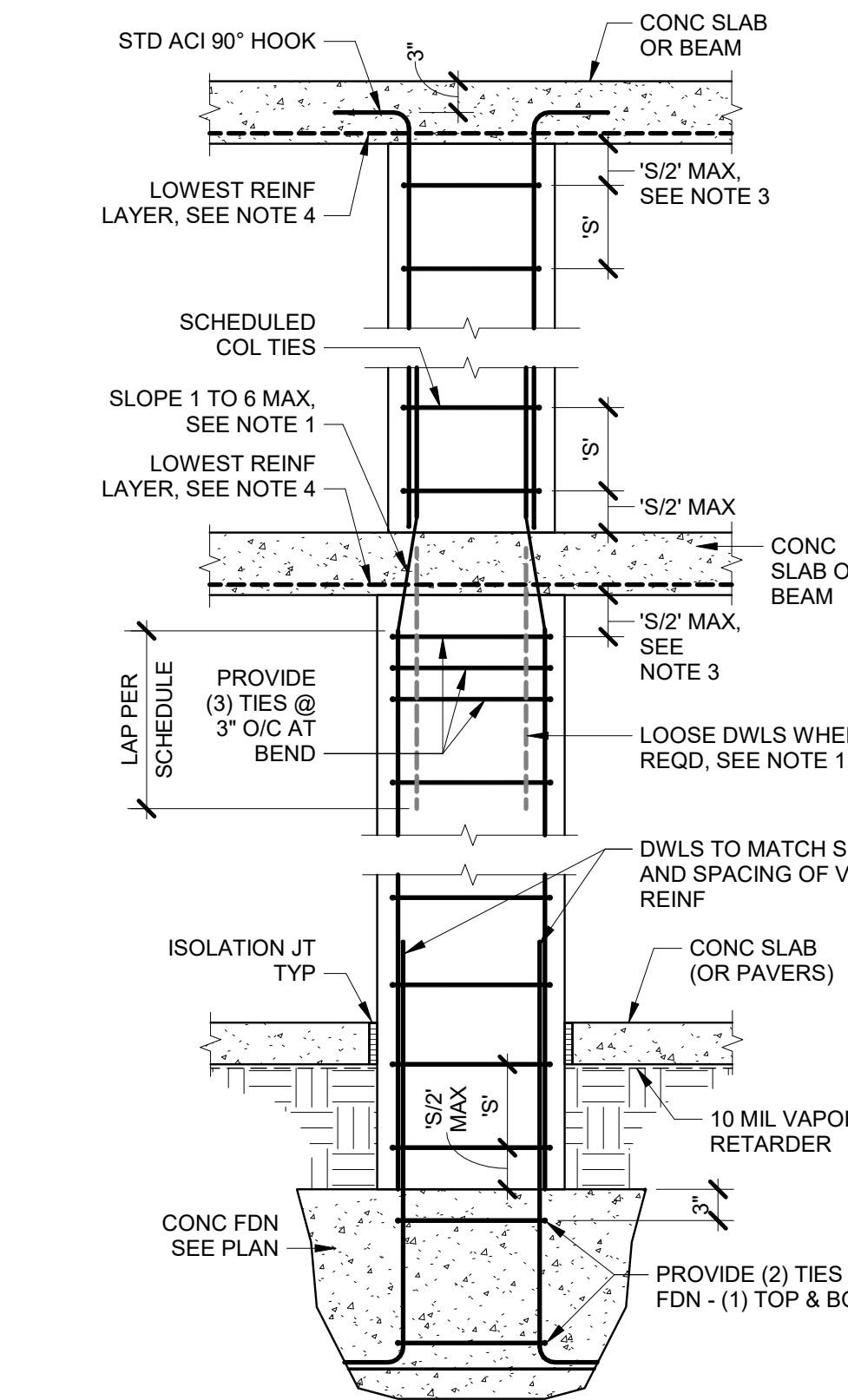
- NTS**
- BEAM NOTES:**
1. START STIRRUP SPACING @ 'S1/2' FROM FACE OF SUPPORT.
2. EXTEND A MINIMUM OF 1/4 OF THE MAXIMUM BOTTOM REINFORCEMENT (2 BAR MINIMUM) TO DEVELOP FULL TENSION CAPACITY & HOOK AT SUPPORT.
3. 'S1' AND 'S2' DENOTE STIRRUP SPACING. S2 IS 18" ON CENTER UNLESS NOTED OTHERWISE.
4. * INDICATES STIRRUP SPACING S1 TO BE MAINTAINED THROUGHOUT SPAN.
5. FOR ALL BEAMS OVER 24" DEEP, PROVIDE #4@12" HORIZONTAL REINFORCING EACH FACE IN ADDITION TO THE TOP AND BOTTOM REINFORCING. UNO - TYPE 'M' BARS.
6. LAP A MINIMUM OF 1/4 OF THE MAXIMUM BOTTOM REINFORCEMENT (2 BAR MINIMUM) AT THE SUPPORT WITH A CLASS 'A' TENSION LAP SPICE OR PROVIDE CONTINUOUS BOTTOM BARS.



TYPICAL BEAM SECTION

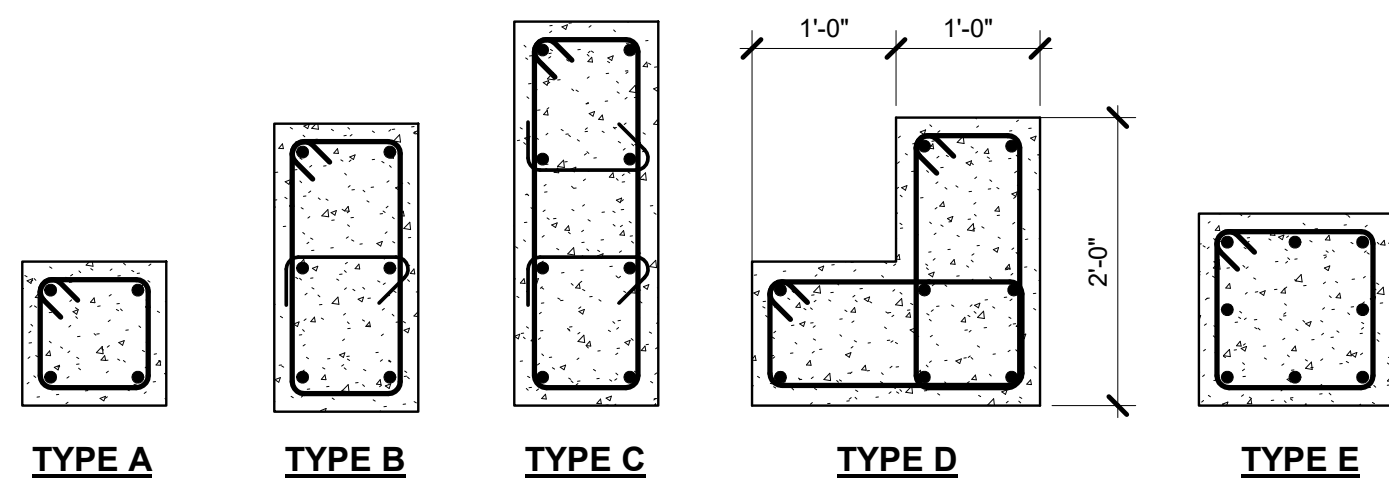
NTS

1 TYPICAL BENDING DIAGRAM FOR BEAMS & ONE WAY SLABS
S201 3/4" = 1'-0"

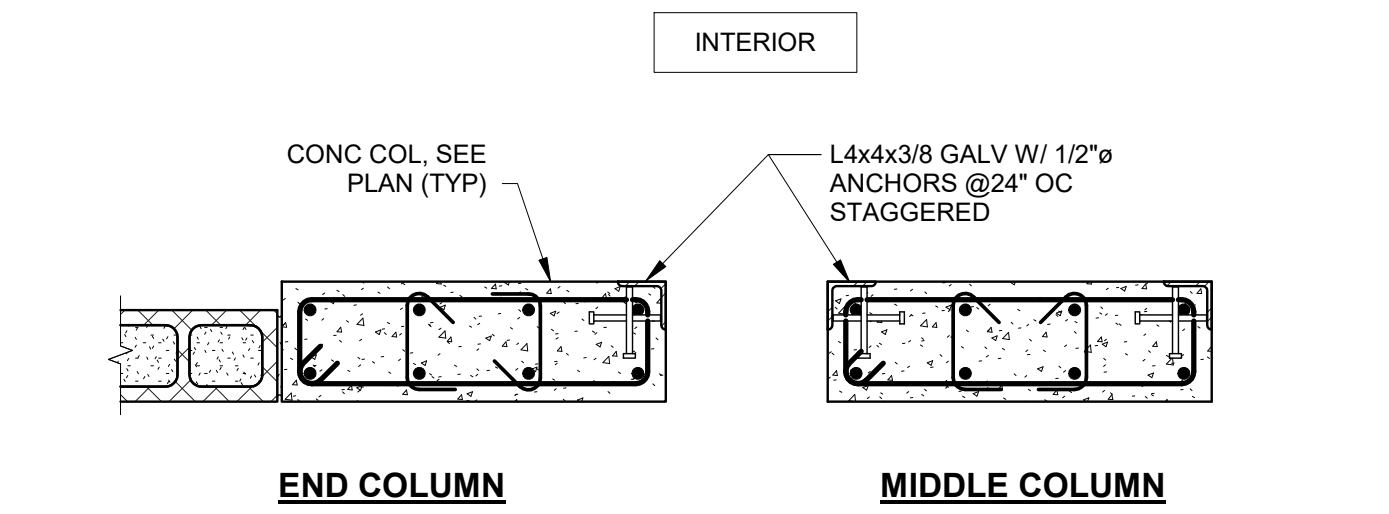


- NOTES:**
1. WHERE COLUMN FACE ABOVE IS OFFSET 3" OR GREATER, VERTICAL BARS SHALL NOT BE OFFSET BENT. LOOSE DOWELS SHALL BE PROVIDED.
2. 'S' DENOTES SCHEDULED COLUMN TIE SPACING. SEE COLUMN SCHEDULE.
3. 'S/2' DENOTES 1/2 THE SCHEDULED COLUMN TIE SPACING.
4. WHERE BEAMS FRAME FROM FOUR DIRECTIONS, TERMINATE TIES NO MORE THAN 3" BELOW THE LOWEST HORIZONTAL REINFORCEMENT IN THE SHALLOWEST BEAM.
5. ASSUME 1" ABOVE SLAB OFFSET FOR PT CONSTRUCTION WHERE NO BOTTOM BARS ARE PRESENT.

7 CONCRETE COLUMN OR TIE COLUMN DETAIL
S201 3/4" = 1'-0"



5 CONCRETE COLUMN TYPES
S201 3/4" = 1'-0"



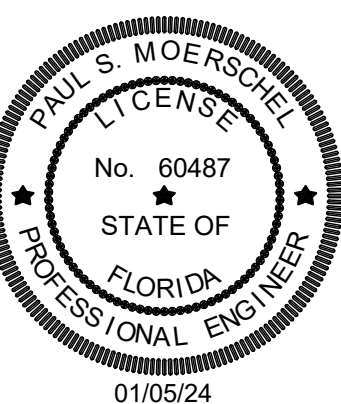
6 APPARATUS REQUIREMENTS AT BAY COLUMNS
S201 3/4" = 1'-0"

CONCRETE BEAM SCHEDULE (CB# & TB#)								
MARK	SIZE WxD (IN)	BOTTOM REINFORCING	TOP REINFORCING	'M' (# of Bars EF) REINFORCING	'C' REINFORCING	'E' REINFORCING	STIRRUP	COMMENTS
CB1	12x16	(2) #6	(2) #6	-	-	-	#3@6" OC	
CB3	12x32	(3) #7	(3) #7	-	-	-	#3@12" OC	
CB4	12x34	(3) #7	(3) #7	-	-	-	#3@12" OC	TOP OF BEAM SLOPES W/ SLAB SLOPE, SEE PLAN
CB5	8x16	(2) #7	(2) #7	-	-	-	#3@6" OC	
CB6	12x16	(2) #7	(2) #7	-	-	-	#3@6" OC	
CB7	8x32	(2) #8	(2) #8	-	-	-	#3@6" OC	
TB1	8x16	(2) #5	(2) #5	-	-	-	#3@24" OC	<varies>
TB2	8x40	(2) #6	(2) #6	(3) #6	-	-	#3@24" OC	
TB3	12x32	(2) #6	(2) #6	(2) #6	-	-	#3@24" OC	
TB4	12x16	(2) #6	(2) #6	-	-	-	#3@24" OC	
TB5	8x24	(2) #5	(2) #5	(1) #5	-	-	#3@24" OC	
TB6	8x32	(2) #5	(2) #5	(2) #5	-	-	#3@24" OC	
TB7	8x12	(2) #6	(2) #6	-	-	-	#3@6" OC	
TB8	12x30	(2) #6	(2) #6	-	-	-	#3@24" OC	
TB9	8x10	(2) #6	(2) #6	-	-	-	#3@24" OC	
TB10	12x38	(2) #6	(2) #6	-	-	-	#3@24" OC	
TB11	12x12	(2) #6	(2) #6	-	-	-	#3@24" OC	
TB12	12x32	(2) #6	(2) #6	(4) #6	-	-	#3@24" OC	

CONCRETE COLUMN SCHEDULE (CC#)					
MARK	SIZE	VERT REINF	TIES	TYPE	COMMENTS
CC1	12x32	(8) #8	#3@12" OC	C	
CC2	12x24	(6) #8	#3@12" OC	B	
CC3	12x36	(6) #8	#3@12" OC	C	
CC4	12x24x24	(8) #8	#3@12" OC	D	
CC5	20x20	(8) #7	#3@12" OC	A	CONCRETE PEDESTAL
CC6	16x16	(8) #8	#3@12" OC	E	
CC7	12x12	(4) #7	#3@12" OC	A	

FOOTING SCHEDULE								
MARK	LENGTH	FTG WIDTH	THICKNESS	BOTTOM REINFORCING LONG WAY	BOTTOM REINFORCING SHORT WAY	TOP REINFORCING LONG WAY	TOP REINFORCING SHORT WAY	COMMENTS
F3.5	3'-6"	3'-6"	1'-4"	(5) #5	(5) #5	-	-	
F5.0	3'-0"	3'-0"	1'-4"	(6) #6	(6) #6	-	-	
F6.0	6'-0"	6'-0"	1'-4"	(7) #6	(7) #6	-	-	
F8.0	8'-0"	8'-0"	1'-6"	(9) #7	(9) #7	-	-	
F9.0	9'-0"	9'-0"	1'-8"	(10) #8	(10) #8	-	-	
F9.5	9'-6"	9'-6"	1'-8"	(10) #8	(10) #8	-	-	
WF2.0	CONT	2'-0"	1'-4"	(3) #5	#5@8" OC	-	-	
WF3.0	CONT	3'-0"	1'-4"	(4) #5	#5@12" OC	-	-	
WF4.0	CONT	4'-0"	1'-4"	(5) #5	#5@12" OC	-	-	

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SCHEDULES & DETAILS

S201

100% CONSTRUCTION DOCUMENTS



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION: 5171 SANIBEL CAPTIVA SANIBEL, FLORIDA 33957



9510 Corkscrew Palms Circle, Unit 1 Estero, FL 33928 voice (239) 208-4846

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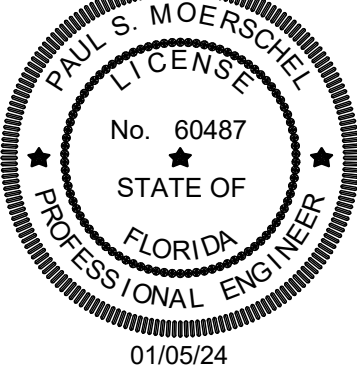


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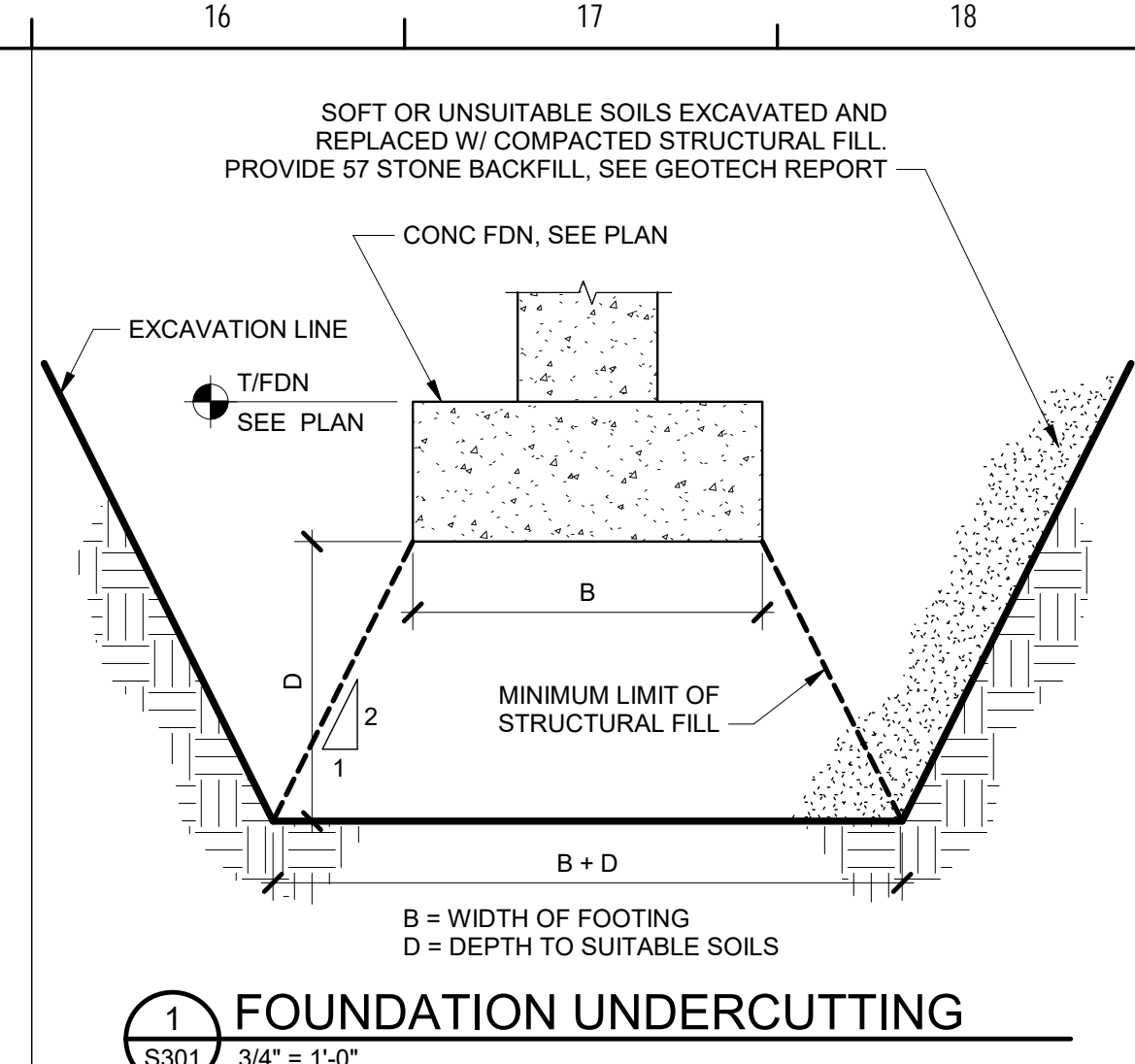


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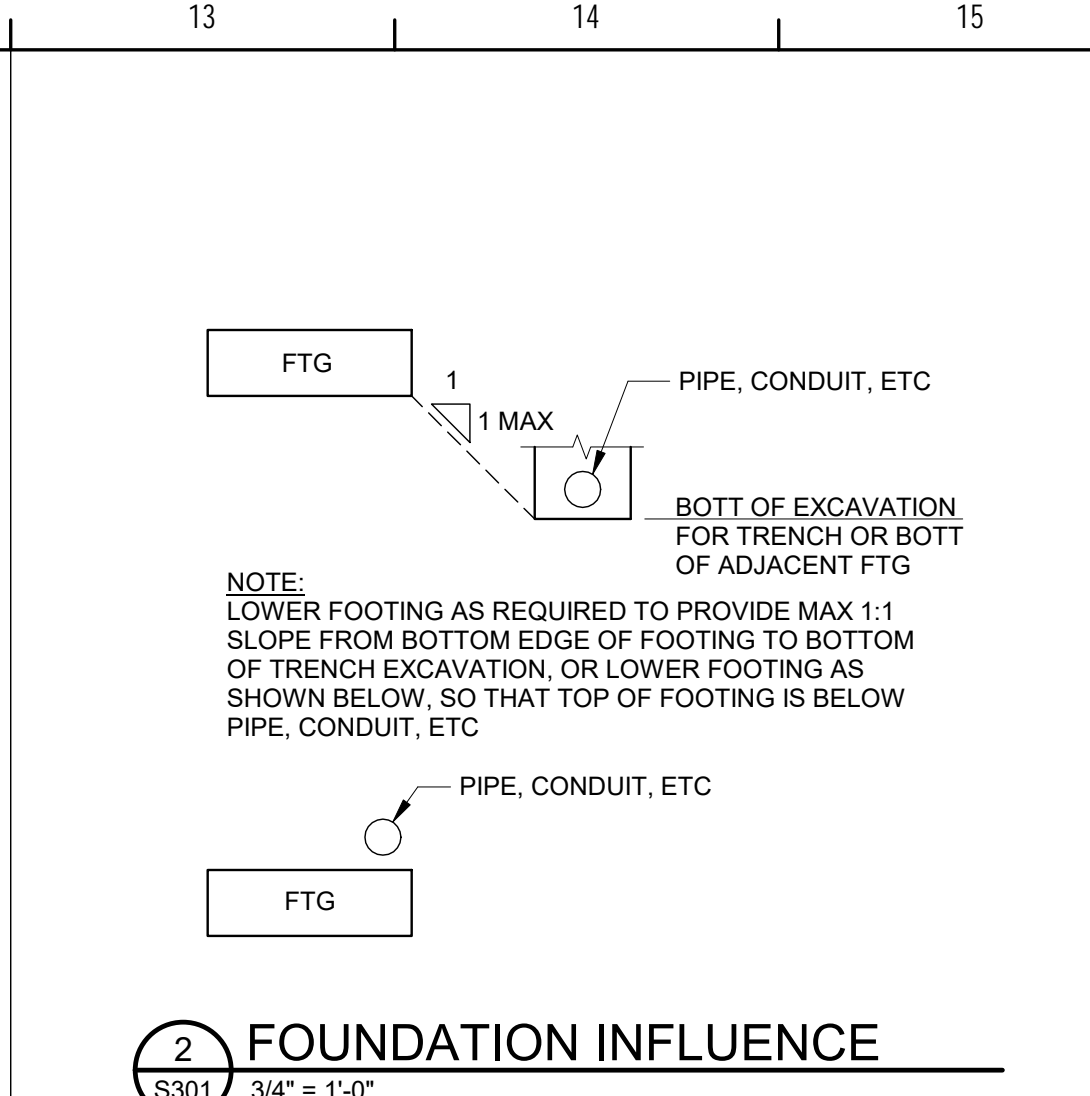
FOUNDATION & SLAB ON GRADE (SOG) DETAILS

S301

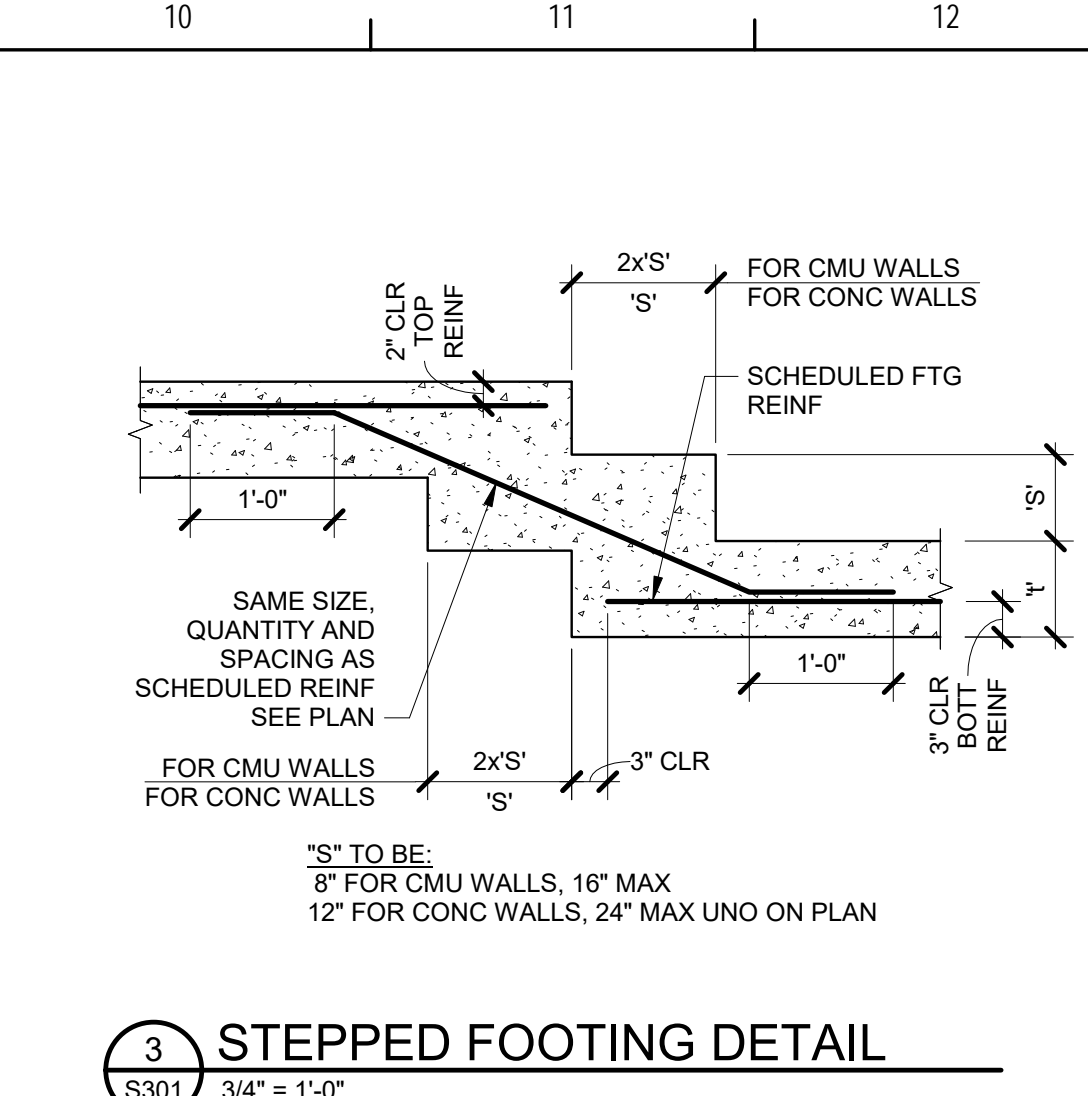
100% CONSTRUCTION DOCUMENTS



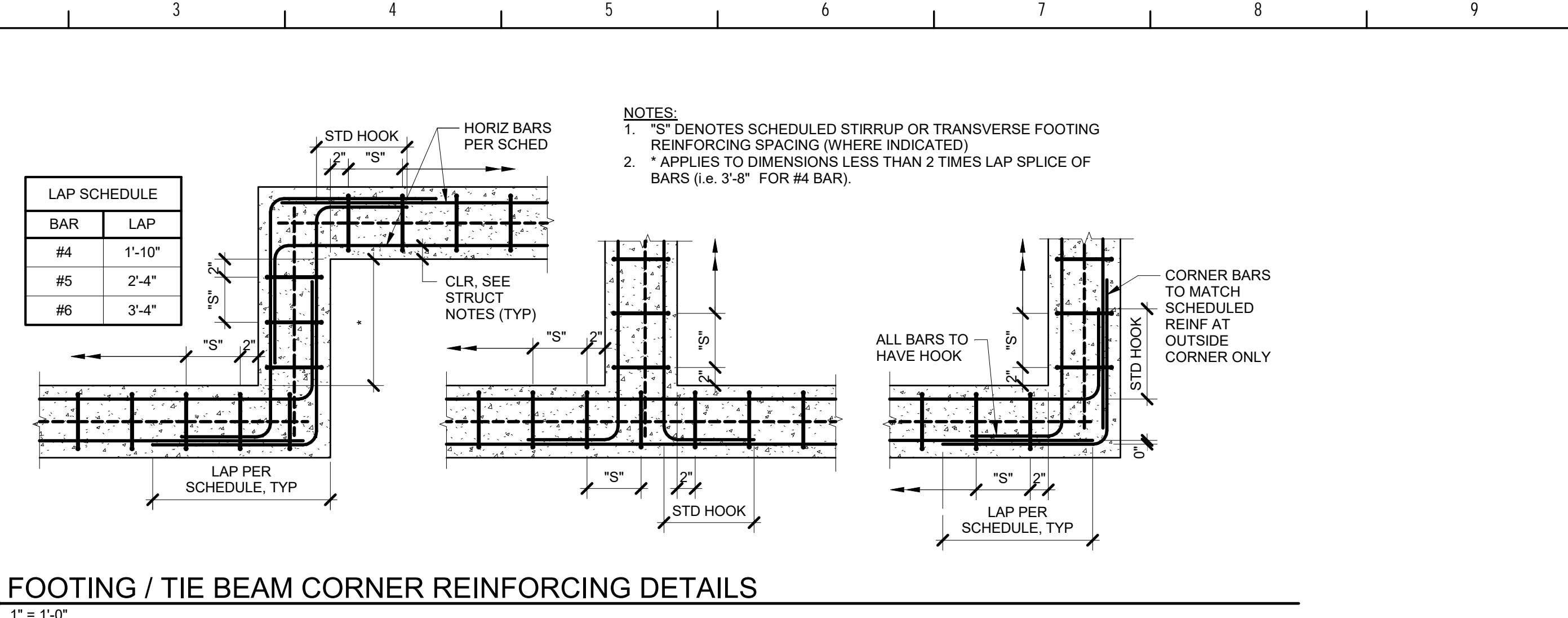
1 FOUNDATION UNDERCUTTING S301 3/4" = 1'-0"



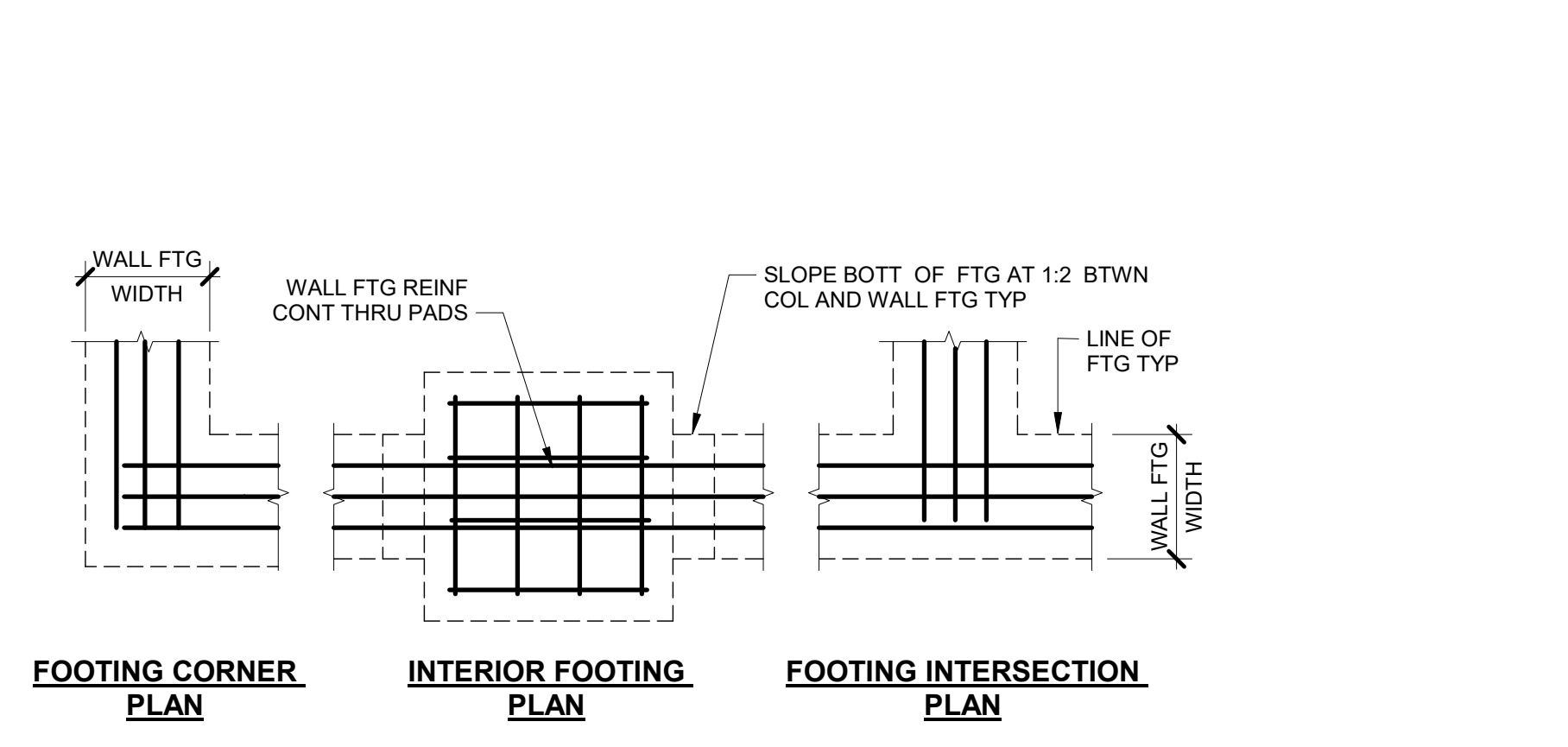
2 FOUNDATION INFLUENCE S301 3/4" = 1'-0"



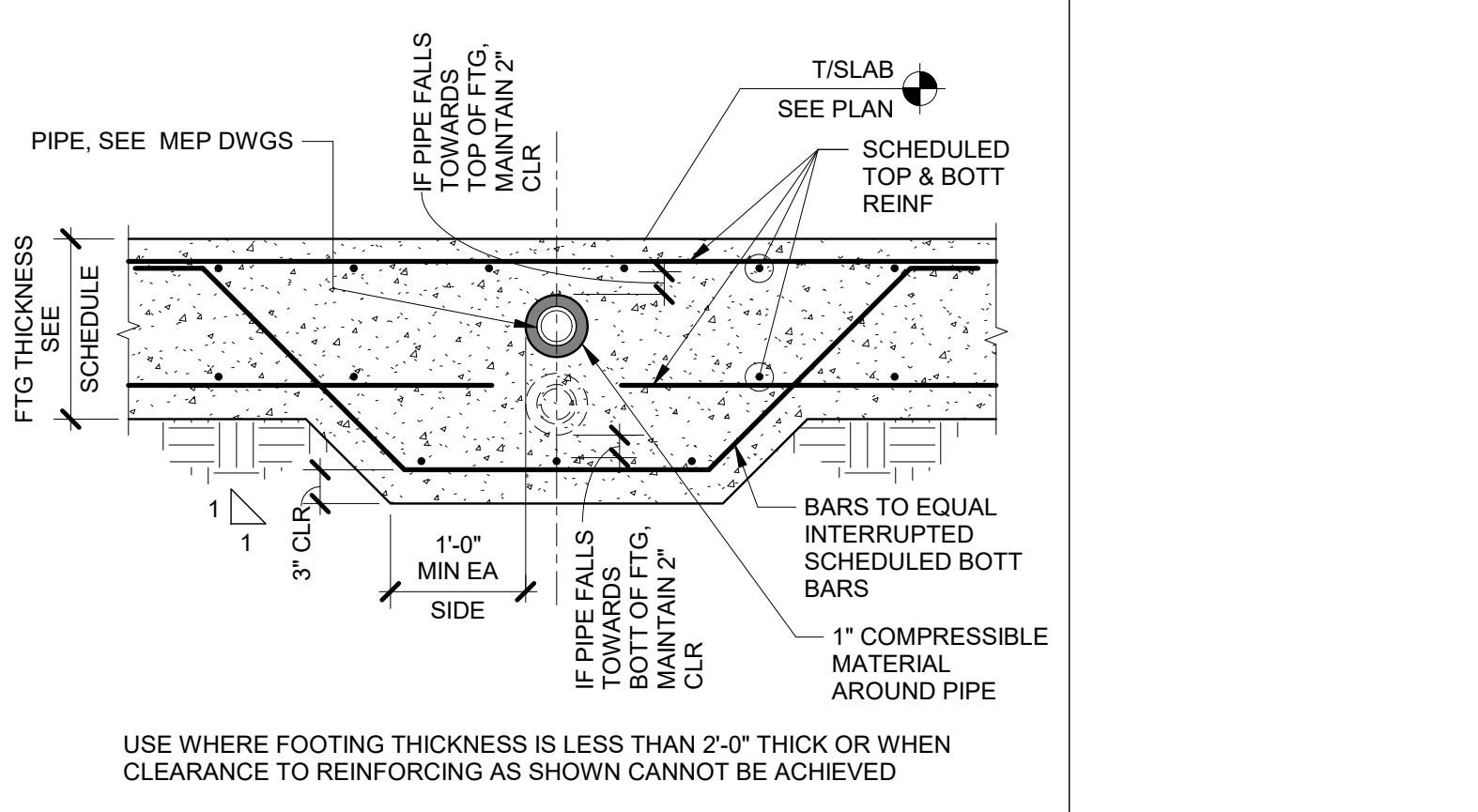
3 STEPPED FOOTING DETAIL S301 3/4" = 1'-0"



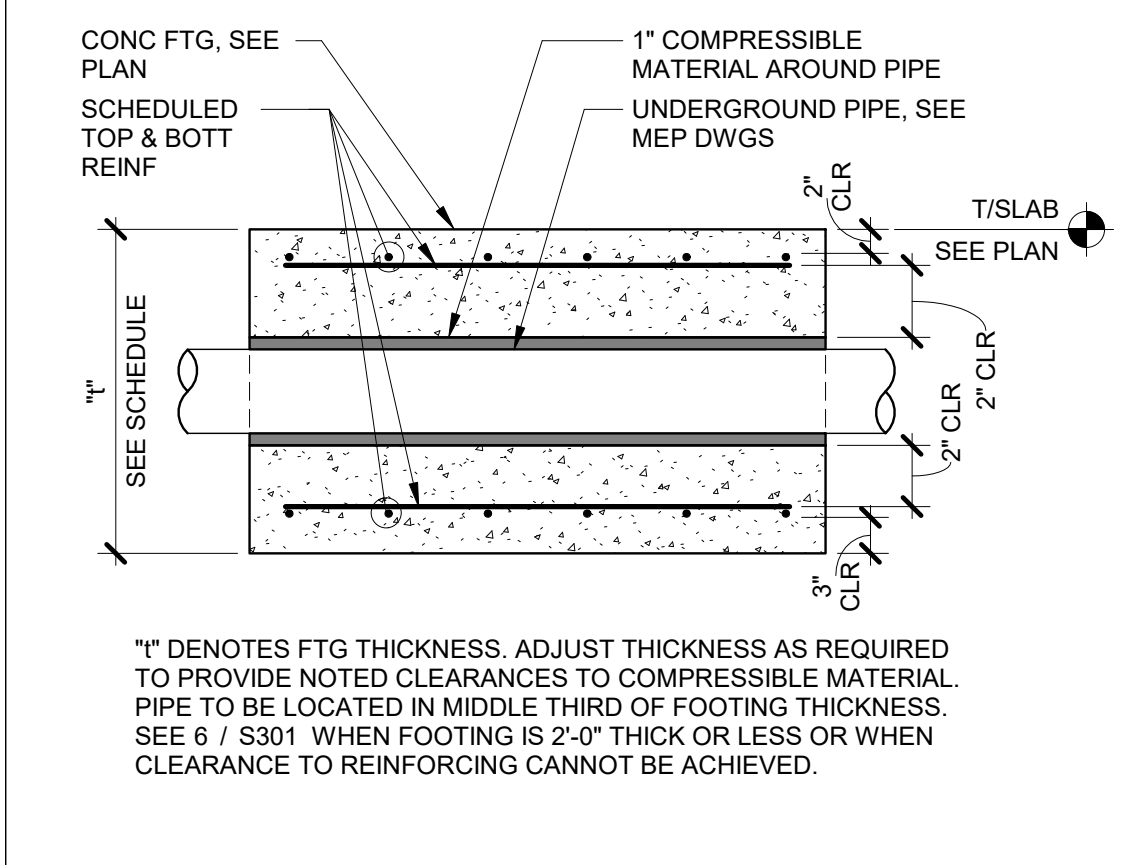
4 FOOTING / TIE BEAM CORNER REINFORCING DETAILS S301 1" = 1'-0"



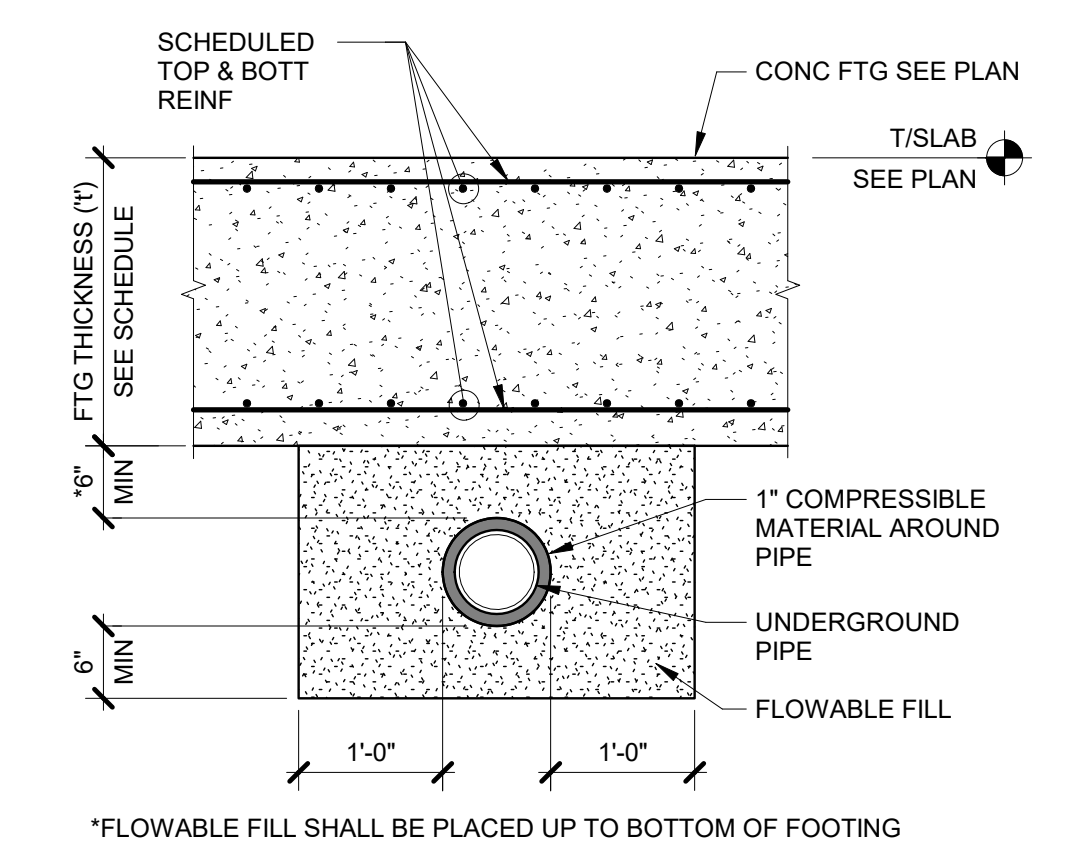
5 FOOTING REINFORCING DETAILS S301 3/4" = 1'-0"



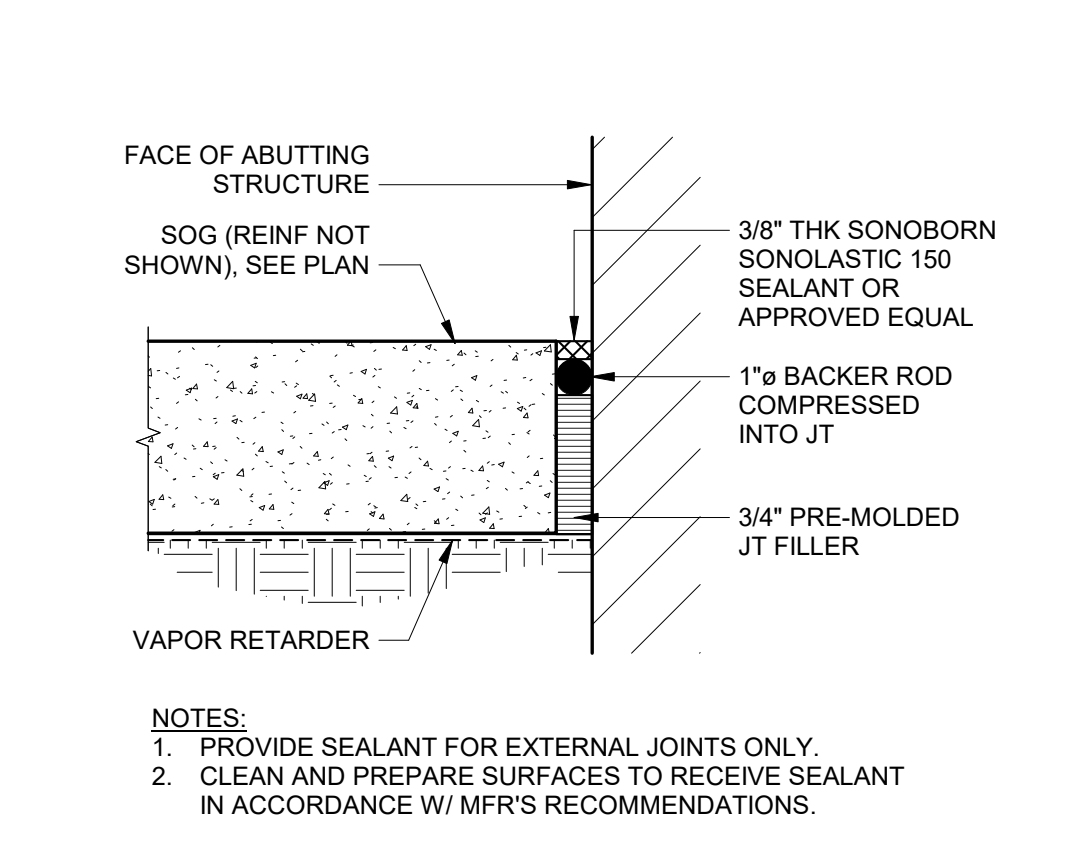
6 PIPE PENETRATION THROUGH FOOTING S301 3/4" = 1'-0"



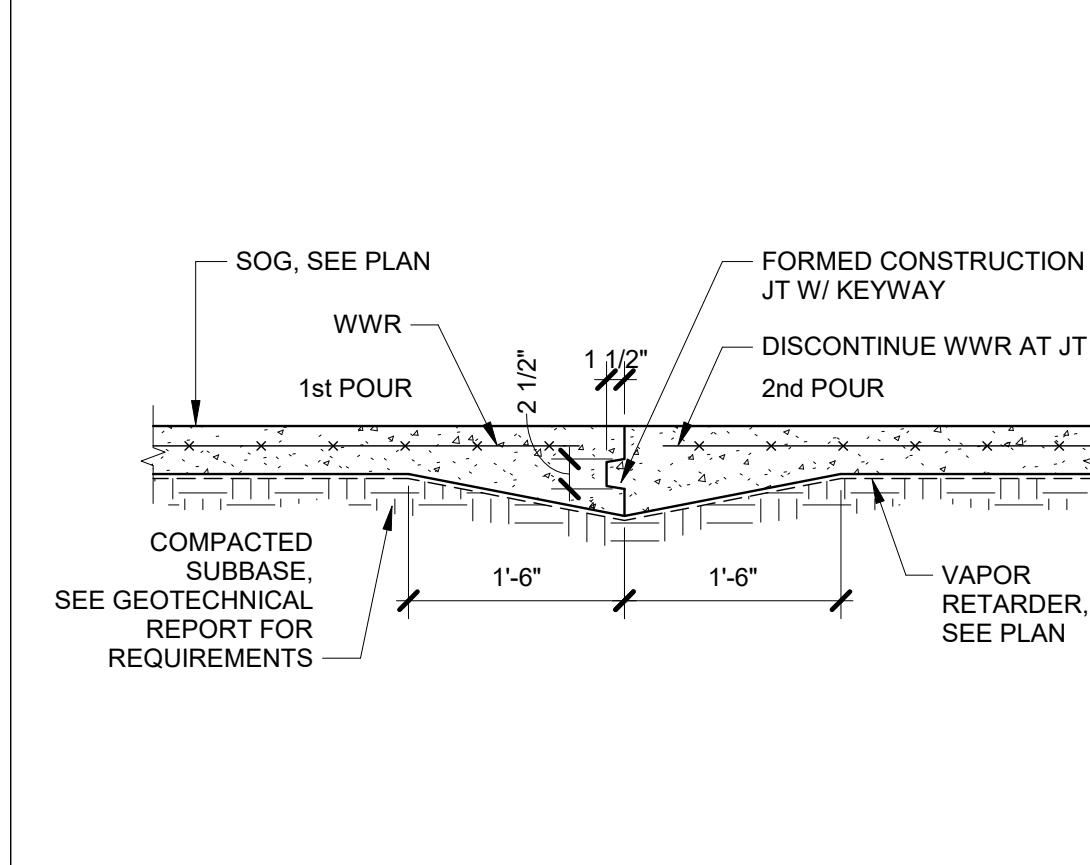
7 PIPE PENETRATION THROUGH FOOTING S301 3/4" = 1'-0"



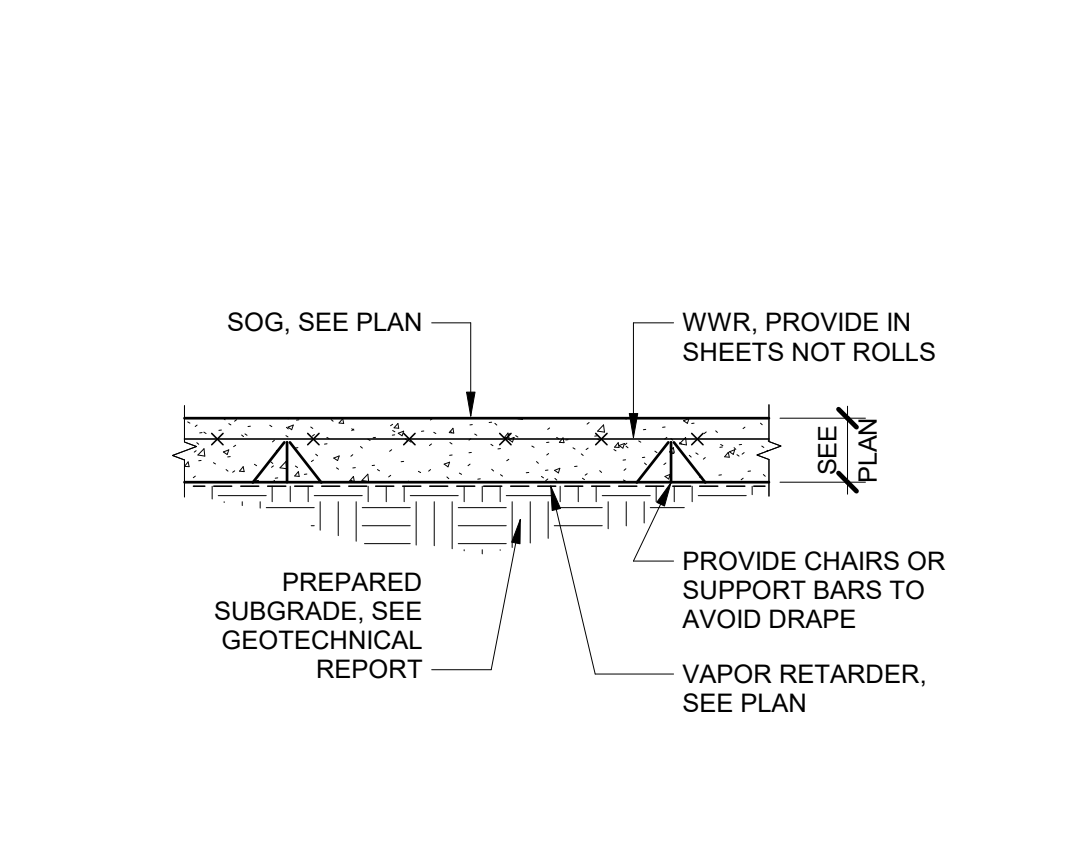
8 PIPE BELOW SLAB OR FOOTING S301 3/4" = 1'-0"



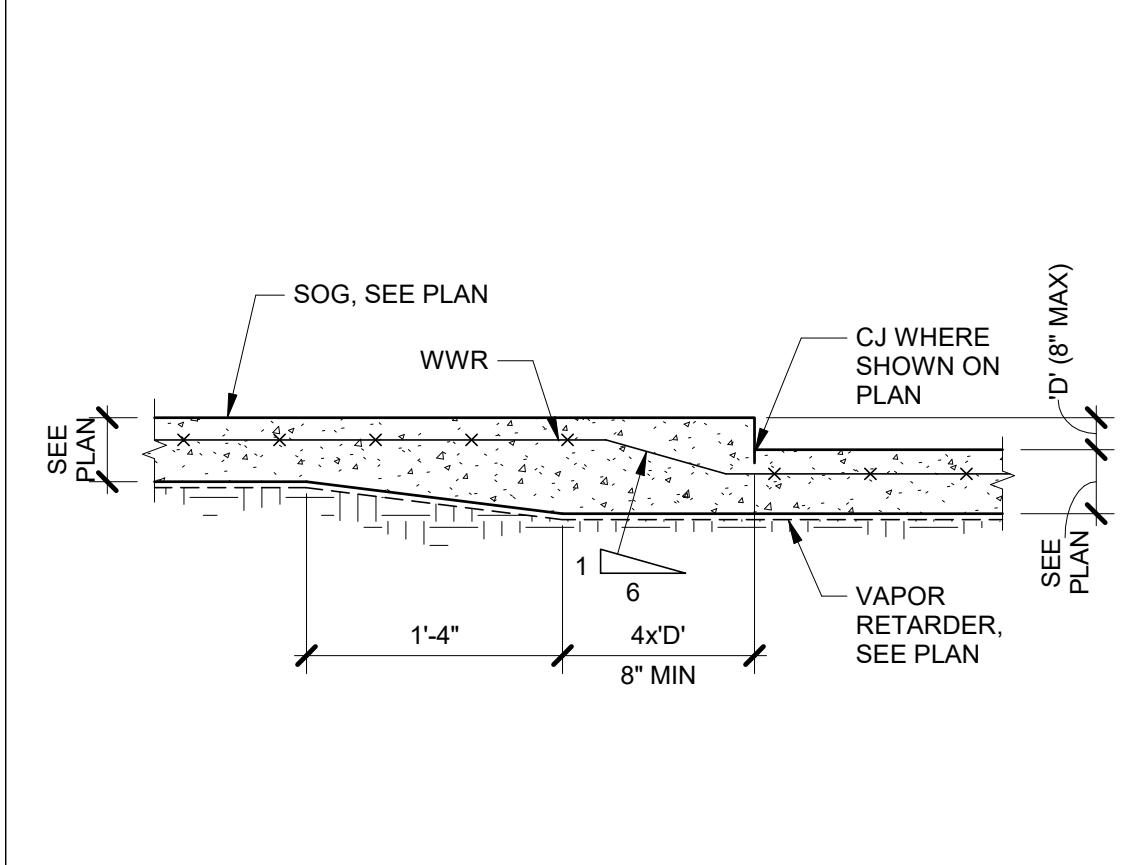
9 ISOLATION JOINT AT SOG (IJ) S301 3" = 1'-0"



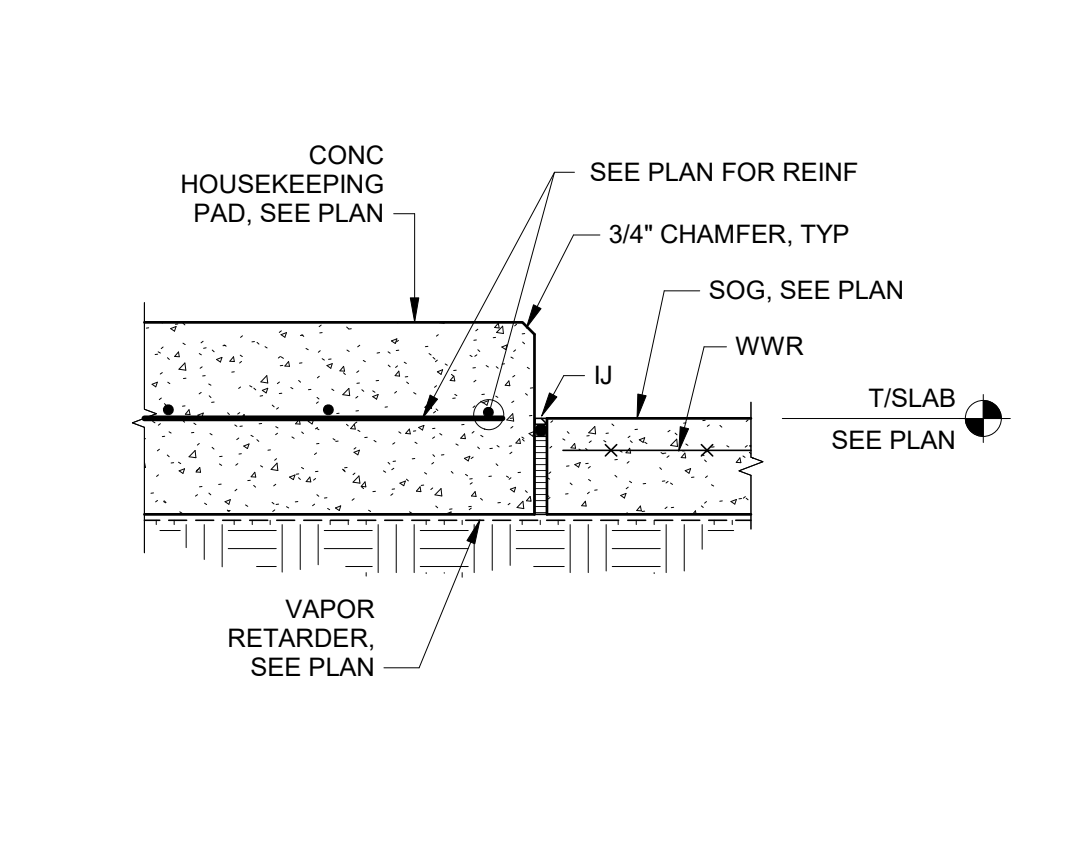
11 CONSTRUCTION JOINT AT SOG S301 3/4" = 1'-0"



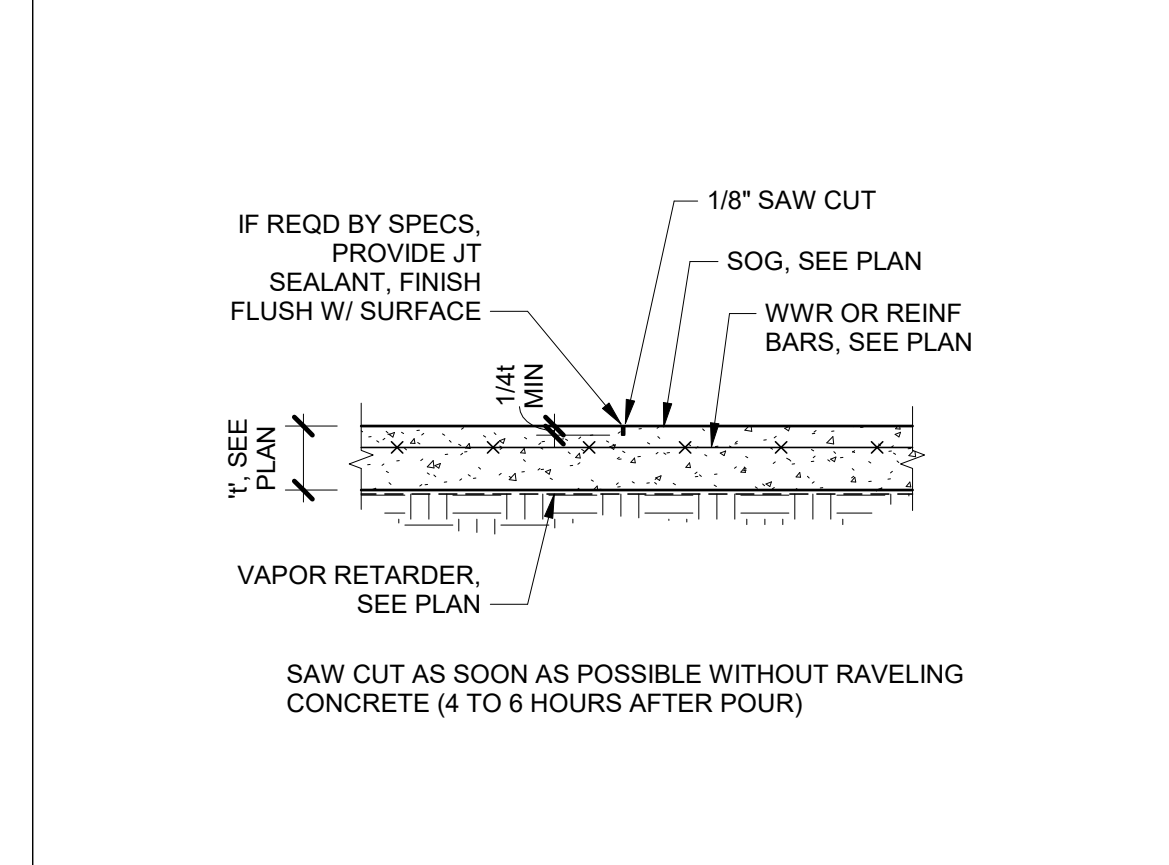
12 WWR AT SOG S301 1" = 1'-0"



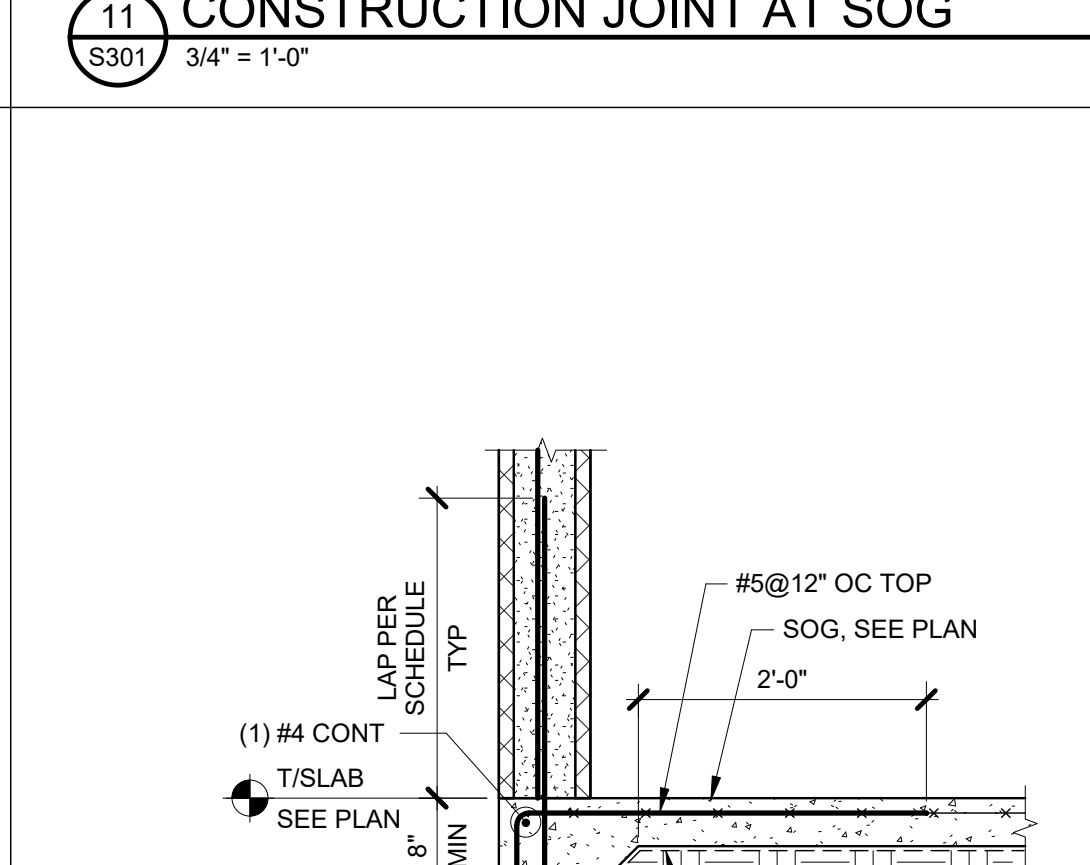
13 DEPRESSED SOG S301 1" = 1'-0"



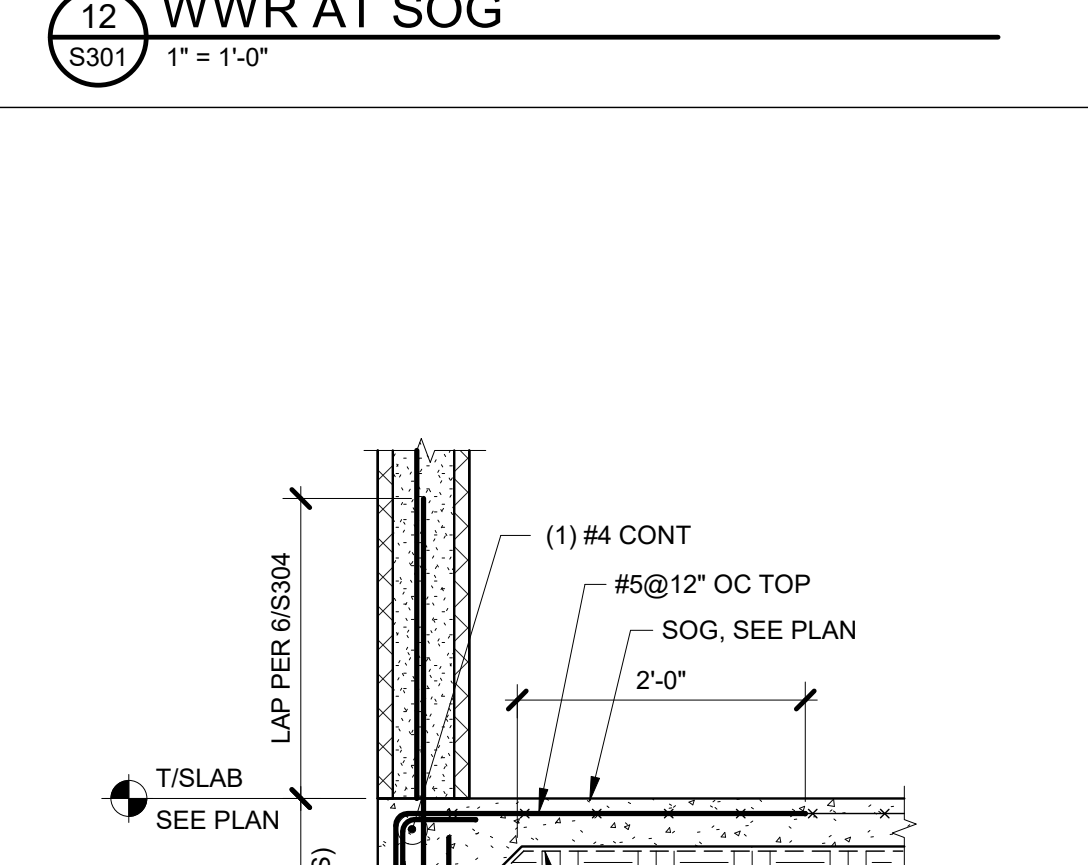
14 HOUSEKEEPING PAD AT SOG S301 1" = 1'-0"



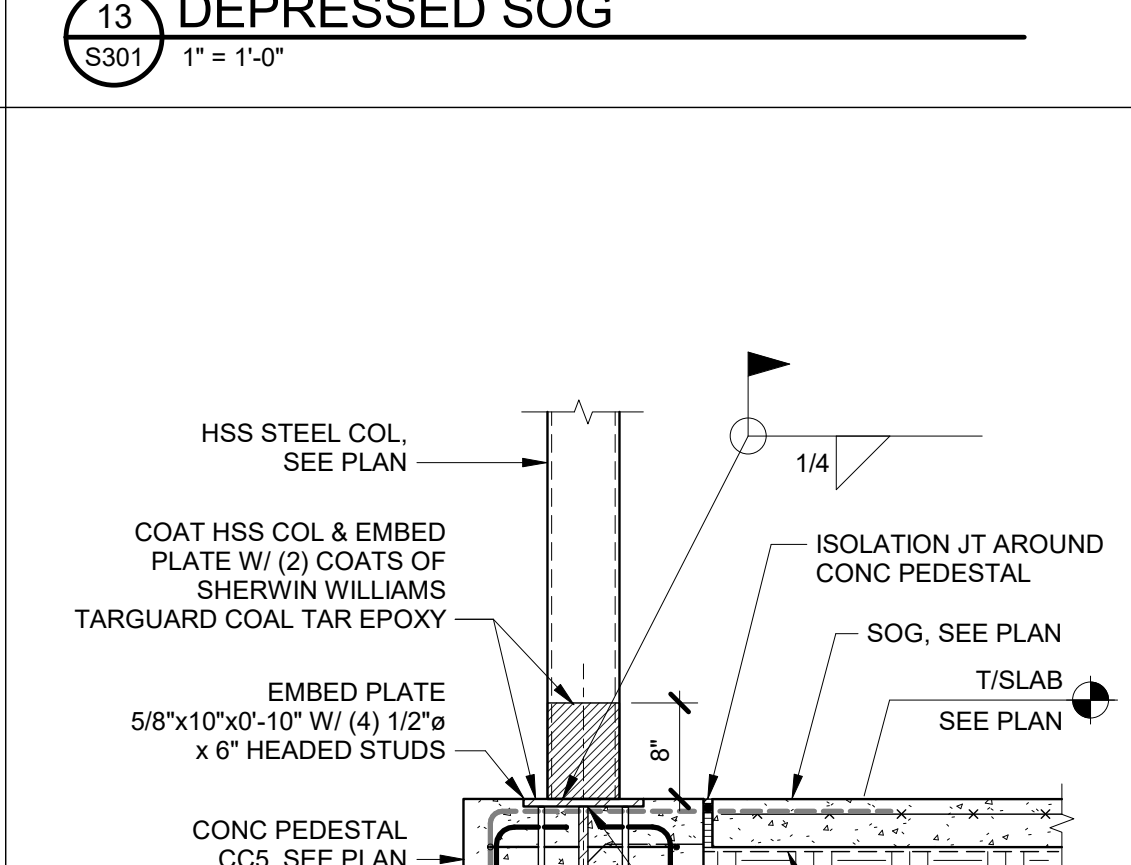
10 CONTROL JOINT (CJ) AT SOG S301 1" = 1'-0"



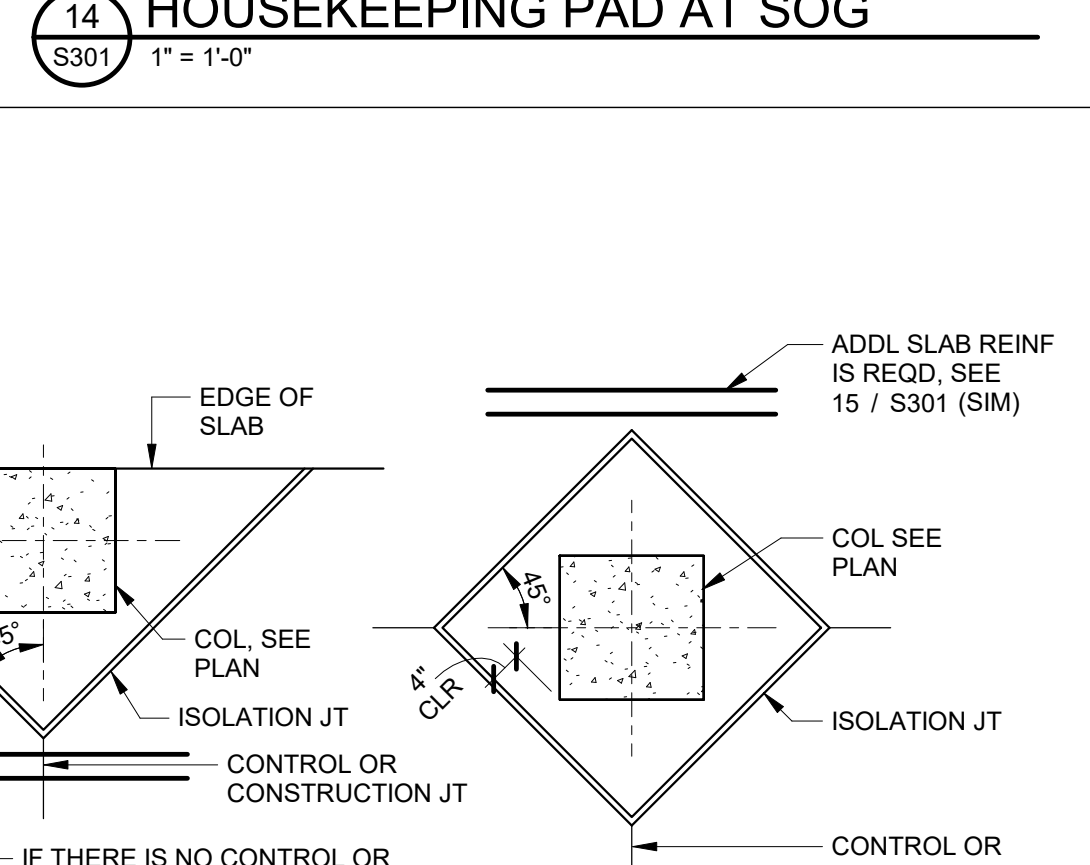
18 EXTERIOR CMU WALL FOOTING S301 3/4" = 1'-0"



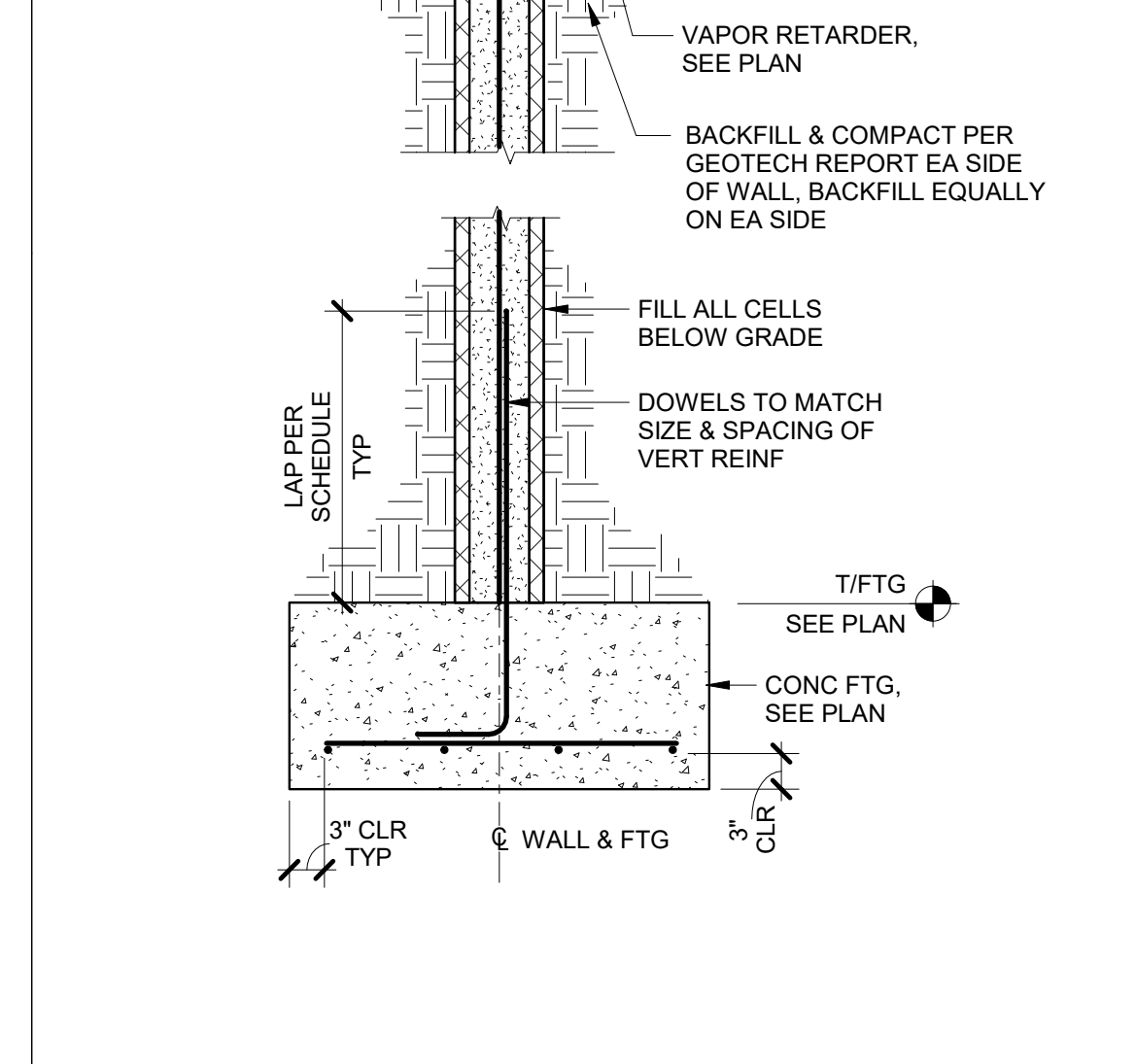
19 EXTERIOR CANTILEVER CONCRETE WALL ALTERNATE S301 3/4" = 1'-0"



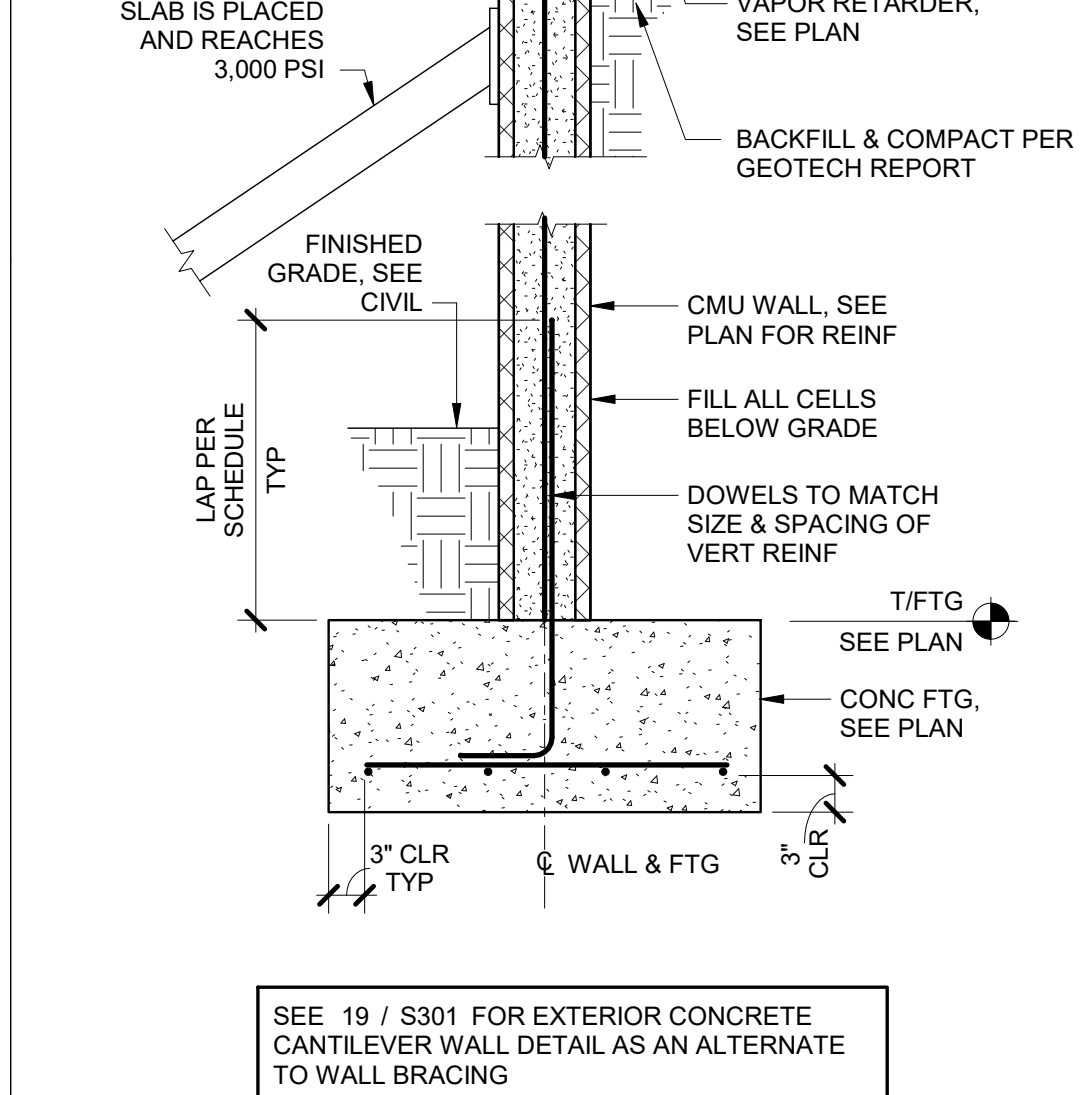
20 CONCRETE PIER AT ENTRY S301 3/4" = 1'-0"



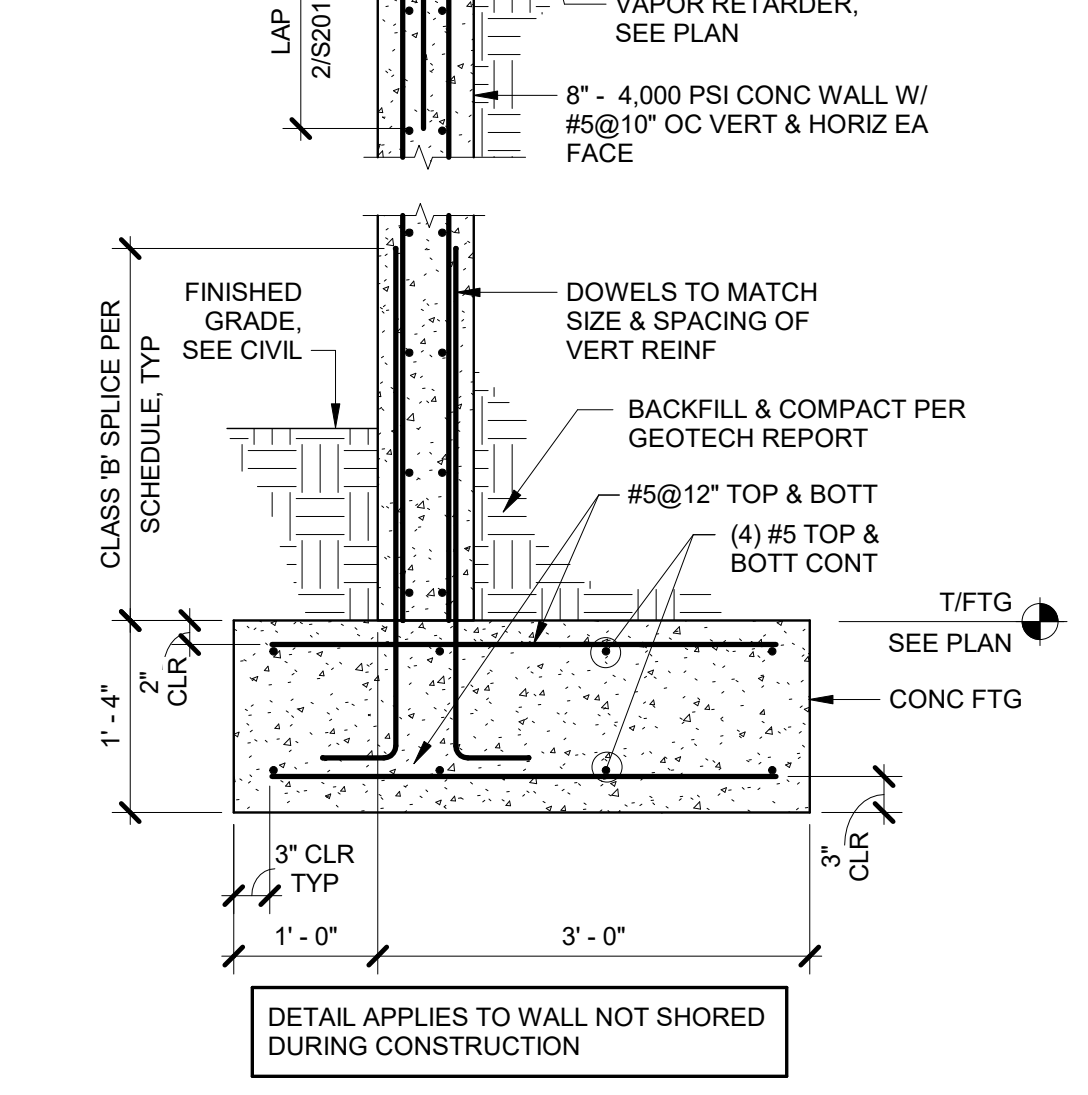
16 ISOLATION JOINTS AT CONCRETE COLUMNS S301 1/2" = 1'-0"



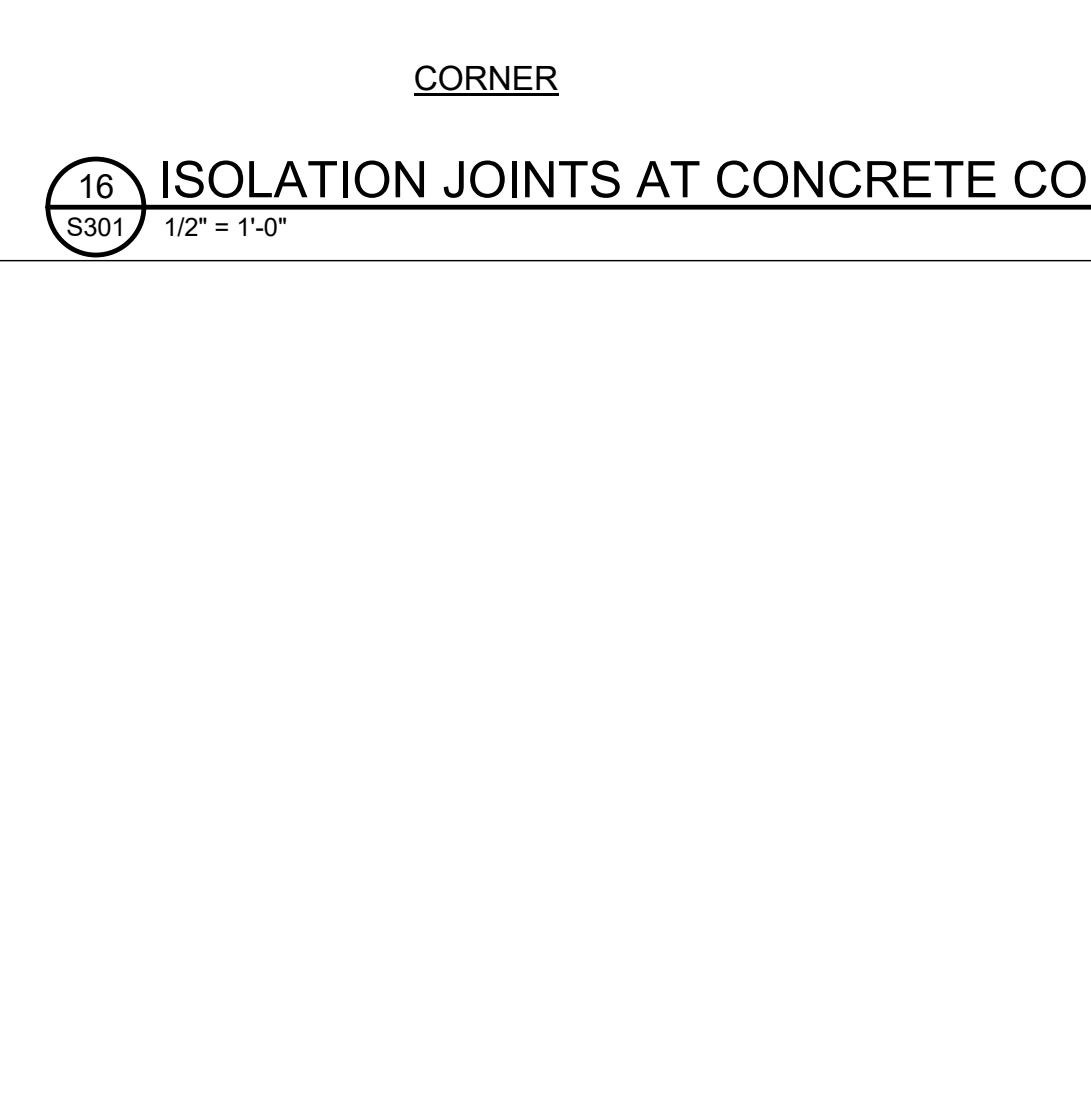
17 INTERIOR CMU WALL FOOTING S301 3/4" = 1'-0"



18 EXTERIOR CMU WALL FOOTING S301 3/4" = 1'-0"



21 TURNED DOWN SLAB EDGE TE2 S301 3/4" = 1'-0"



16 ISOLATION JOINTS AT CONCRETE COLUMNS S301 1/2" = 1'-0"



**SANIBEL FIRE AND RESCUE
STATION 172**

PROJECT LOCATION:
5171 SANIBEL CAPTIVA
SANIBEL, FLORIDA 33957



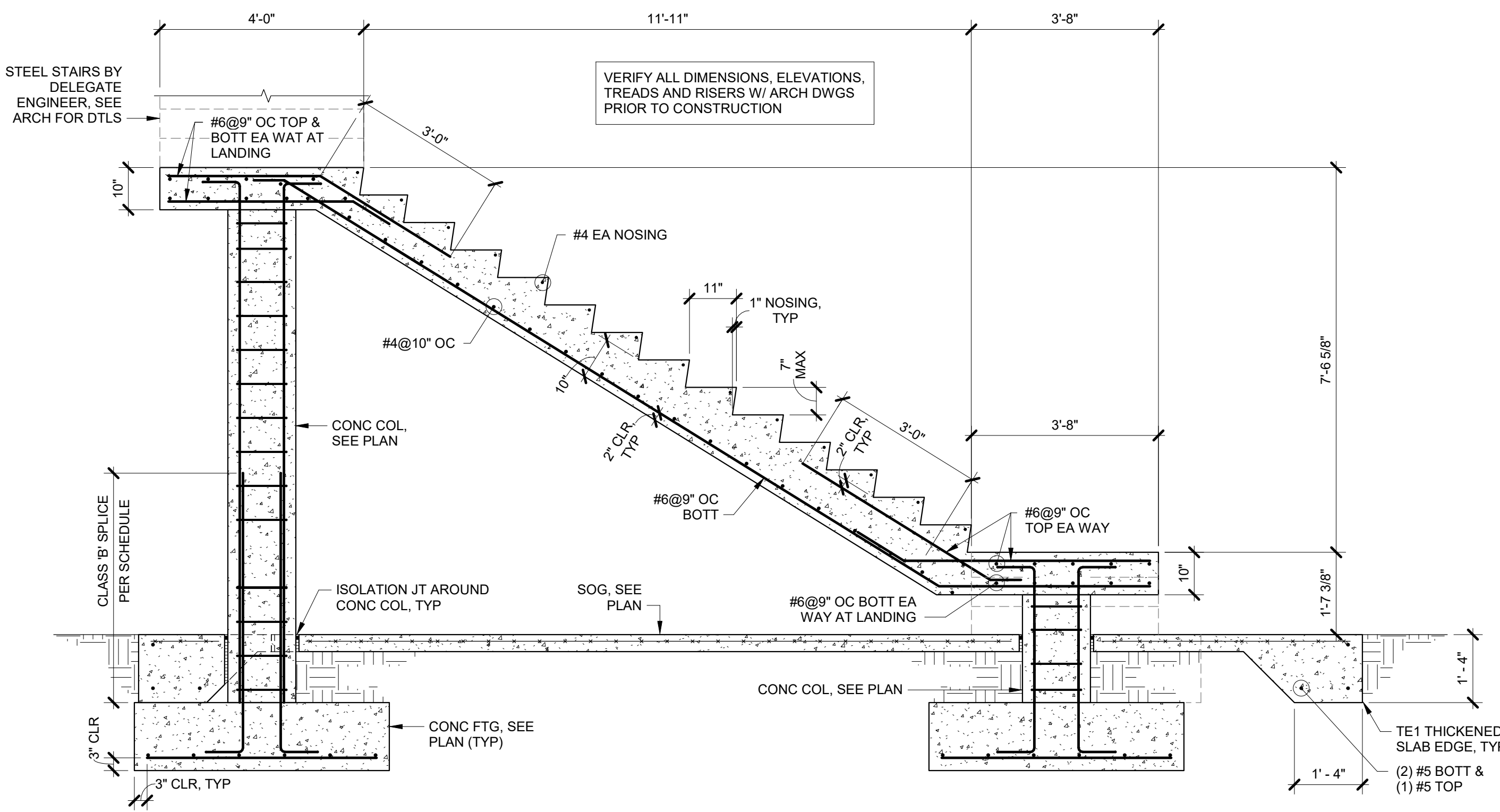
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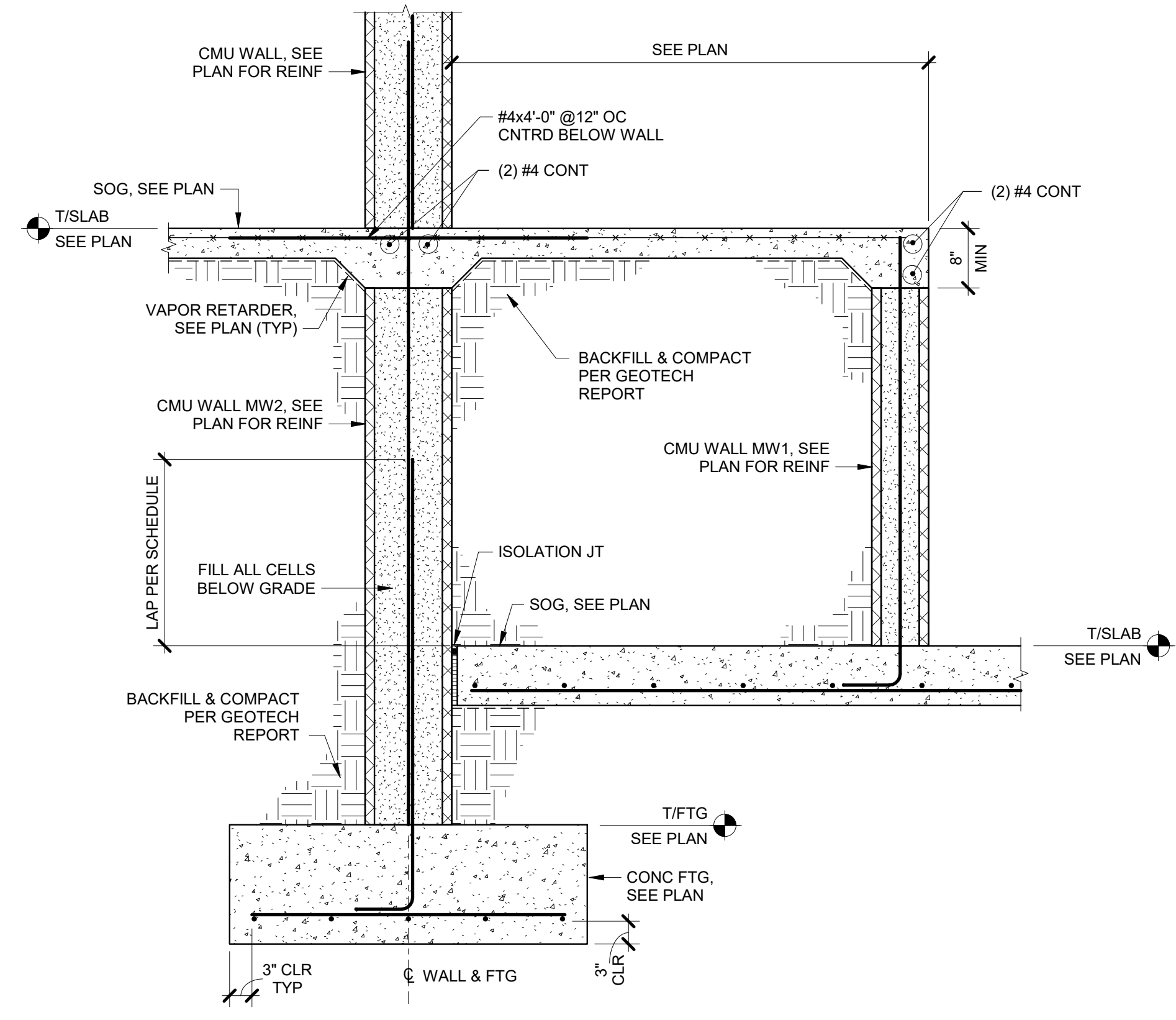
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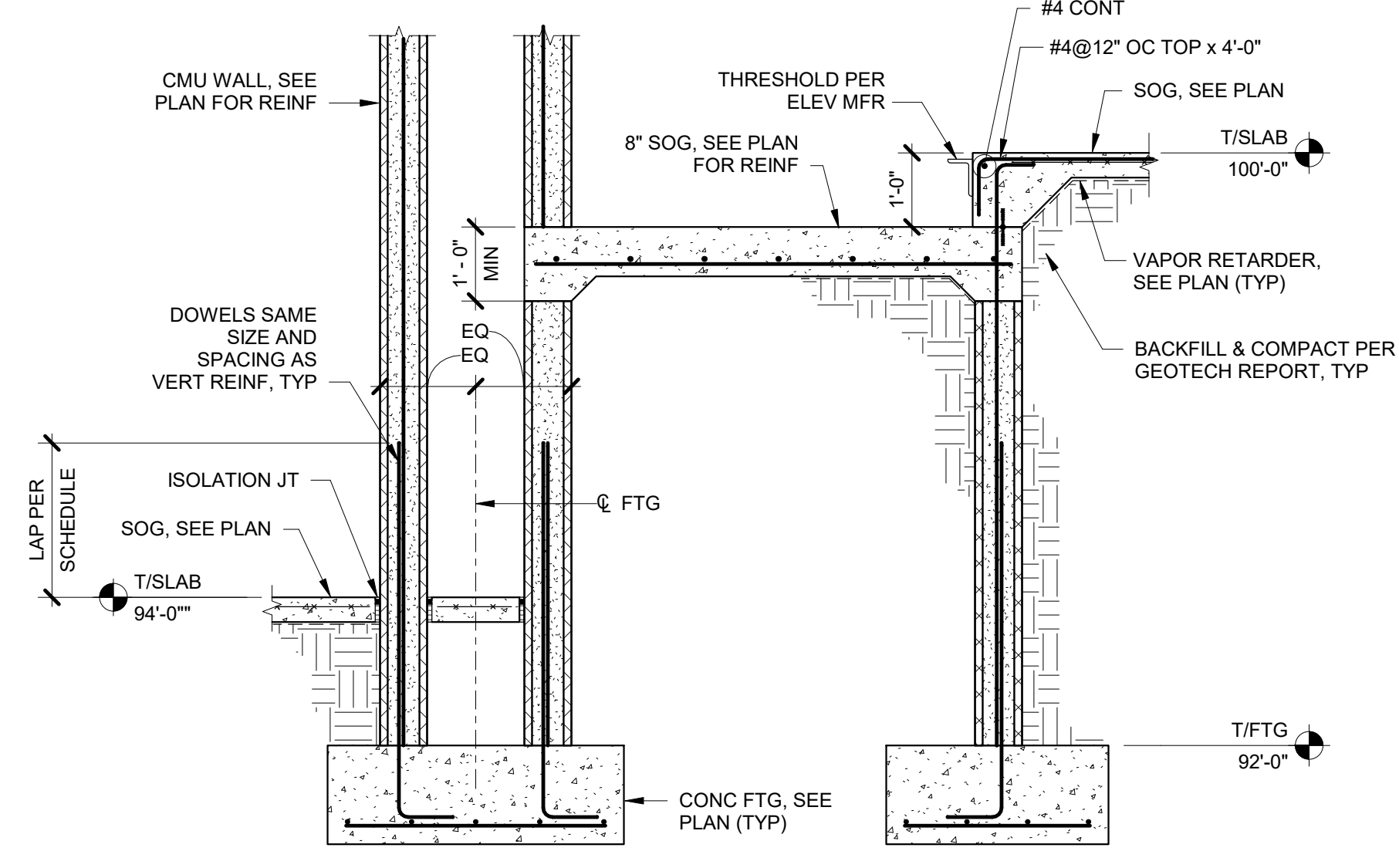
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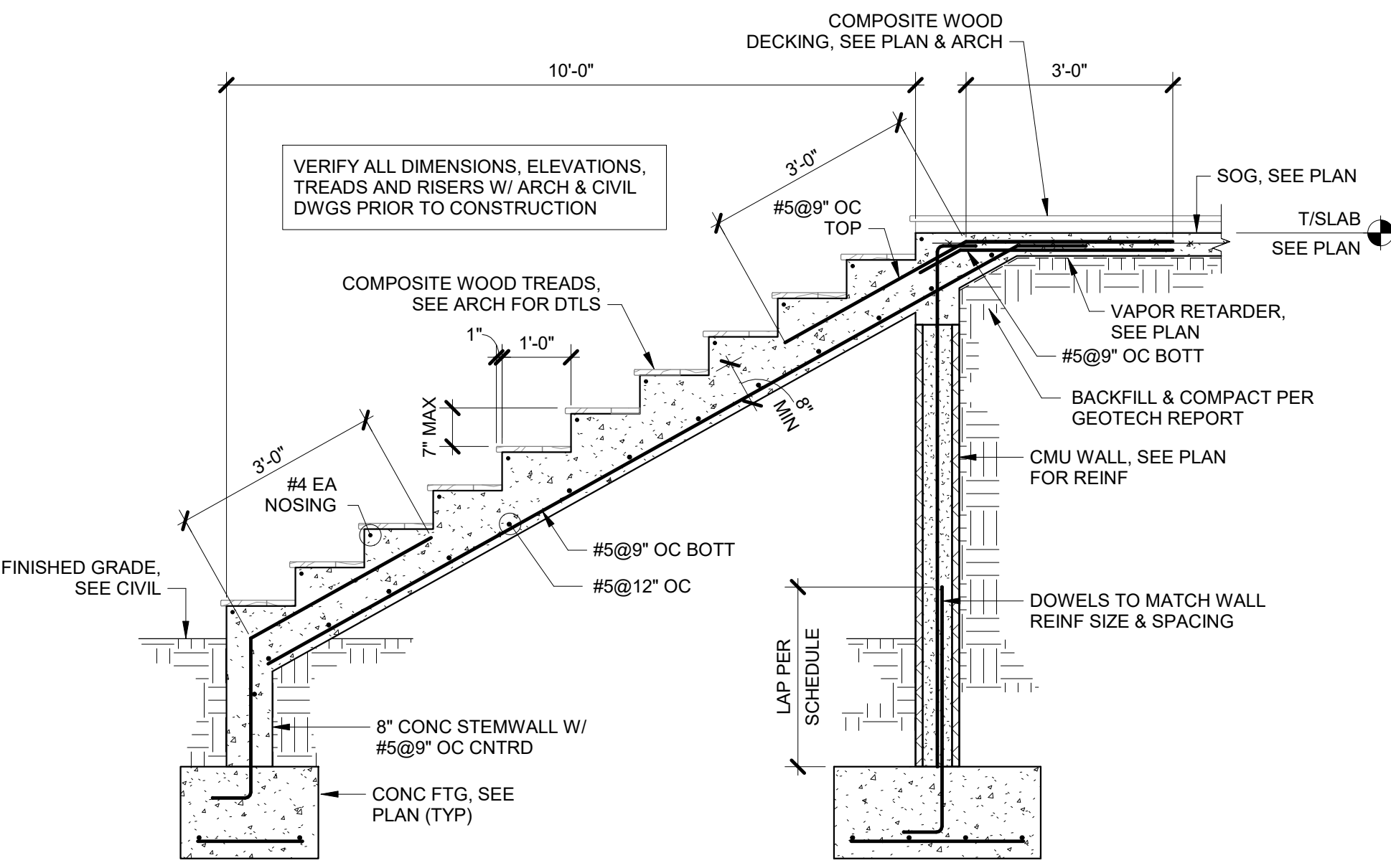
2 EXTERIOR STAIR SECTION
S302 1/2" = 1'-0"



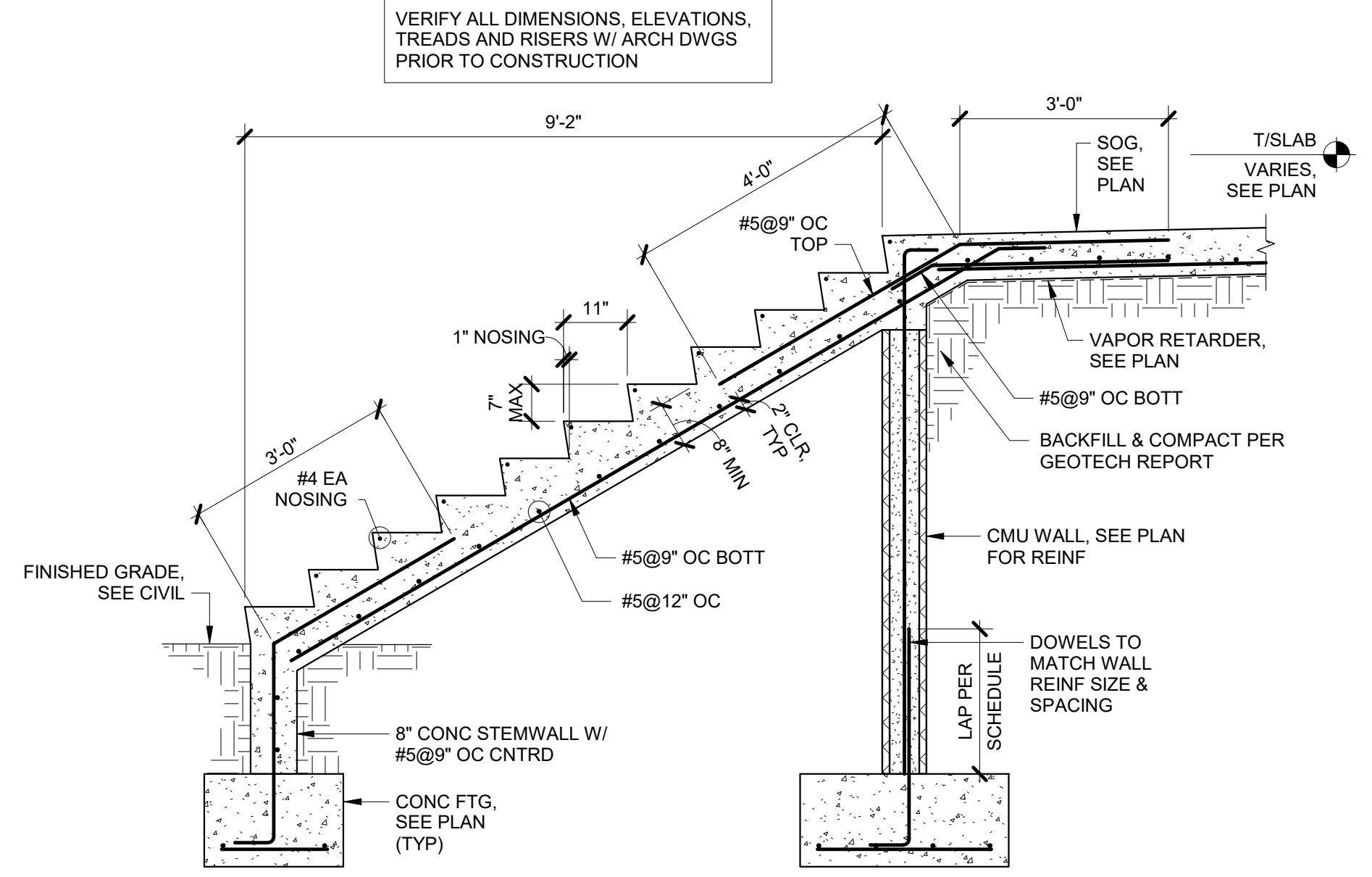
1 WALL FOOTING AT APARATAS FLOOR
S302 3/4" = 1'-0"



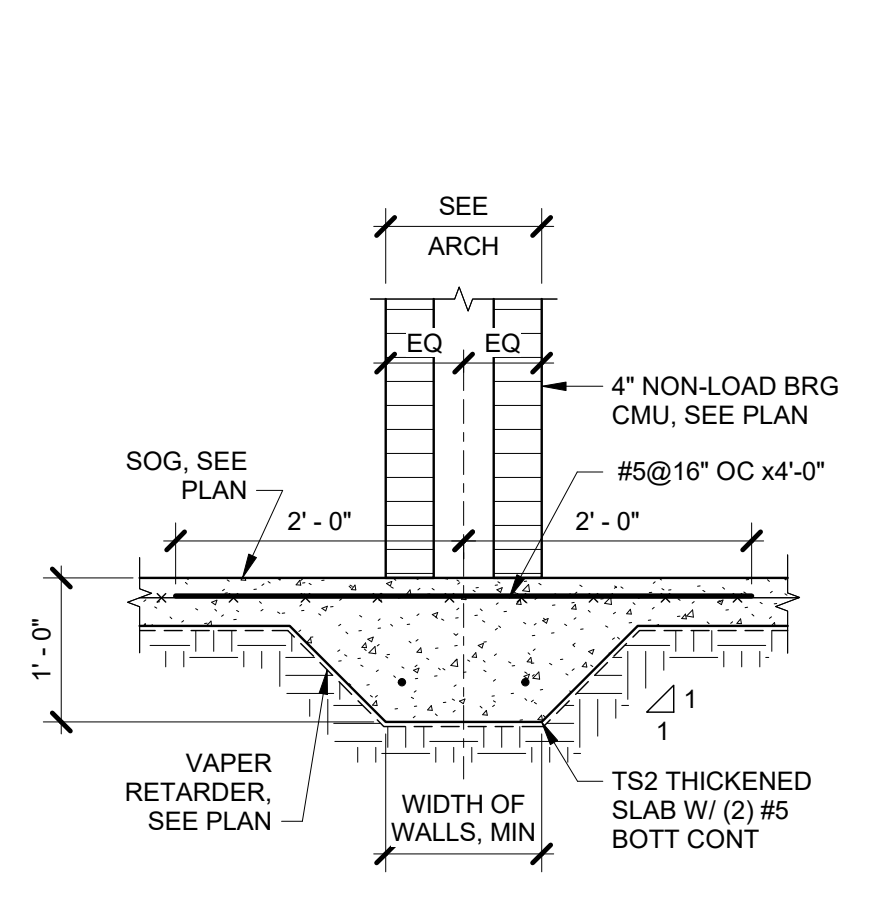
5 LIFT SECTION
S302 1/2" = 1'-0"



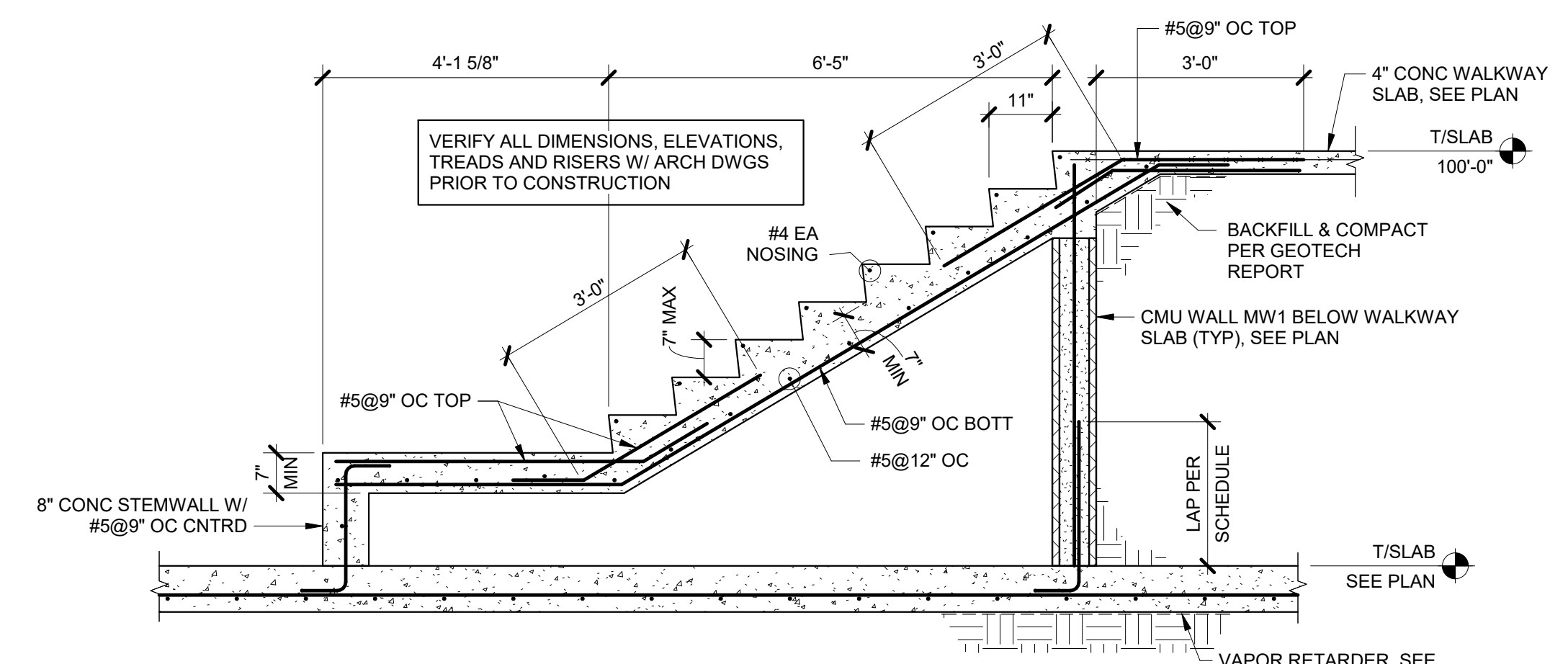
4 STAIR SECTION
S302 1/2" = 1'-0"



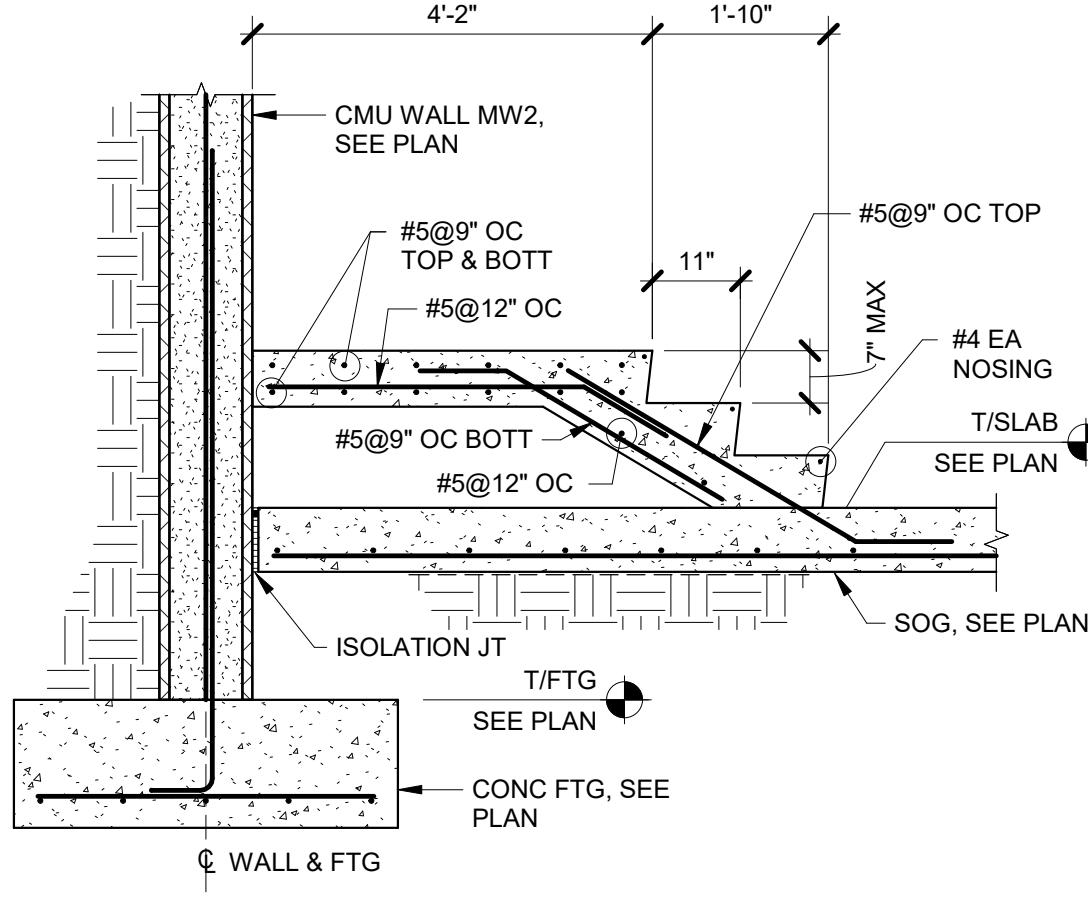
3 STAIR SECTION
S302 1/2" = 1'-0"



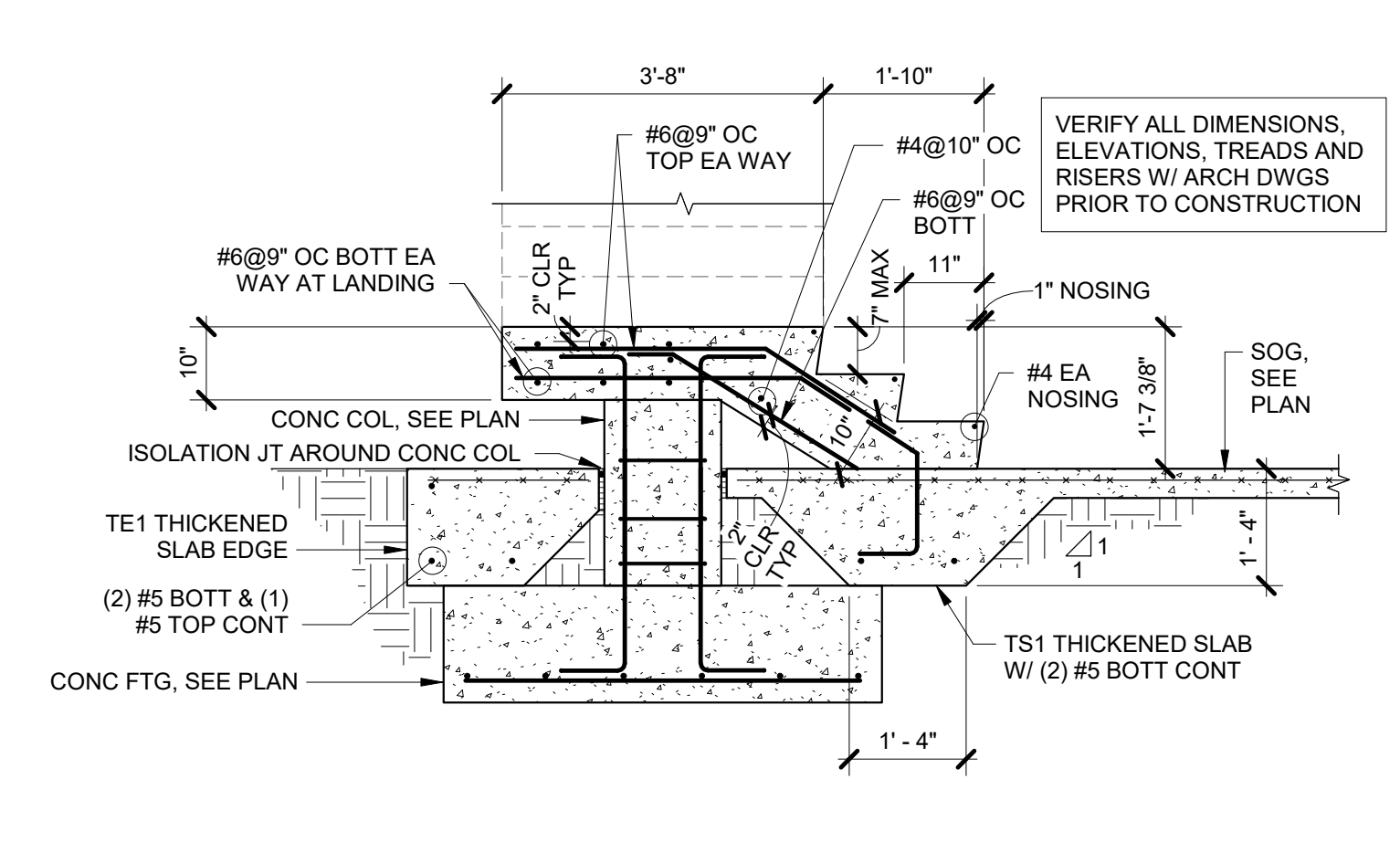
9 TS2 THICKENED SLAB
S302 3/4" = 1'-0"



8 APARATUS FLOOR STAIR SECTION
S302 1/2" = 1'-0"



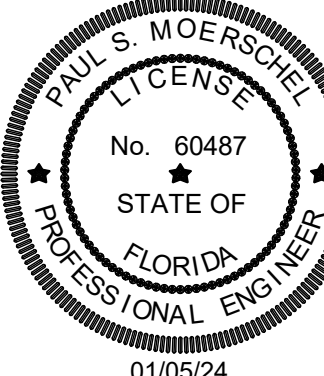
7 APARATUS FLOOR STAIR SECTION
S302 1/2" = 1'-0"



6 EXTERIOR STAIR SECTION
S302 1/2" = 1'-0"

REVISIONS		
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**FOUNDATION / GROUND
FLOOR SECTIONS &
DETAILS**

S302

100% CONSTRUCTION DOCUMENTS



SANIBEL FIRE AND RESCUE
STATION 172

PROJECT LOCATION:
5171 SANIBEL CAPTIVA
SANIBEL, FLORIDA 33957



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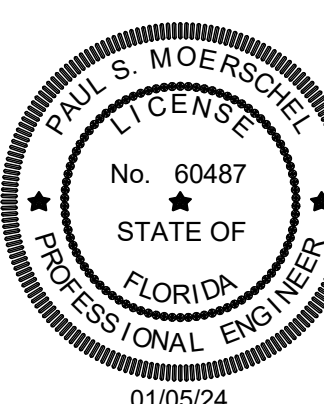
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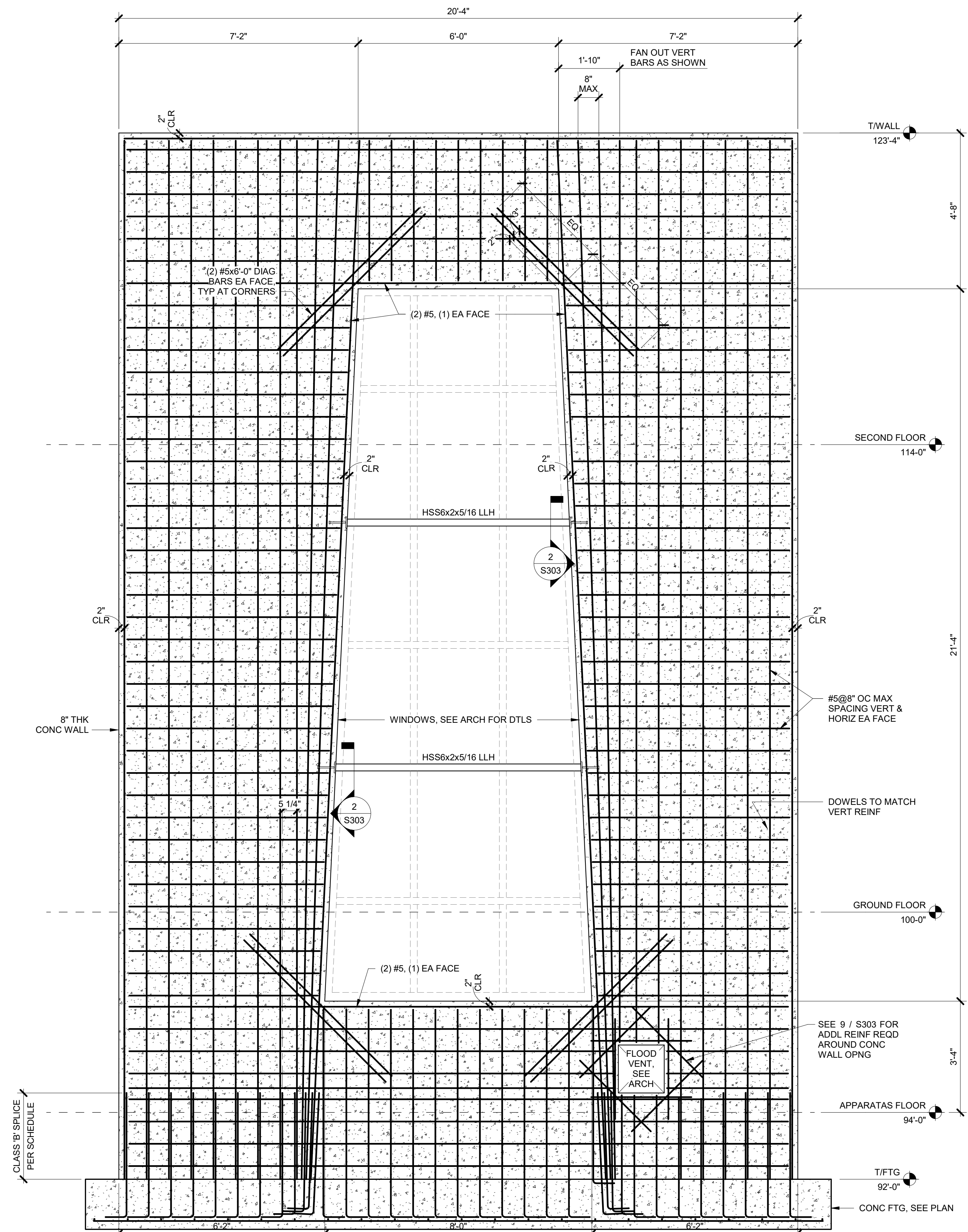


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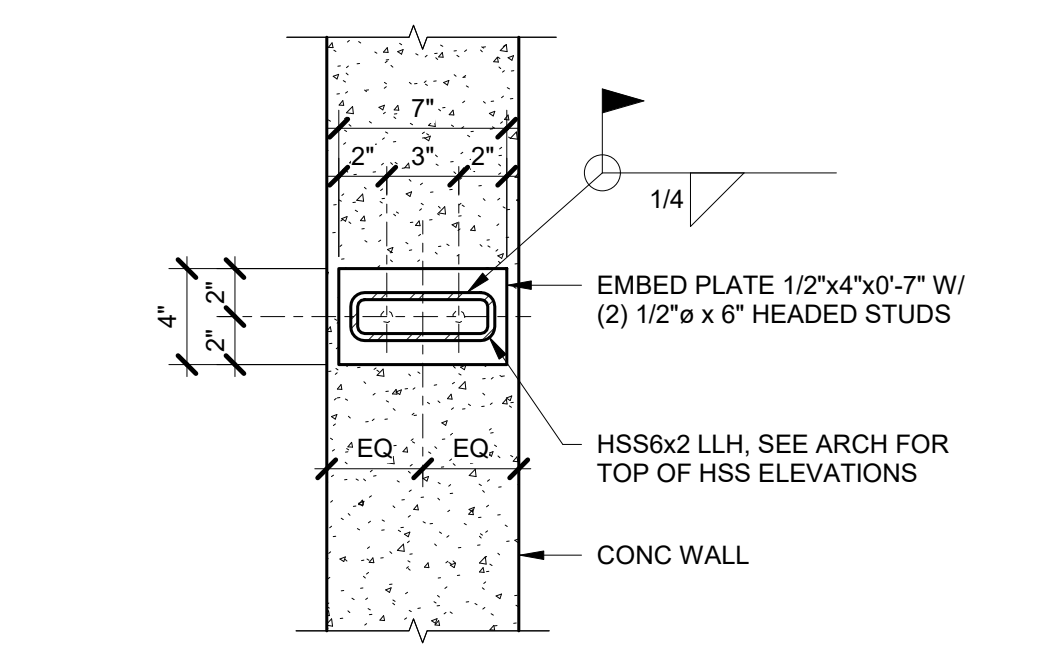
GROUND FLOOR SECTIONS
/ CONC WALL ELEVATION

S303

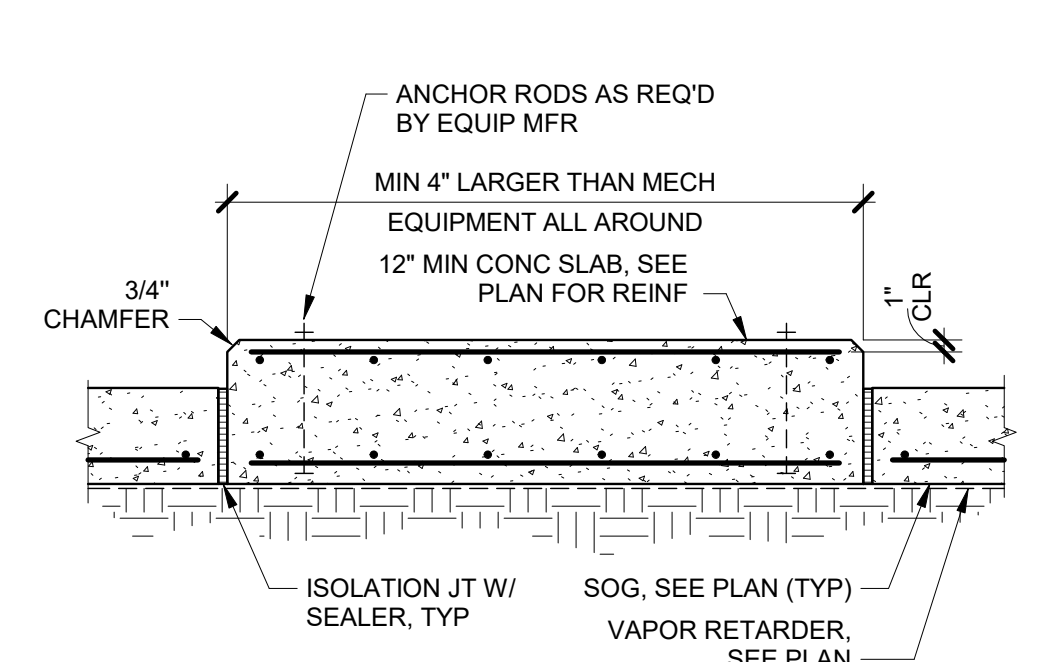
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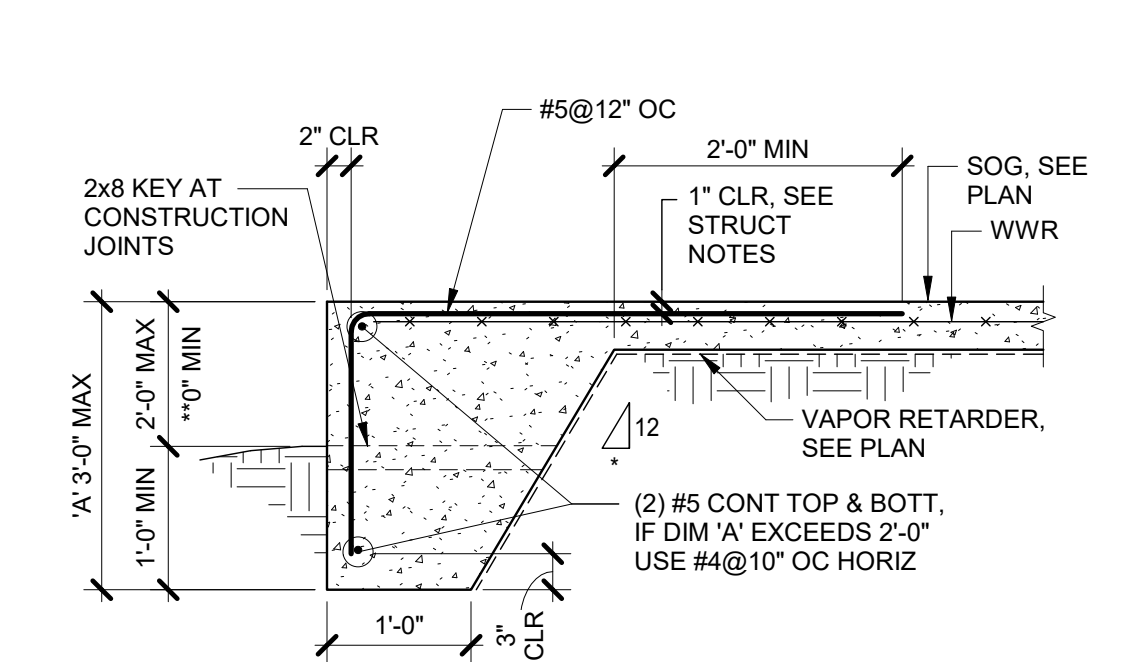
1 CONCRETE WALL ELEVATION
S303 1/2" = 1'-0"



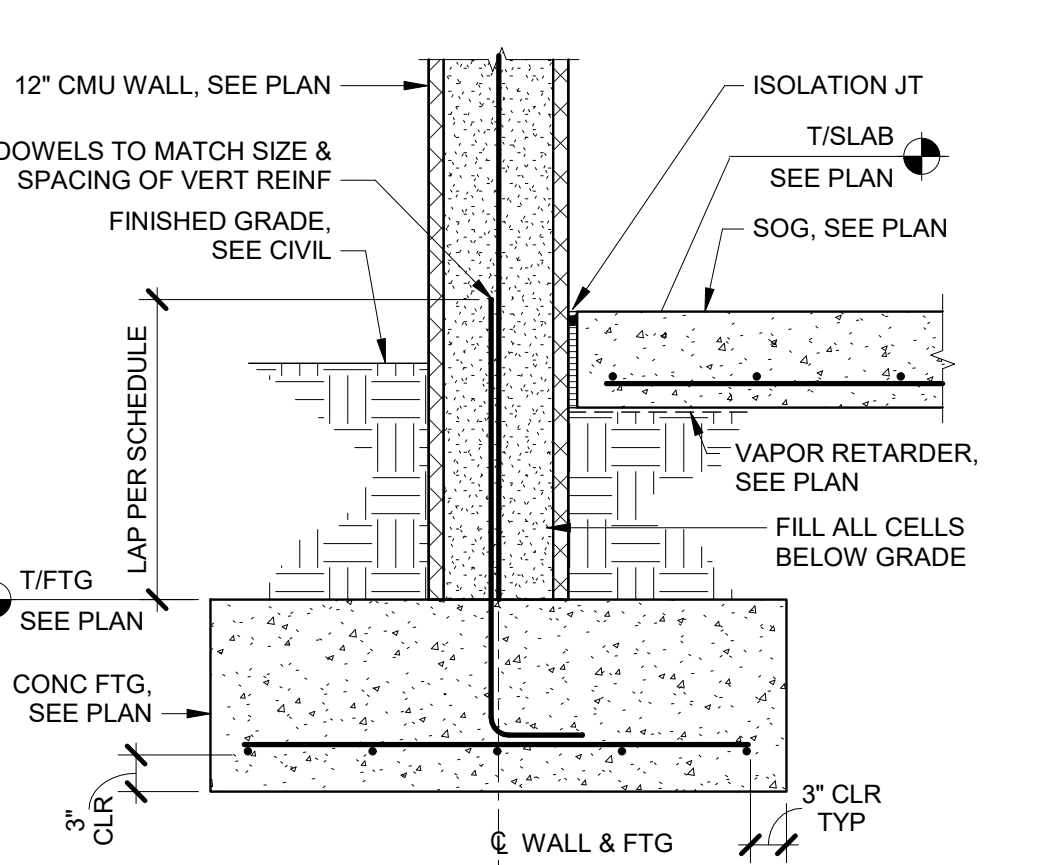
2 HSS TO CONCRETE WALL CONNECTION
S303 1 1/2" = 1'-0"



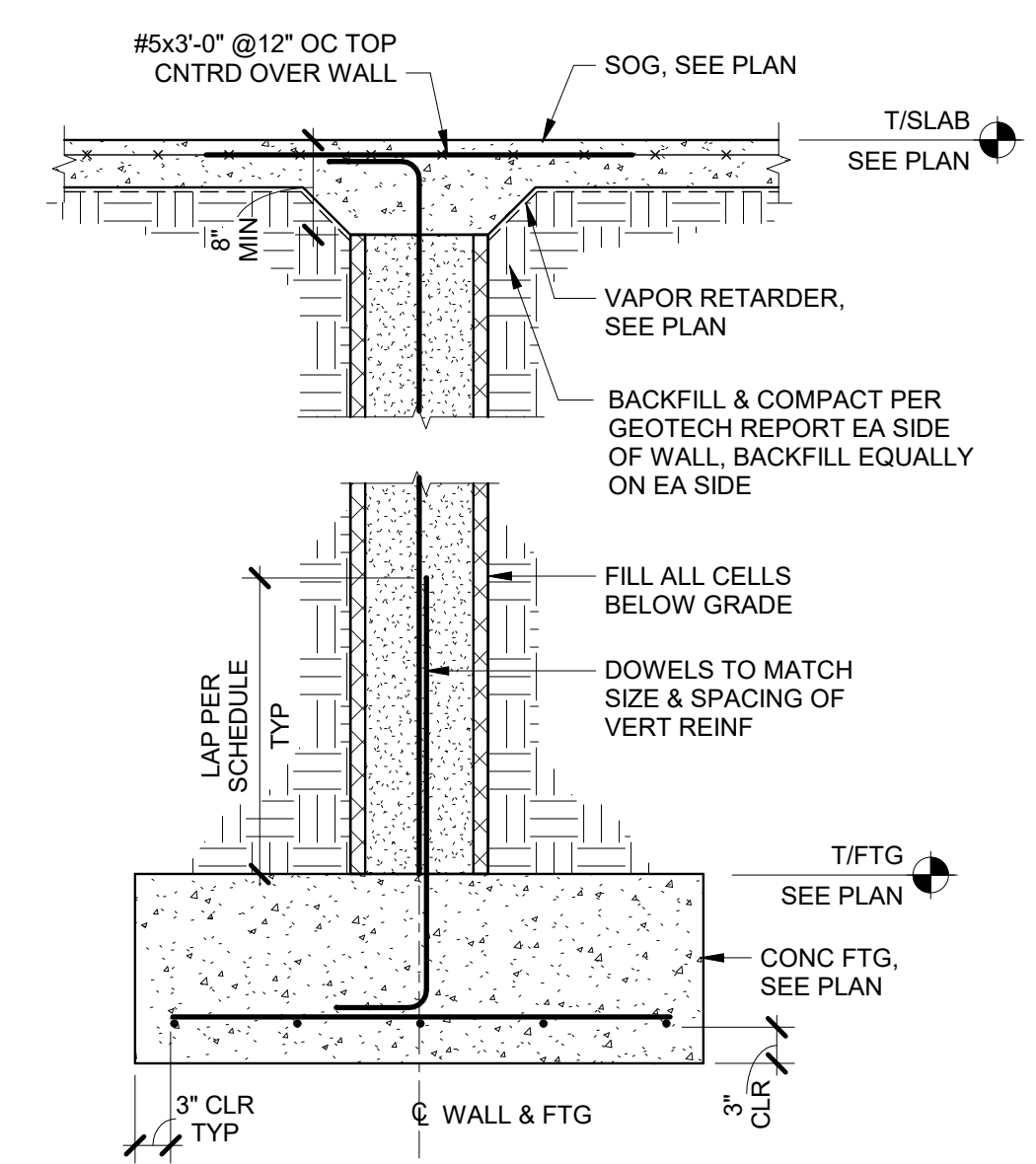
3 EQUIPMENT PAD AT SOG
S303 3/4" = 1'-0"



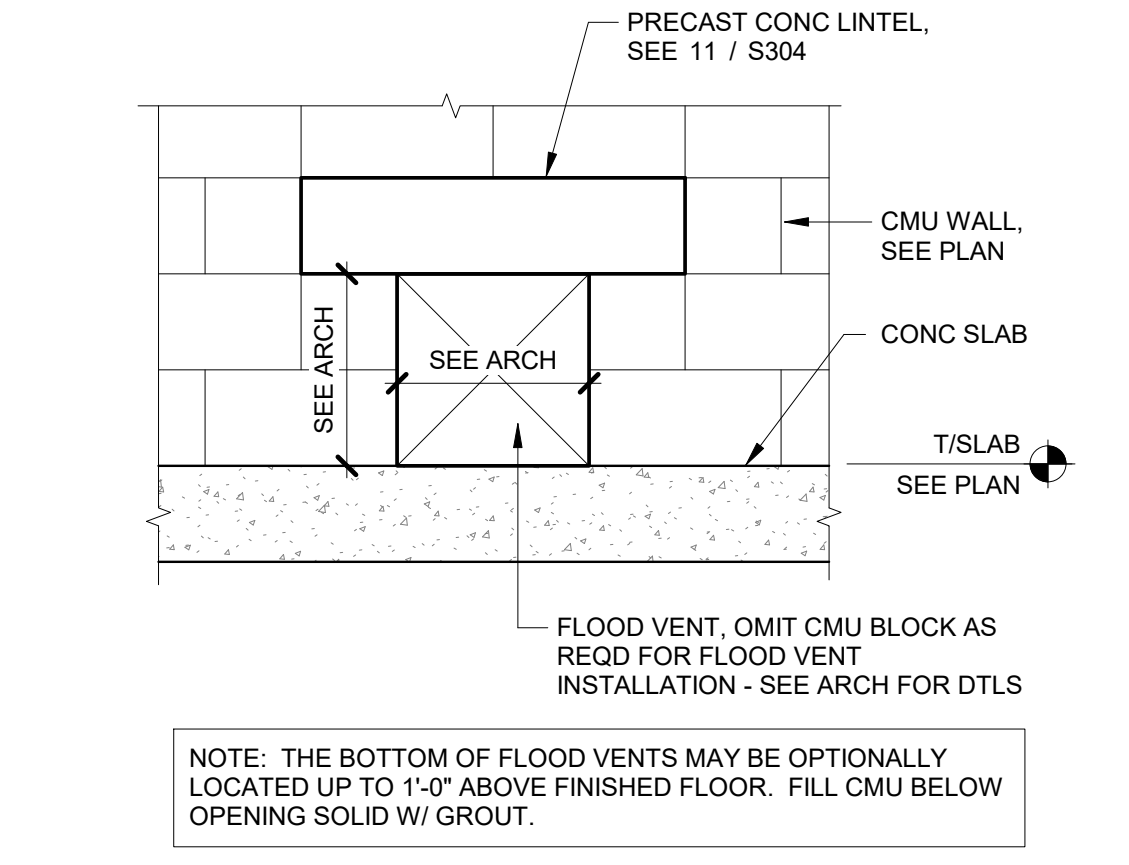
4 TURNED DOWN SLAB EDGE TE1
S303 3/4" = 1'-0"



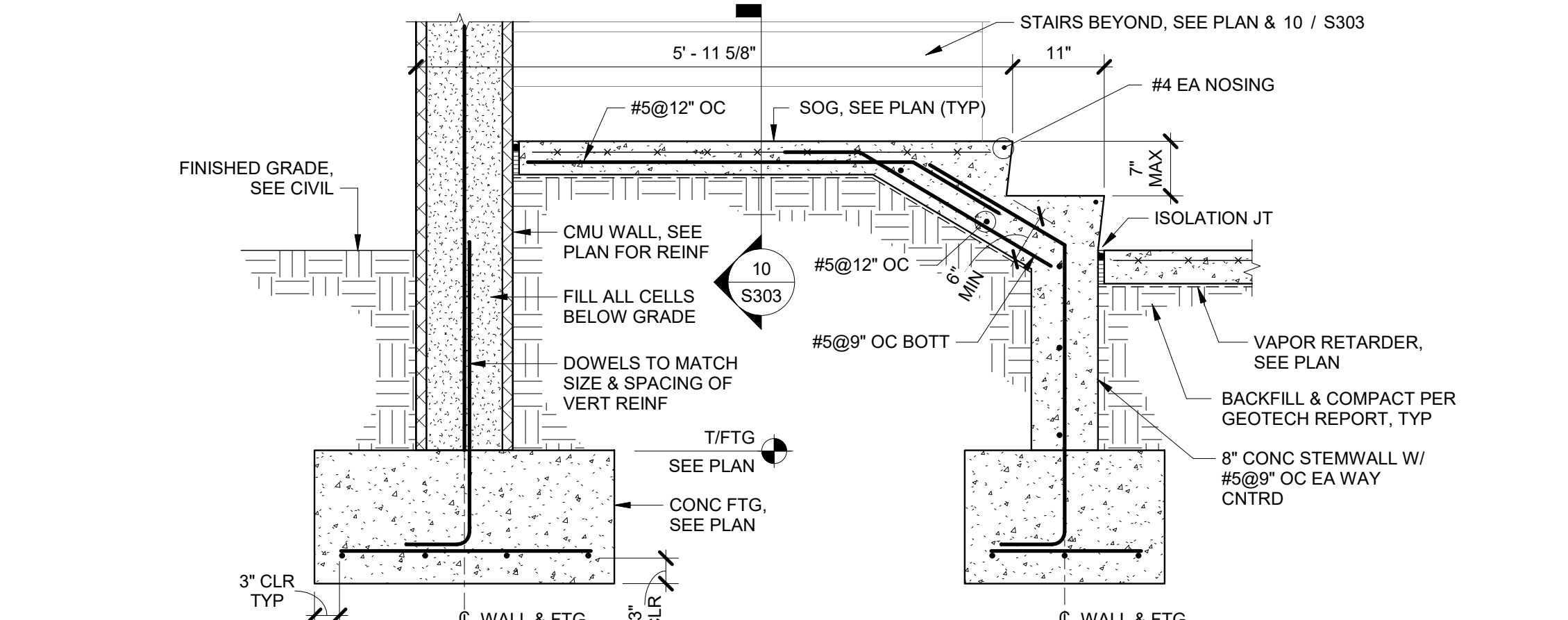
5 EXTERIOR APPARATUS WALL FOOTING
S303 3/4" = 1'-0"



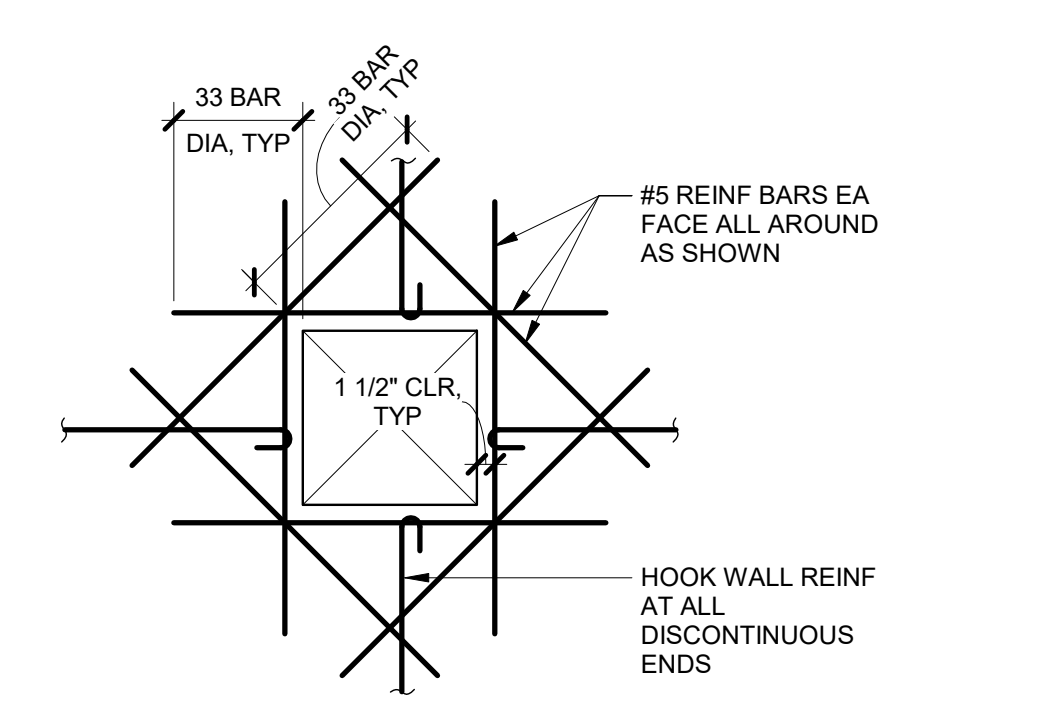
7 INTERIOR CMU WALL FOOTING
S303 3/4" = 1'-0"



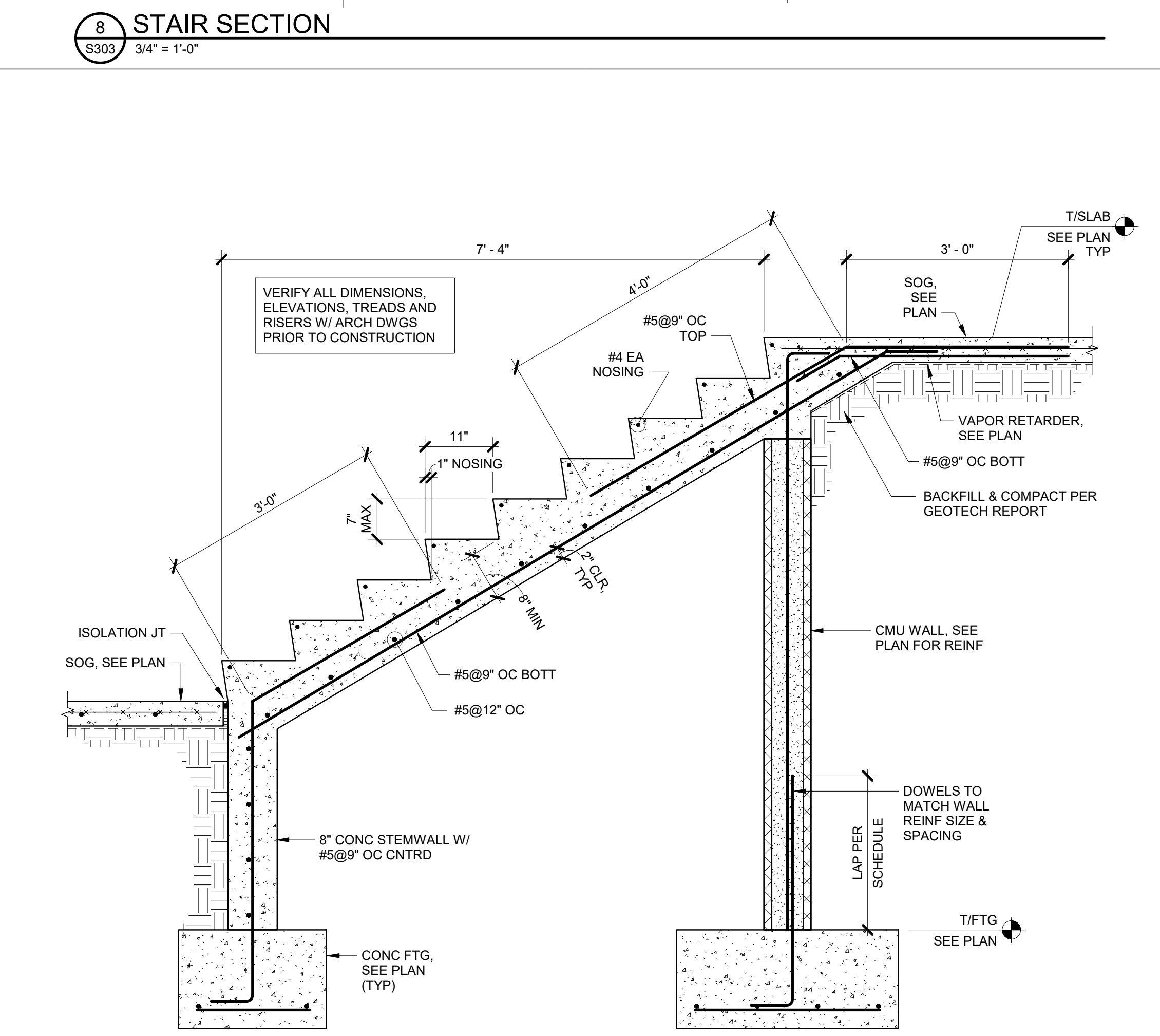
6 CMU FLOOD VENT ELEVATION
S303 3/4" = 1'-0"



8 STAIR SECTION
S303 3/4" = 1'-0"



9 REINFORCING AT CONCRETE WALL OPENING
S303 3/4" = 1'-0"



10 STAIR SECTION
S303 3/4" = 1'-0"



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION: 5171 SANIBEL-CAPTIVA SANIBEL, FLORIDA 33957



9510 Corkscrew Palms Circle, Unit 1 Estero, FL 33928 voice (239) 208-4846

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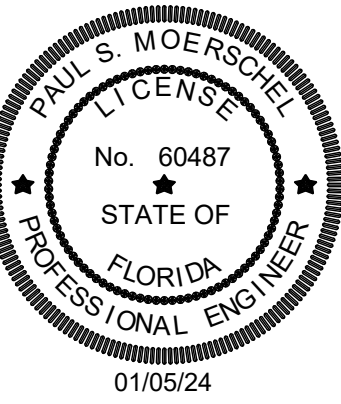


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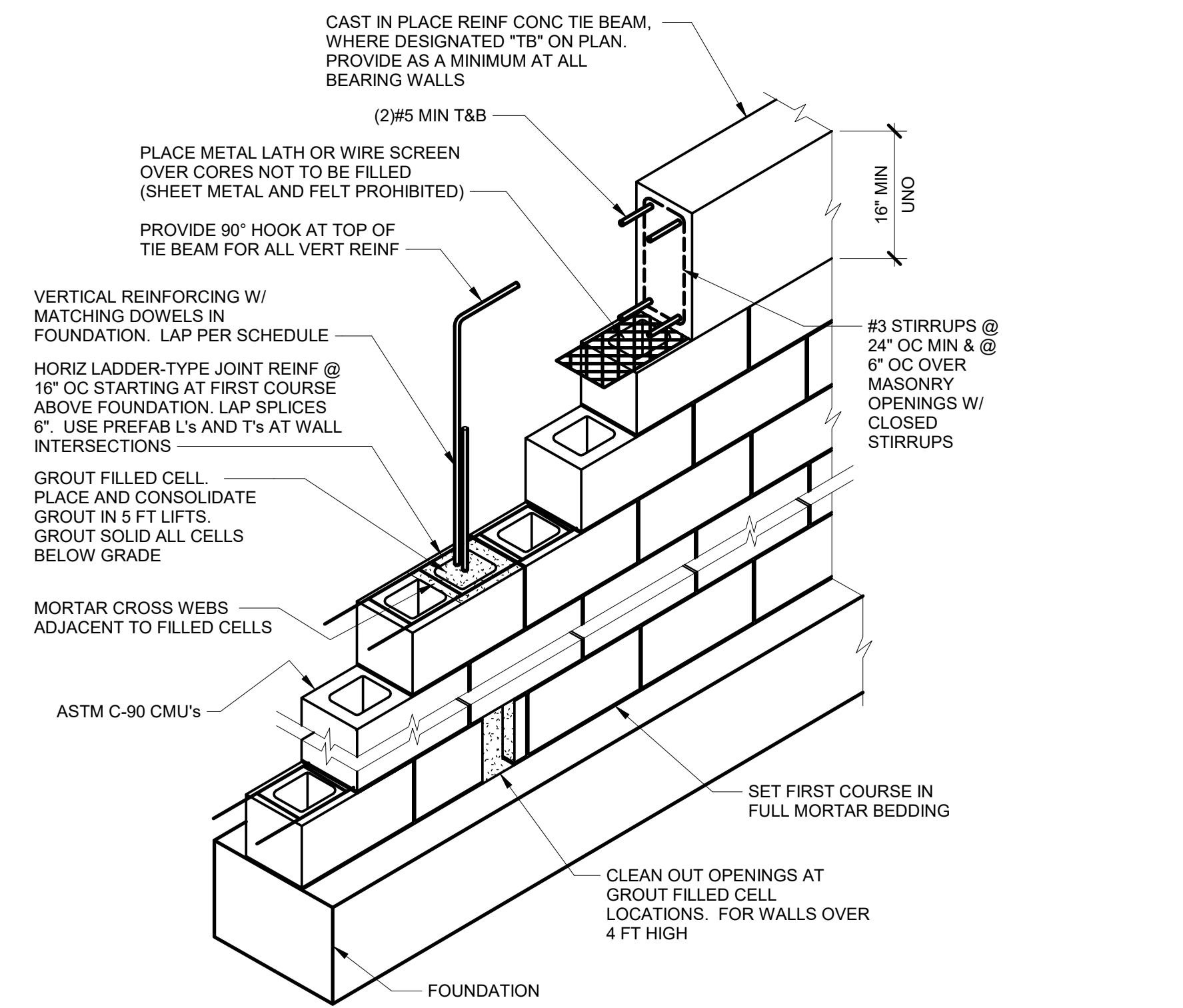


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TYPICAL MASONRY (CMU) DETAILS

S304

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1 TYPICAL MASONRY (CMU) WALL CONSTRUCTION

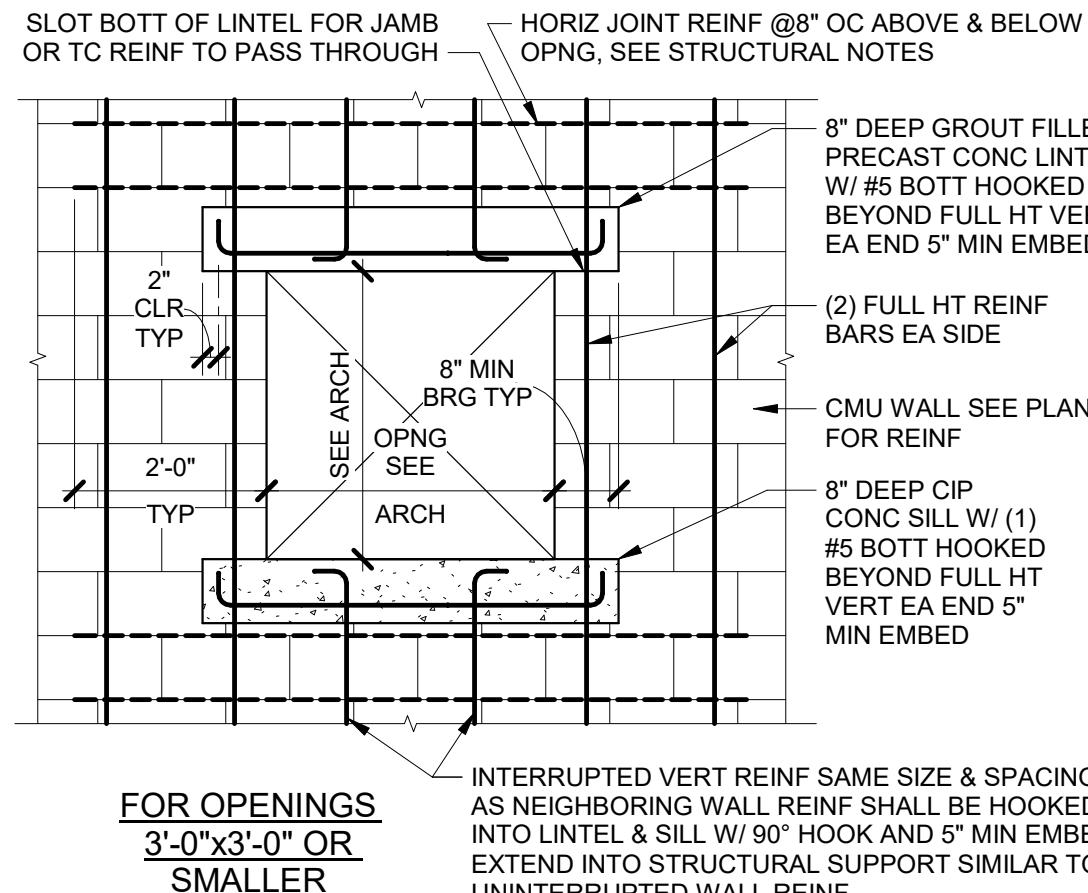
CMU WALL SCHEDULE table with columns: MARK, THICKNESS, REINFORCING, COMMENTS

NOTES: PROVIDE A MINIMUM OF (2) #6 VERT REIN BAR IN GROUT FILLED CELLS AT ALL WALL INTERSECTIONS, CORNERS, ENDS OF WALLS AND AT EDGES OF ALL WALL OPENINGS EXCEEDING 2'-0" IN WIDTH.

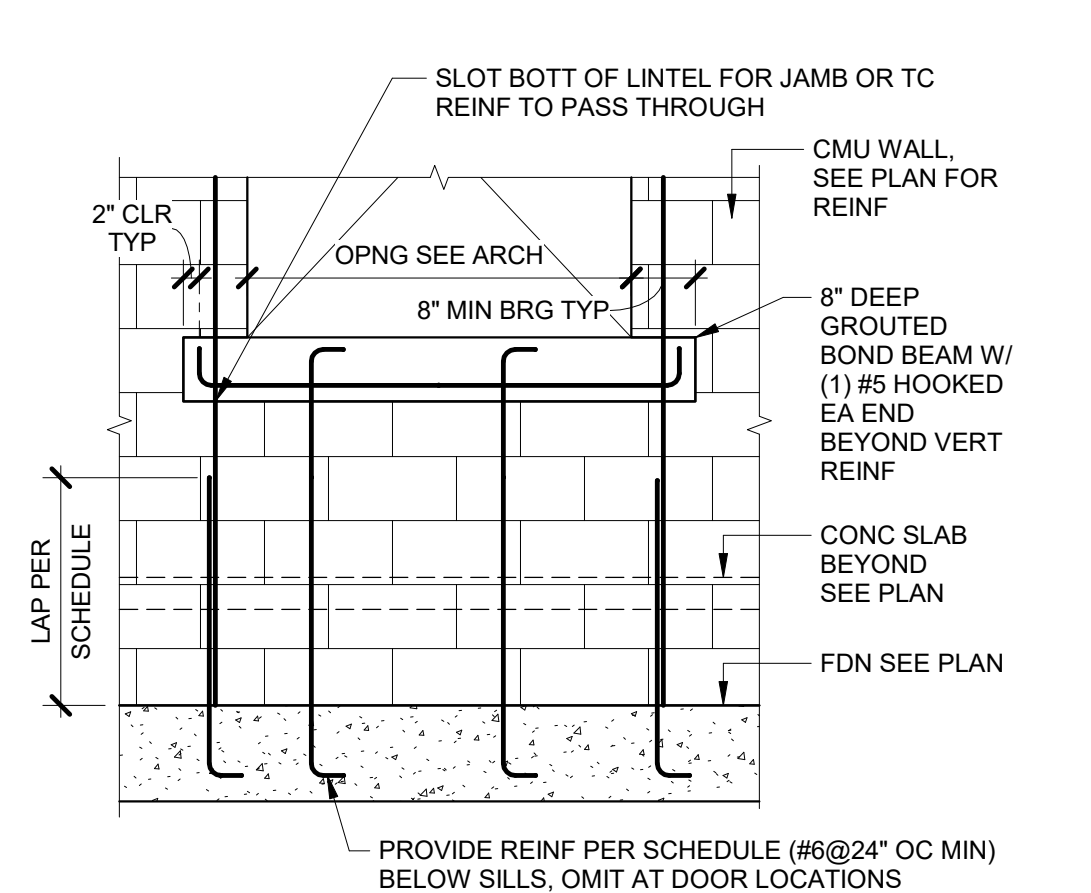
5 CMU WALL SCHEDULE

SCHEDULE table with columns: WALL THICKNESS, BAR, LAP

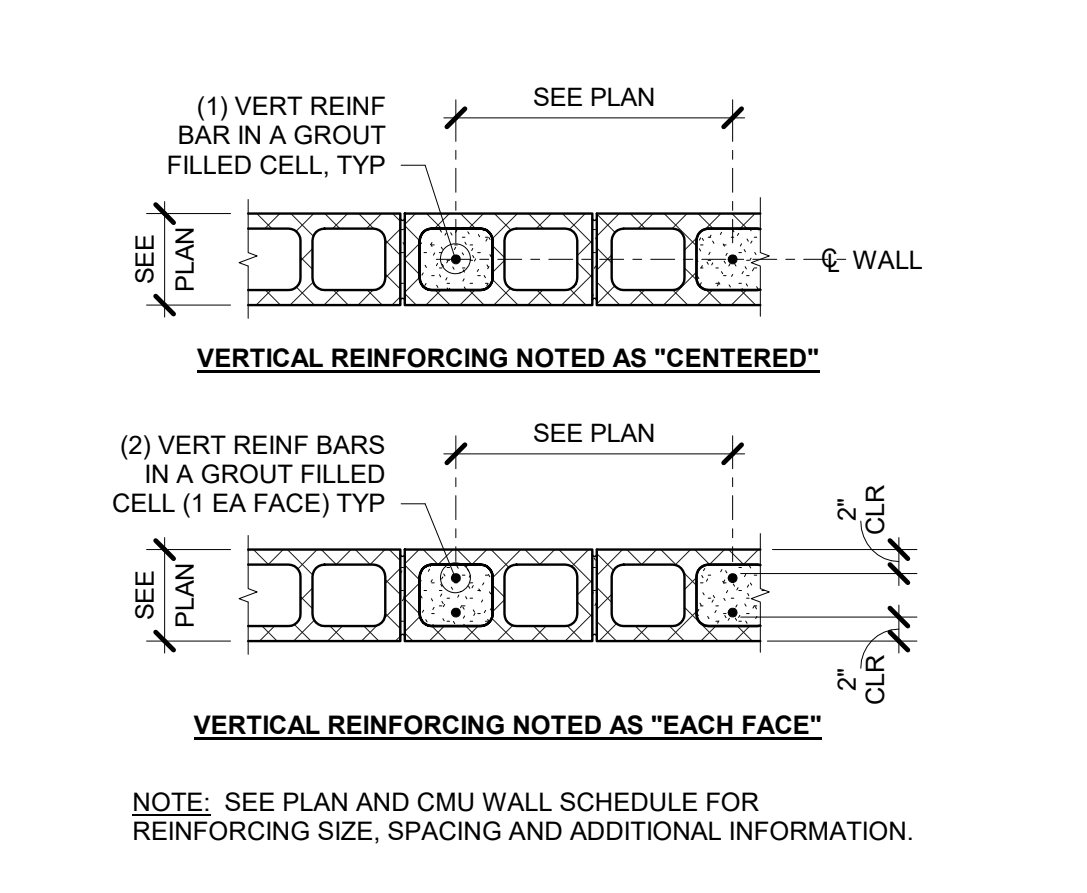
6 CMU VERTICAL REINFORCING LAP SCHEDULE



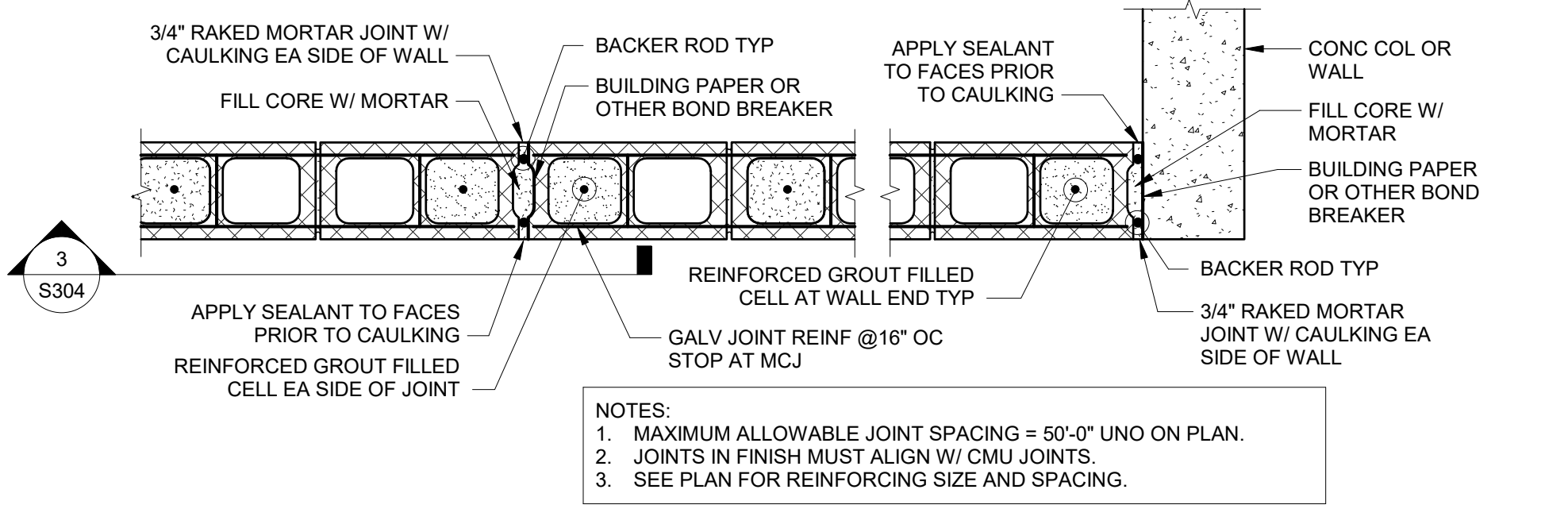
10 MINOR CMU WALL OPNGS



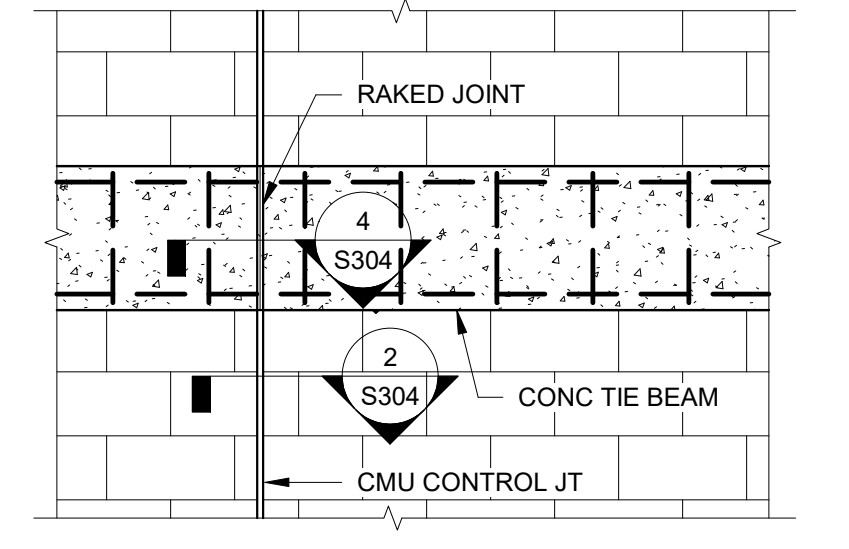
9 CMU WALL OPNG W/ BOND BEAM SILL



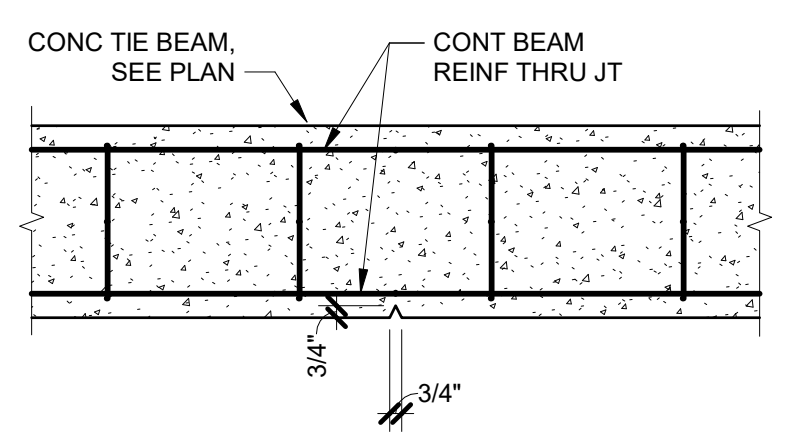
8 CMU BAR PLACEMENT REQUIREMENTS



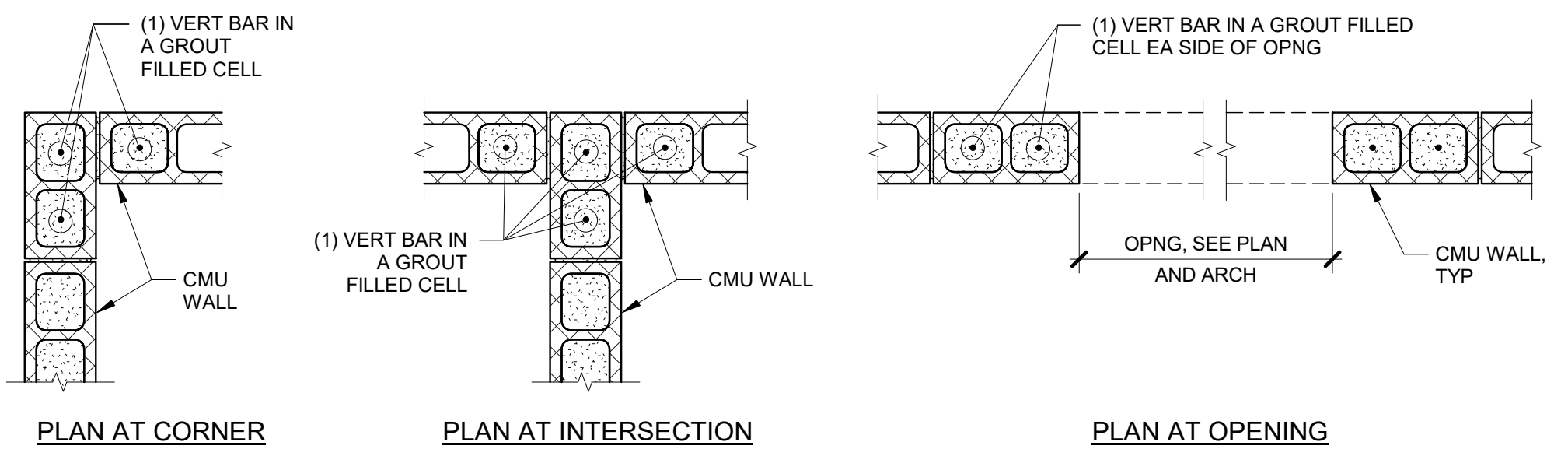
2 MASONRY CONTROL JOINT (MCJ) REINFORCING



3 SECTION AT MCJ



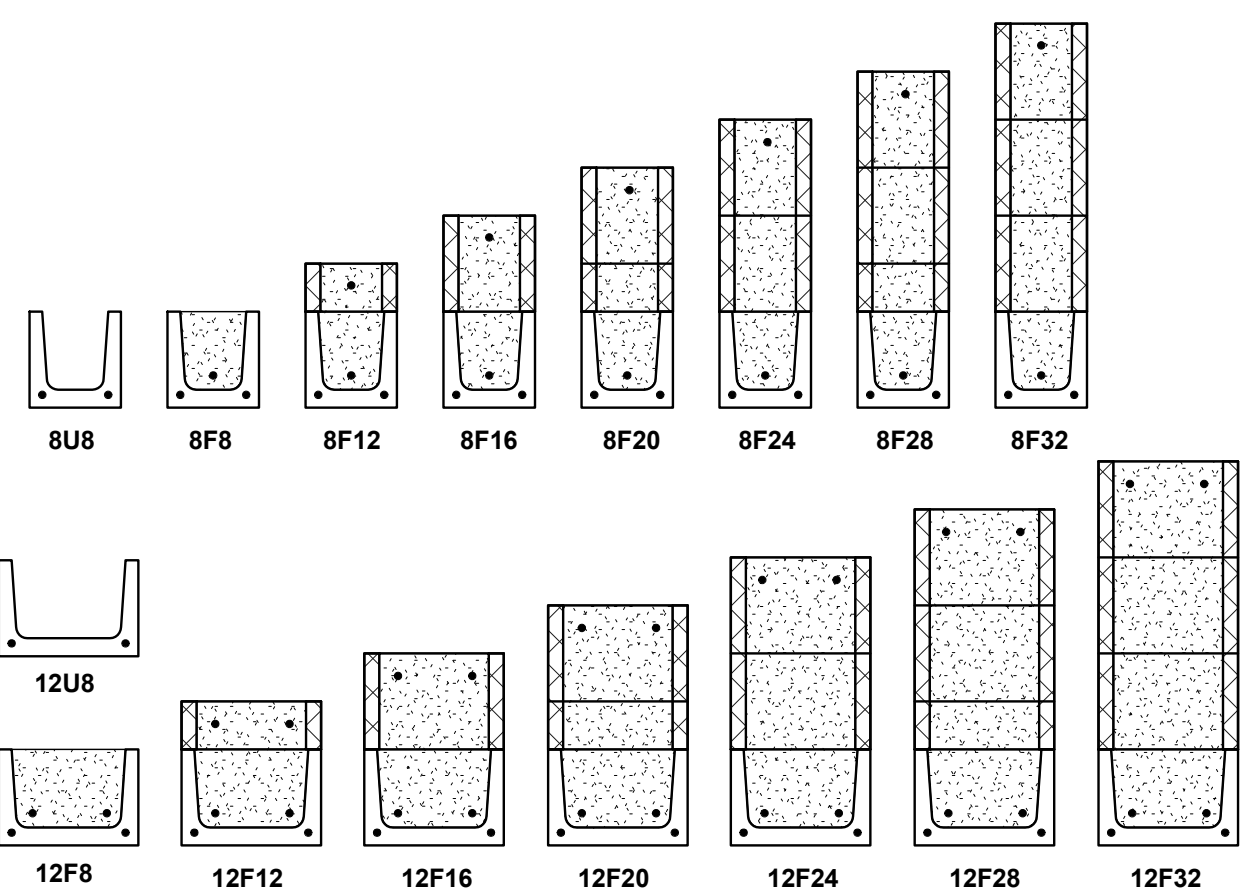
4 SECTION AT MCJ



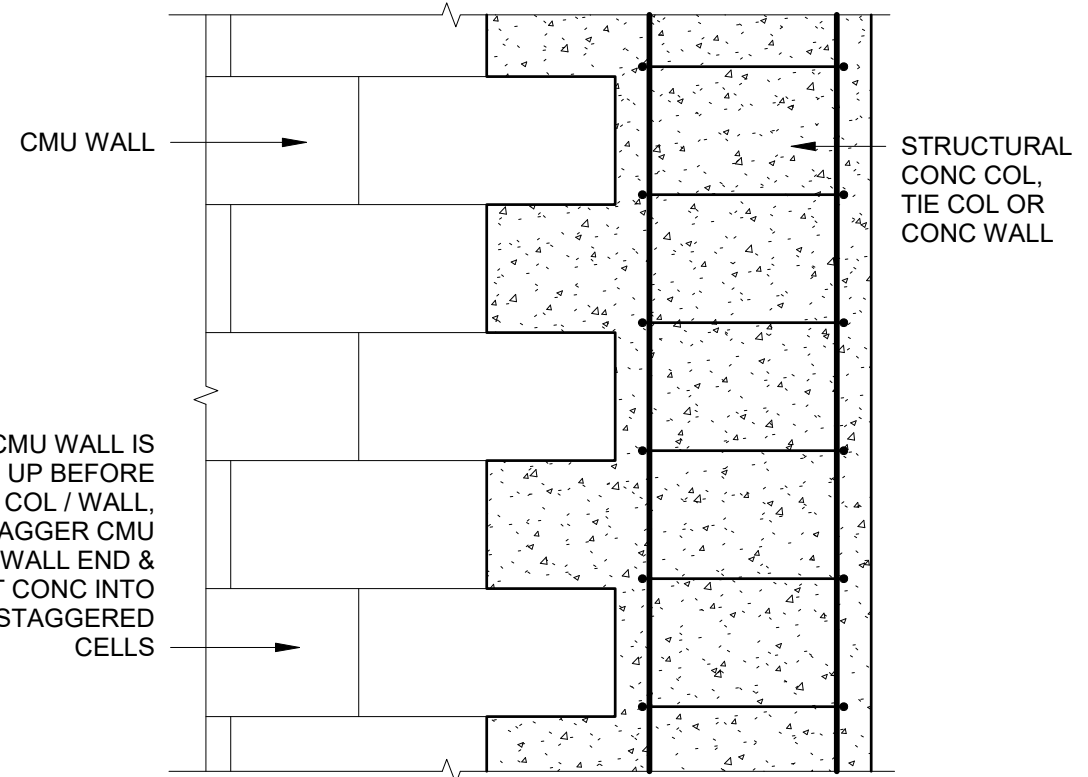
7 REINFORCING AT CMU WALL CORNERS, INTERSECTIONS AND OPENINGS

LINTEL SCHEDULE table with columns: LINTEL SPAN, LINTEL DESIGNATION, LINTEL DESIGNATION, REMARKS

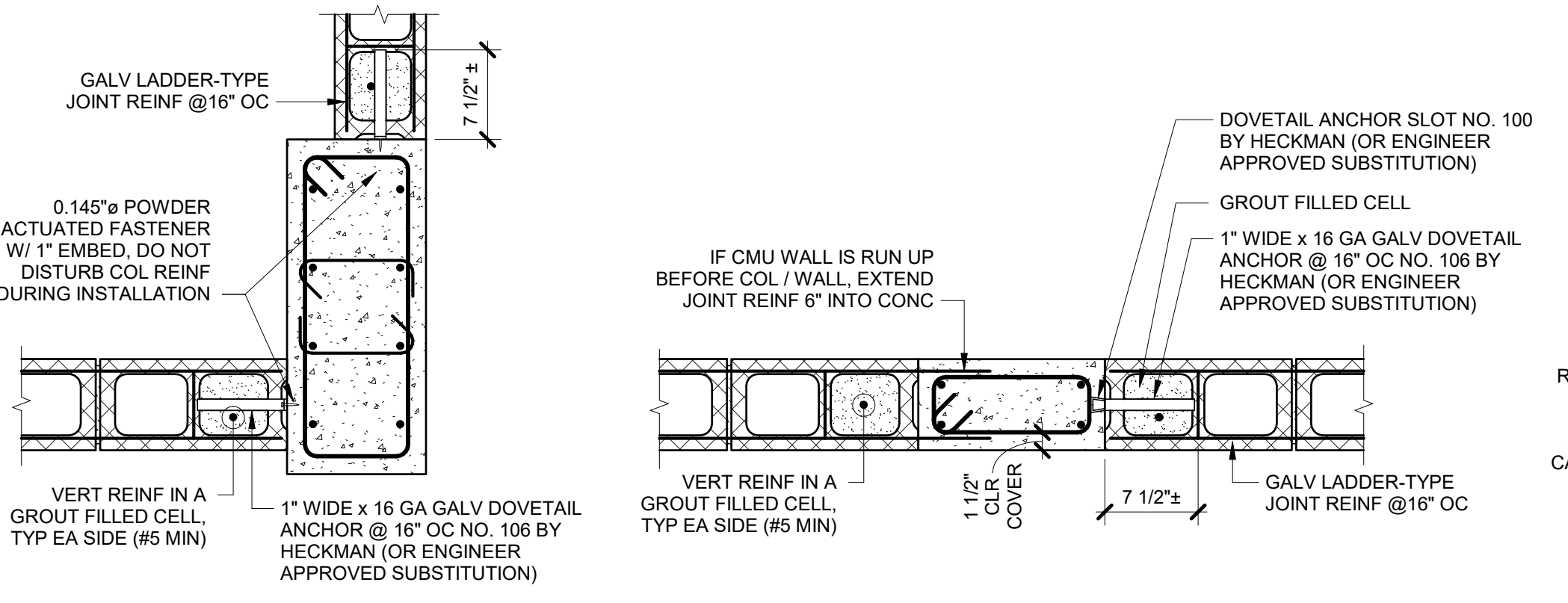
NOTES: 1. LINTELS SHALL BE "CAST-CRETE" OR EQUIVALENT PRECAST CONCRETE UNO. 2. LINTELS SHALL BEAR 8" MIN ON CMU/CONCRETE AND 3" MINIMUM ON STEEL ANGLES.



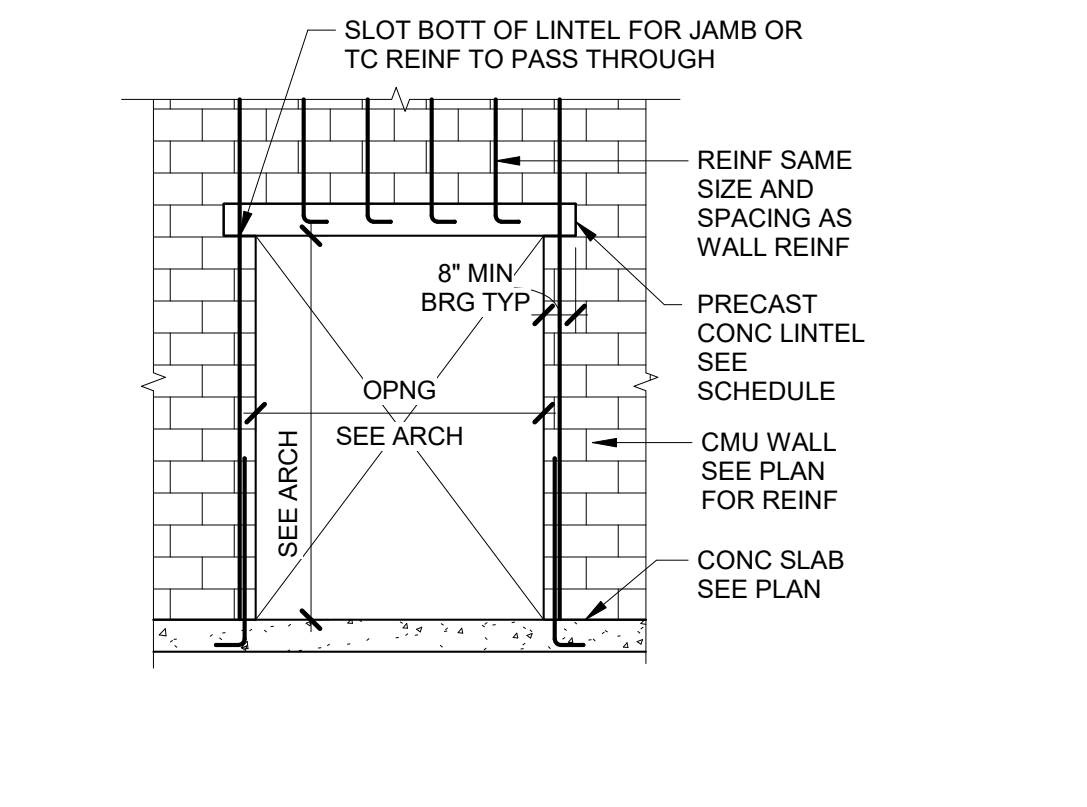
11 LINTEL SCHEDULE AND DETAILS



14 CMU ANCHORAGE TO CONCRETE

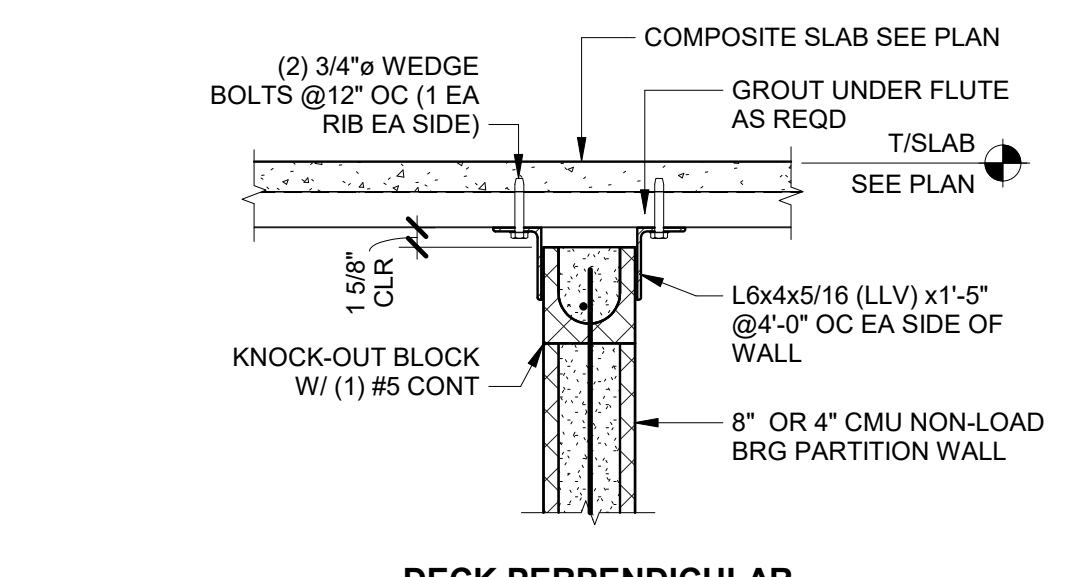


13 PRECAST LINTEL SUPPORT AT CAST IN PLACE CONCRETE

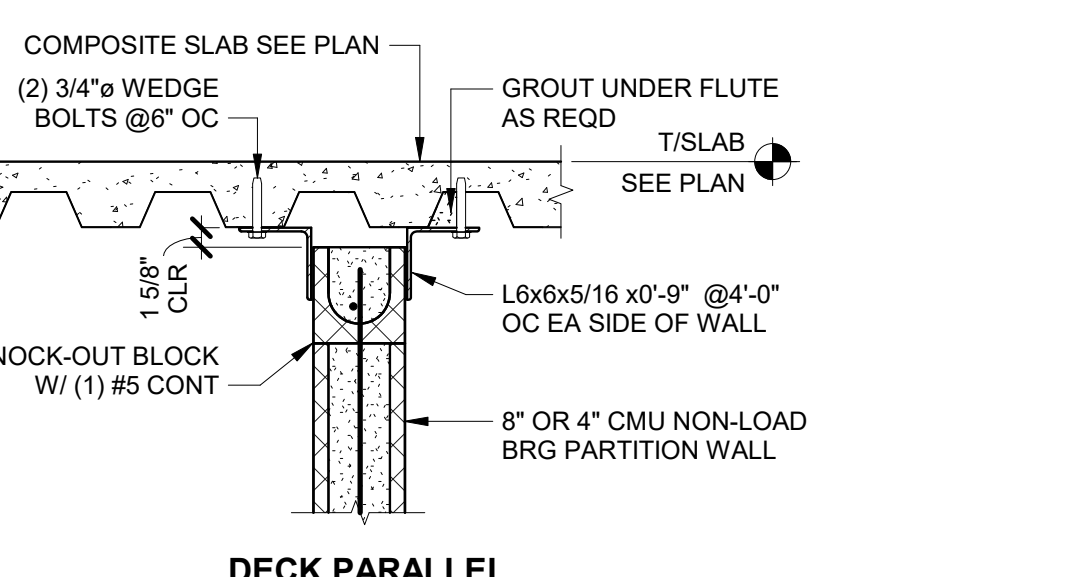


12 CMU WALL OPNG W/ PRECAST LINTEL

ALTERNATE CONNECTION



15 BRACING AT CMU NON LOAD BEARING PARTITION WALL



DECK PERPENDICULAR

DECK PARALLEL

NOTE: DO NOT ATTACH ANGLES TO CMU PARTITION WALL.



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION: 5171 SANIBEL-CAPTIVA SANIBEL, FLORIDA 33957



9510 Corkscrew Palms Circle, Unit 1 Esler, FL 33928 voice (239) 208-4846

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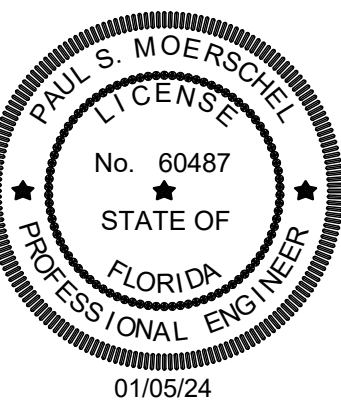


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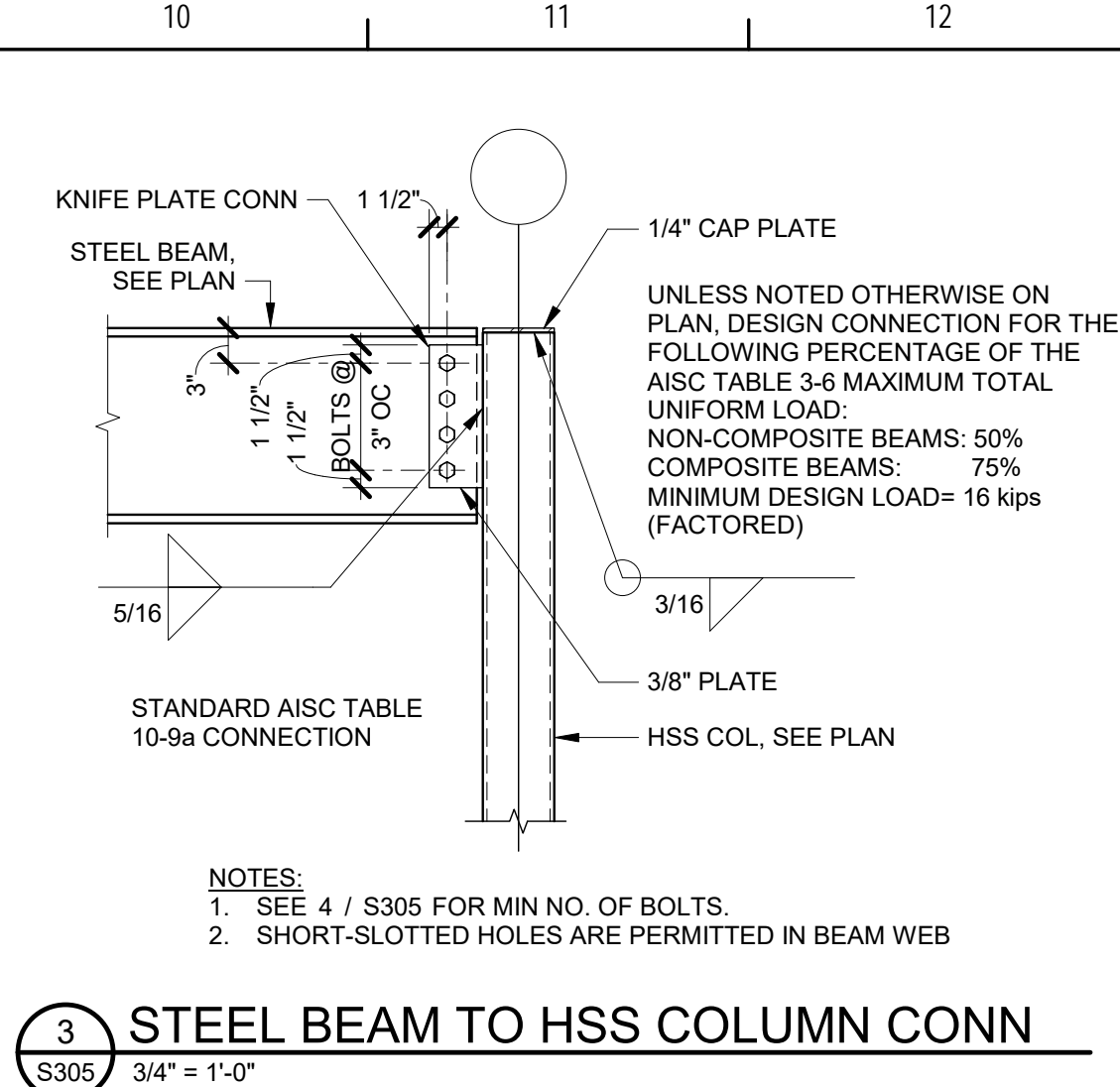
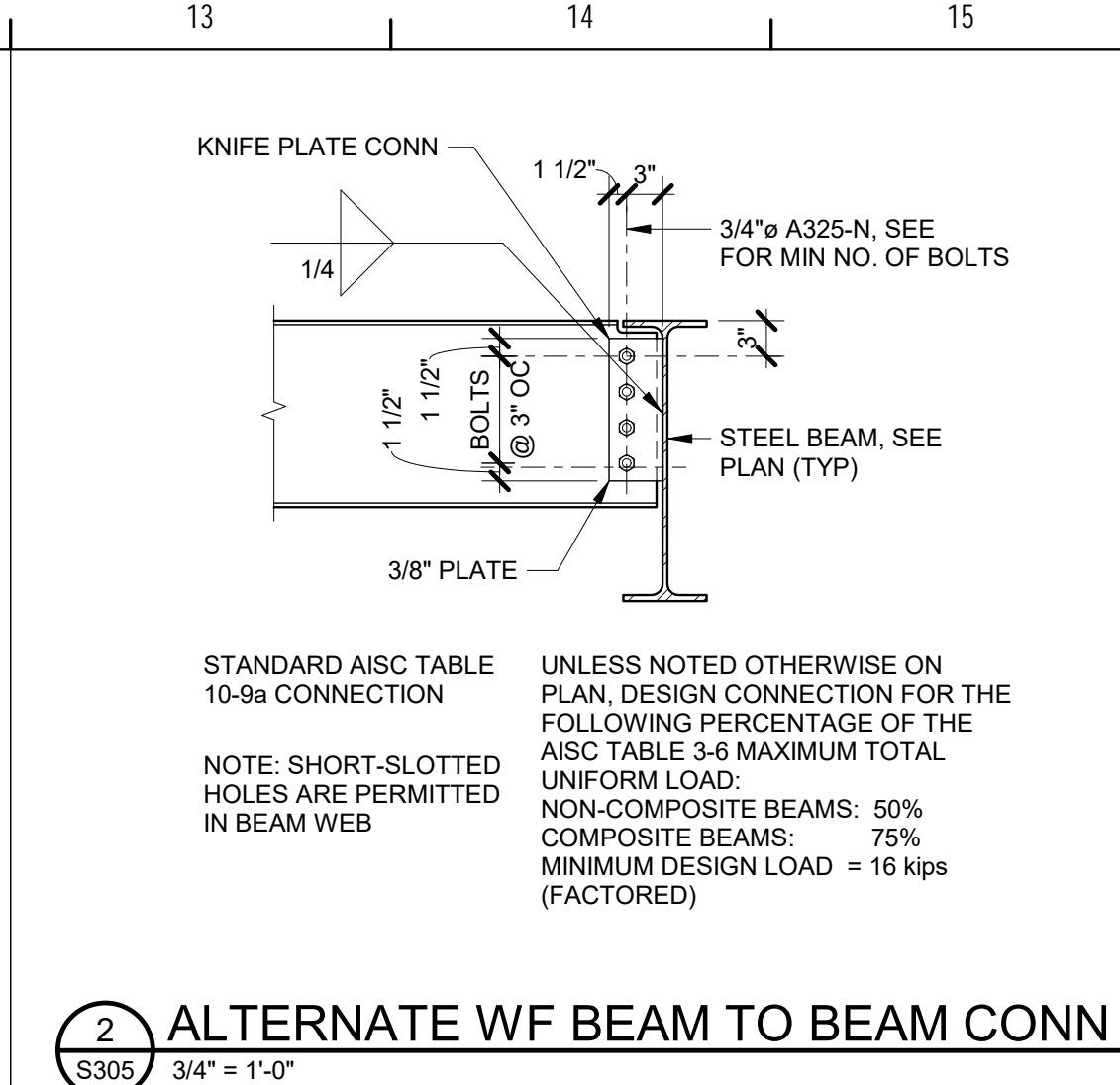
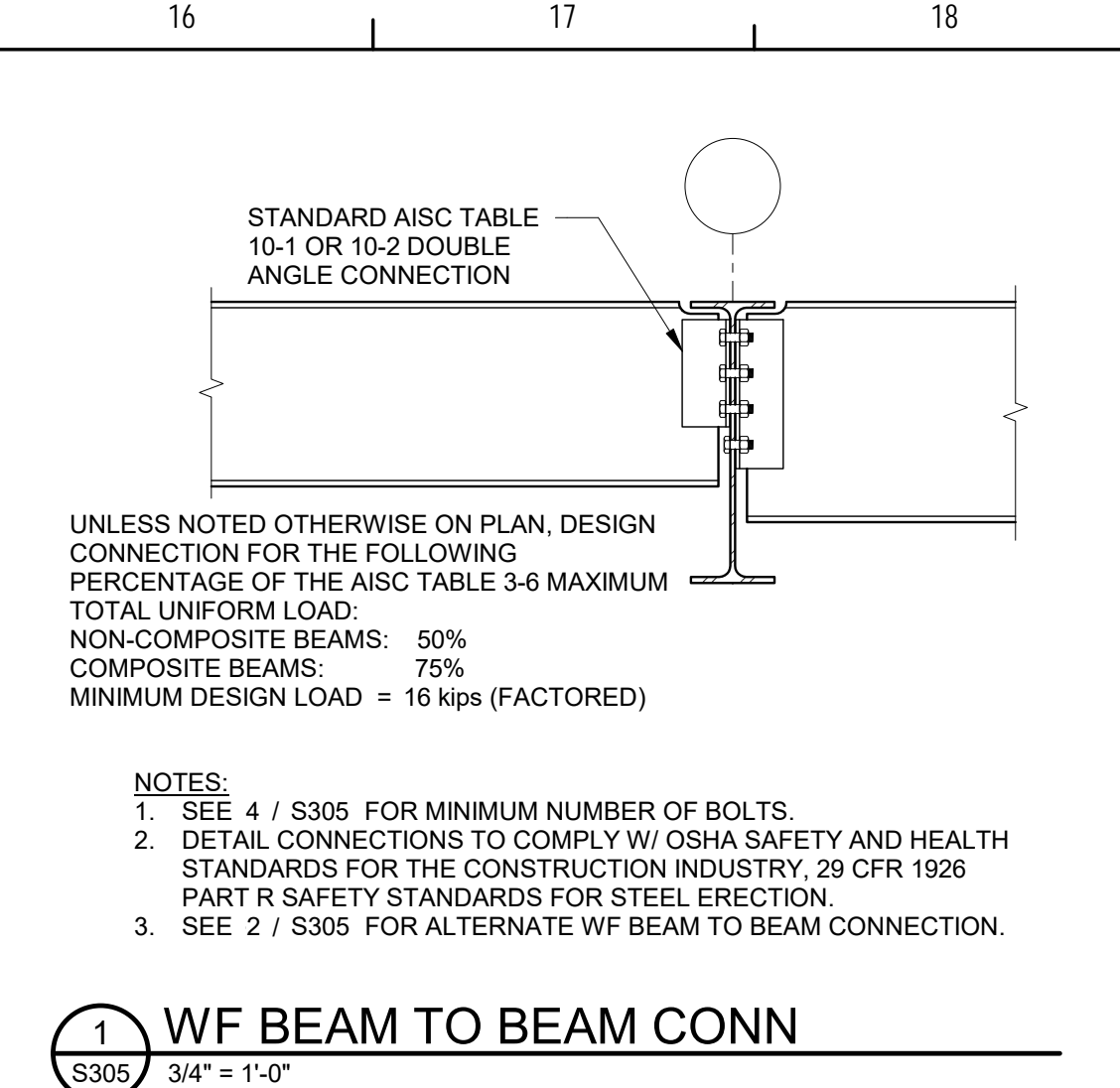


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STEEL FRAMING SECTIONS & DETAILS

S305

100% CONSTRUCTION DOCUMENTS

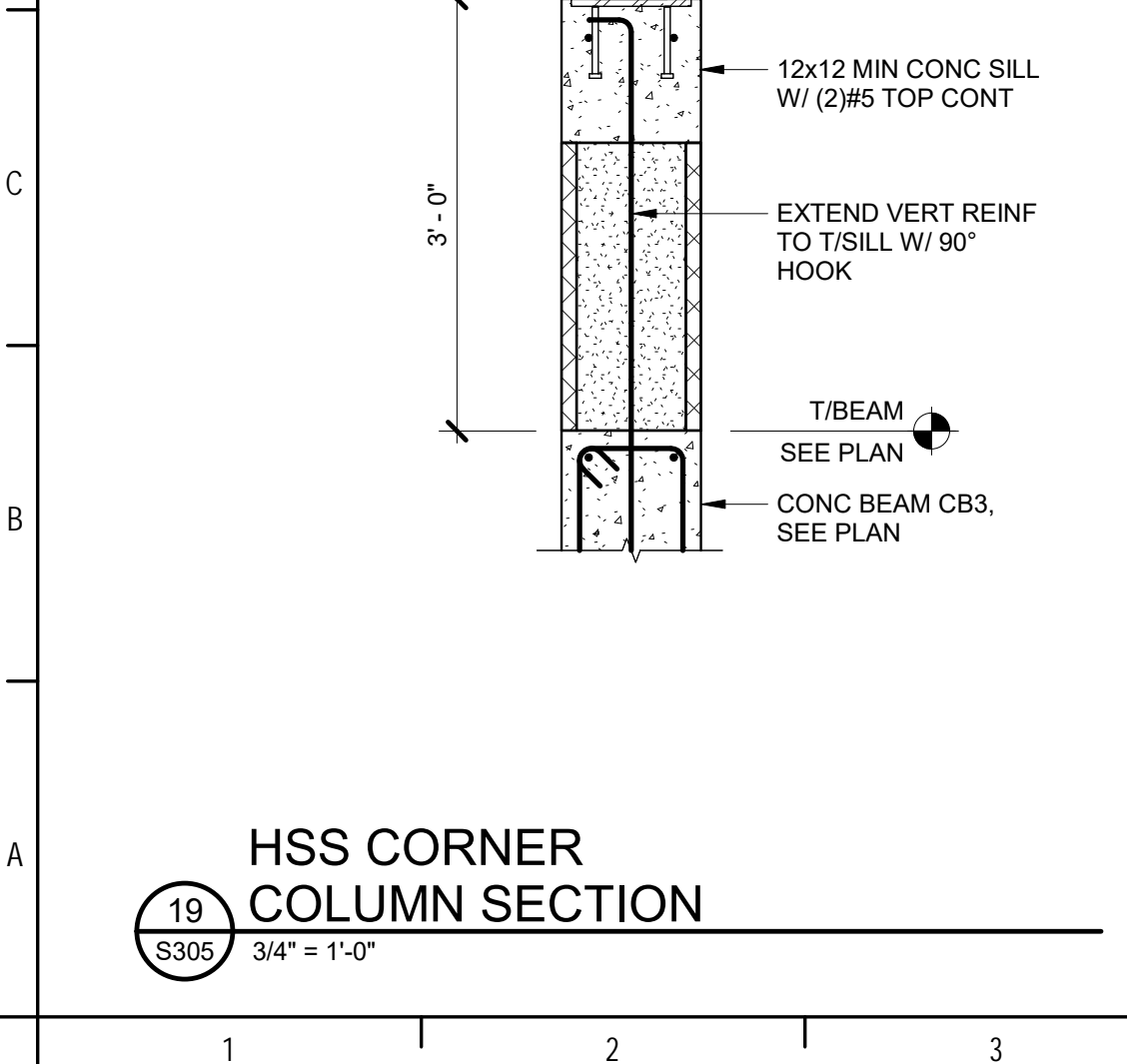
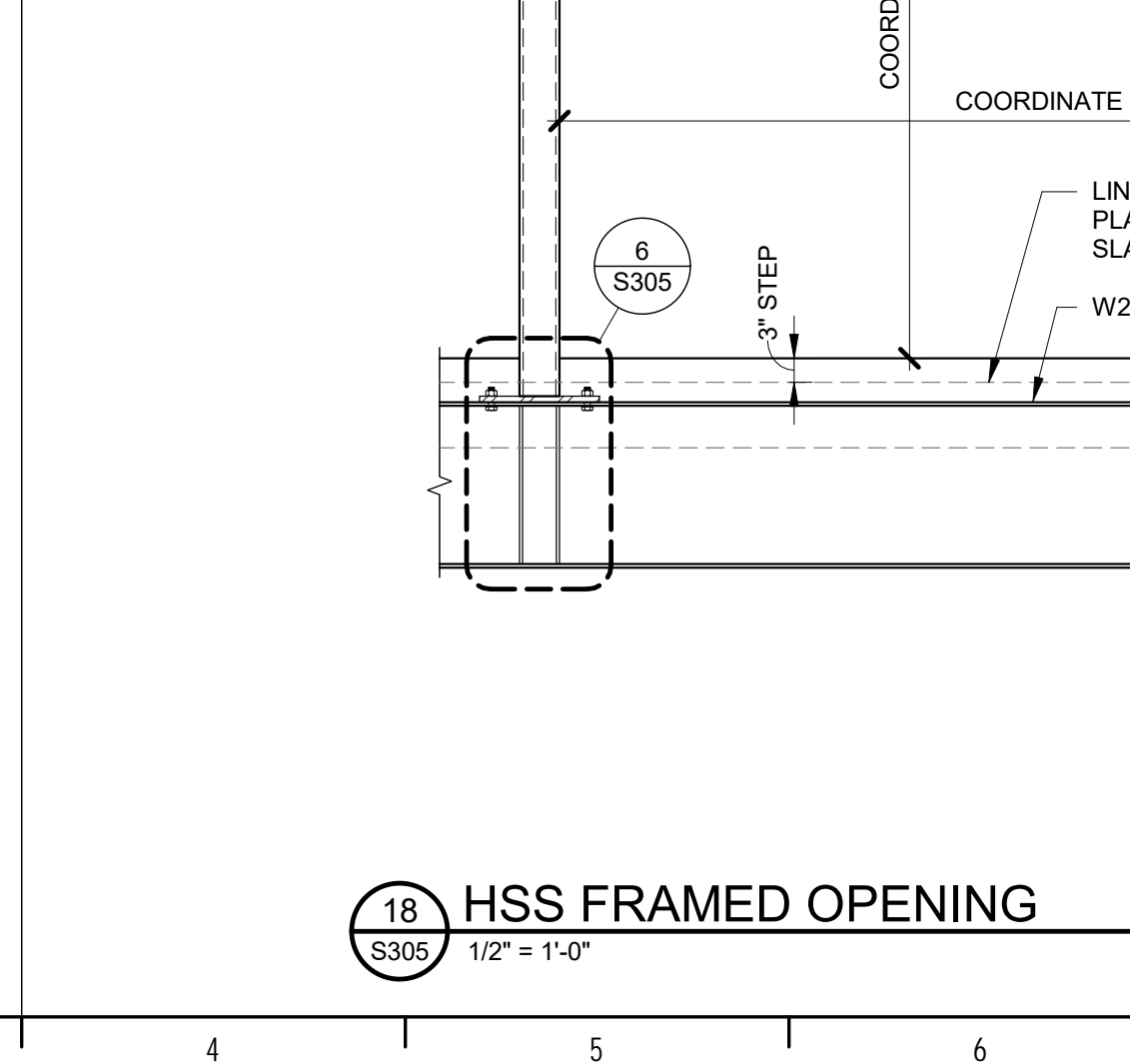
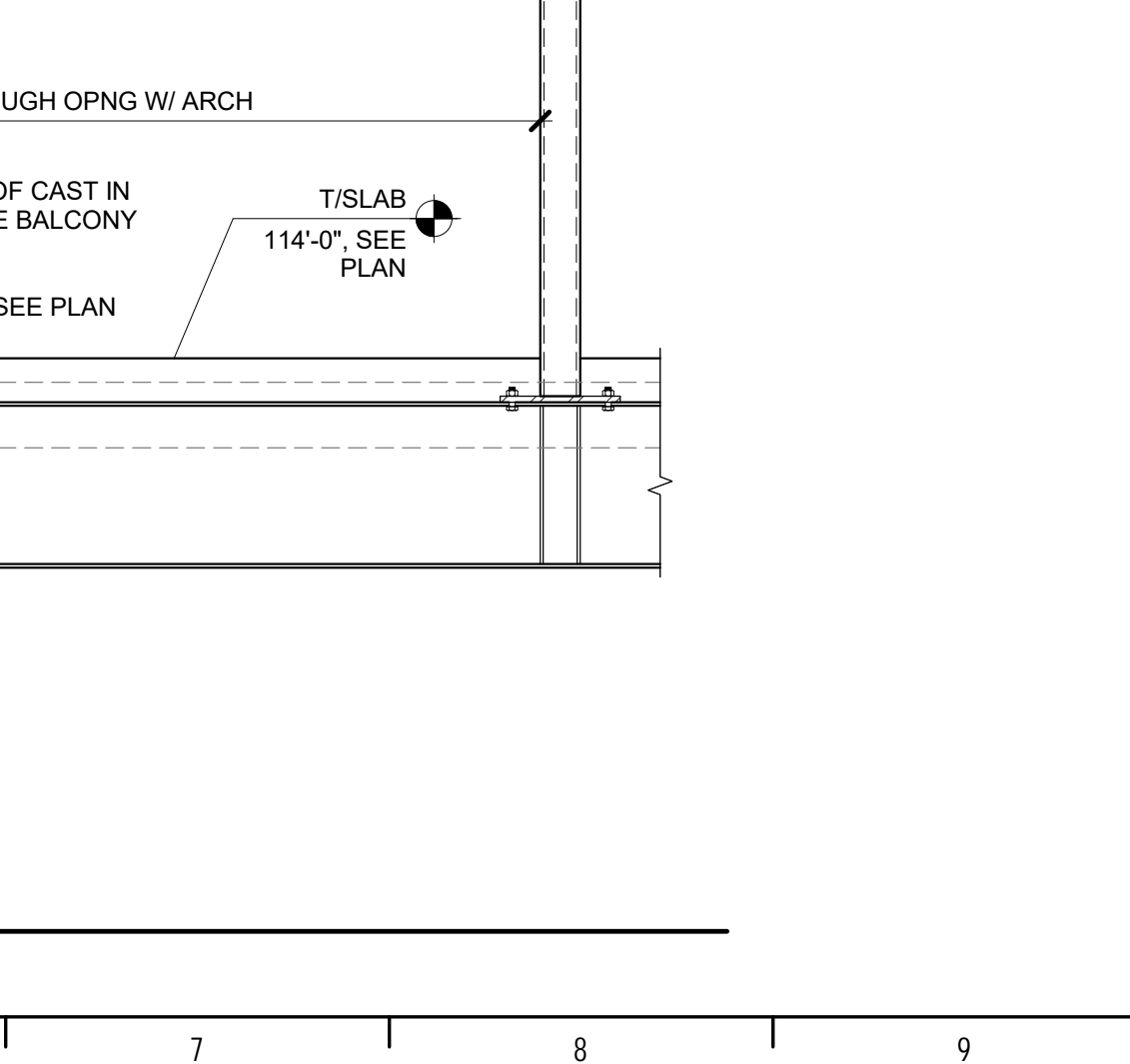
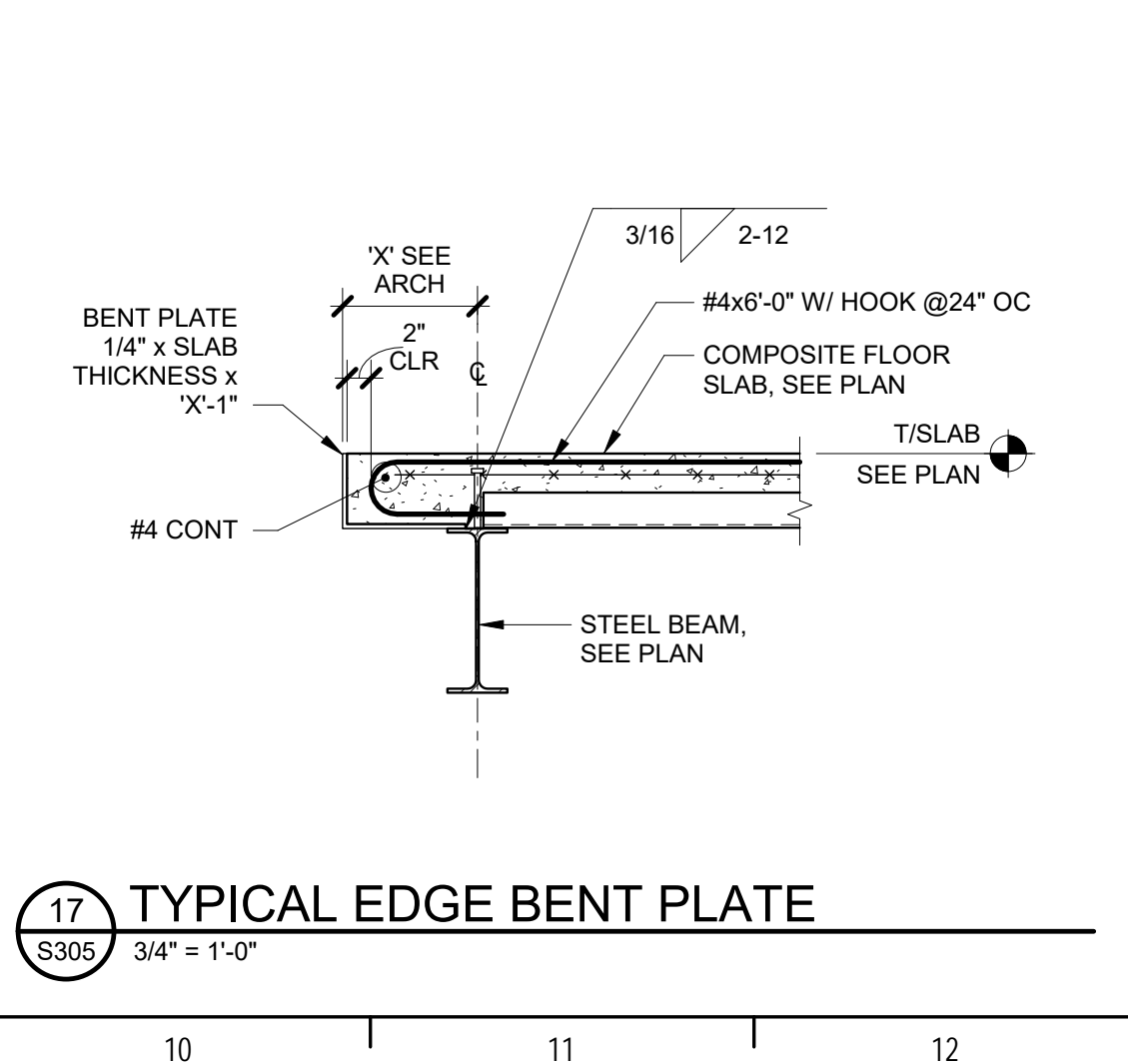
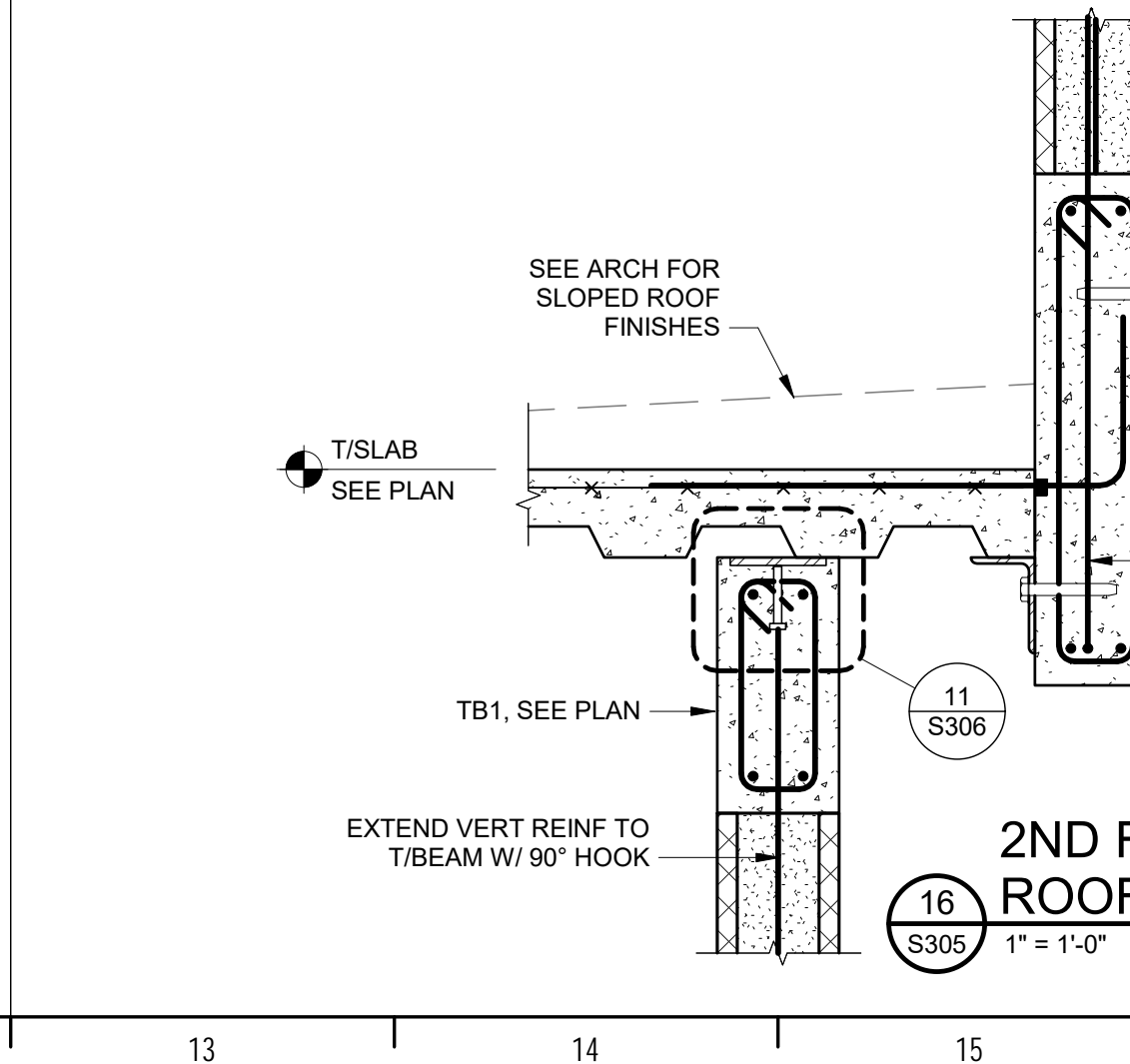
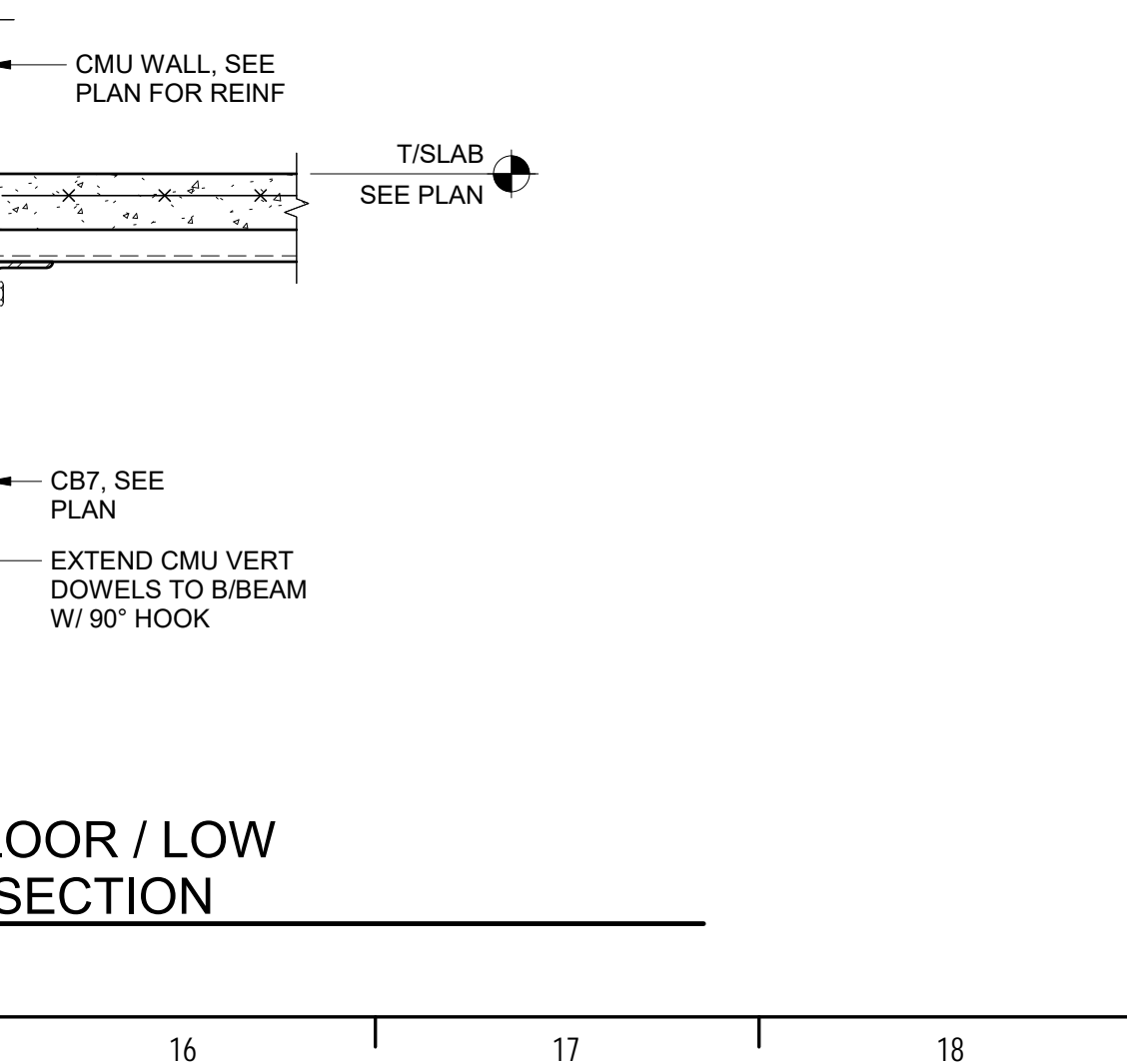
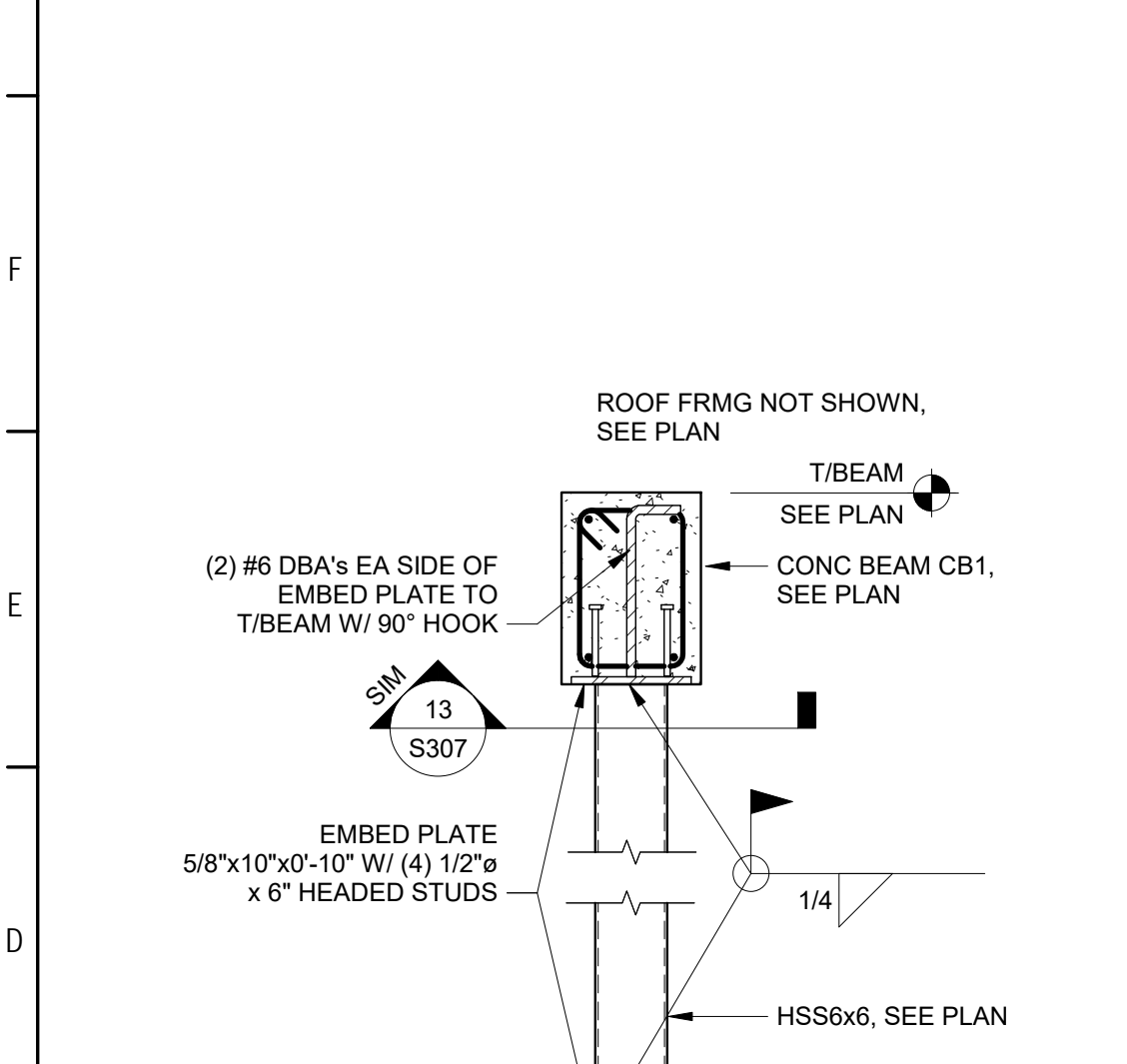
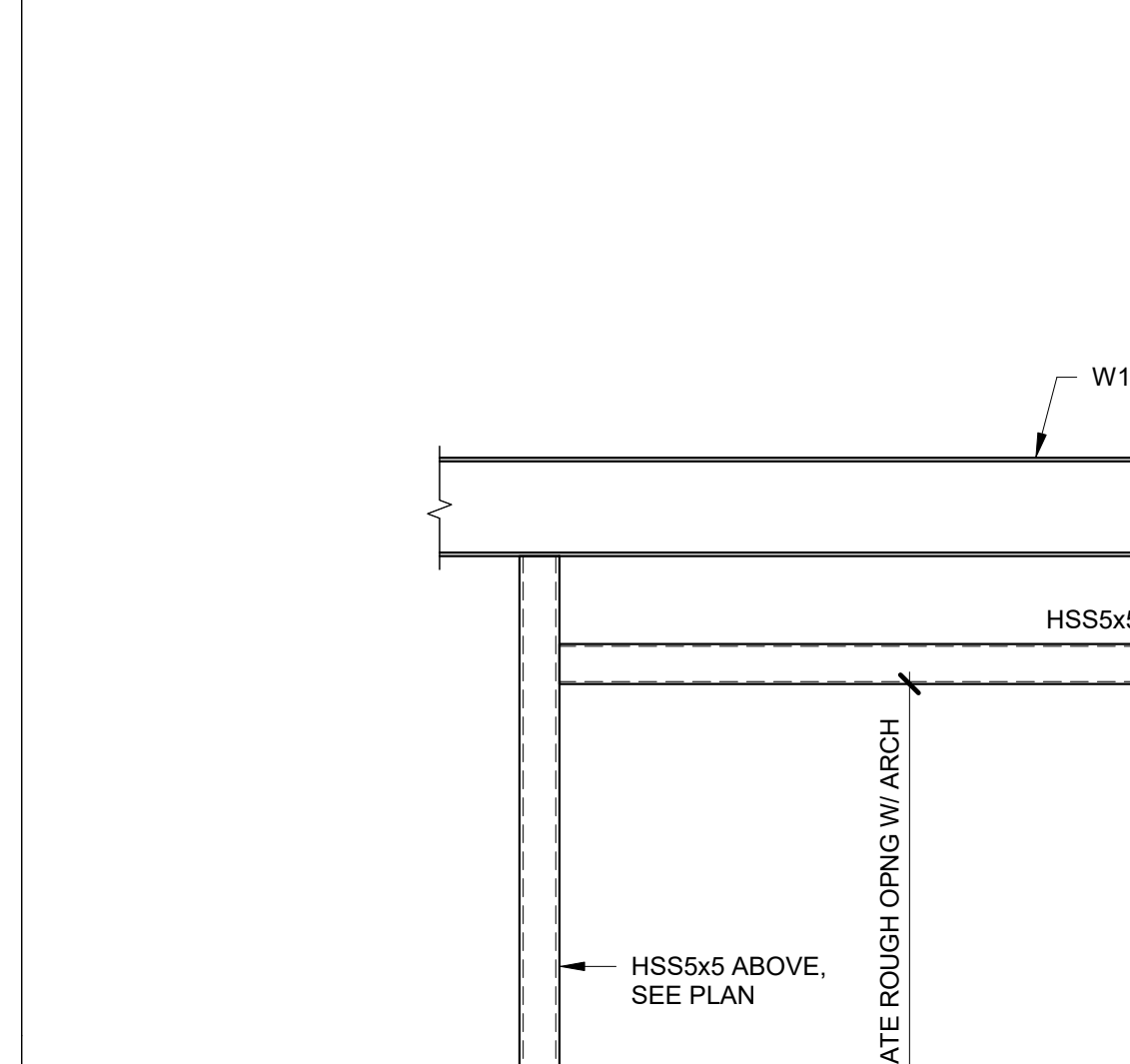
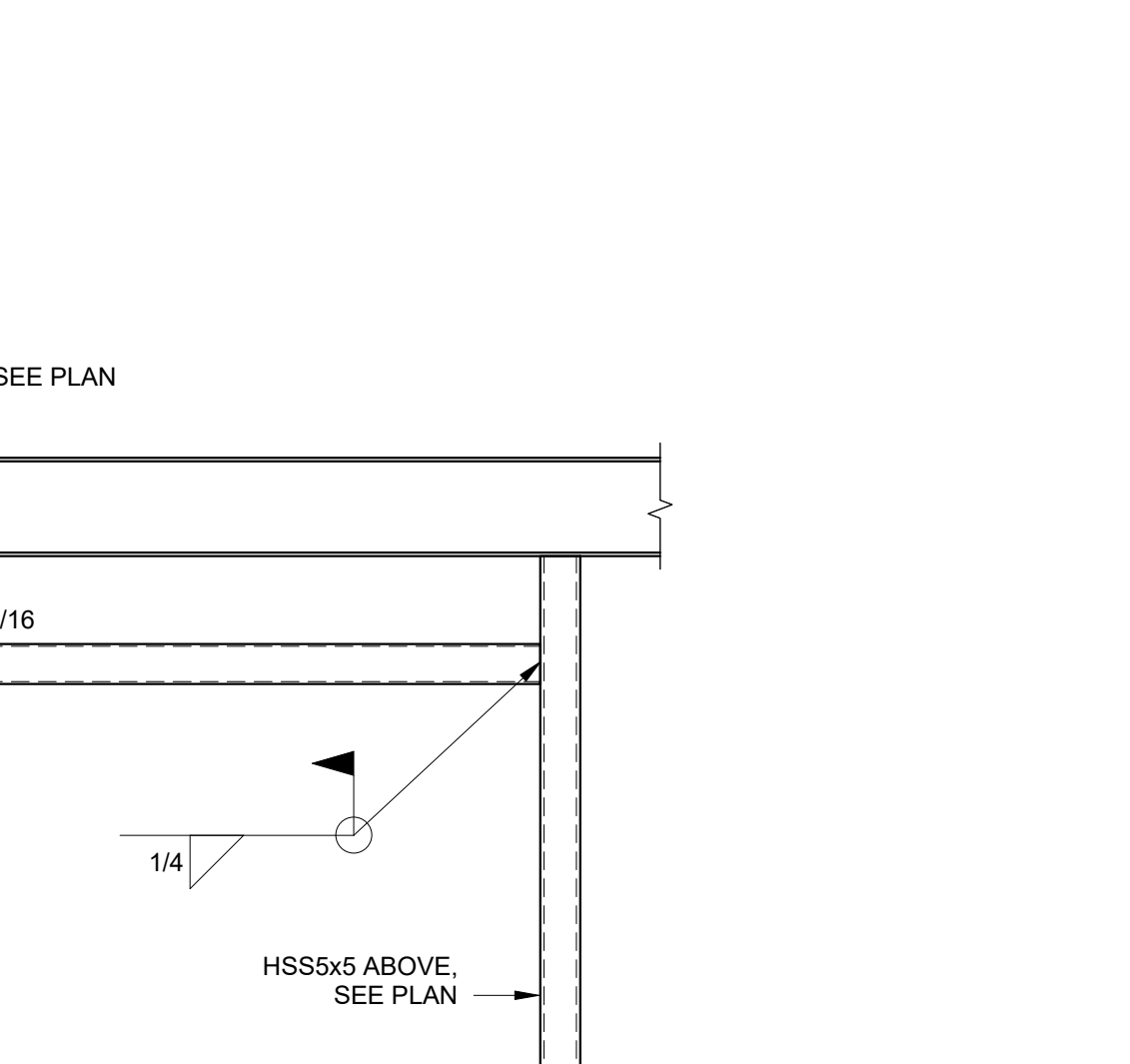
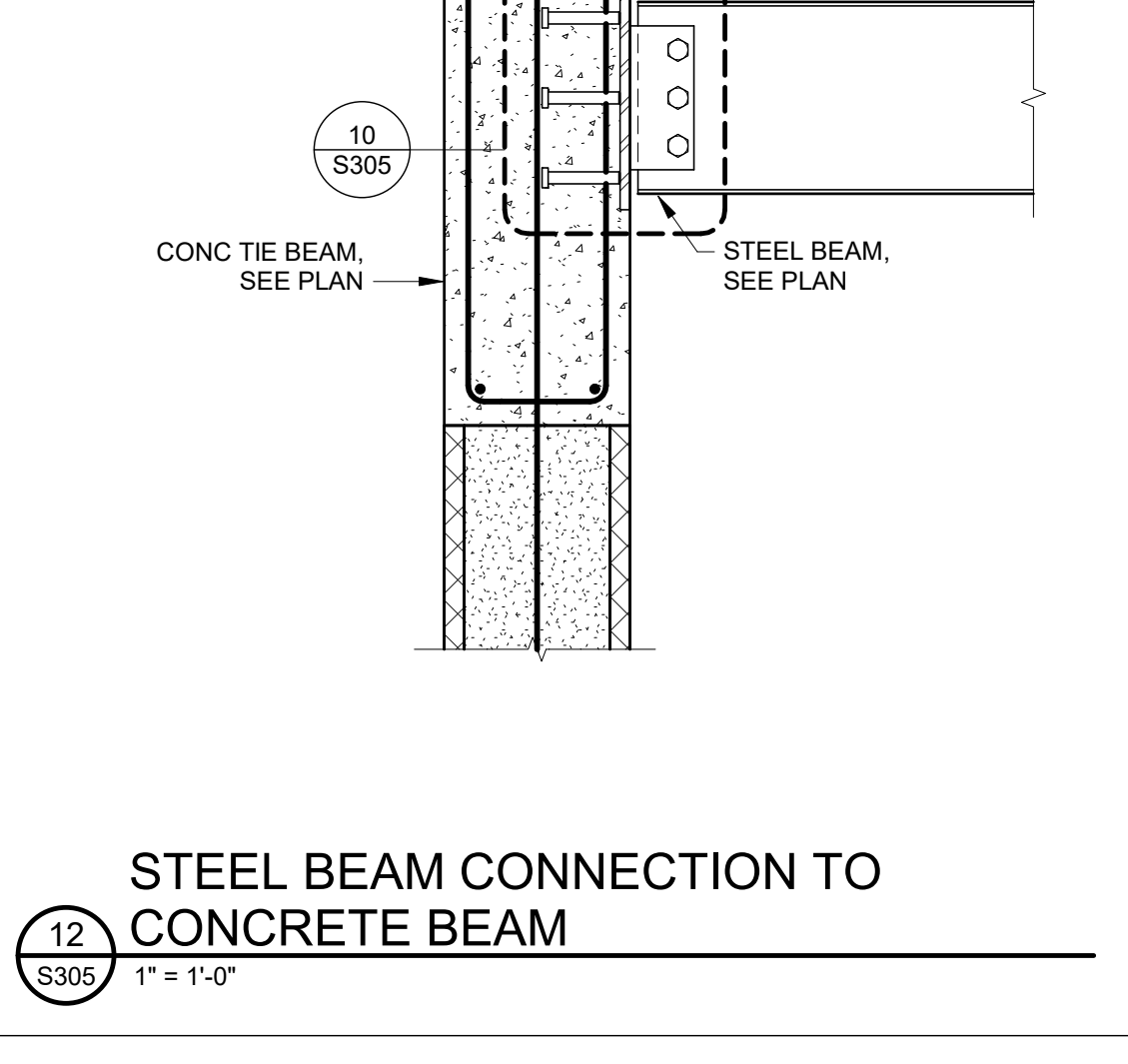
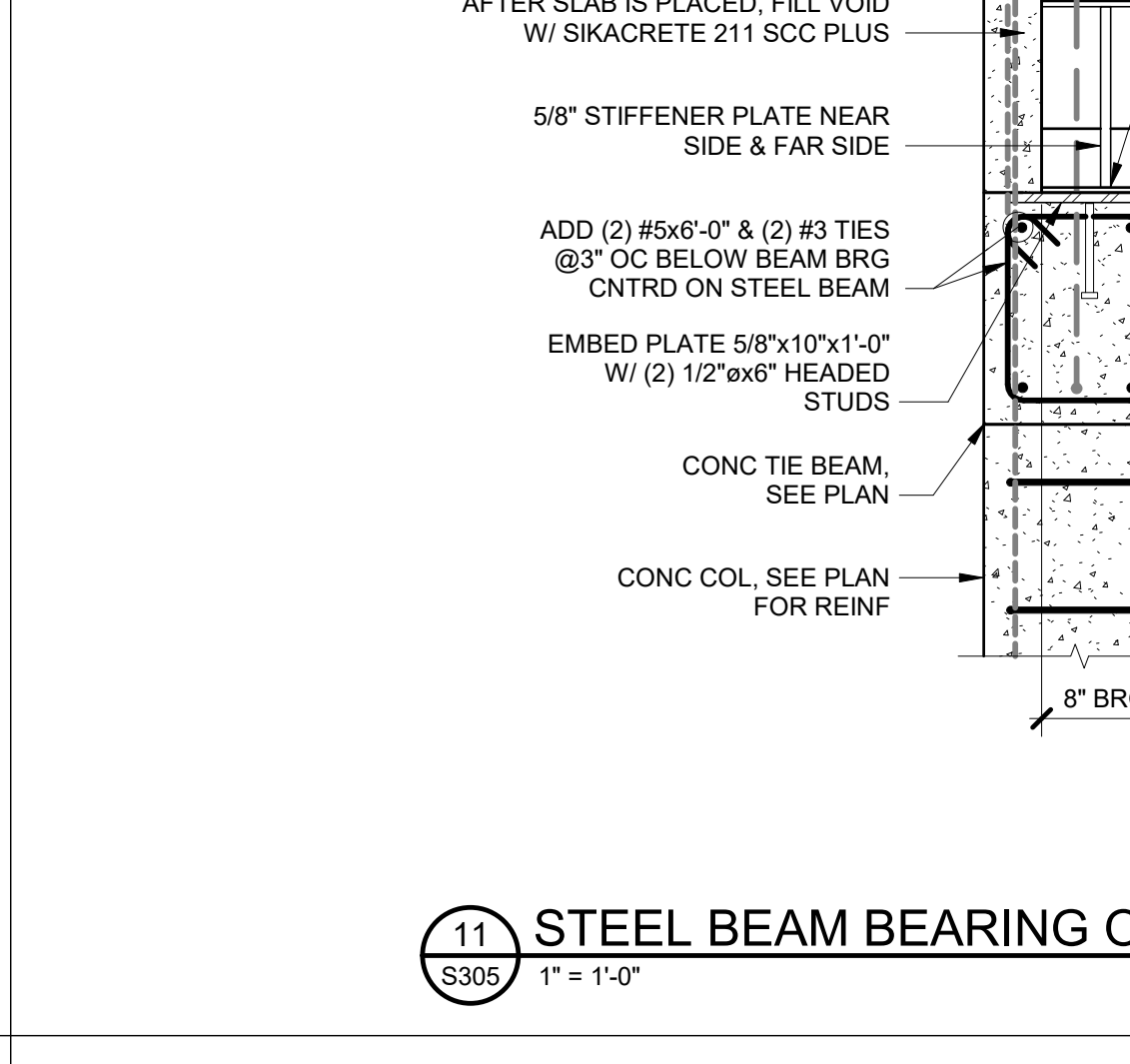
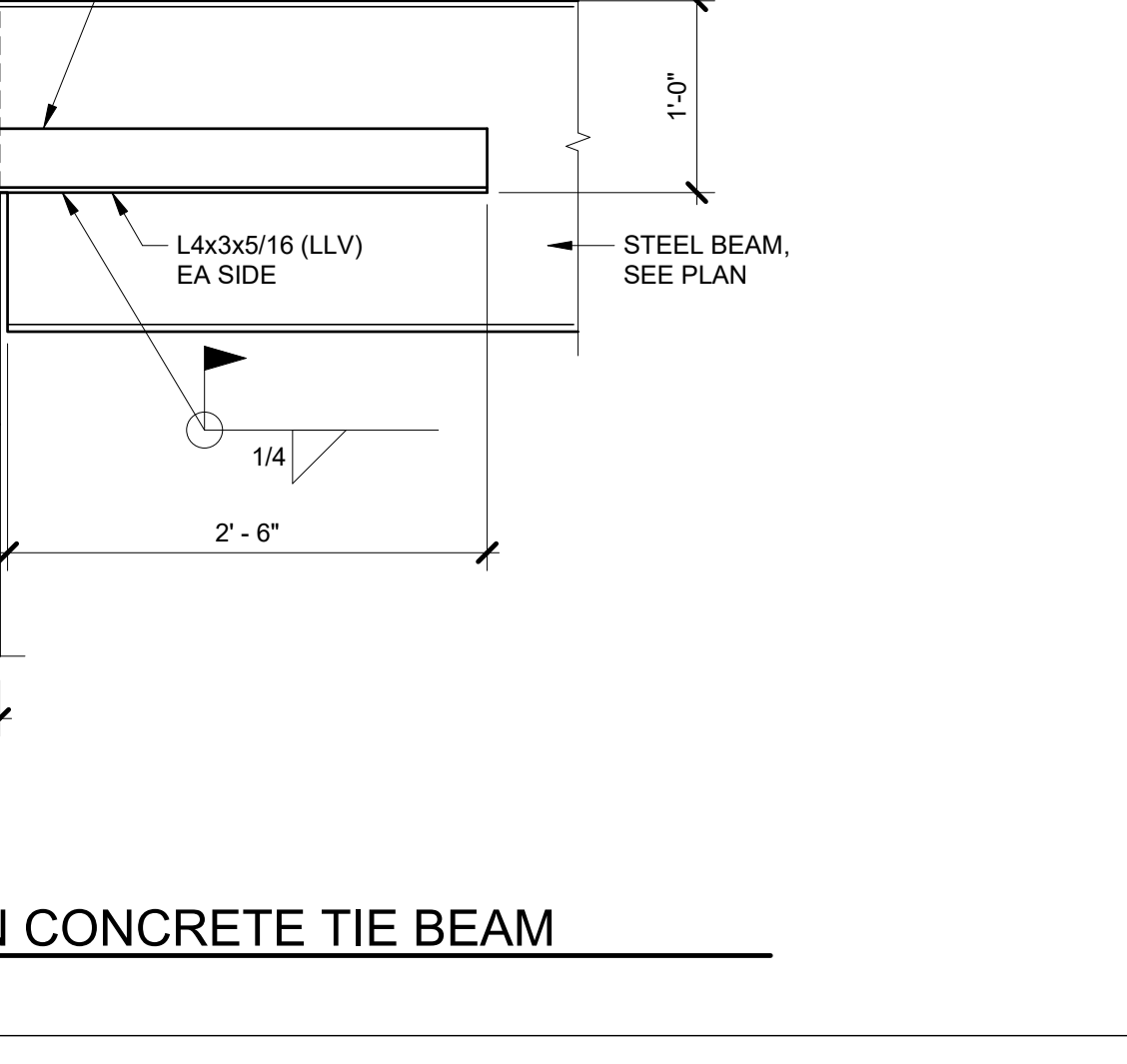
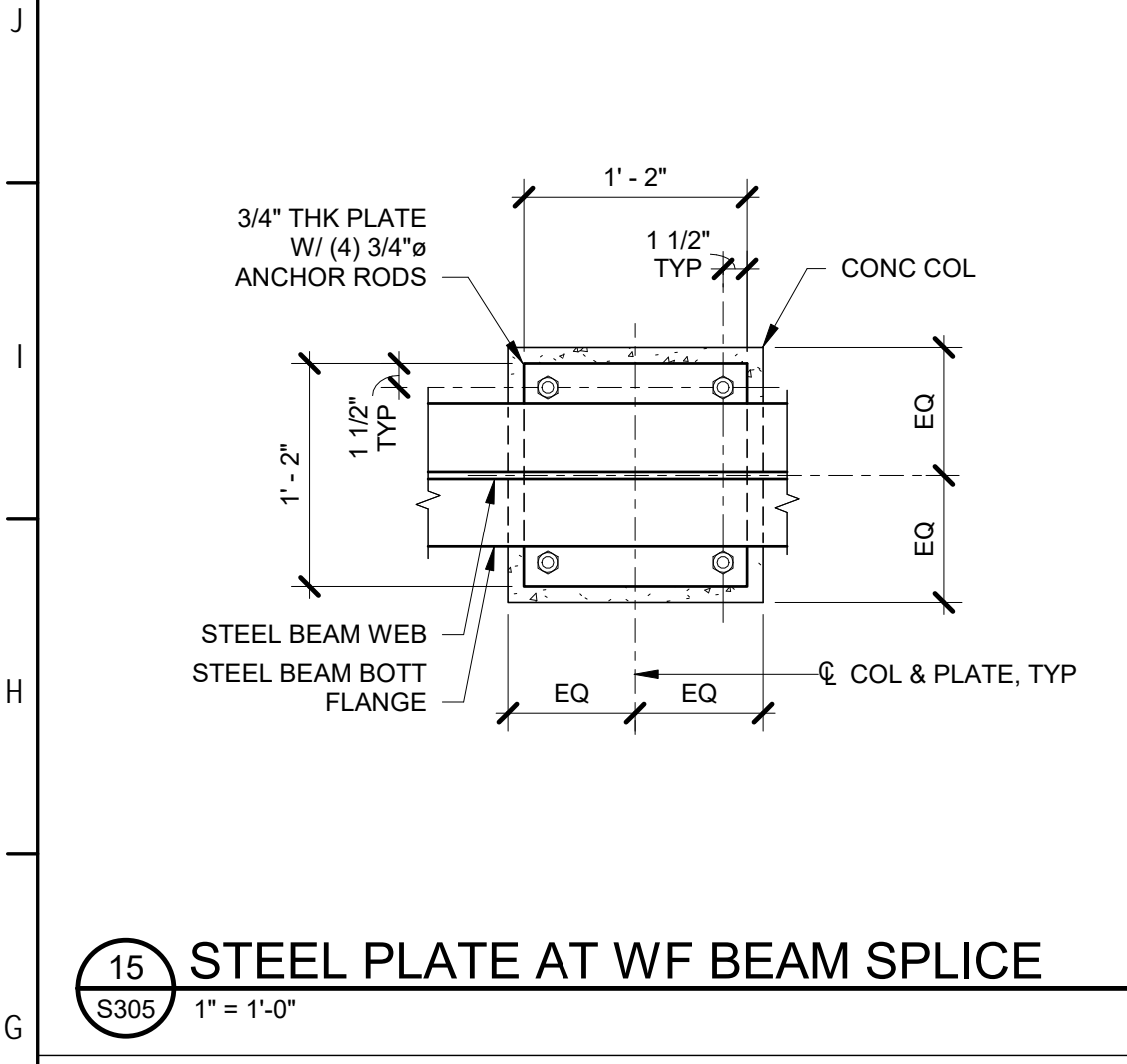
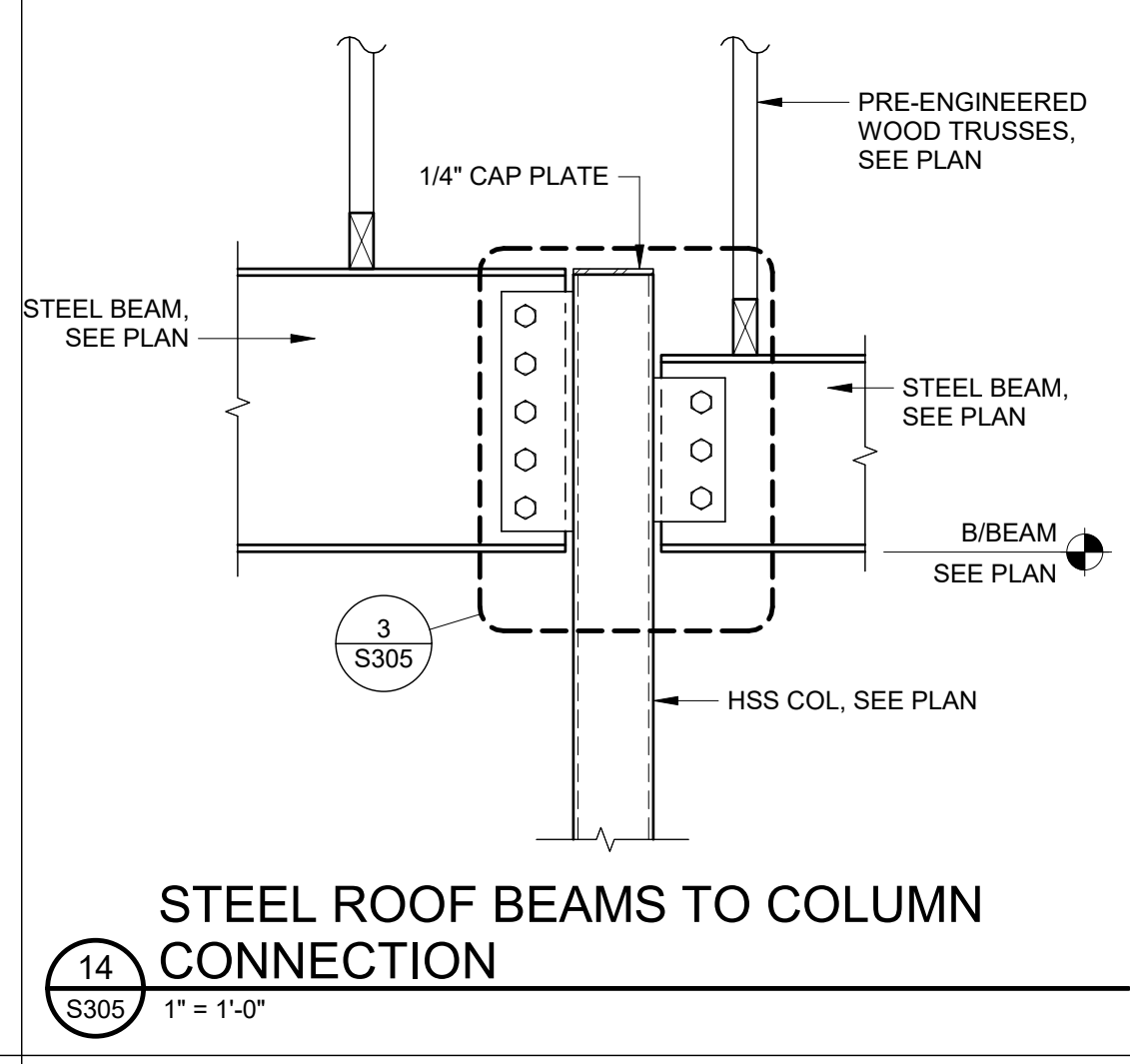
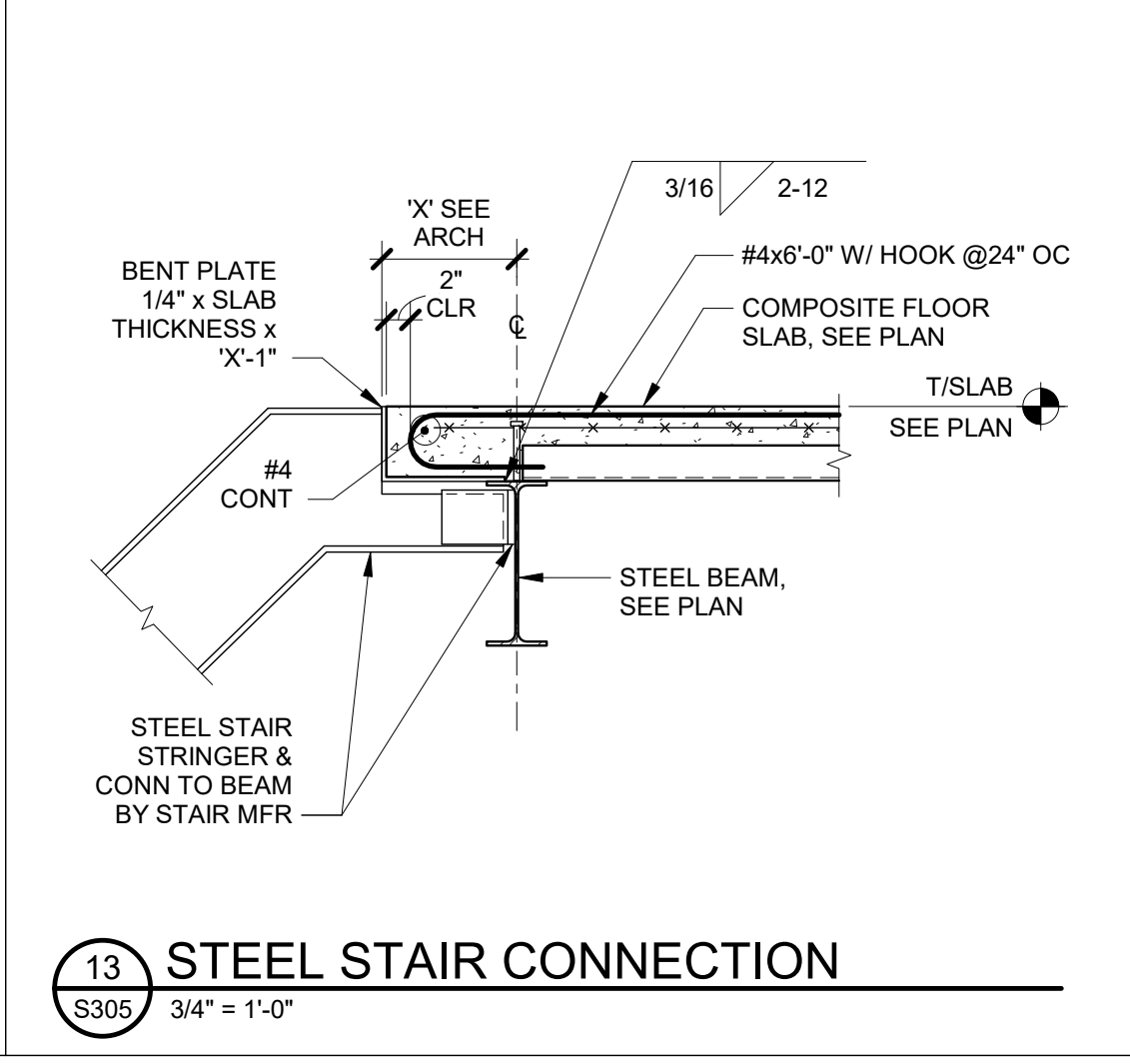
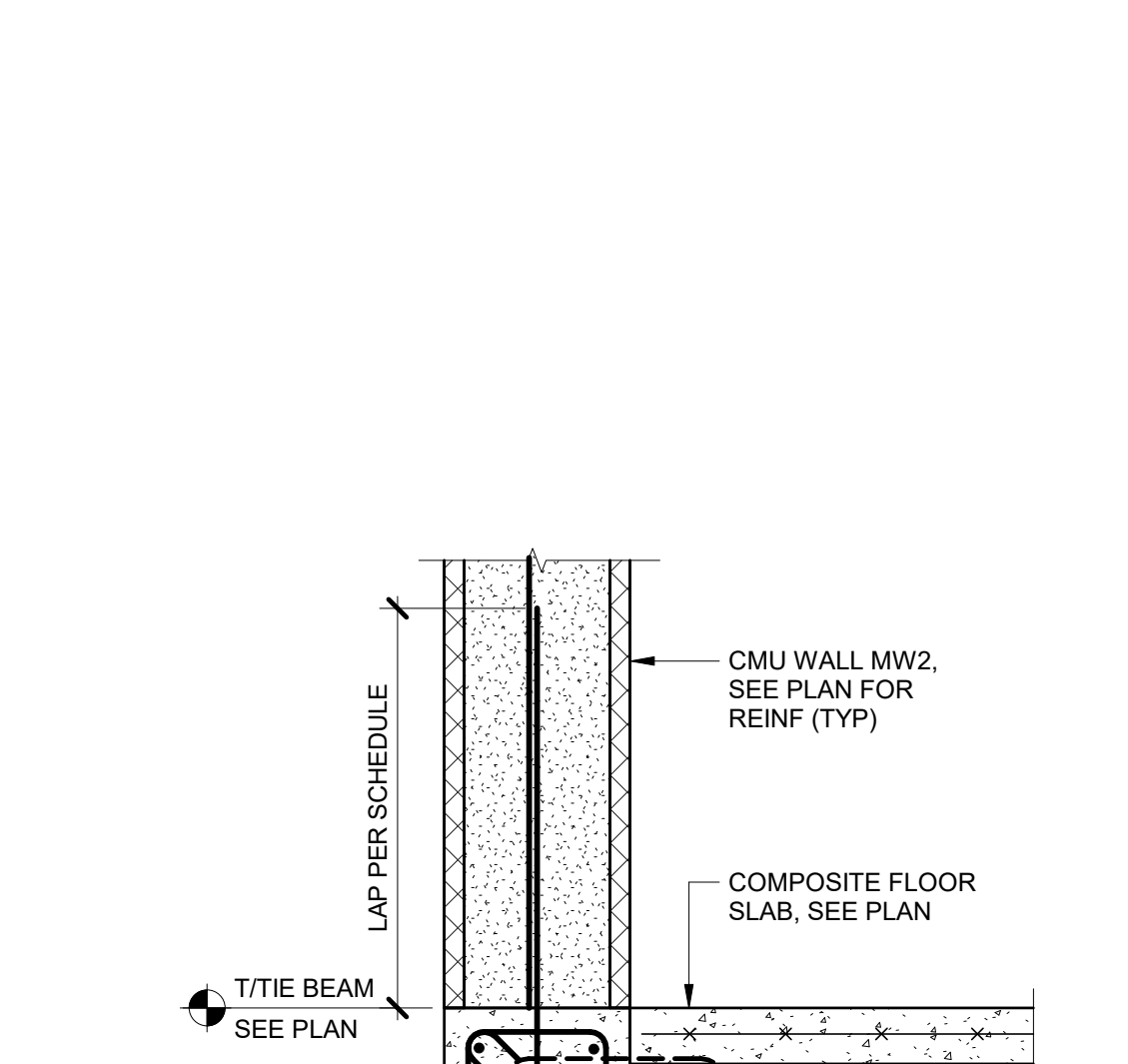
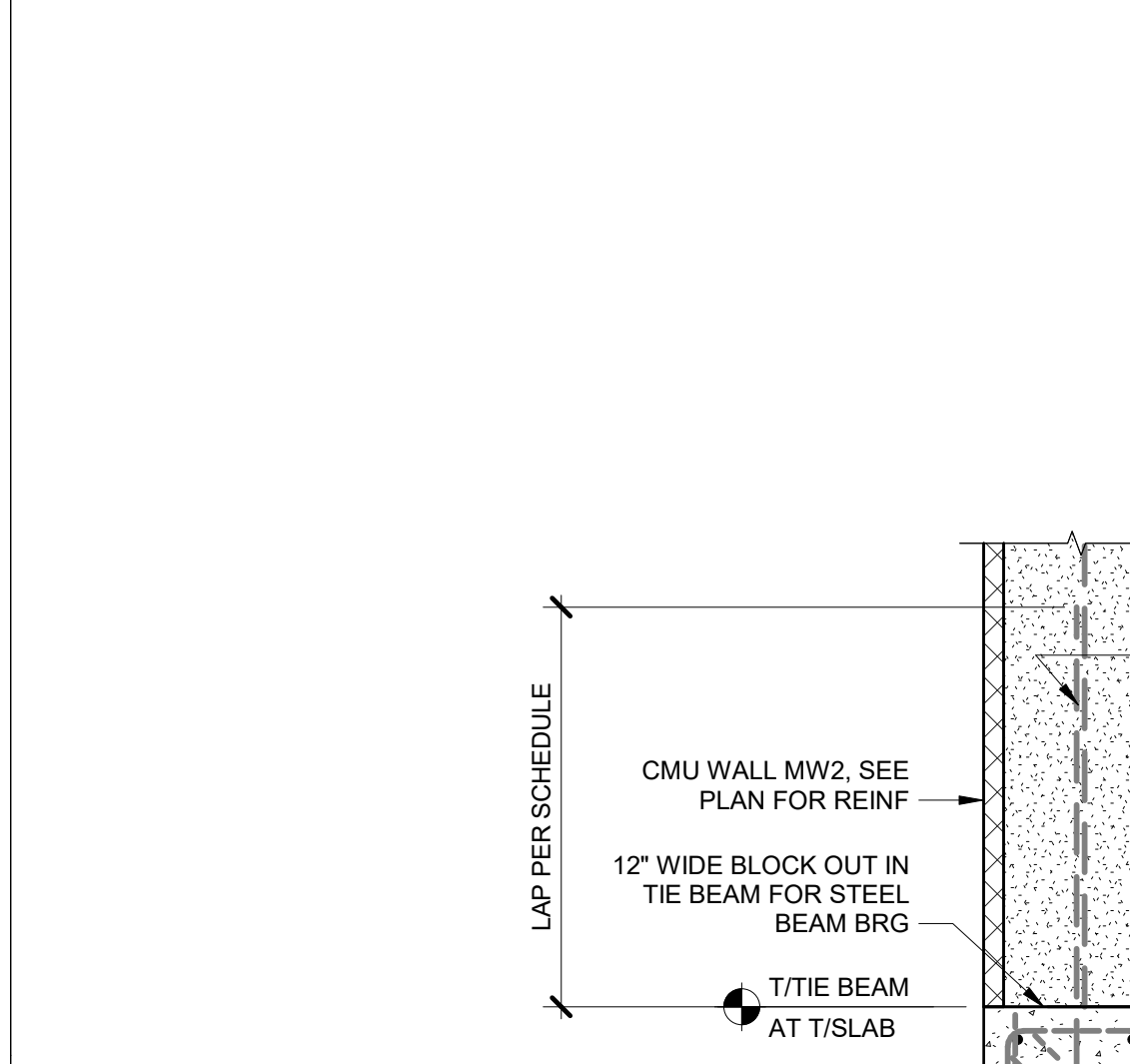
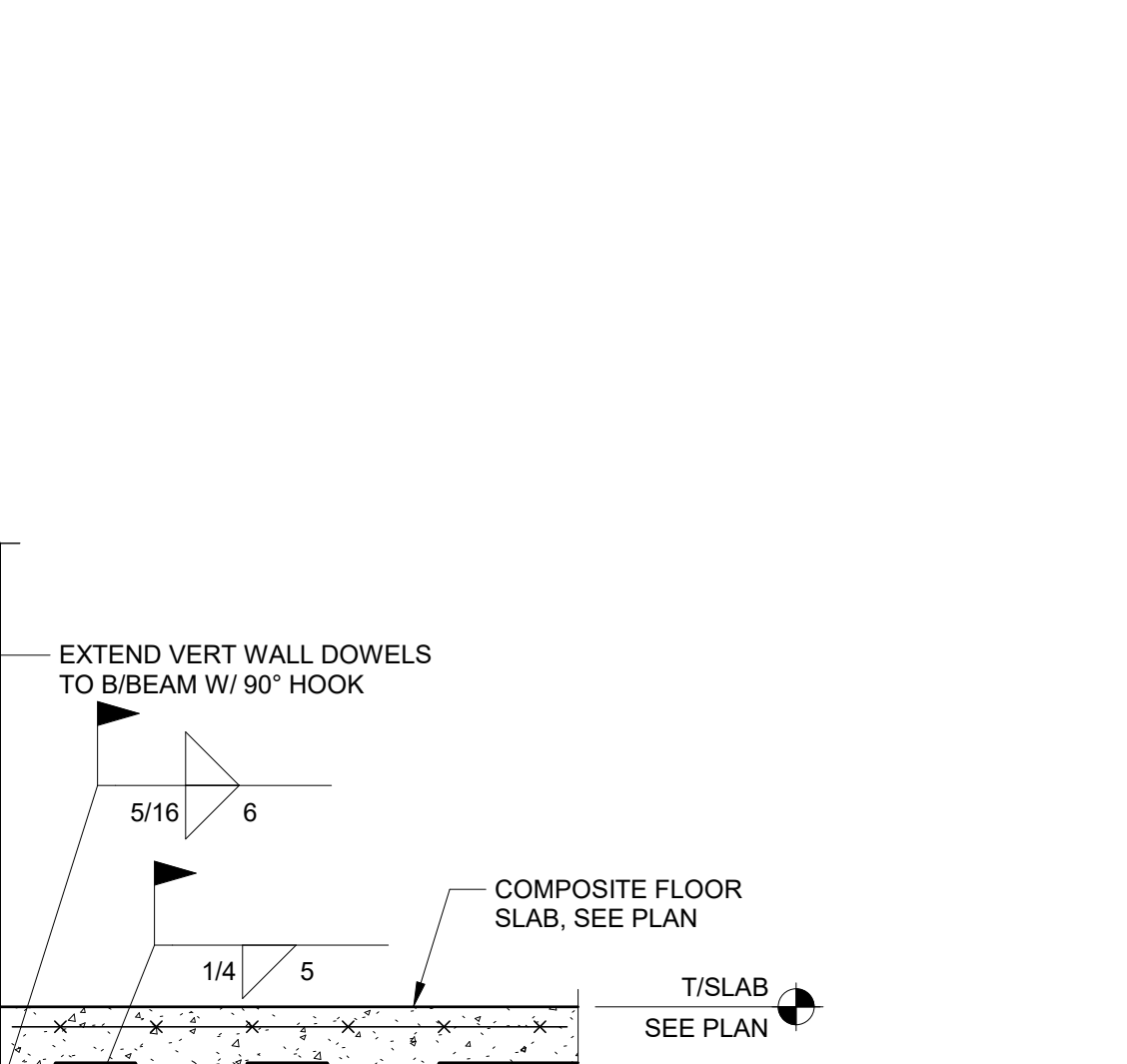
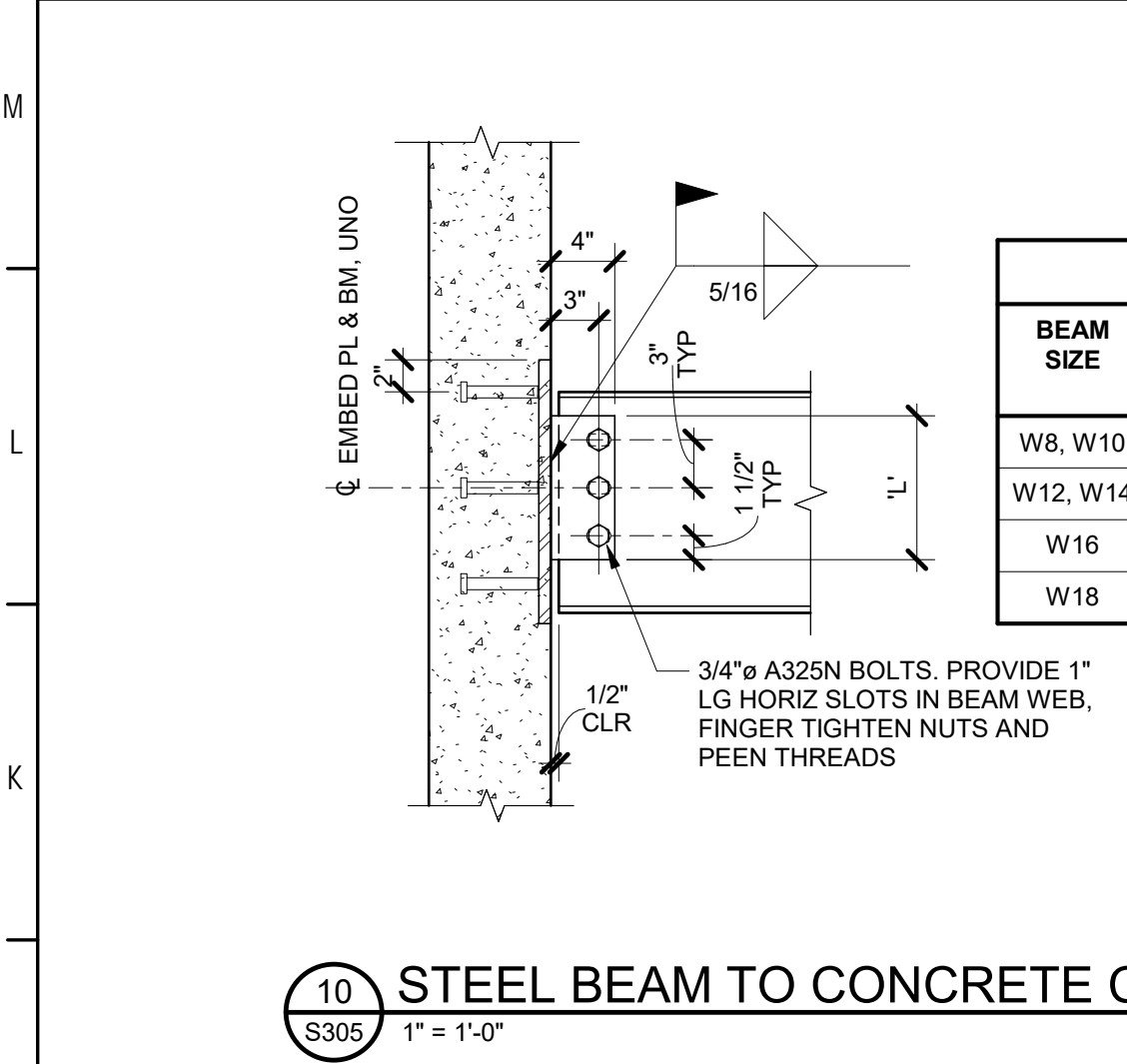
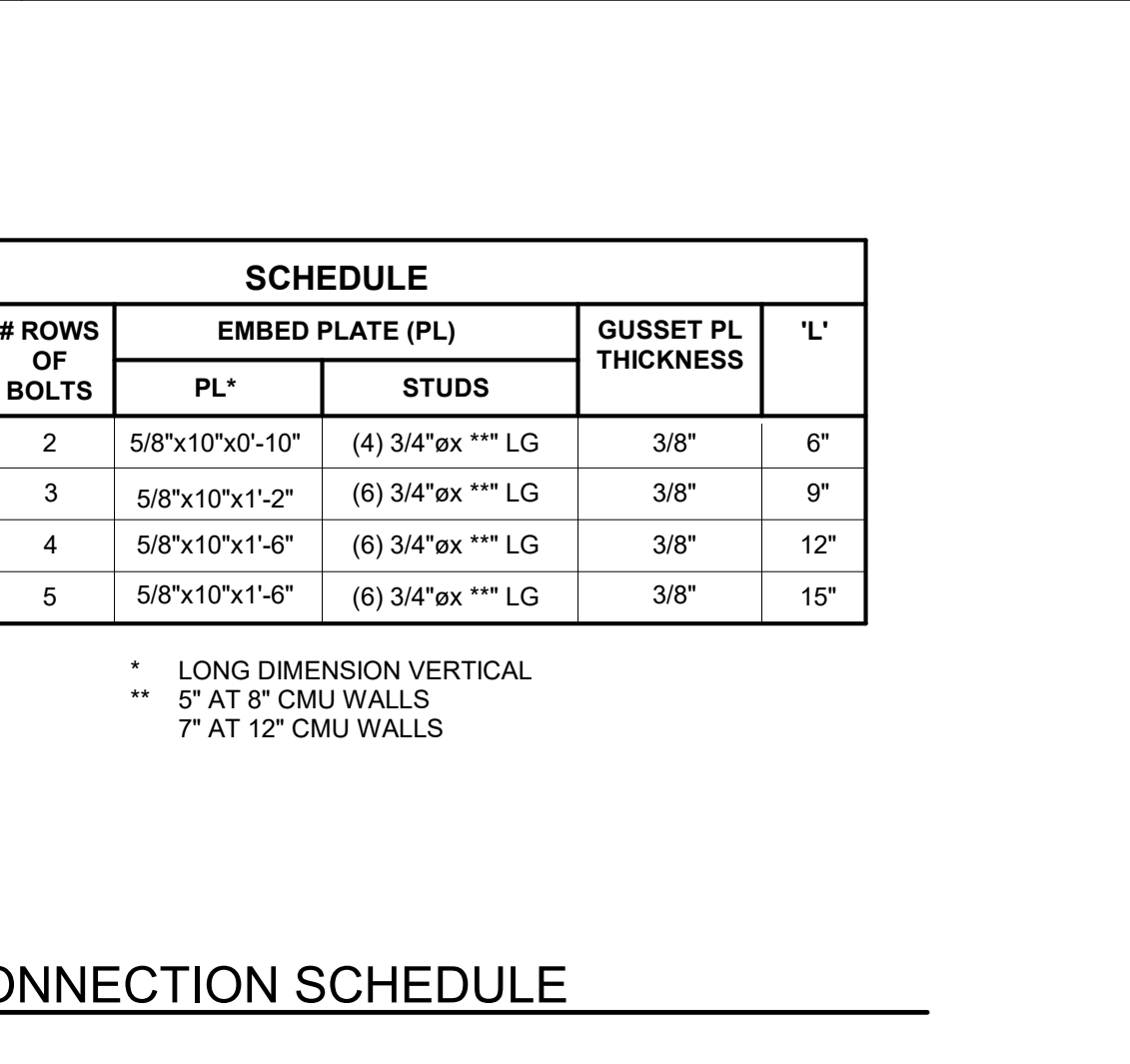
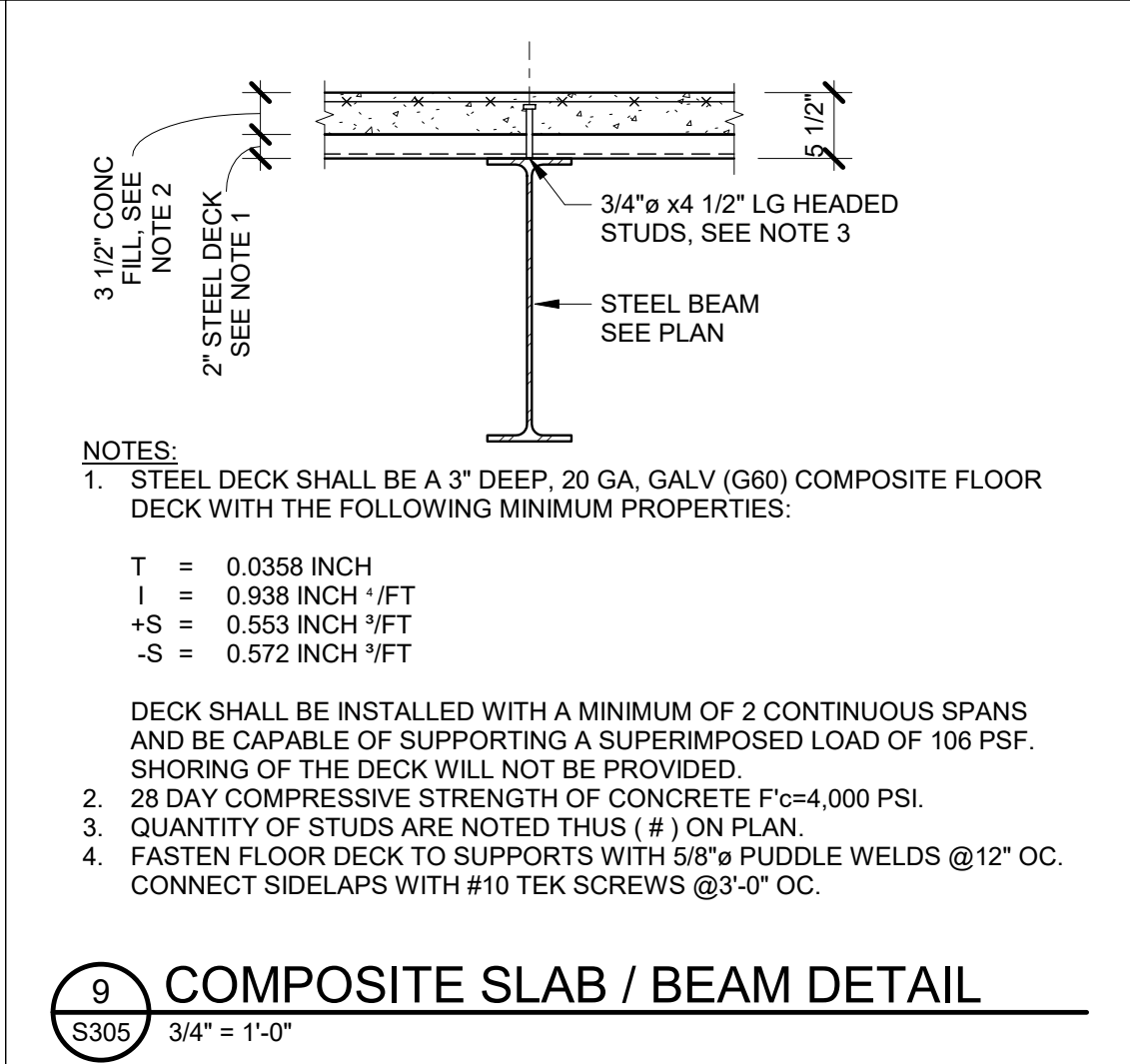
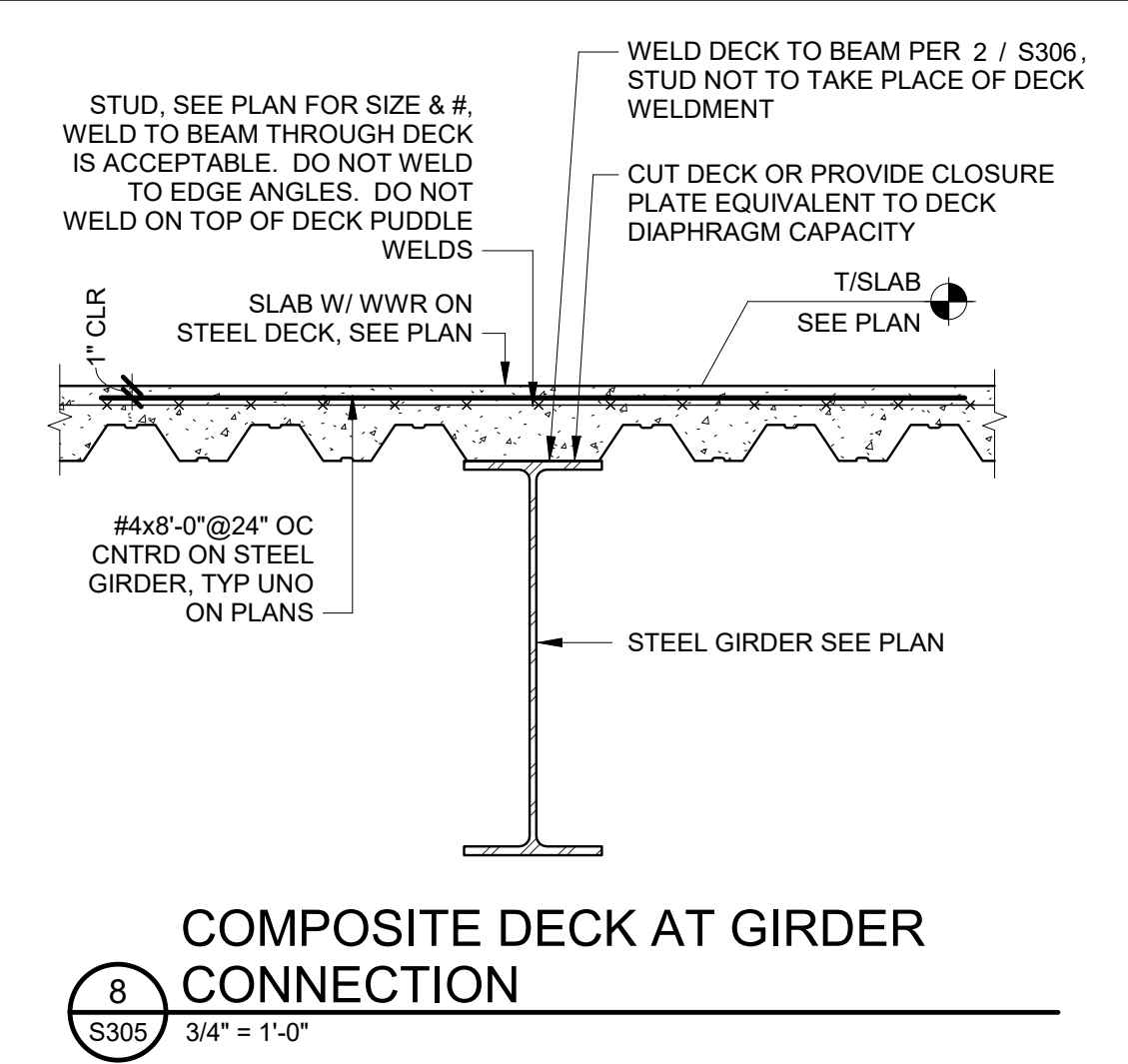
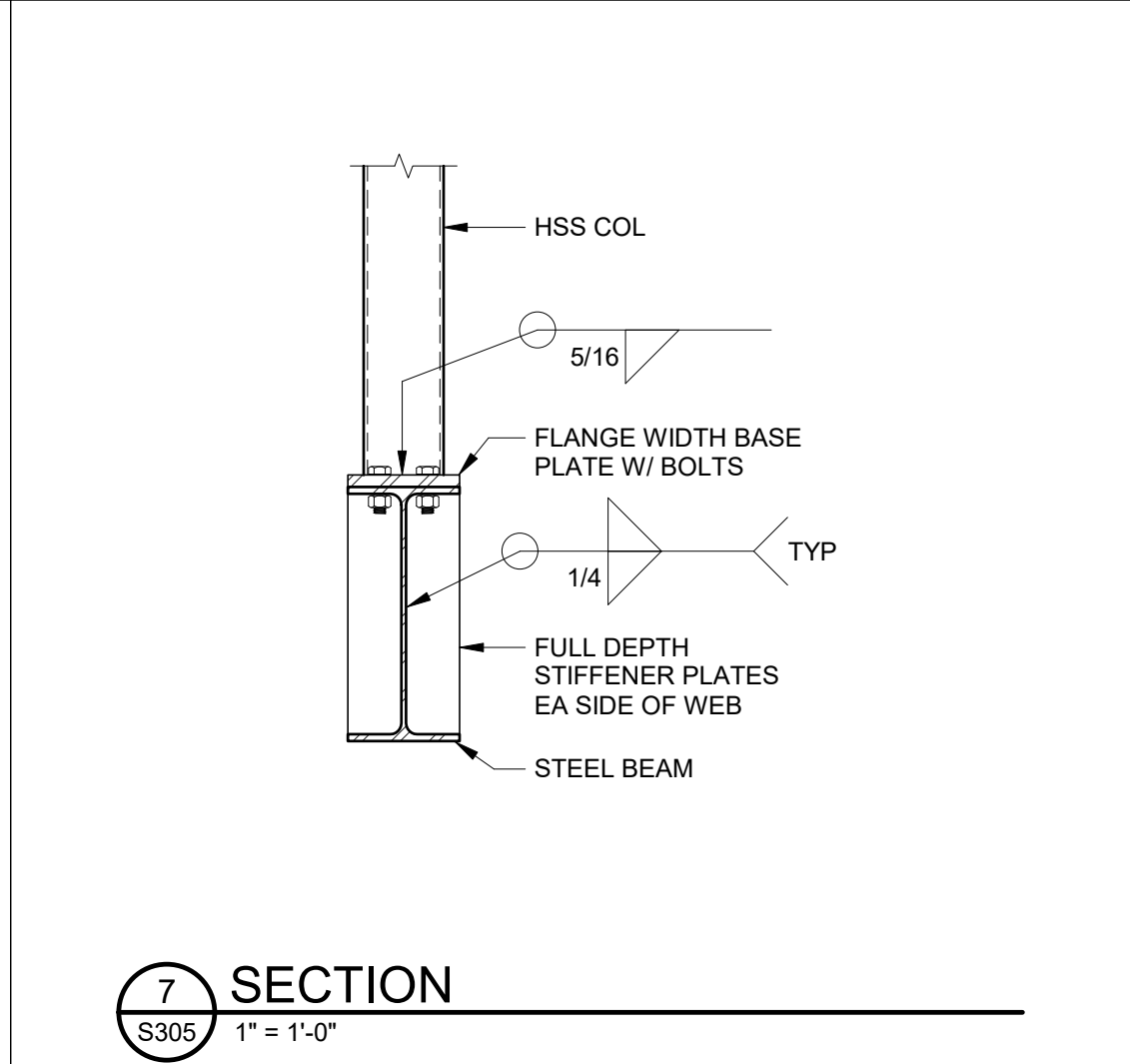
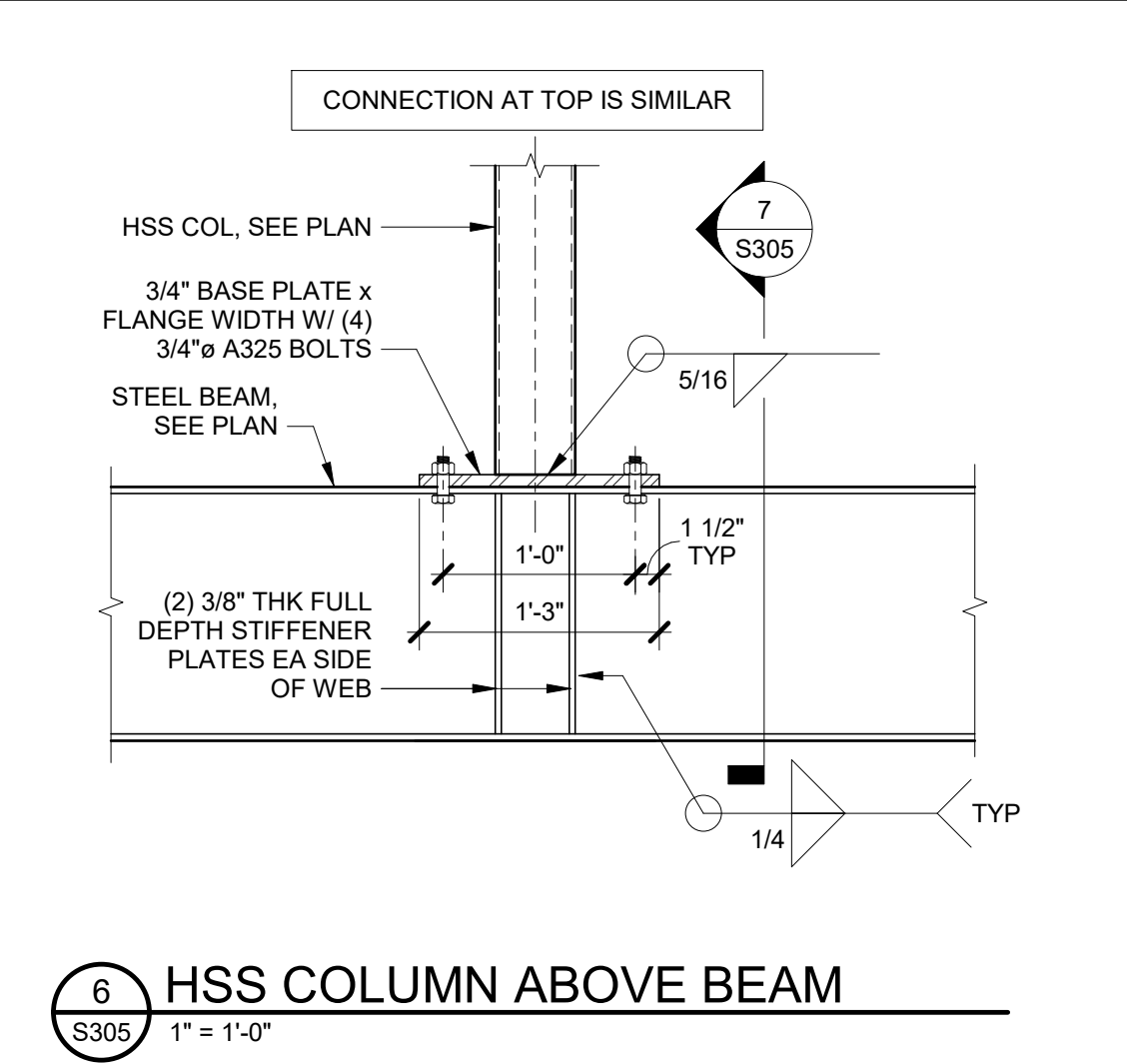
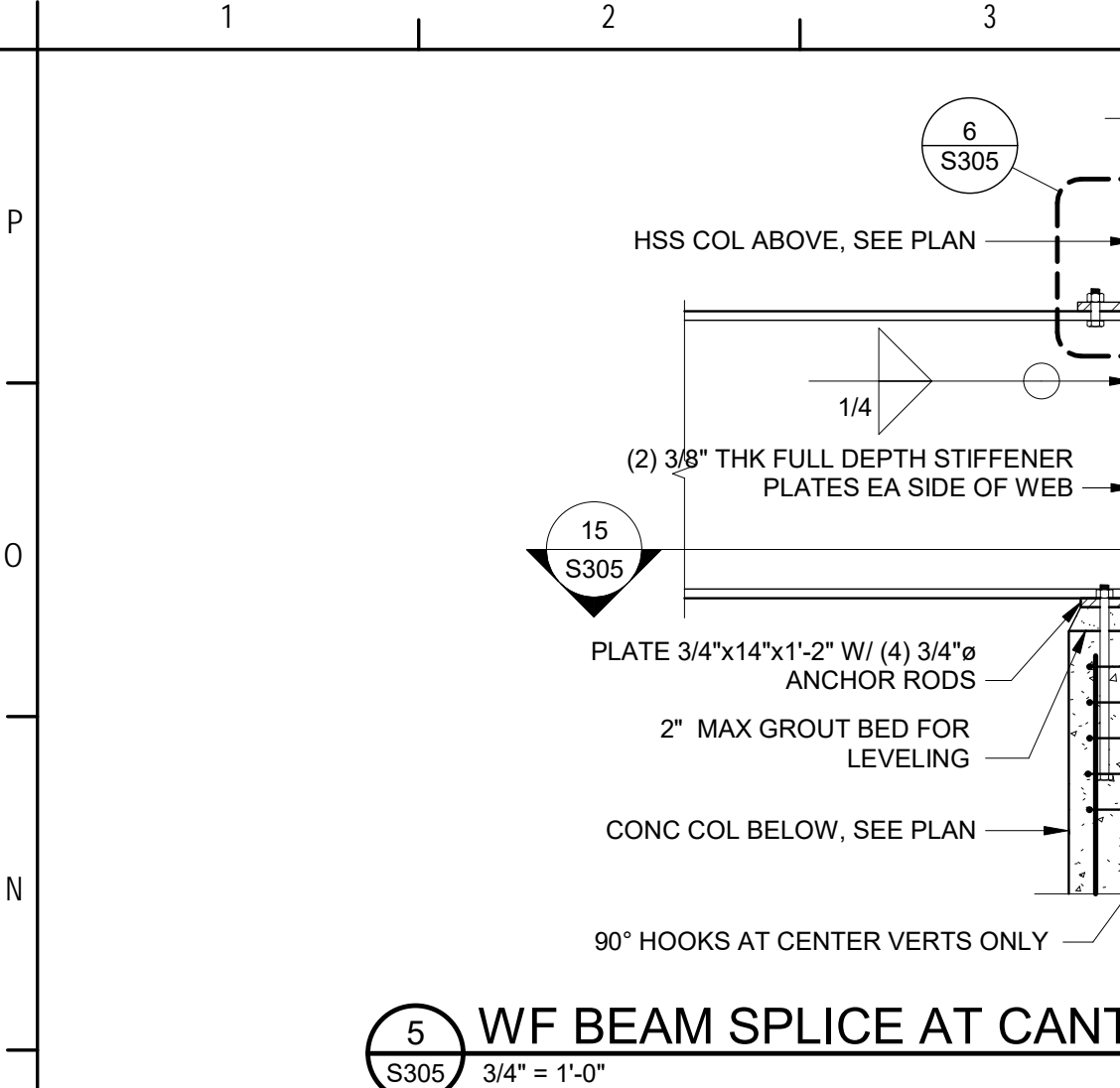
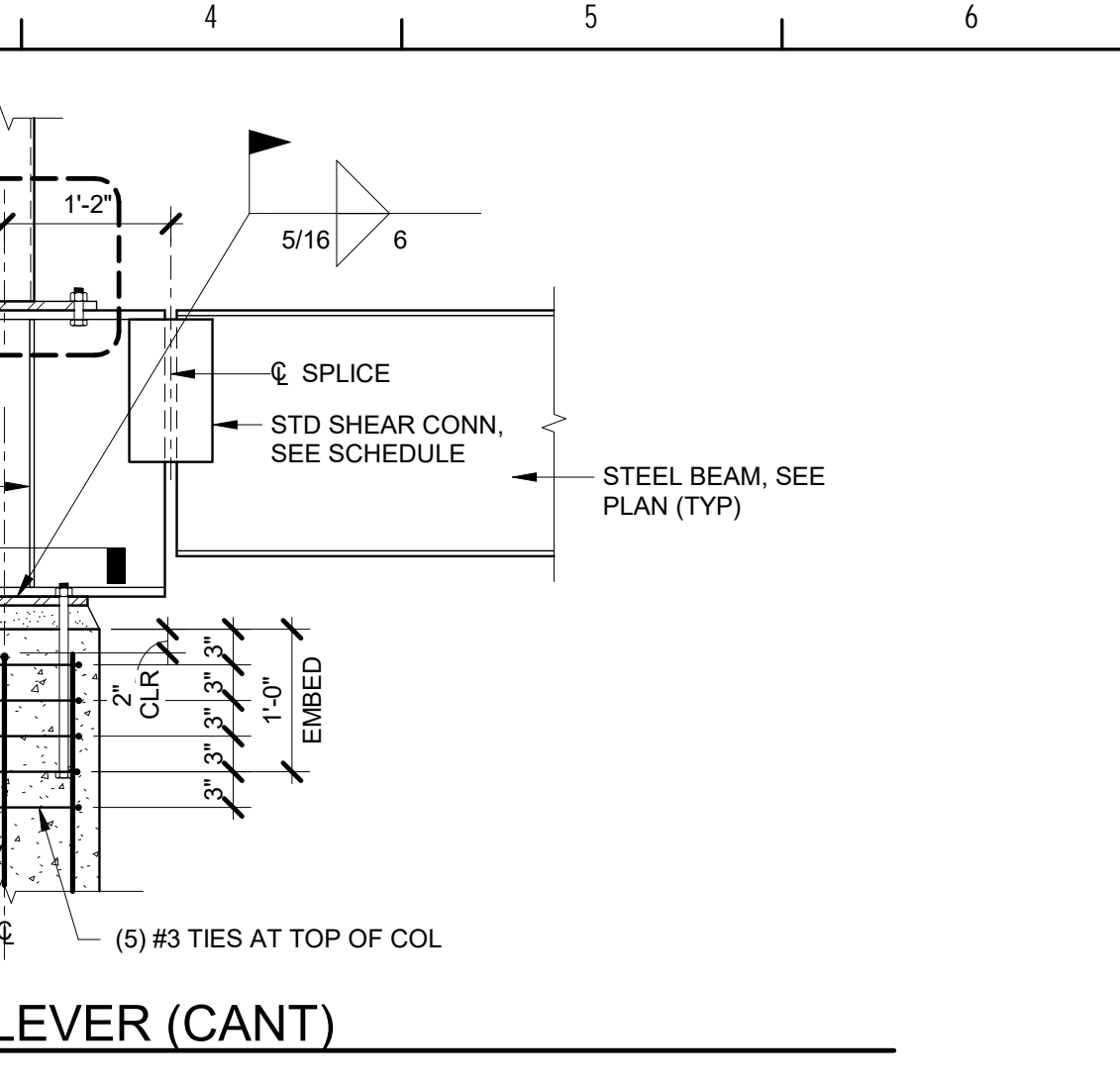


CONNECTION SCHEDULE

BEAM SIZE	MIN NO. 3/4" A325 BOLTS PER ANGLE LEG	MIN NO. 3/4" A325 BOLTS KNIFE PLATE CONNECTION
W10	2	2
W12, W14	3	3
W16	4	4
W18	5	5
W21	6	6
W24, W27	7	7
W30	8	8

MIN RQMTS FOR WF BM TO COL & BM TO BM CONNECTION SCHEDULE

S305 3/4" = 1'-0"





SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION: 5171 SANIBEL CAPTIVA SANIBEL, FLORIDA 33957



9510 Corkscrew Palms Circle, Unit 1, Estero, FL 33928 voice (239) 208-4846

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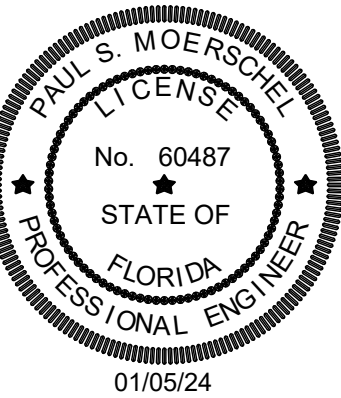


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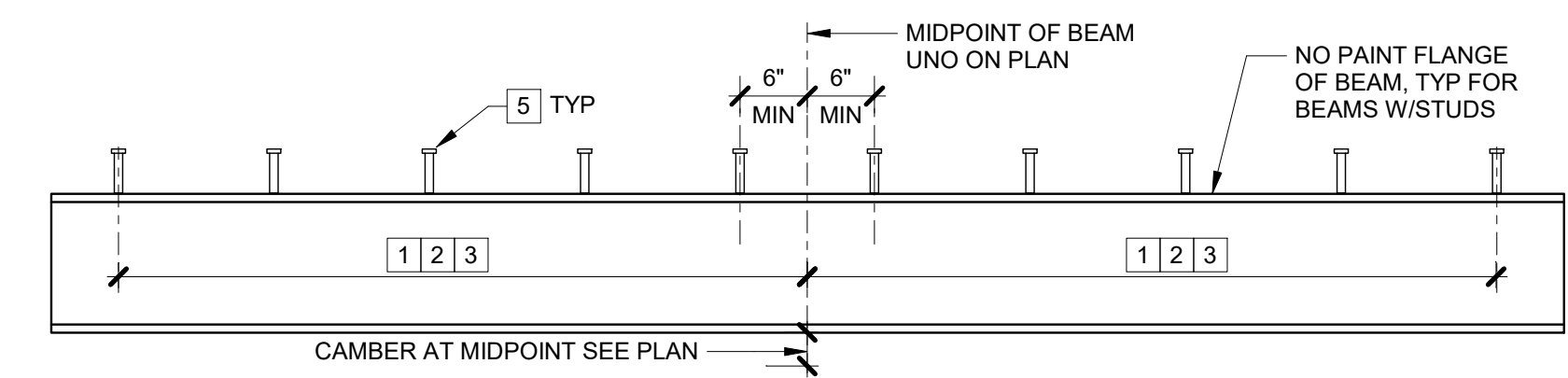


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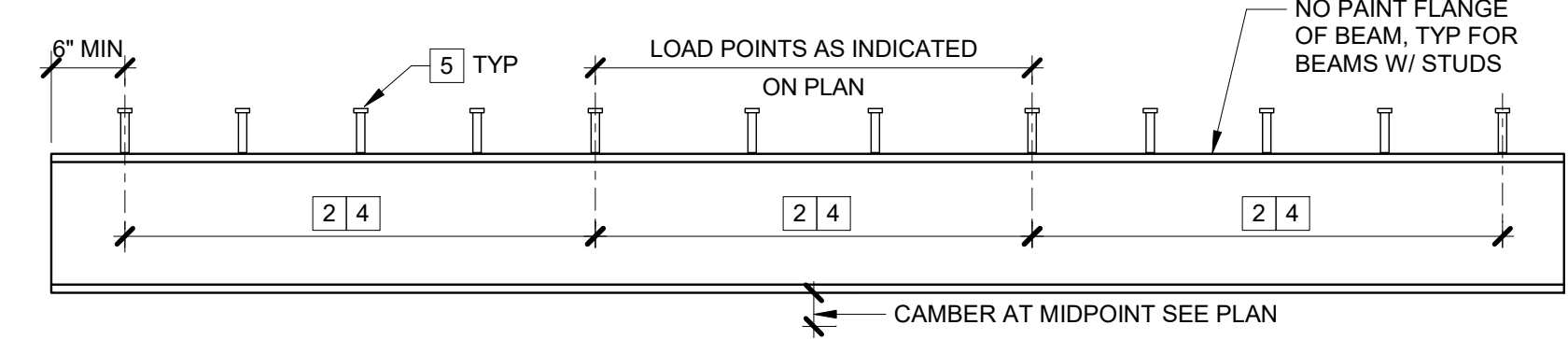
COMPOSITE & SECOND FLOOR SECTIONS & DETAILS

S306

100% CONSTRUCTION DOCUMENTS



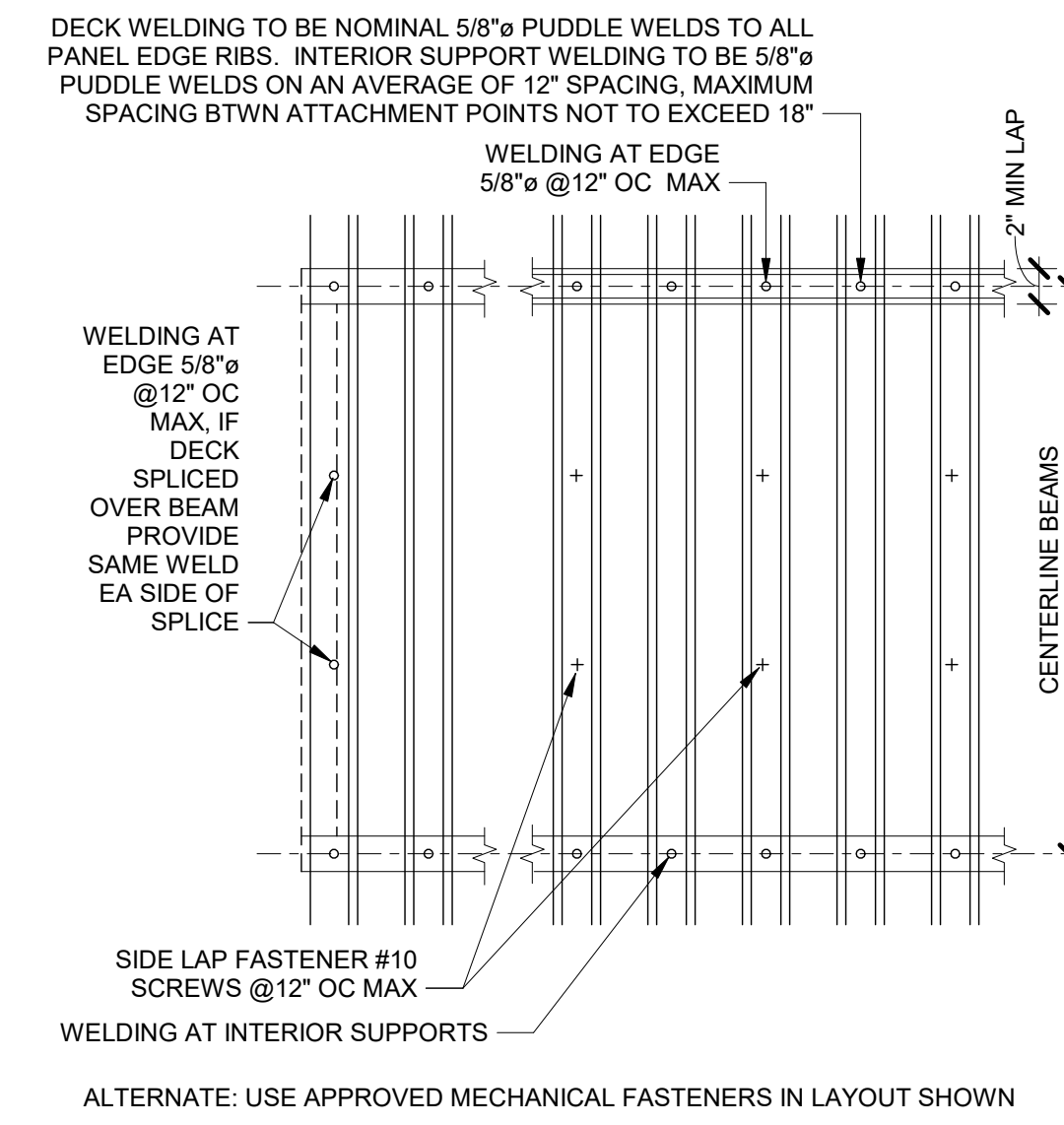
DISTRIBUTED SHEAR STUD PLACEMENT



GROUPED SHEAR STUD PLACEMENT

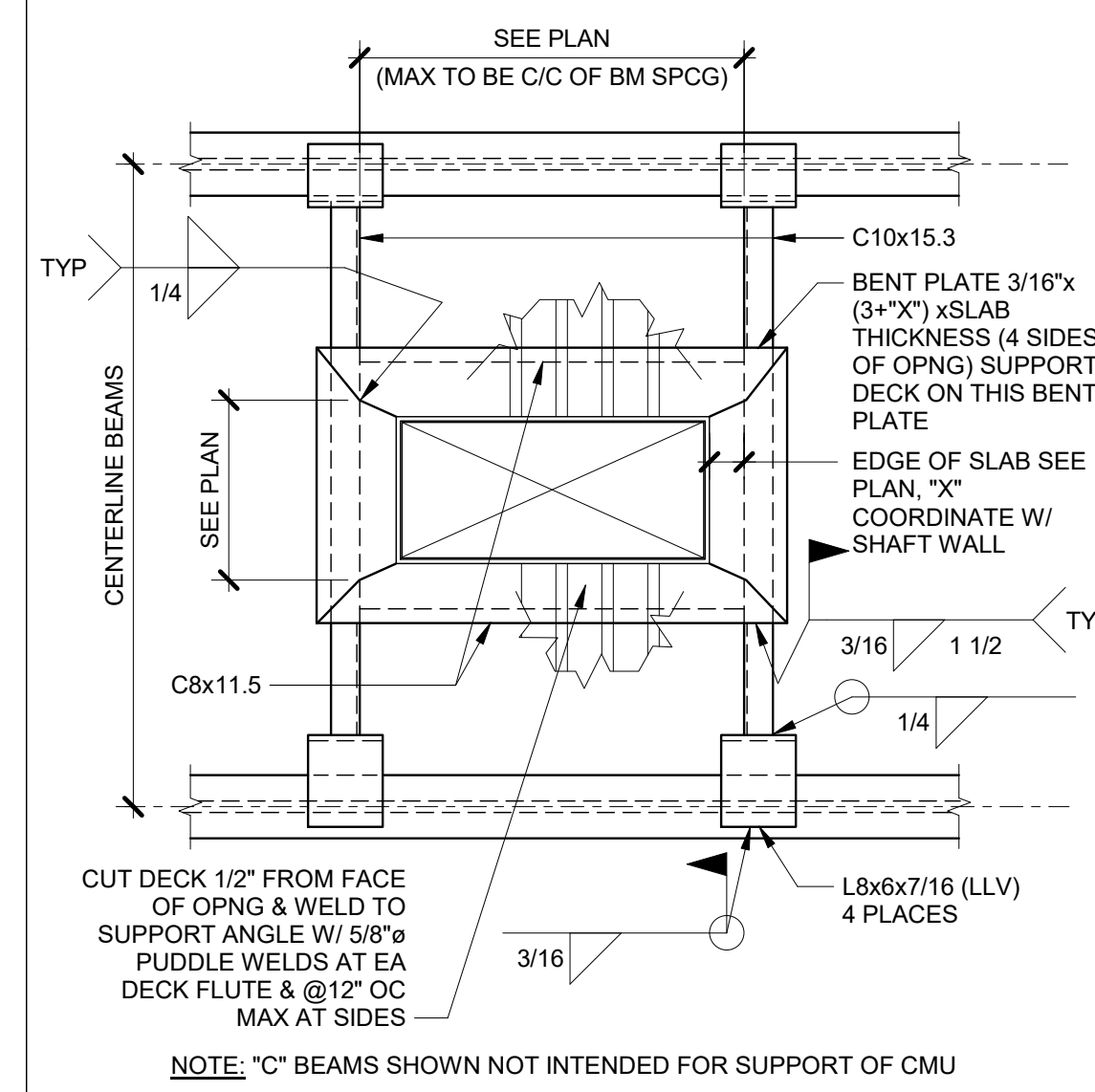
SHEAR STUD PLACEMENT

- EQUALLY DISTRIBUTE ONE HALF OF SHEAR CONNECTORS INDICATED ON PLAN EACH SIDE OF BEAM MIDPOINT OR LOAD POINTS INDICATED ON PLANS, STARTING FROM EACH END OF SPAN. SEE PLAN FOR NUMBER OF STUDS.
- SPACING OF SHEAR CONNECTORS SHALL NOT EXCEED 8 TIMES THE TOTAL SLAB THICKNESS AND NO GREATER THAN 36" OC. SPACING SHALL BE NO CLOSER THAN 6x STUD DIAMETER OR DISTANCE BETWEEN FLUTES FOR STEEL DECKS WHEN DECK FLUTE IS PERPENDICULAR TO BEAM. COORDINATE STUD LAYOUT WITH DECK SECTIONS USED.
- DOUBLE OR TRIPLE STUDS IF REQUIRED. DOUBLE AND TRIPLE STUD PLACEMENT TO BE SYMMETRICAL ABOUT BEAM WEB. MAINTAIN 4x STUD DIAMETER TRANSVERSE SPACING BETWEEN STUDS IN PARALLEL ROWS, WITH A MINIMUM EDGE DISTANCE OF 1 1/2 STUD DIAMETERS, 1" MINIMUM.
- EQUALLY DISTRIBUTE SHEAR CONNECTORS INDICATED ON PLANS FOR EACH GIRDER SEGMENT BETWEEN LOAD POINTS, BEAMS WHICH FRAME INTO GIRDER.
- SEE PLAN FOR STUD SIZE. NUMBER OF STUDS REQUIRED PER BEAM IS INDICATED BY (#).

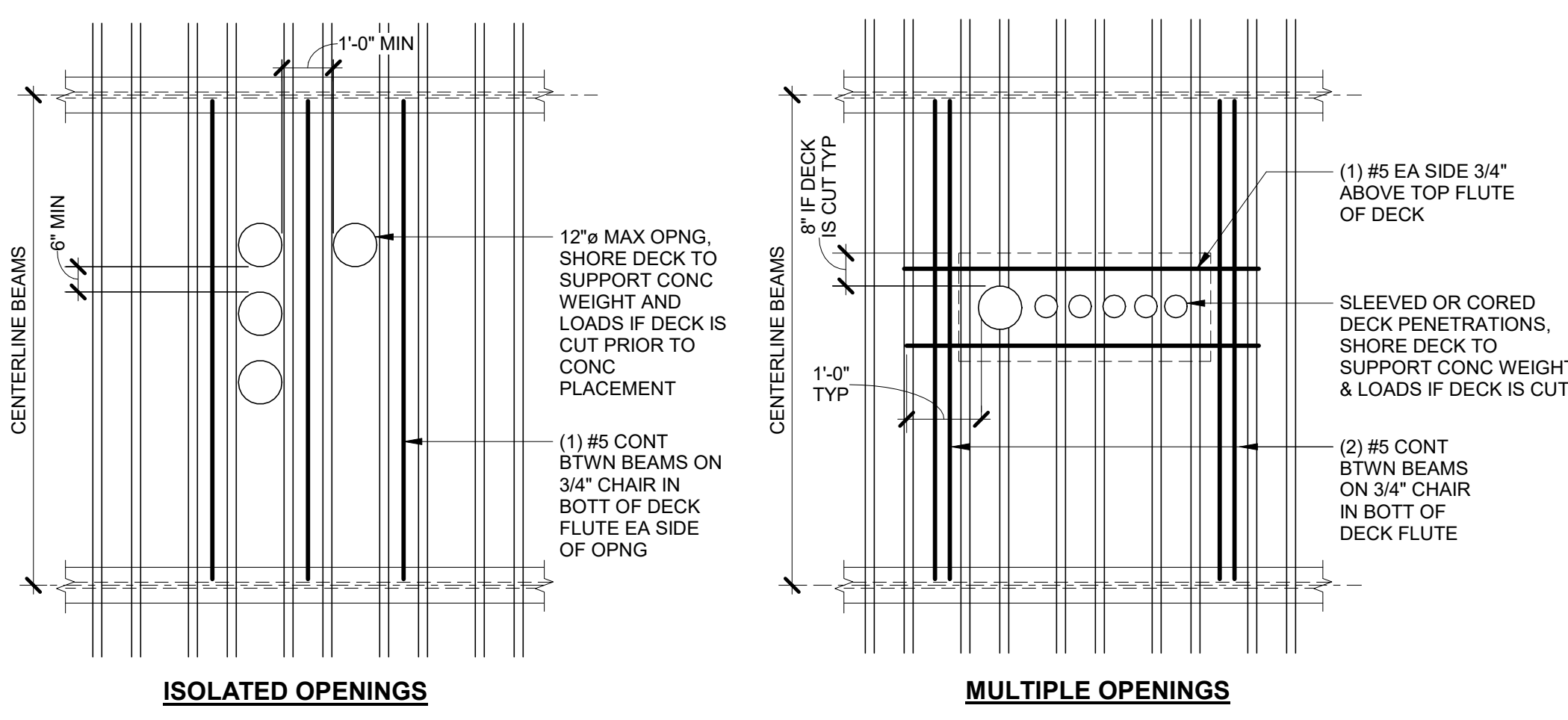


ALTERNATE: USE APPROVED MECHANICAL FASTENERS IN LAYOUT SHOWN

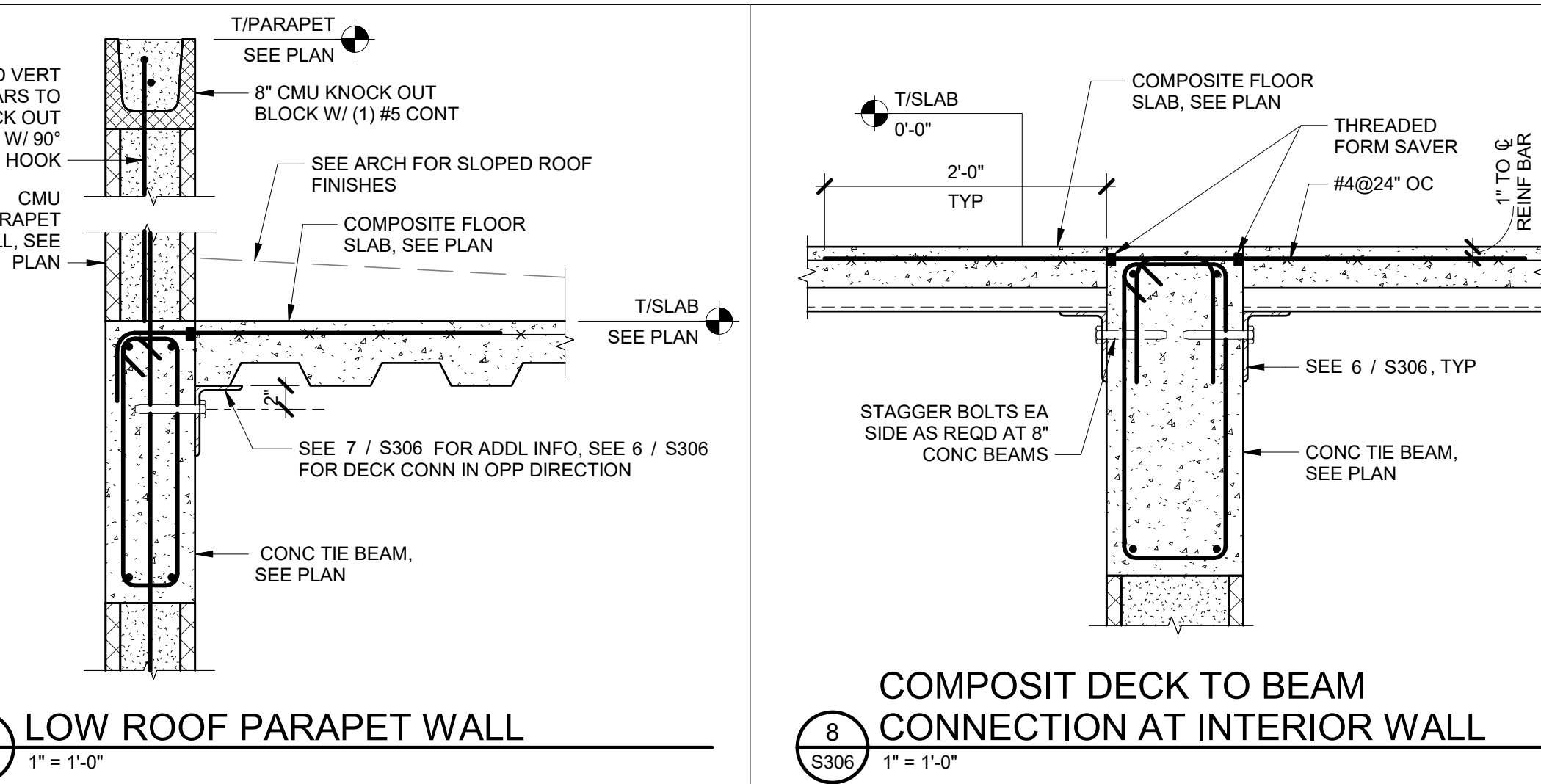
2 COMPOSITE FLOOR DECK FASTENING



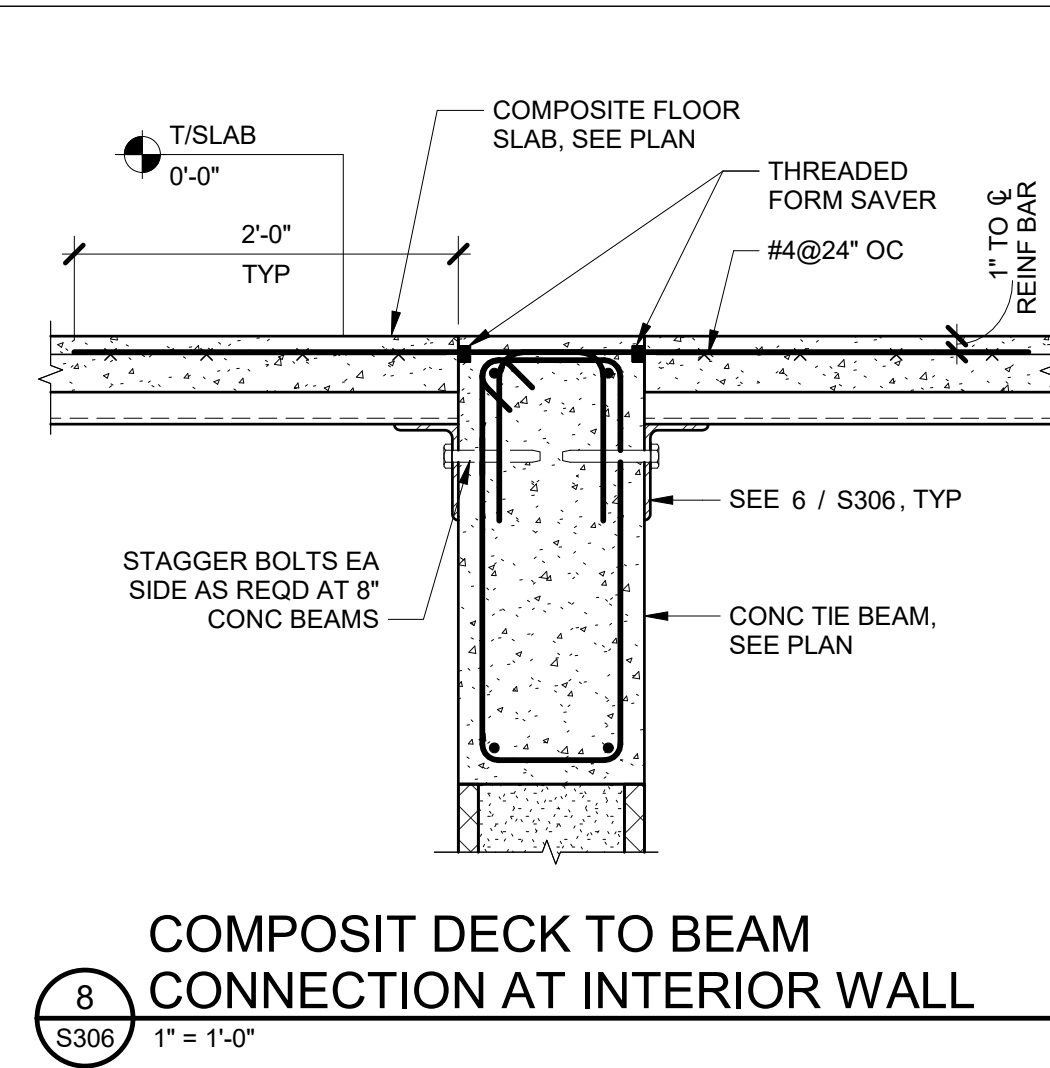
3 COMPOSITE SLAB OPENING DETAIL



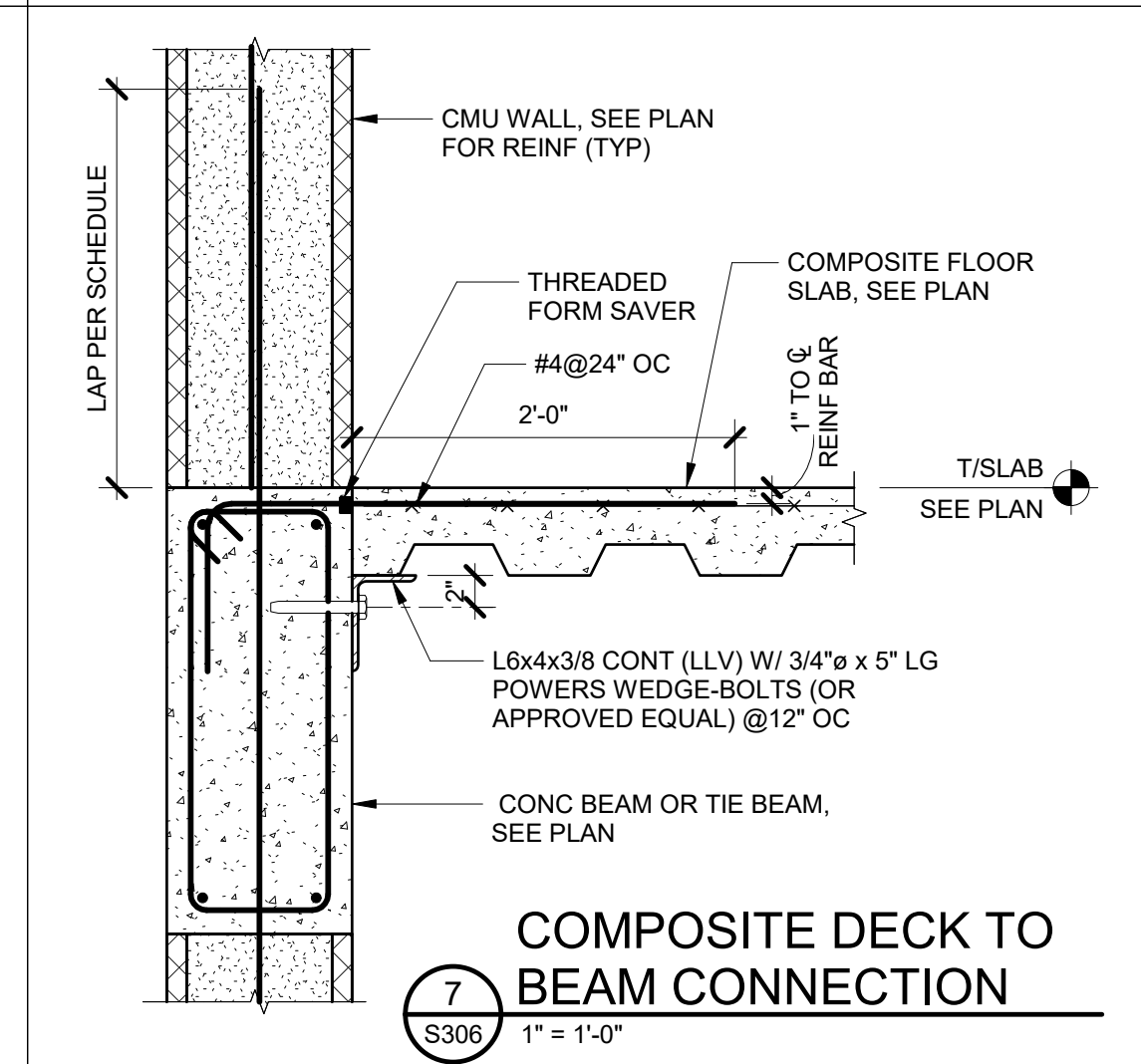
4 COMPOSITE SLAB PIPE PENETRATION DETAIL



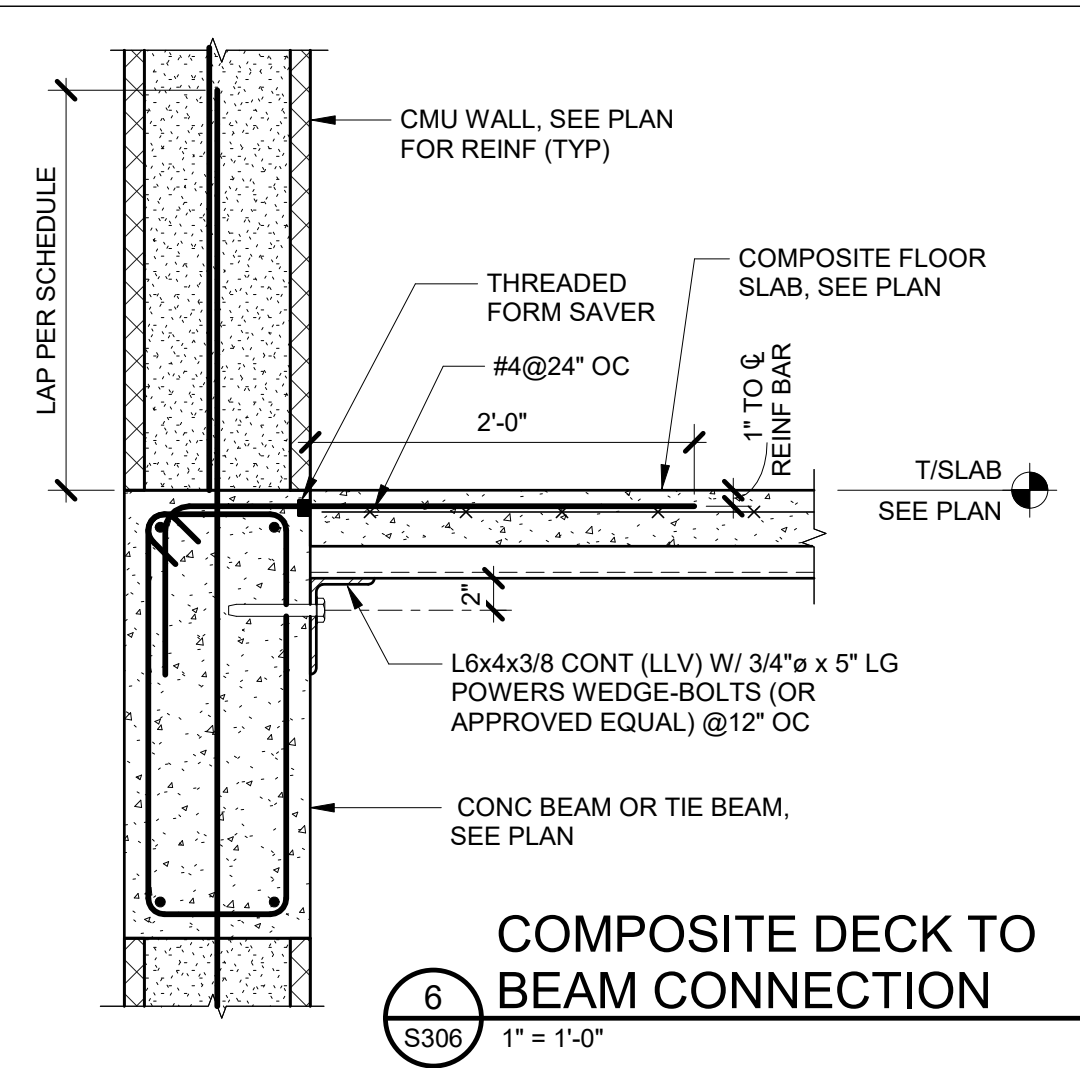
9 LOW ROOF PARAPET WALL



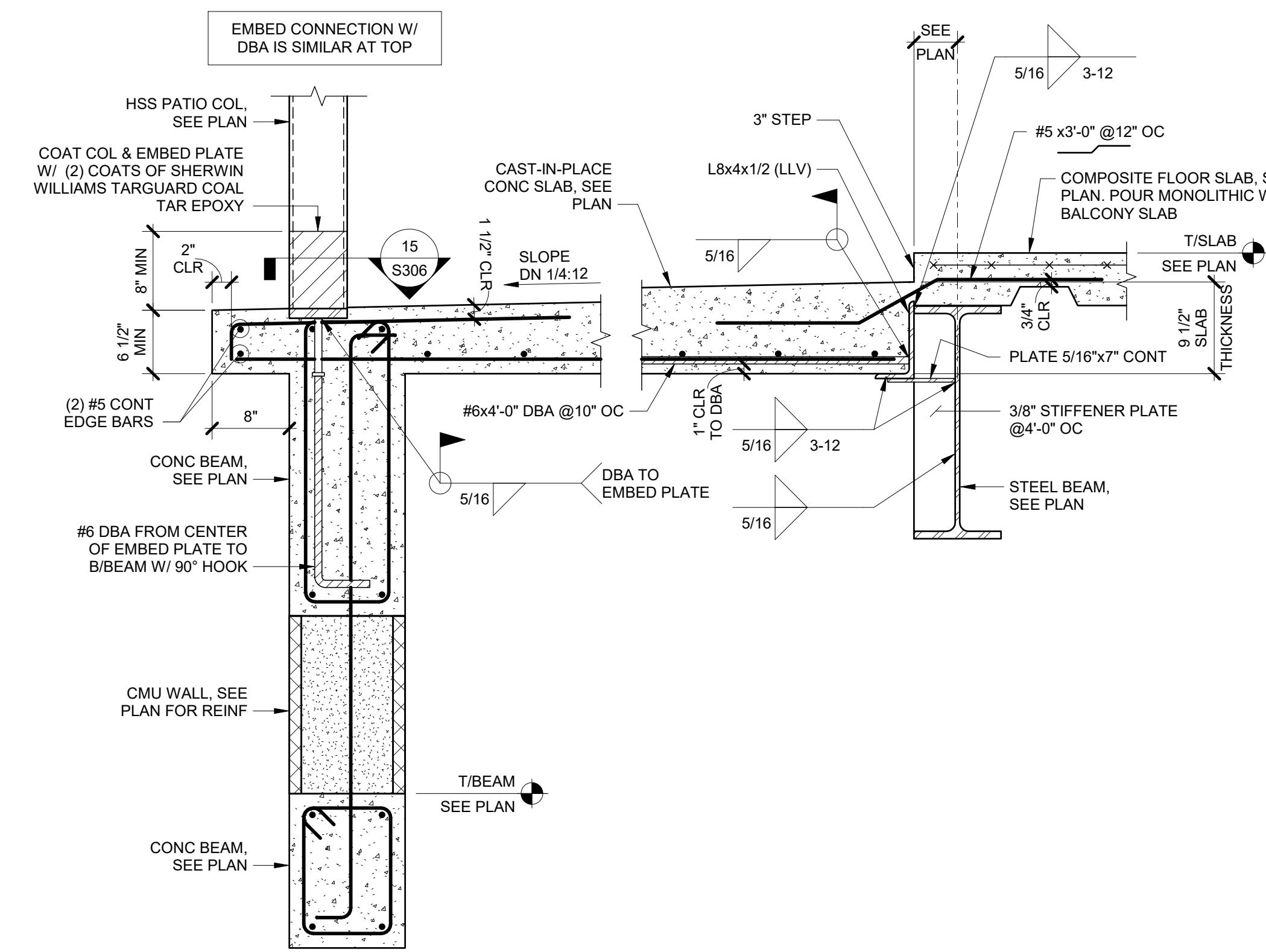
8 COMPOSITE DECK TO BEAM CONNECTION AT INTERIOR WALL



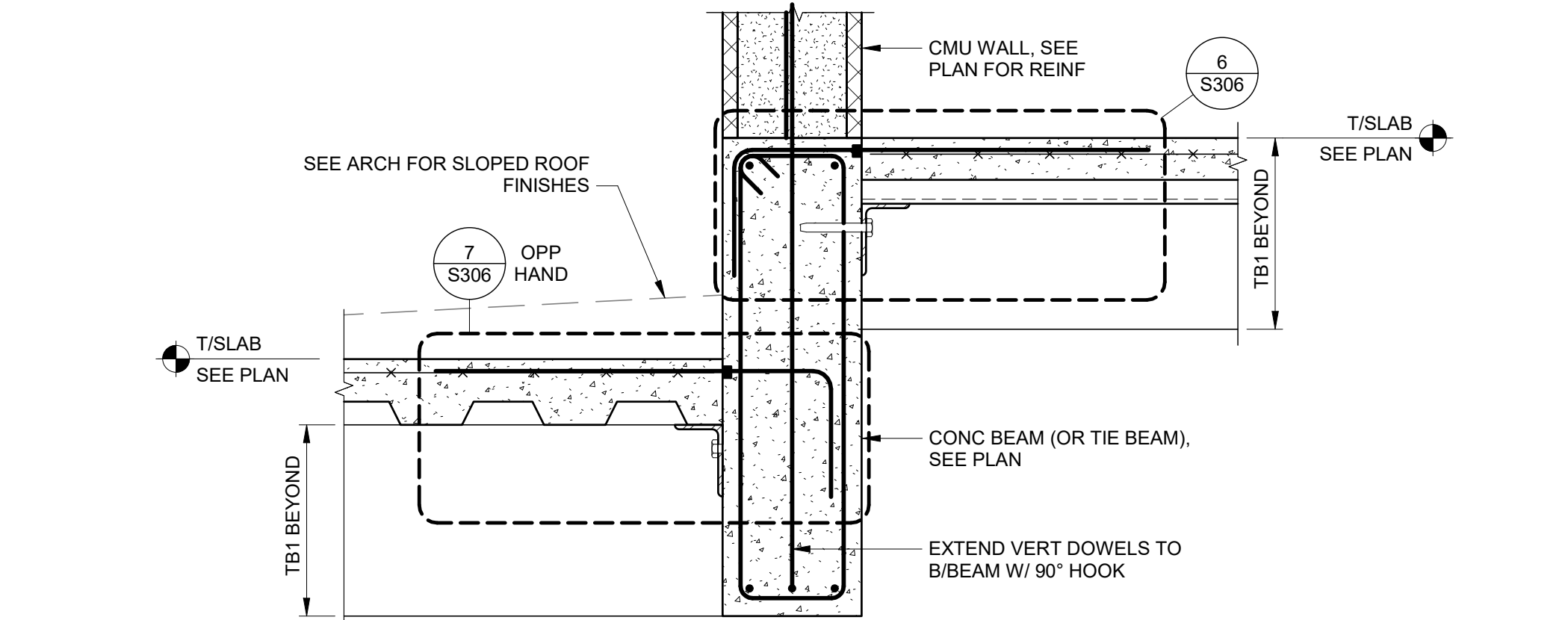
7 COMPOSITE DECK TO BEAM CONNECTION



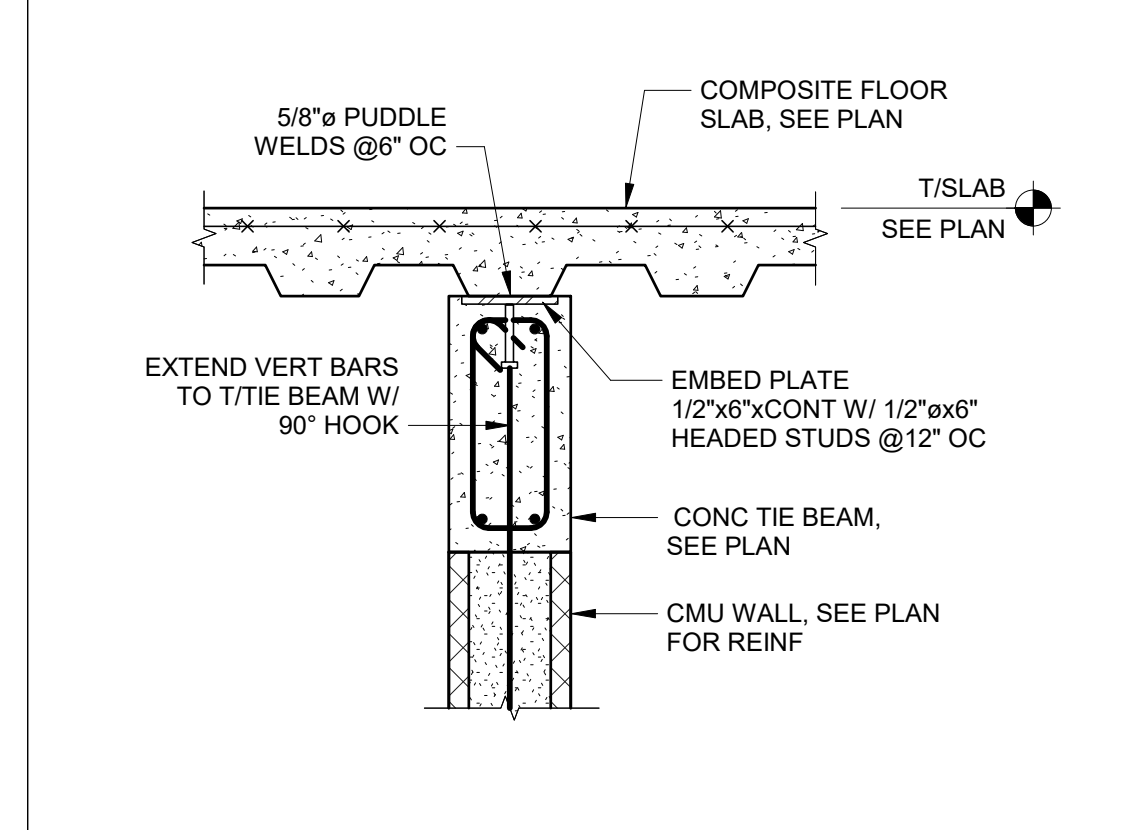
6 COMPOSITE DECK TO BEAM CONNECTION



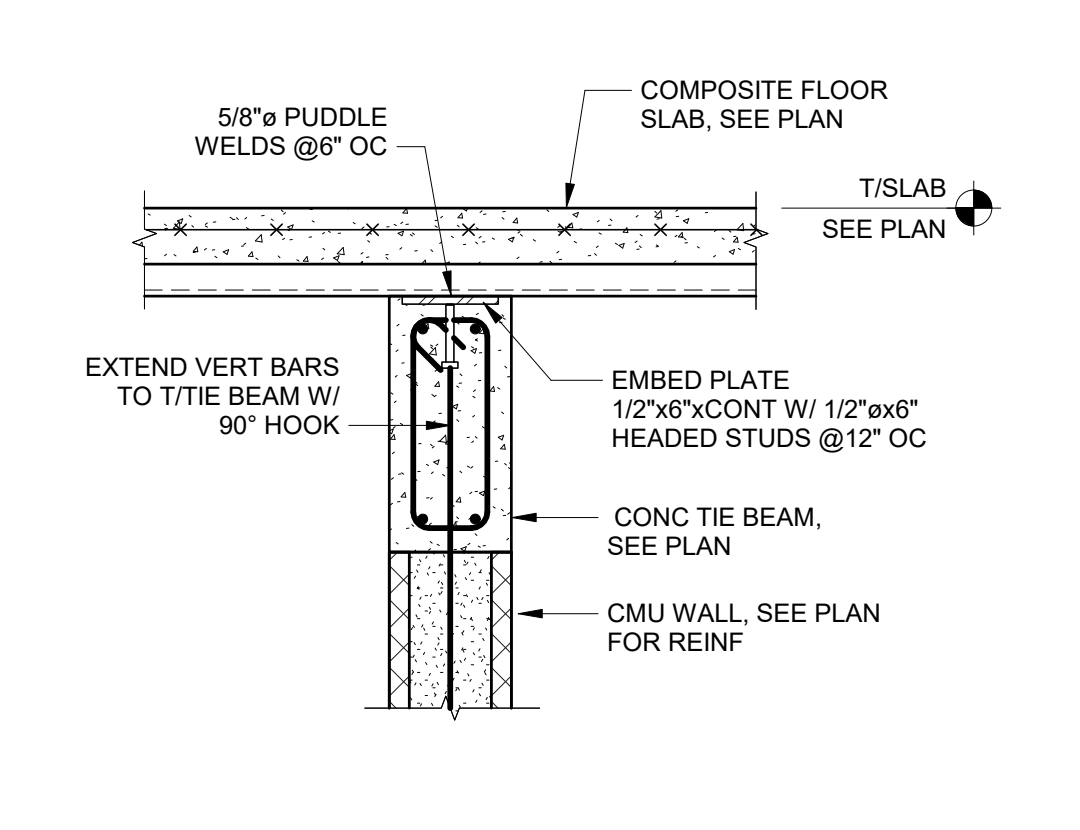
5 CAST-IN-PLACE PATIO SLAB TRANSITION



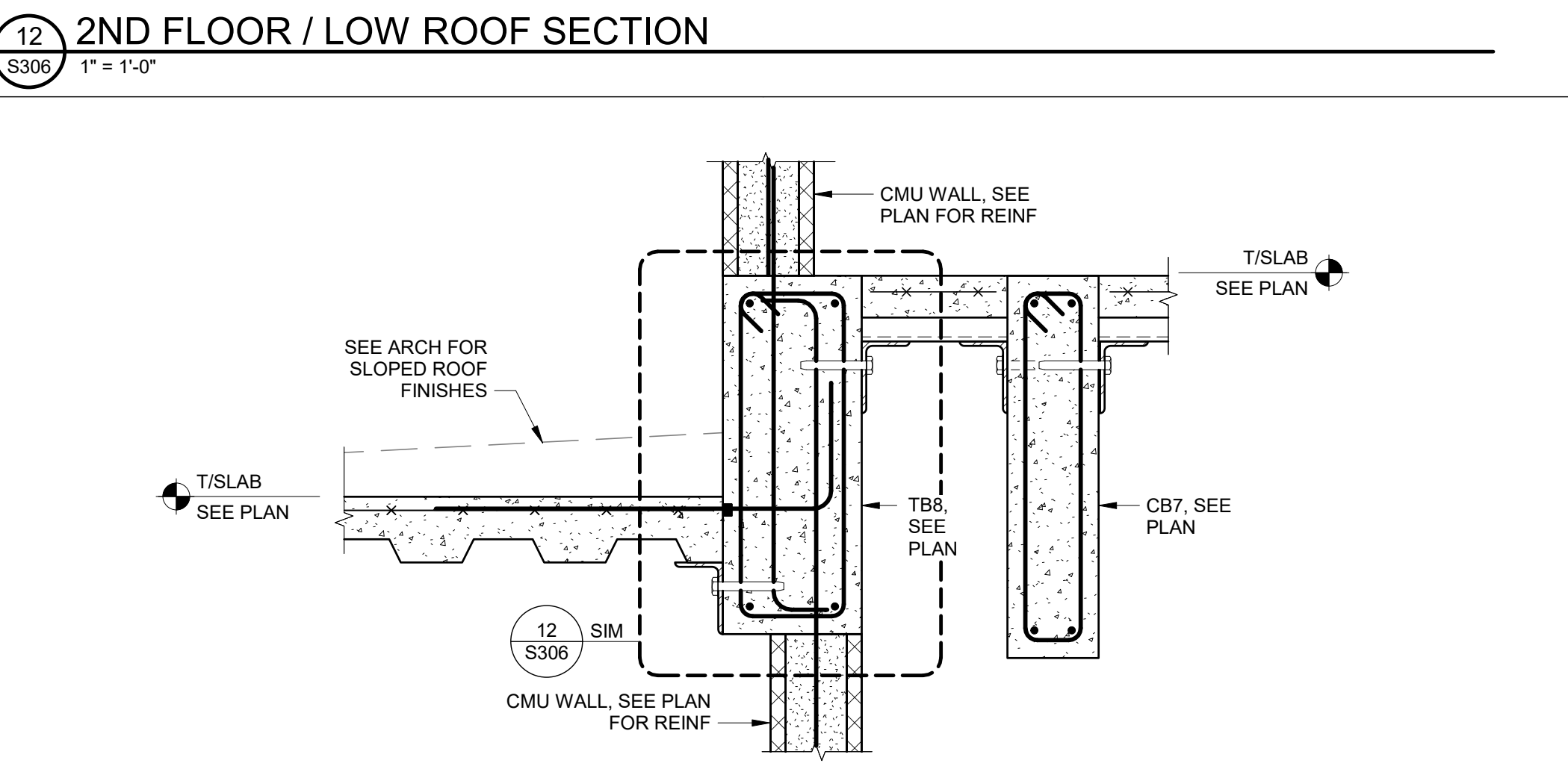
12 2ND FLOOR / LOW ROOF SECTION



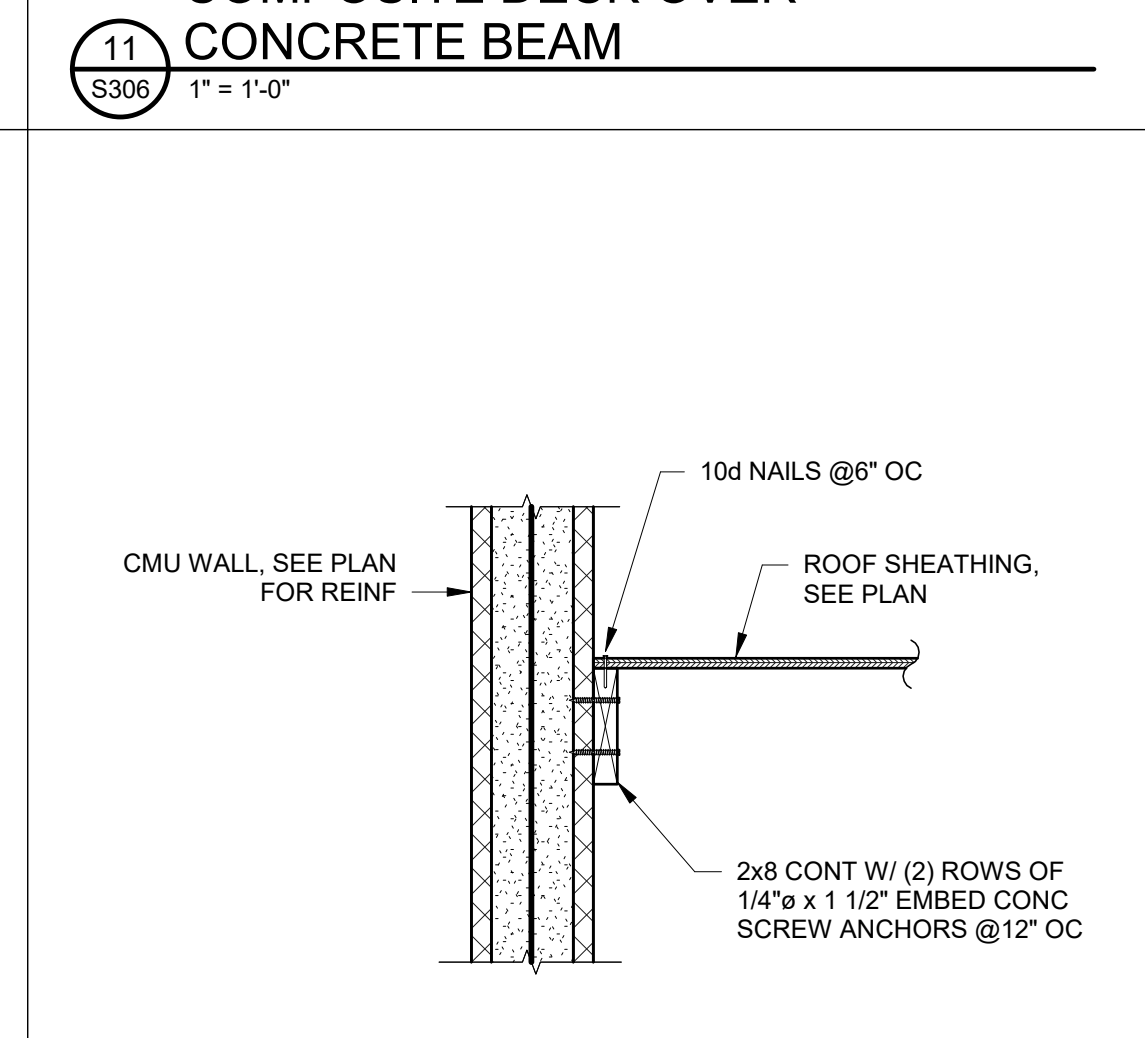
11 COMPOSITE DECK OVER CONCRETE BEAM



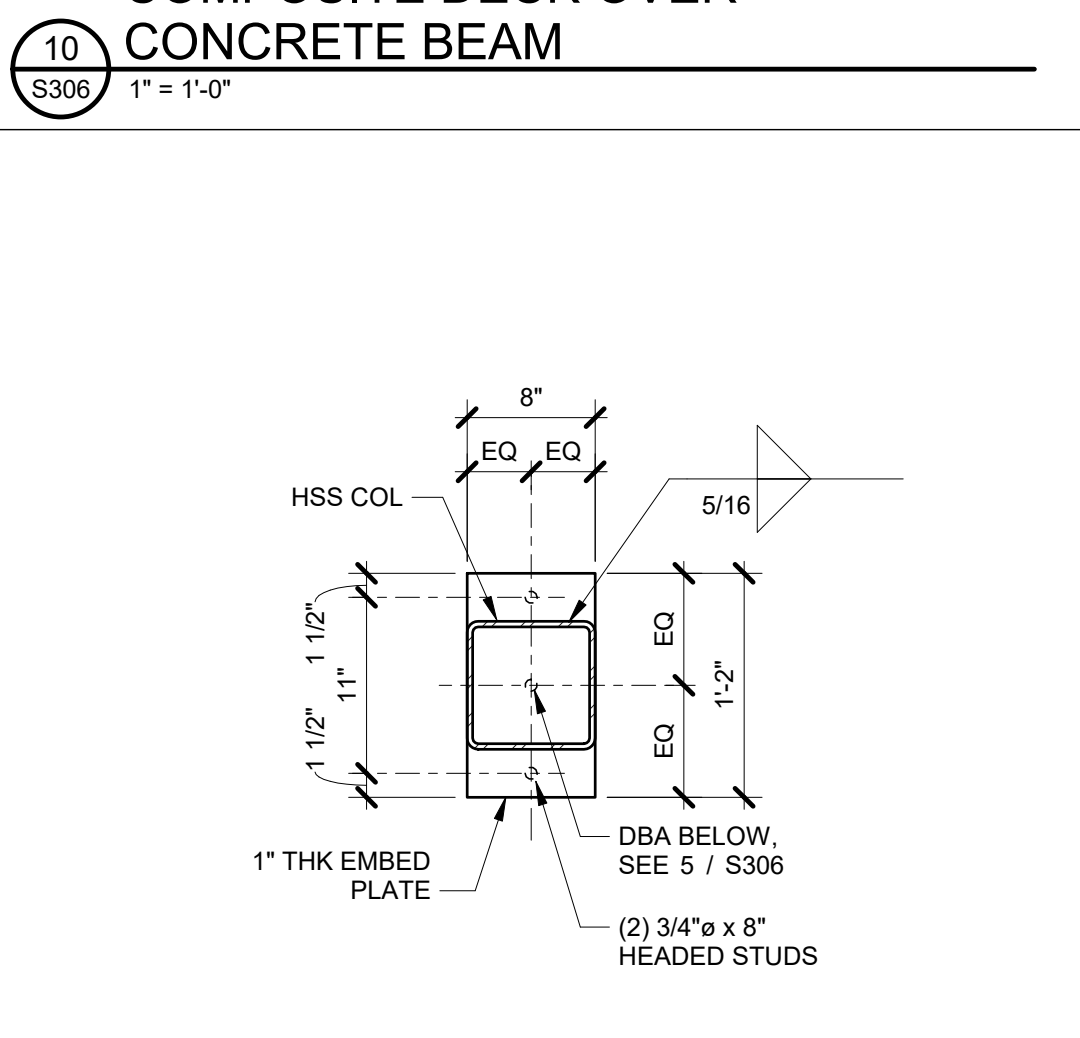
10 COMPOSITE DECK OVER CONCRETE BEAM



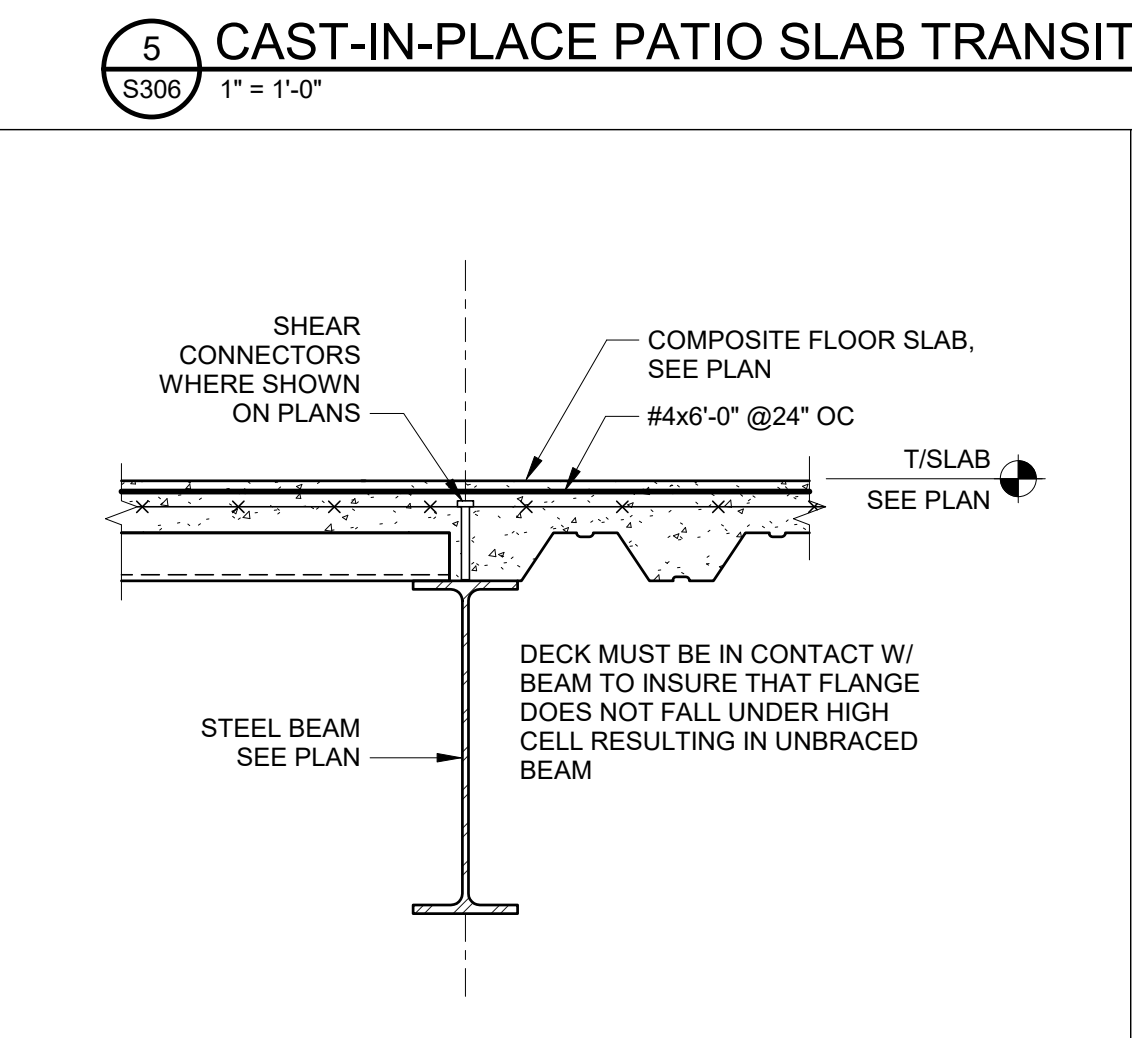
17 2ND FLOOR / LOW ROOF SECTION AT CMU BUMP-OUT



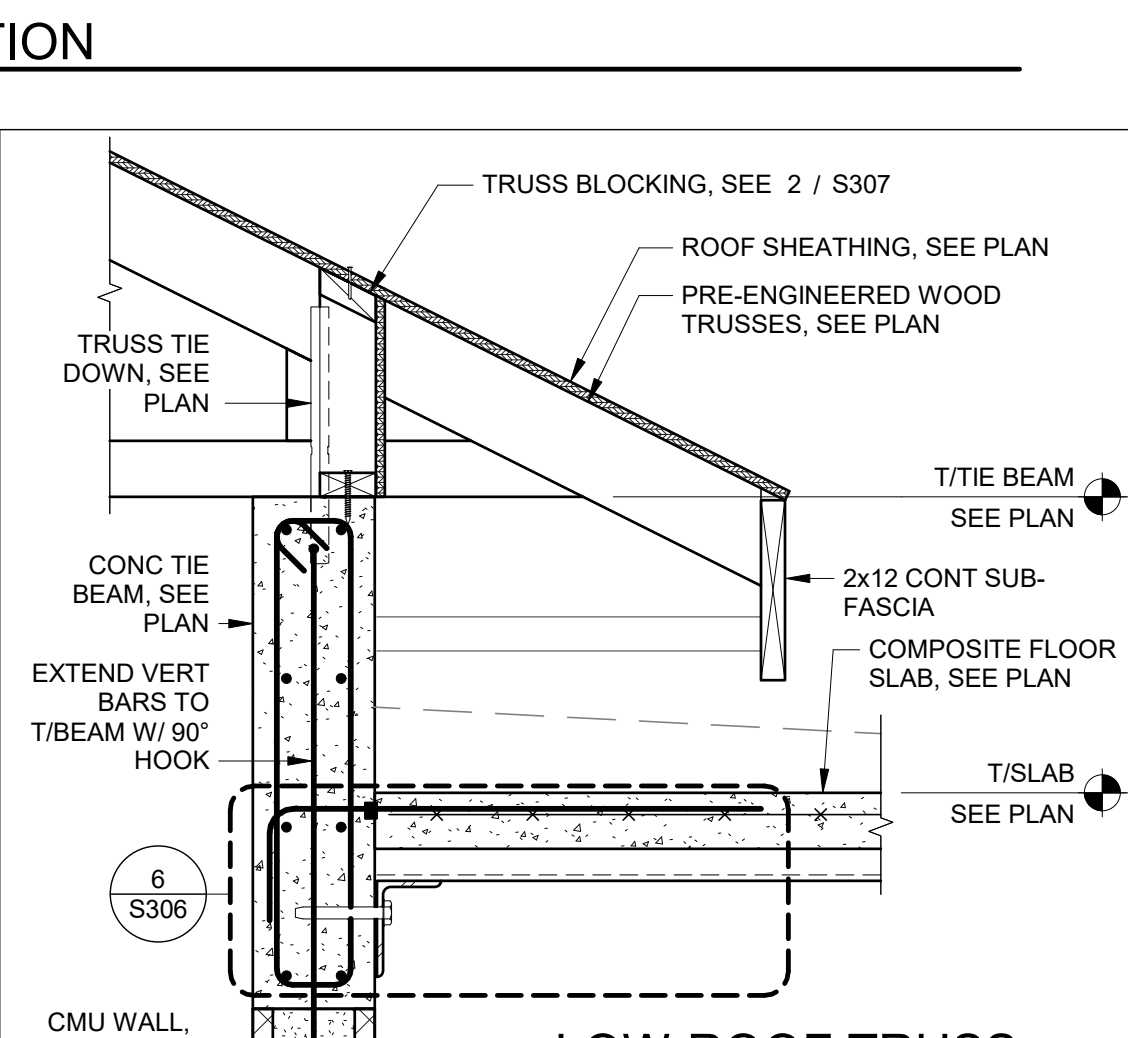
16 PT LEDGER AT MAIN ROOF



15 HSS PATIO COLUMN EMBED PLATE



14 DECK TRANSITION AT STEEL BEAM



13 LOW ROOF TRUSS FRAMING



SANIBEL FIRE AND RESCUE STATION 172

PROJECT LOCATION:
5171 SANIBEL CAPTIVA
SANIBEL, FLORIDA 33957



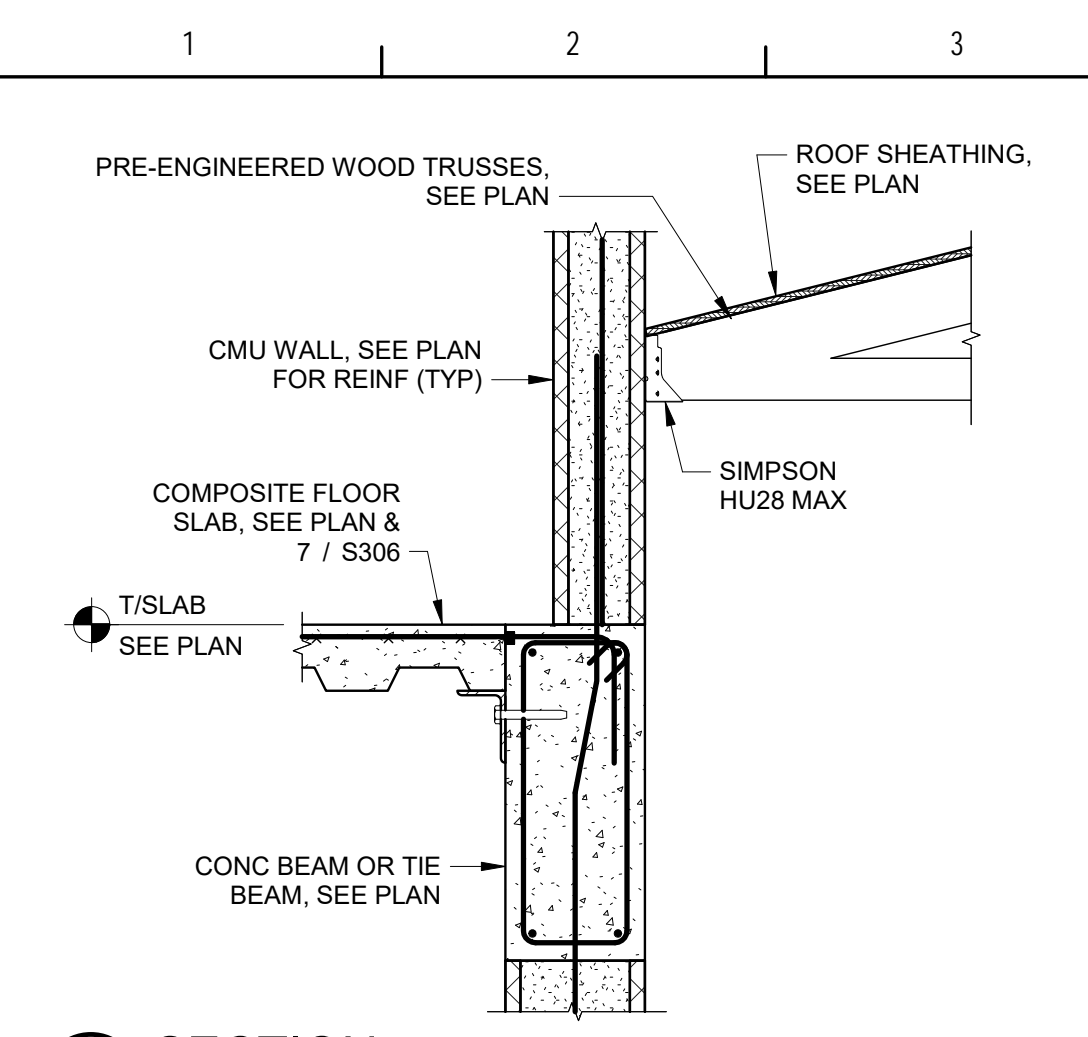
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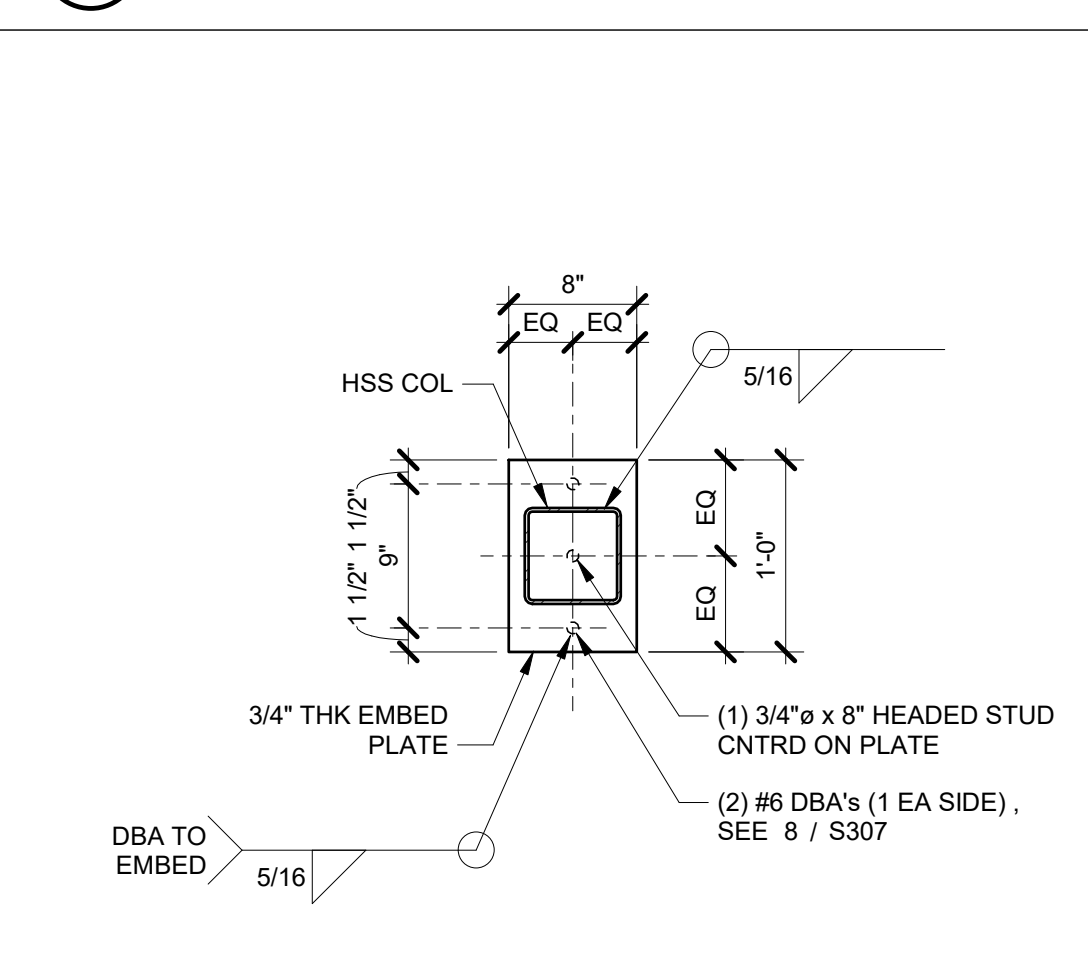
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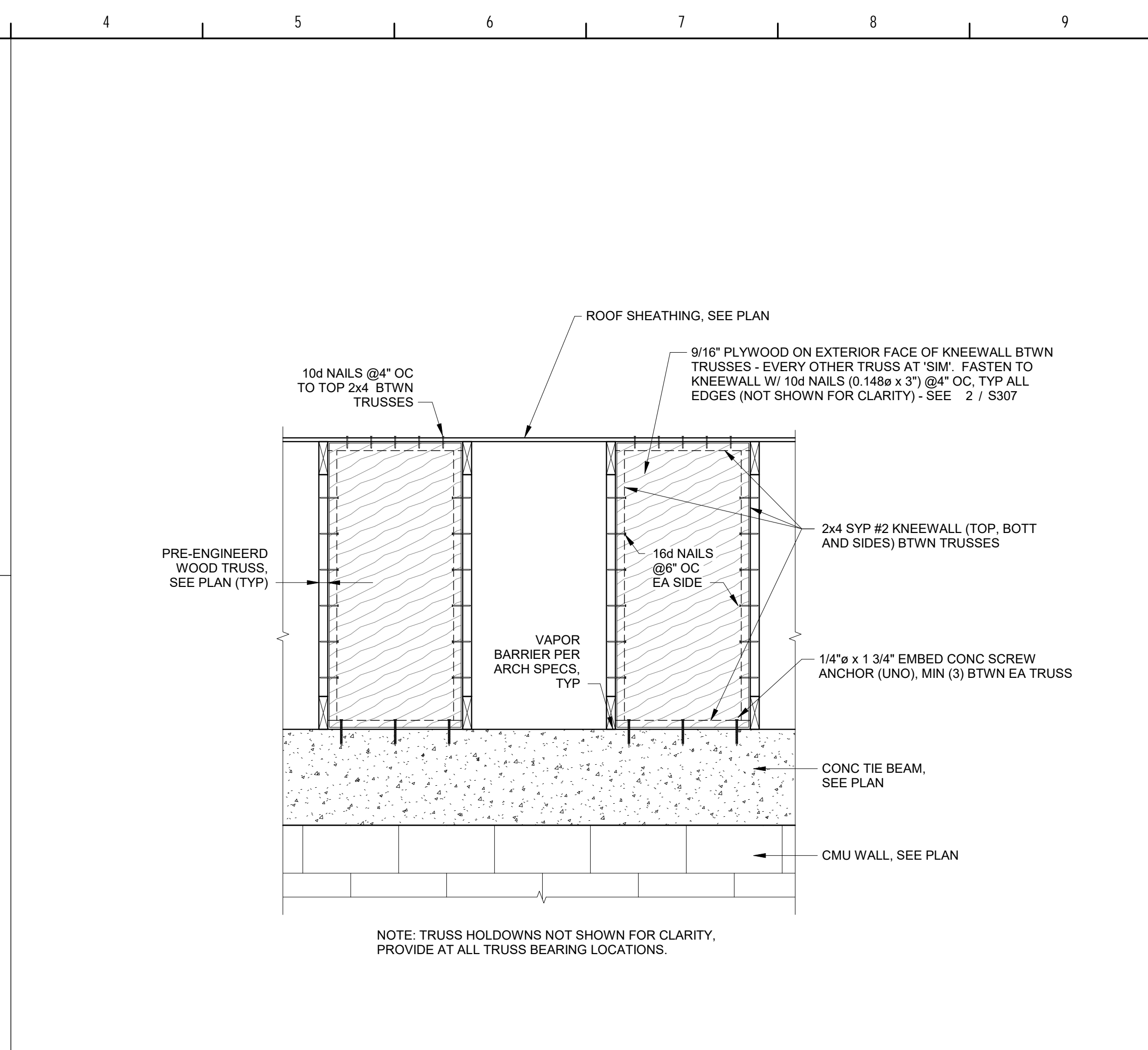
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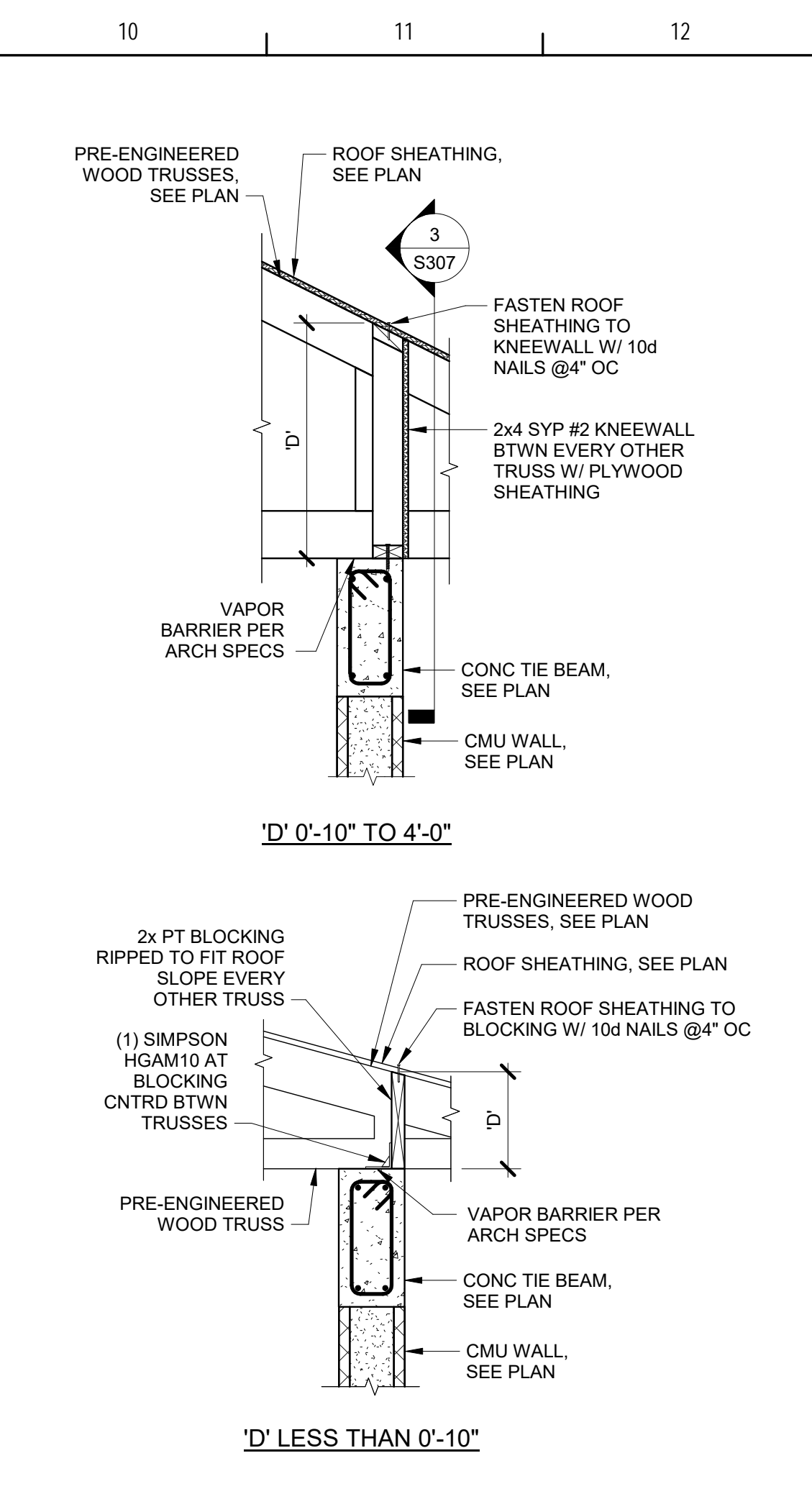
4 SECTION
S307 3/4" = 1'-0"



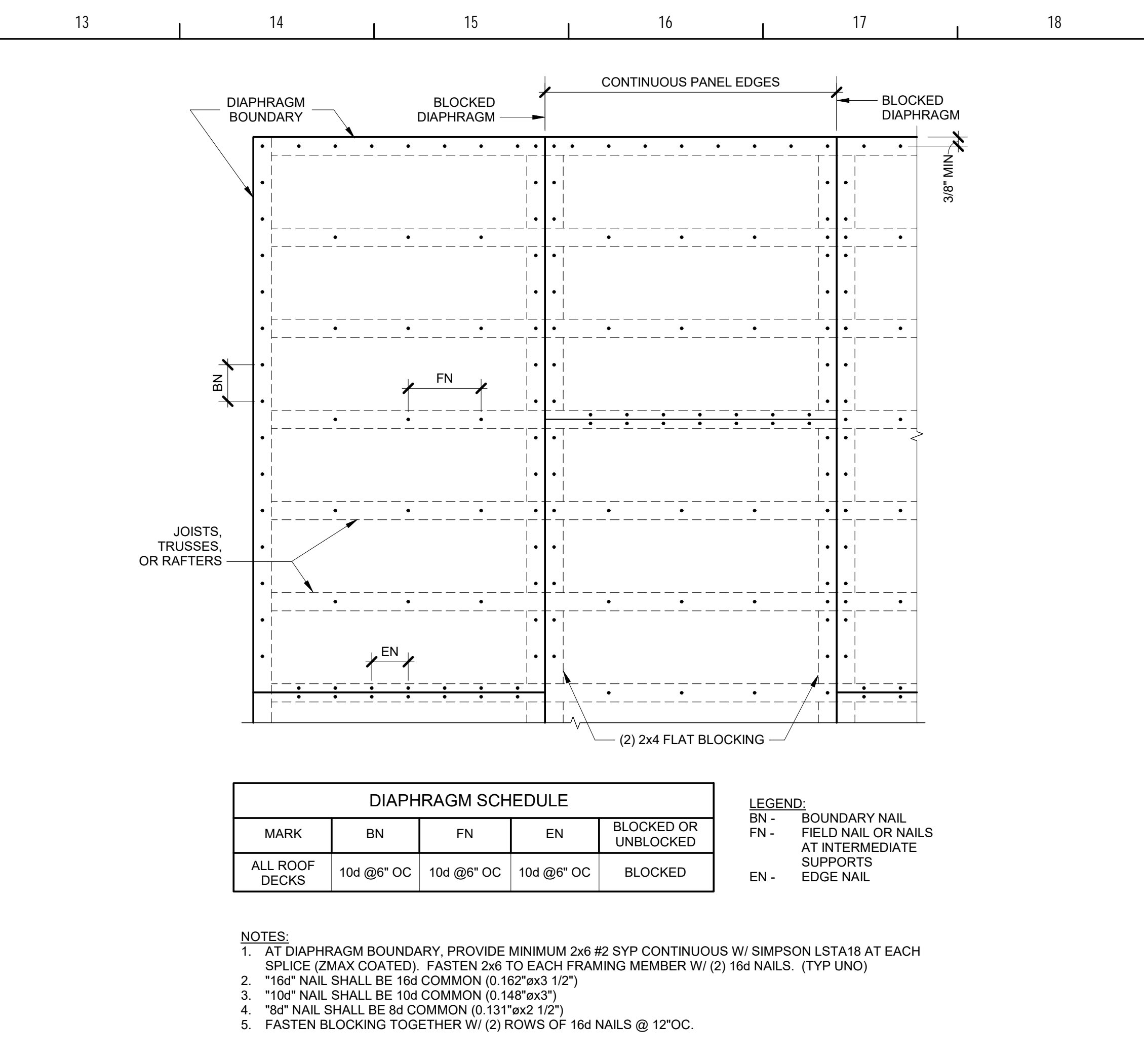
5 HSS TOWER COLUMN EMBED PLATE
S307 1" = 1'-0"



3 TRUSS BLOCKING SECTION
S307 3/4" = 1'-0"



2 TRUSS BLOCKING DETAILS
S307 3/4" = 1'-0"

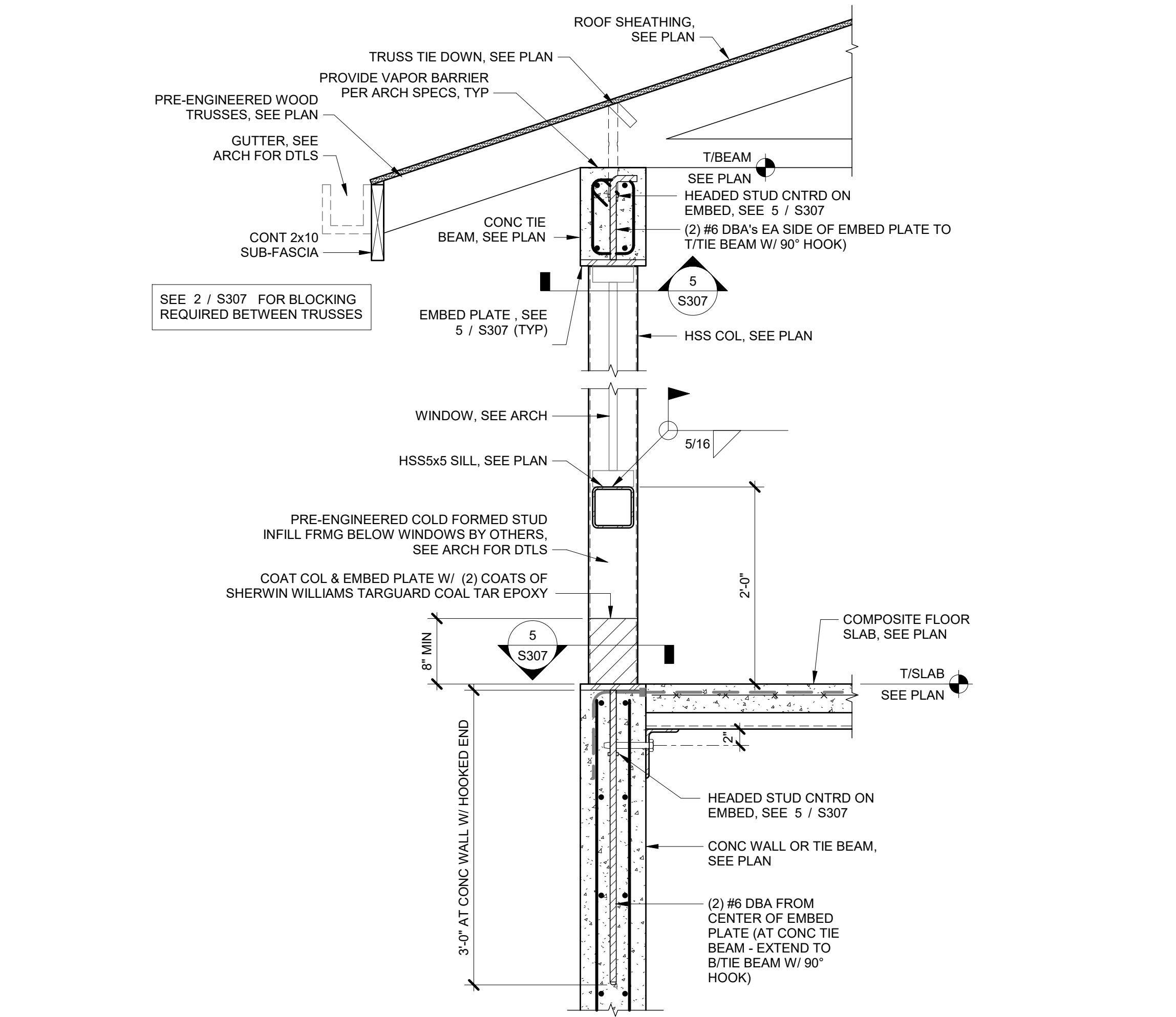


1 ROOF DIAPHRAGM NAILING
S307 3/4" = 1'-0"

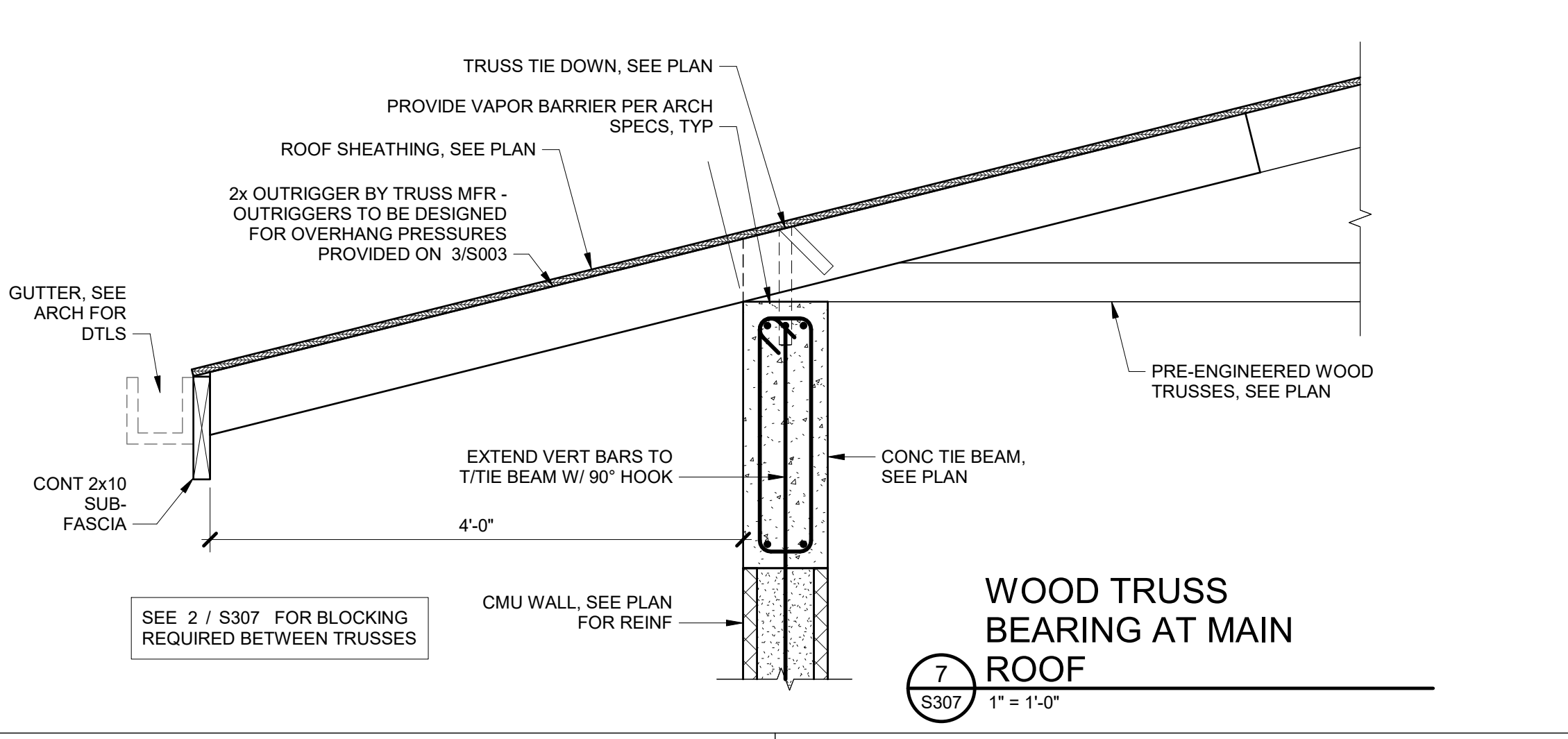
DIAPHRAGM SCHEDULE				
MARK	BN	FN	EN	BLOCKED OR UNBLOCKED
ALL ROOF DECKS	10d @ 6" OC	10d @ 6" OC	10d @ 6" OC	BLOCKED

LEGEND:
BN - BOUNDARY NAIL
FN - FIELD NAIL OR NAILS AT INTERMEDIATE SUPPORTS
EN - EDGE NAIL

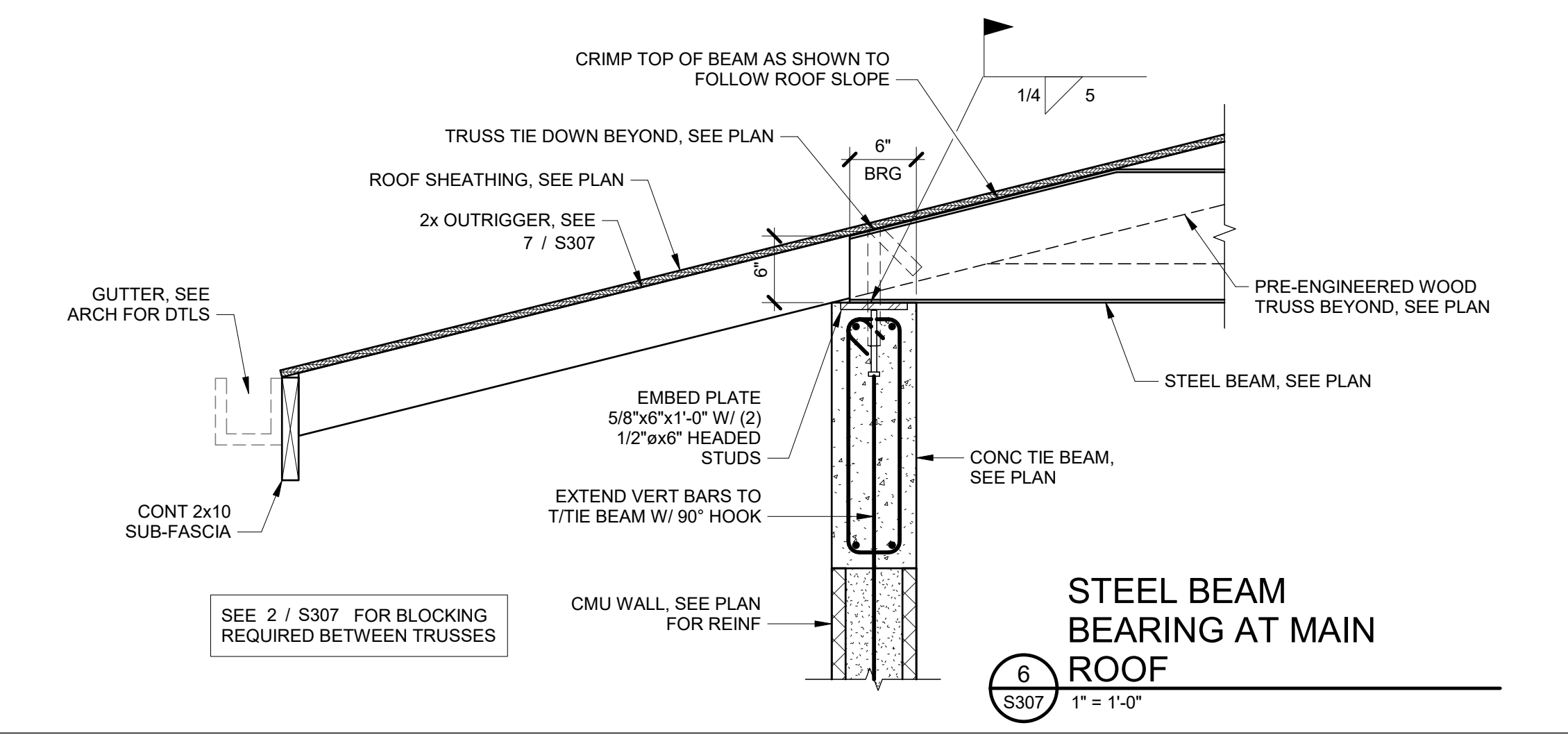
- NOTES:
- AT DIAPHRAGM BOUNDARY, PROVIDE MINIMUM 2x6 #2 SYP CONTINUOUS W/ SIMPSON LSTA18 AT EACH SPLICE (ZMAX COATED). FASTEN 2x6 TO EACH FRAMING MEMBER W/ (2) 16d NAILS. (TYP UNO)
 - 16d NAIL SHALL BE 16d COMMON (0.162"x3.12")
 - 10d NAIL SHALL BE 10d COMMON (0.148"x3")
 - 9d NAIL SHALL BE 9d COMMON (0.131"x2.12")
 - FASTEN BLOCKING TOGETHER W/ (2) ROWS OF 16d NAILS @ 12" OC.



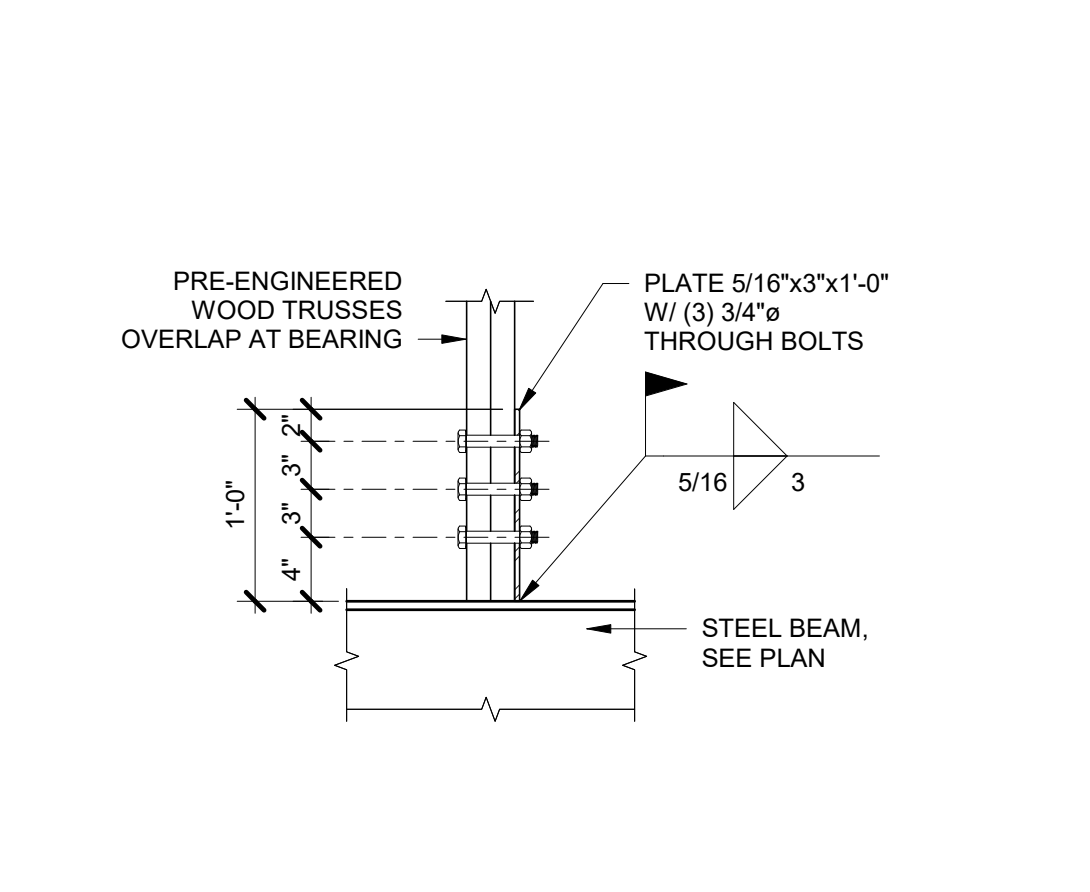
8 TOWER ROOF SECTION
S307 1" = 1'-0"



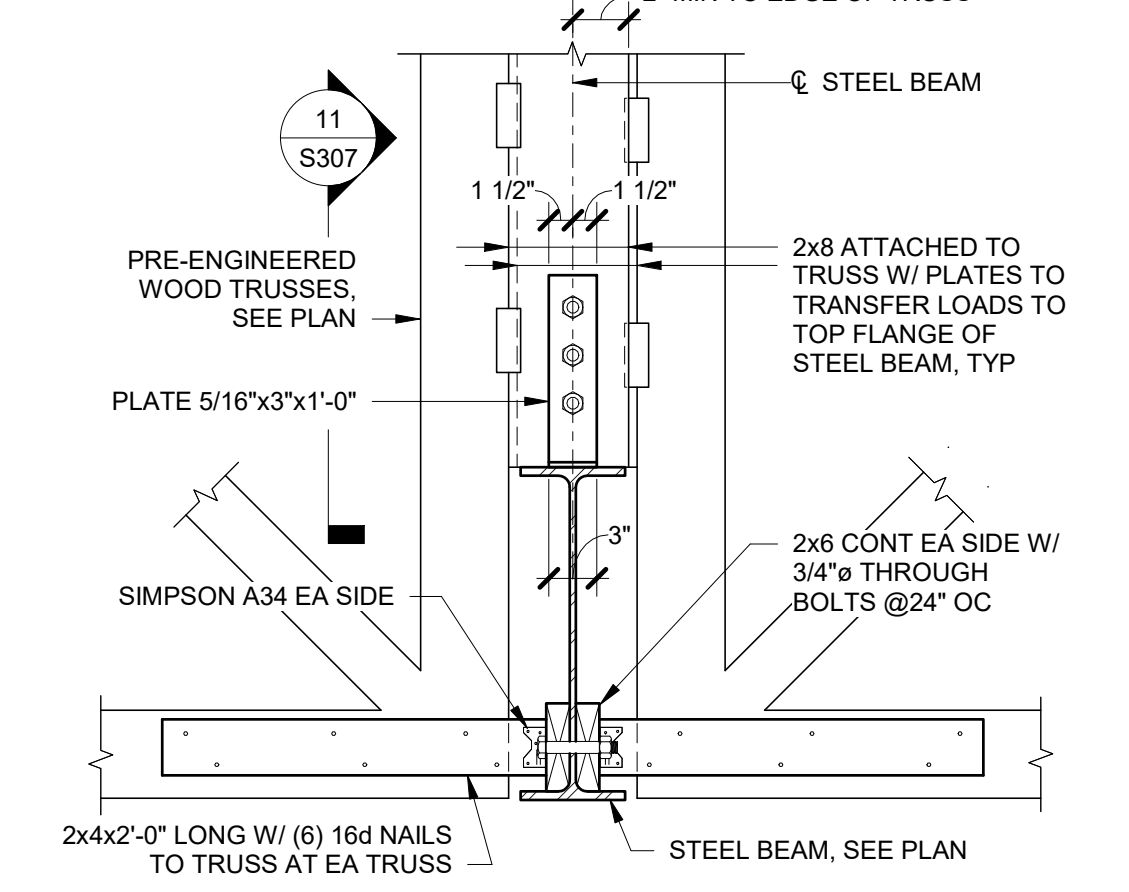
7 WOOD TRUSS BEARING AT MAIN ROOF
S307 1" = 1'-0"



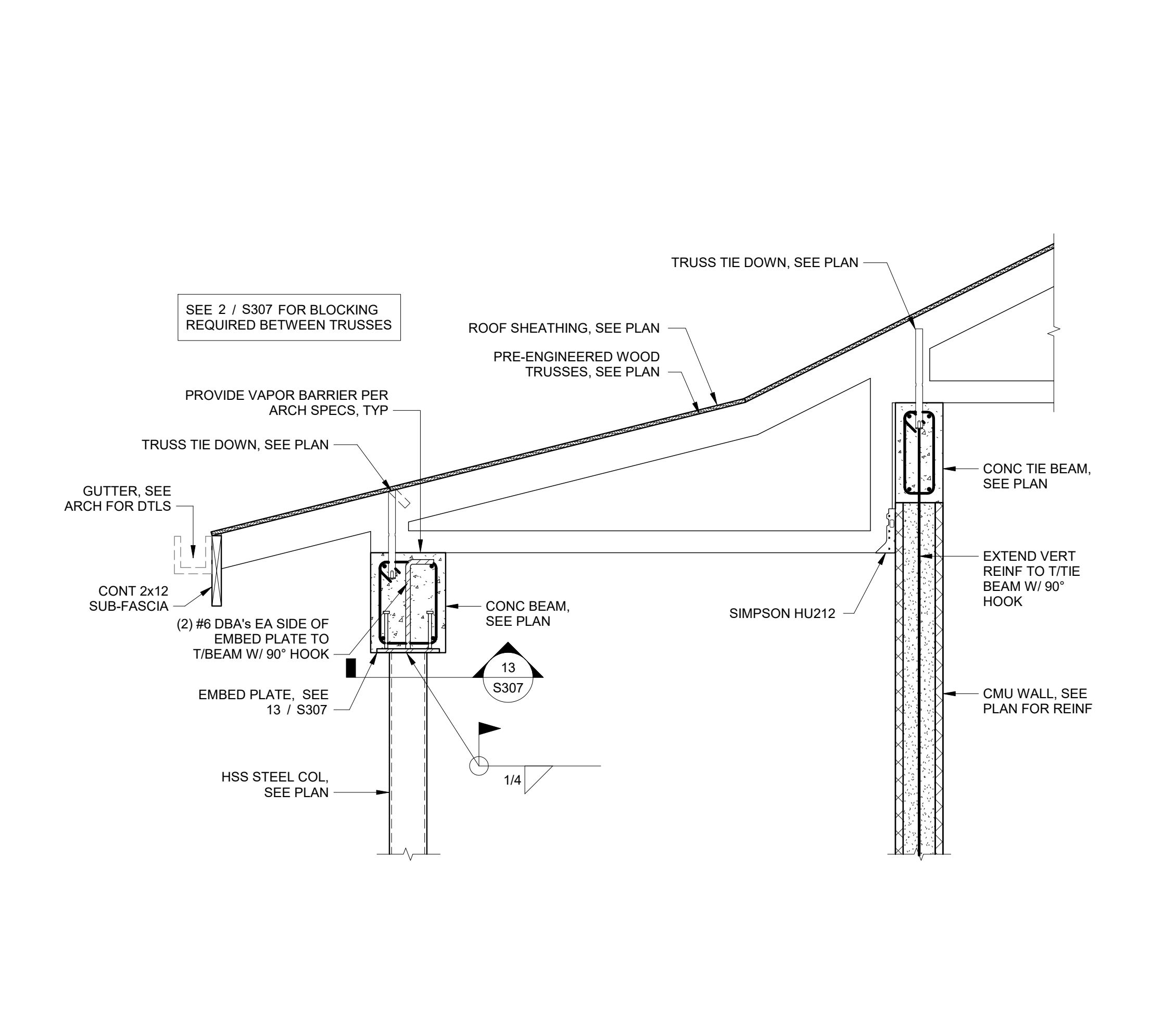
6 STEEL BEAM BEARING AT MAIN ROOF
S307 1" = 1'-0"



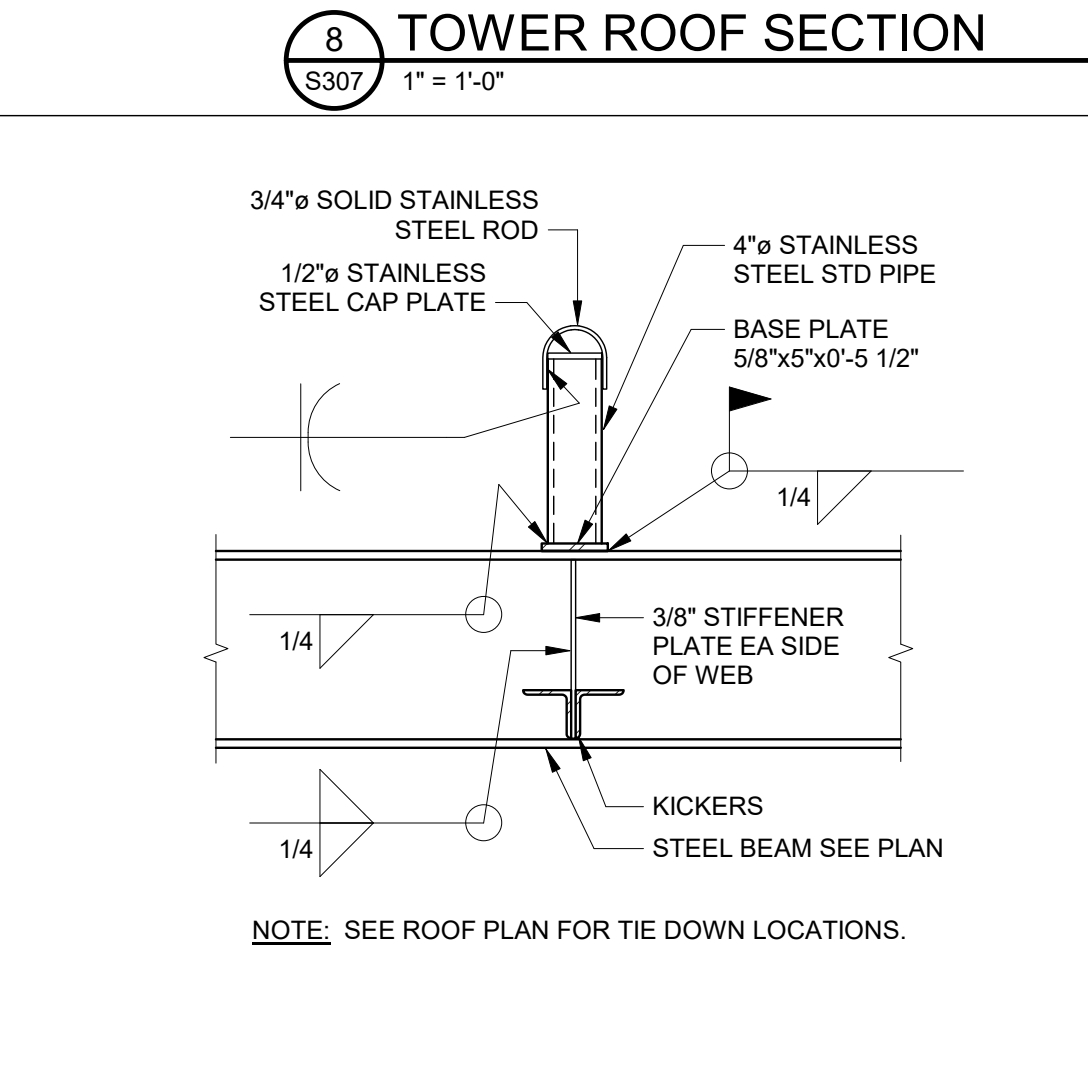
11 SECTION
S307 1" = 1'-0"



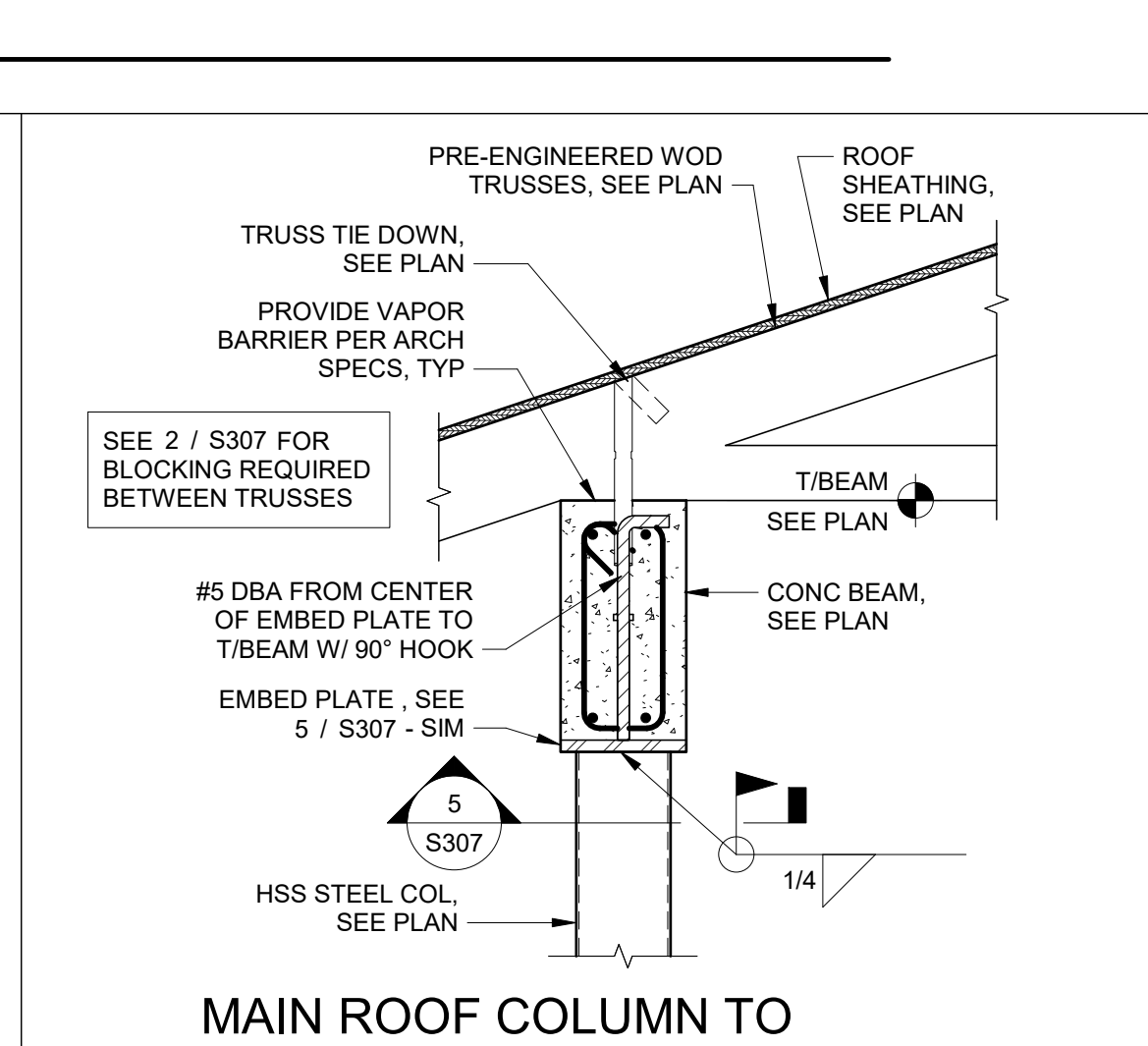
10 TRUSS CONNECTION TO STEEL BEAM
S307 1" = 1'-0"



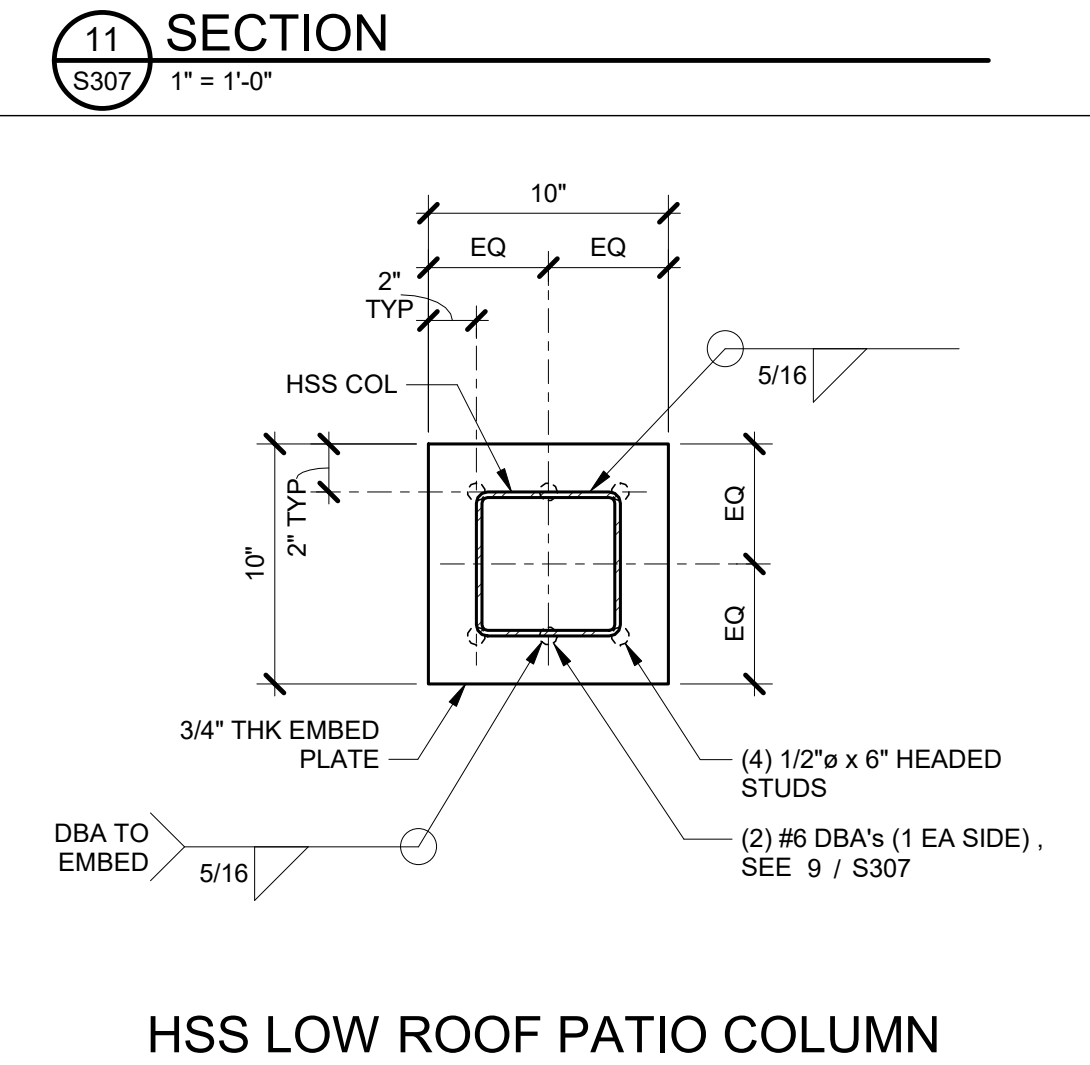
9 LOW ROOF PATIO COLUMN TO CONCRETE BEAM CONNECTION
S307 3/4" = 1'-0"



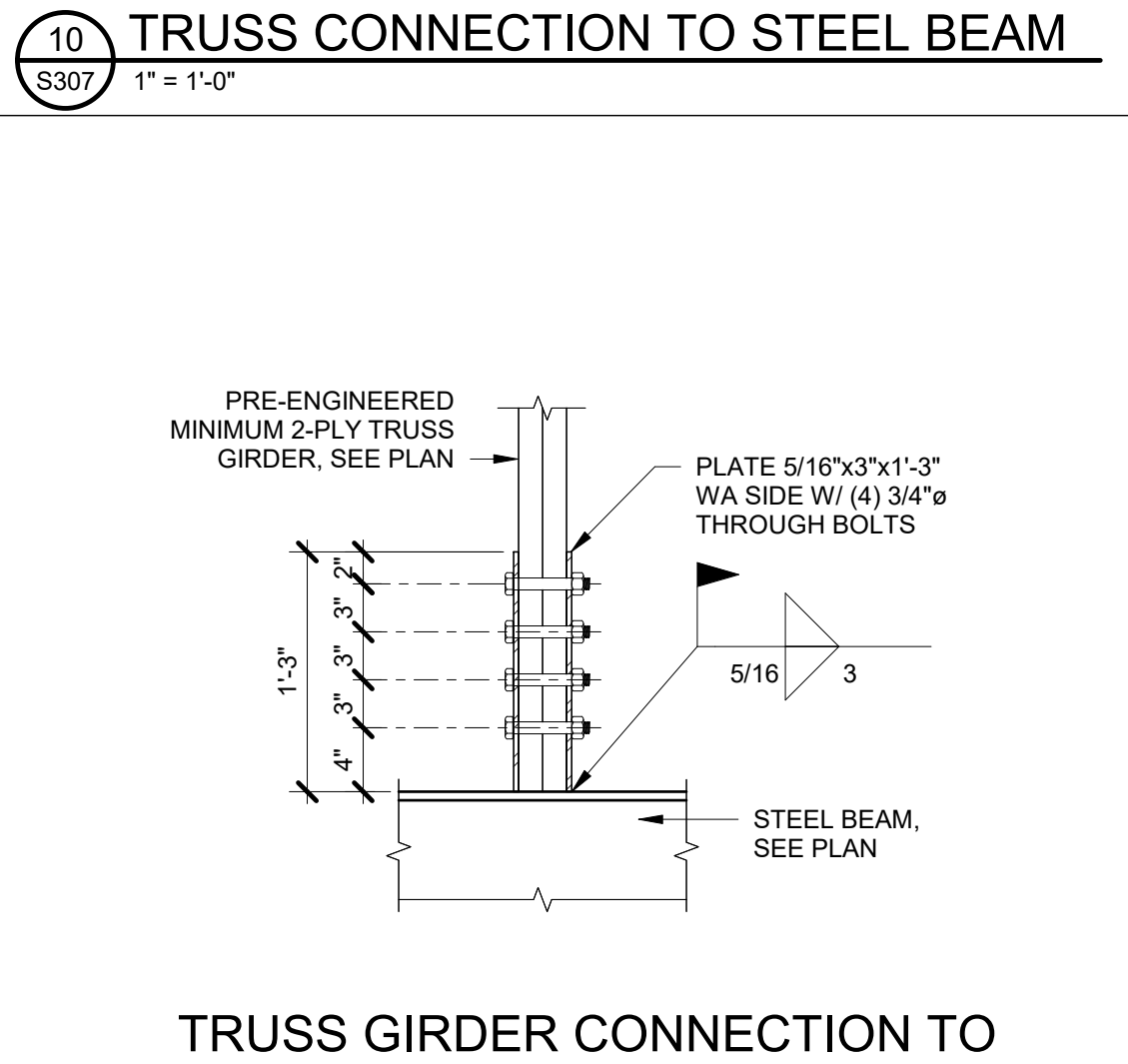
15 SAFETY ROPE TIE DOWN
S307 3/4" = 1'-0"



14 MAIN ROOF COLUMN TO CONCRETE BEAM CONNECTION
S307 1" = 1'-0"



13 HSS LOW ROOF PATIO COLUMN EMBED PLATE
S307 1 1/2" = 1'-0"

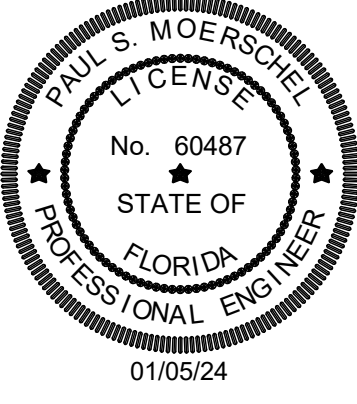


12 TRUSS GIRDER CONNECTION TO STEEL BEAM
S307 1" = 1'-0"

REVISIONS		
MARK	DESCRIPTION	DATE

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ROOF SECTIONS & DETAILS

S307

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STATION 172**

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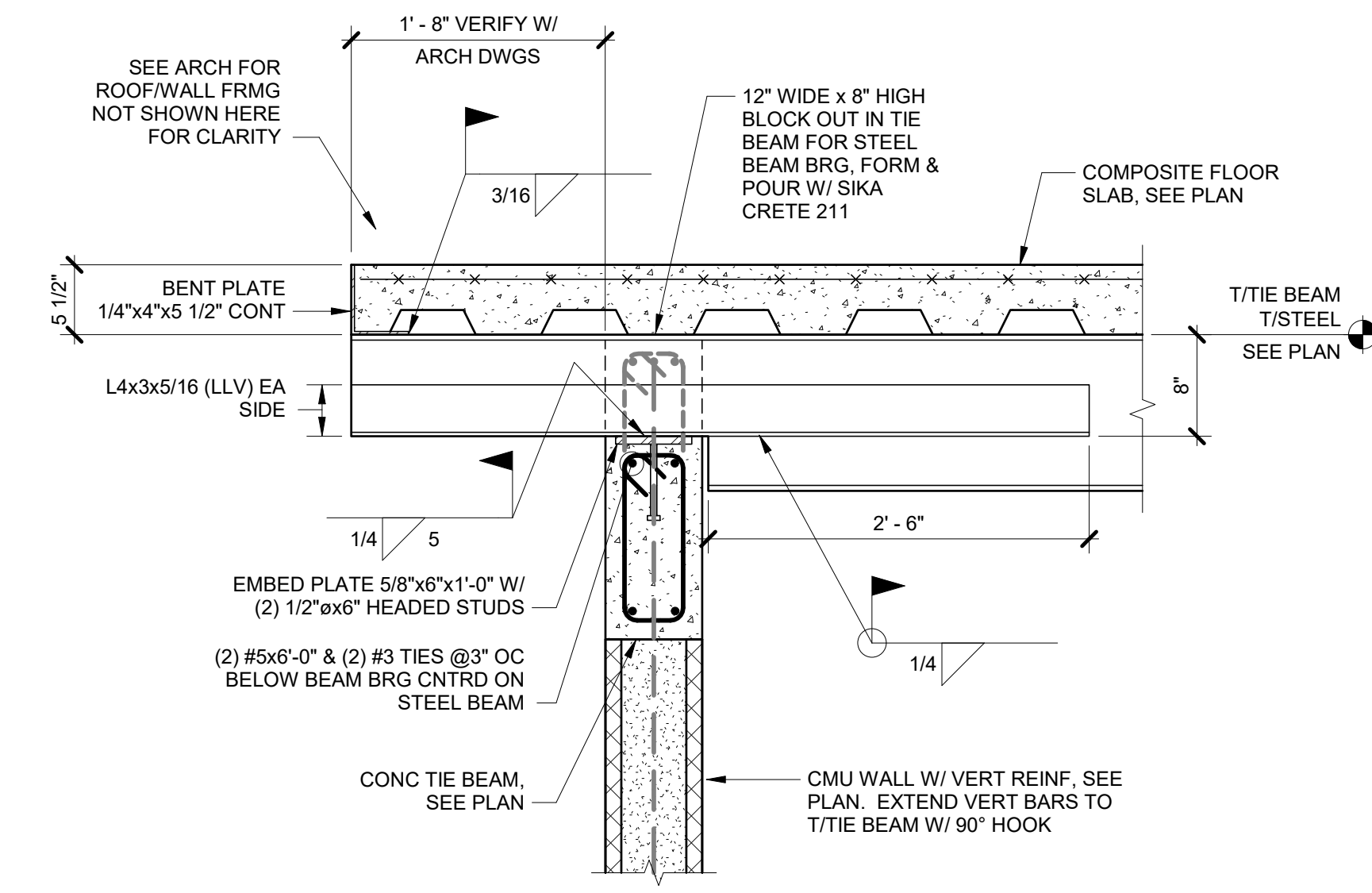
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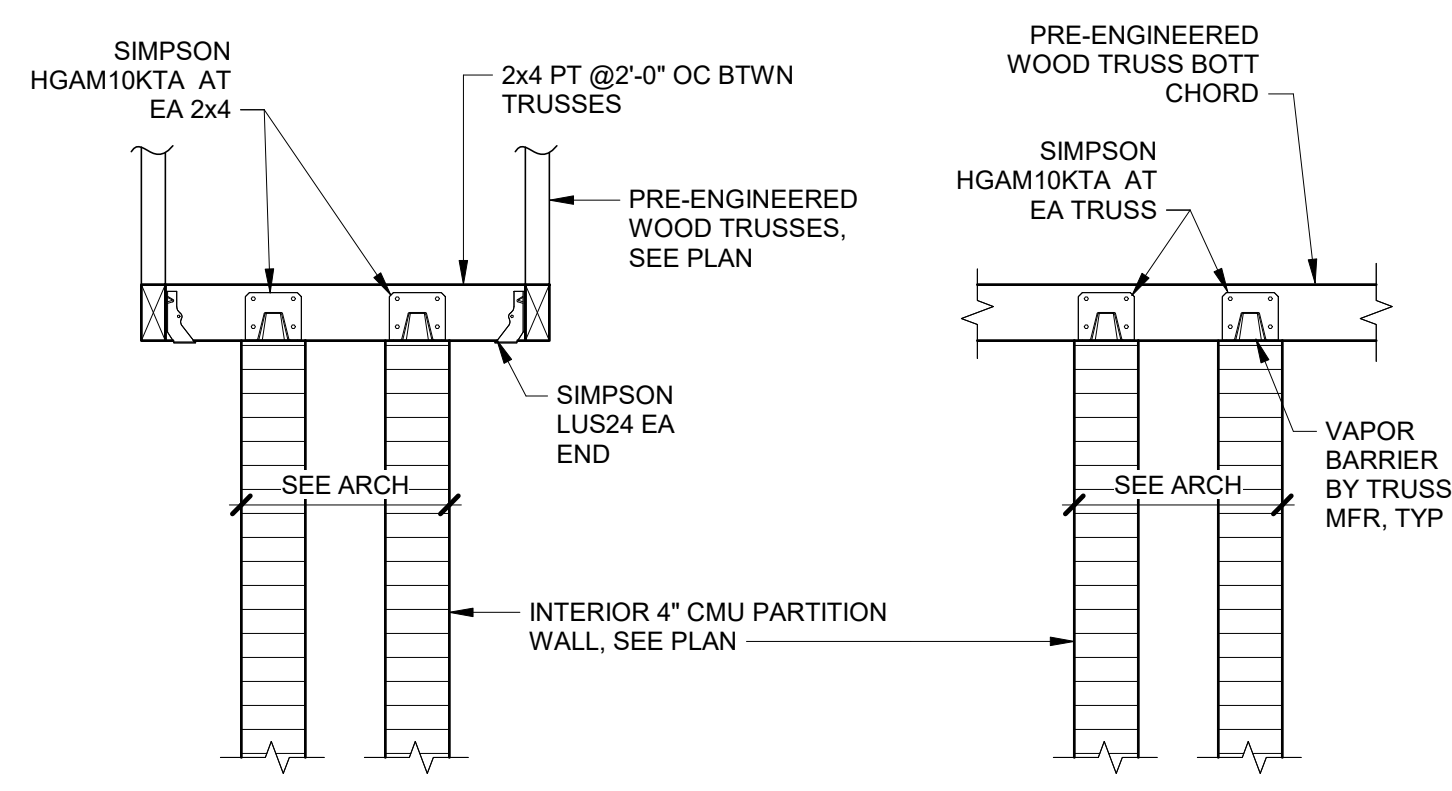
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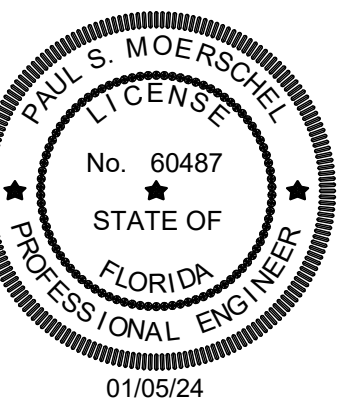
1 STEEL BEAM BEARING AT CONCRETE BEAM
1" = 1'-0"



2 INTERIOR PARTITION WALL BRACING DETAILS
1" = 1'-0"

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SECTIONS AND DETAILS

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