STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
ARCH.	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVG.	AVERAGE
AWS	AMERICAN WELDING SOCIETY
BLDG.	BUILDING
BM	BEAM
BP	BEARING PLATE;BASE PLATE
BRG.	BEARING
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CMU	CONCRETE MASONRY UNIT
CGS	CENTER OF GRAVITY OF STEEL
CL.	CENTERLINE
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CTR.	CENTER
DCJ	DOWELED CONTROL JOINT
DJ	DOUBLE JOIST
DS	DOWN SPOUT
DBL.	DOUBLE
DET.	DETAIL
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DL	DEAD LOAD
DN	DOWN
DWG(S).	DRAWING(S)
E.F.	EACH FACE
E.S.	EACH SIDE
E.W.	EACH WAY
E-W	EAST-WEST
EA.	EACH
ELEV.	ELEVATION; ELEVATOR
ENGR.	ENGINEER
EQ.	EQUAL
EXIST.	EXISTING
EXP. JT.	EXPANSION JOINT
EXT.	EXTERIOR
FD	FLOOR DRAIN
FF	FAR FACE
FDN.	FOUNDATION
FIN.	FINISH
FL.	FLOOR
FLG.	FLANGE
FOB	FACE OF BRICK
FT.	FOOT; FEET
FTG.	FOOTING

GB	GRADE BEAM
GA.	GAGE; GAUGE
GALV.	GALVANIZED
HM	HOLLOW METAL
HS	HIGH STRENGTH
HEX. HD.	HEXAGONAL HEAD
HSS	HOLLOW STRUCTURAL SHAPE
HT.	HEIGHT
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH;INCHES
IBC	INTERNATIONAL BUILDING CODE
INT.	INTERIOR;INTERSECTION
JST.	JOIST
JT.	JOINT
K or k	KIP (1,000 LBS.)
K/FT	KIPS PER FOOT
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LW	LONG WAY
LB.	POUND
LG.	LONG
LIN.	LINEAR
LL	LIVE LOAD
LT. WT.	LIGHT WEIGHT
MOS	MIDDLE OF SLAB
MOW	MIDDLE OF WALL
MATL.	MATERIAL
MAX.	MAXIMUM
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MK	MARK
N/A	NOT APPLICABLE
N.F.	NEAR FACE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
N-S	NORTH-SOUTH
NCSBC	NORTH CAROLINA STATE BUILDING CODE
NO.	NUMBER
NOM.	NOMINAL
O/C	ON CENTER
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG.	OPENING
OPP.	OPPOSITE
OH	OPPOSITE HAND
ORIG.	ORIGINAL
P/S	PRESTRESSED
P/T	POST-TENSIONING
PC	PRECAST CONCRETE
PCI	PRESTRESSED CONCRETE INSTITUTE
PEN.	PENETRATION
PERP.	PERPENDICULAR
PJP	PARTIAL JOINT PENTRATION
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH

PT	PRESSURE TREATED
PTI	POST-TENSIONING INSTITUTE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RAD.	RADIUS
REF.	REFERENCE
REINF.	REINFORCE(D); REINFORCING
REM.	REMAINING; REMAINDER
REQ'D.	REQUIRED
SJ	SAWED JOINT
S.S.	STAINLESS STEEL
SW	SHORT WAY
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SJI	STEEL JOIST INSTITUTE
SLBB	SHORT LEGS BACK TO BACK
SLO	SHORT LEG OUTSTANDING
SOG	SLAB ON GRADE
SPEC(S).	SPECIFICATION(S)
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURAL
SYM.	SYMMETRICAL
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF SLAB; TOP OF STEEL
TOW	TOP OF WALL
T&B	TOP AND BOTTOM
TEMP.	TEMPORARY
THRU	THROUGH
TYP.	TYPICAL
U.L.	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
W/O	WITHOUT
W/	WITH
WM	WOLMANIZED
WP	WORKING POINT
WWF	WELDED WIRE FABRIC
x	BY

SYMBOLS WITHIN TEXT

≈	APPROX. EQUAL
∠	ANGLE
℄	CENTERLINE
Δ	DELTA
≡	IDENTITY/EXACTLY EQUAL
≠	NOT EQUAL
#	NUMBER
Ω	OHM / OMEGA

SYMBOLS WITHIN NUMBERS

$\#^3$	CUBED
°	DEGREE(S)
∅	DIAMETER
±	PLUS/MINUS
$\#^2$	SQUARED

MATERIALS AND SYMBOLS LEGEND

PLAN SYMBOLS

- TOP OF CONC. (TOC) OR DECK ELEVATION
- SPOT ELEVATION: WORKING POINT (WP)
- NOTE MARKER (SEE NOTES)
- CONNECTION TYPE
- COLUMN DESIGNATION (SEE SCHEDULE)
- REPAIR TYPE
- REVISION MARK

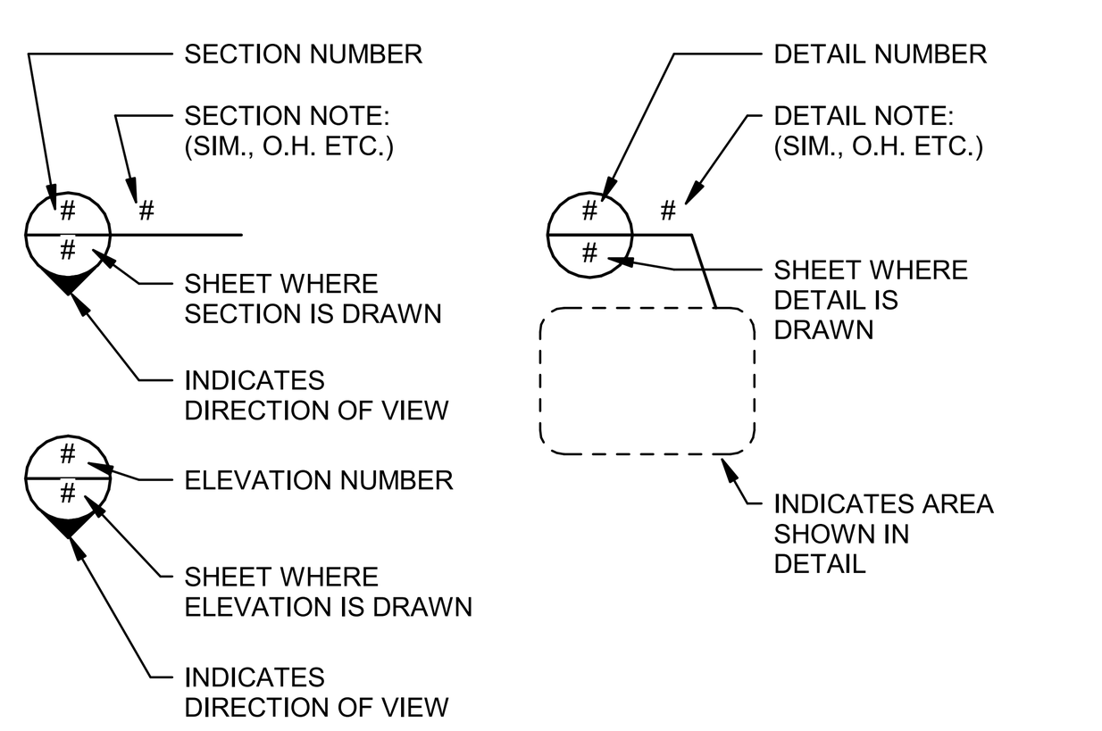
SCHEDULED ITEMS

B...	COLUMN BASE PLATE
BP...	BEAM BEARING PLATE
C...	COLUMN
CB...	CONCRETE BEAM
CG...	CONCRETE GIRDER
CJ...	CONCRETE JOIST
CP...	CONCRETE PIER
DP...	DRILLED PIER
F....	SPREAD FOOTING
GB...	GRADE BEAM
L...	LINTEL
MF...	MAT FOOTING
MP....	MASONRY PIER
PC...	PILE CAP
PTB...	POST-TENSIONED CONC. BEAM
PTS...	POST-TENSIONED CONC. SLAB
S...	ELEVATED SLAB
SG...	SLAB-ON-GRADE
WF...	WALL FOOTING
WR....	RETAINING WALL FOOTING

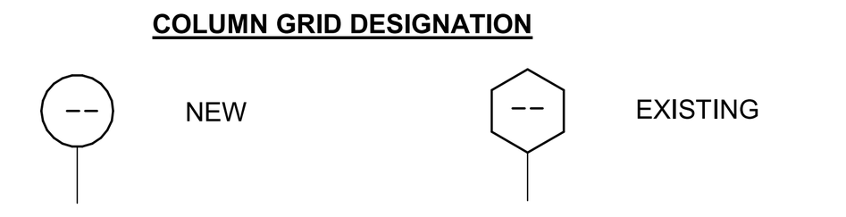
MATERIALS

- BRICK (SECTION)
- BRICK (ELEVATION)
- CONCRETE (SECTION)
- CMU (SECTION)
- CMU (ELEVATION)
- DEPTH" — DEPRESSED SLAB AREA
- EARTH/SOIL
- FILL GROUT
- INSULATION (RIGID)
- INSULATION (BATT)
- PLYWOOD (LARGE SCALE)
- STEEL
- STONE FILL
- WOOD (FINISH)
- WOOD (ROUGH)
- PRECAST CONC.

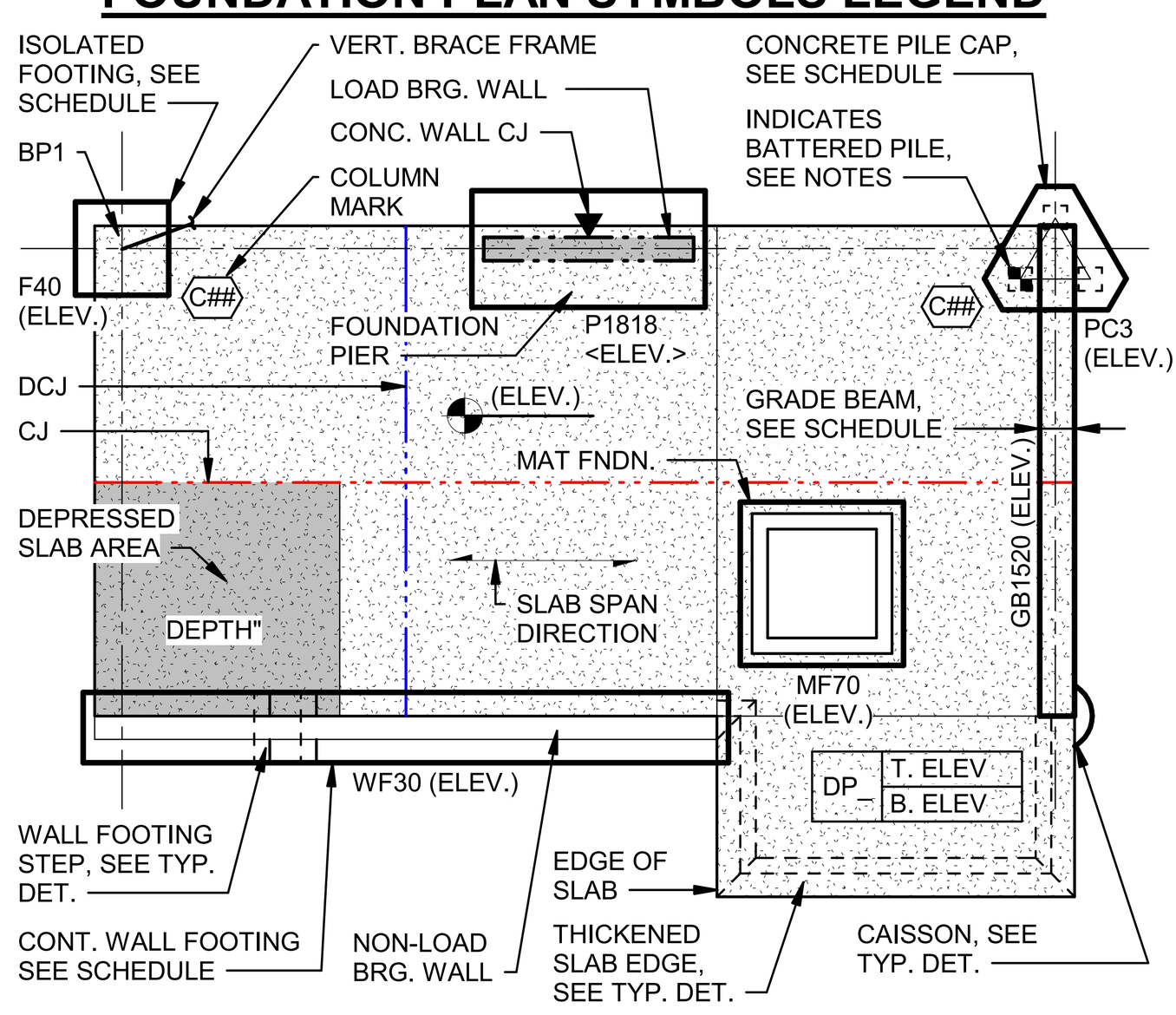
VIEW SYMBOLS



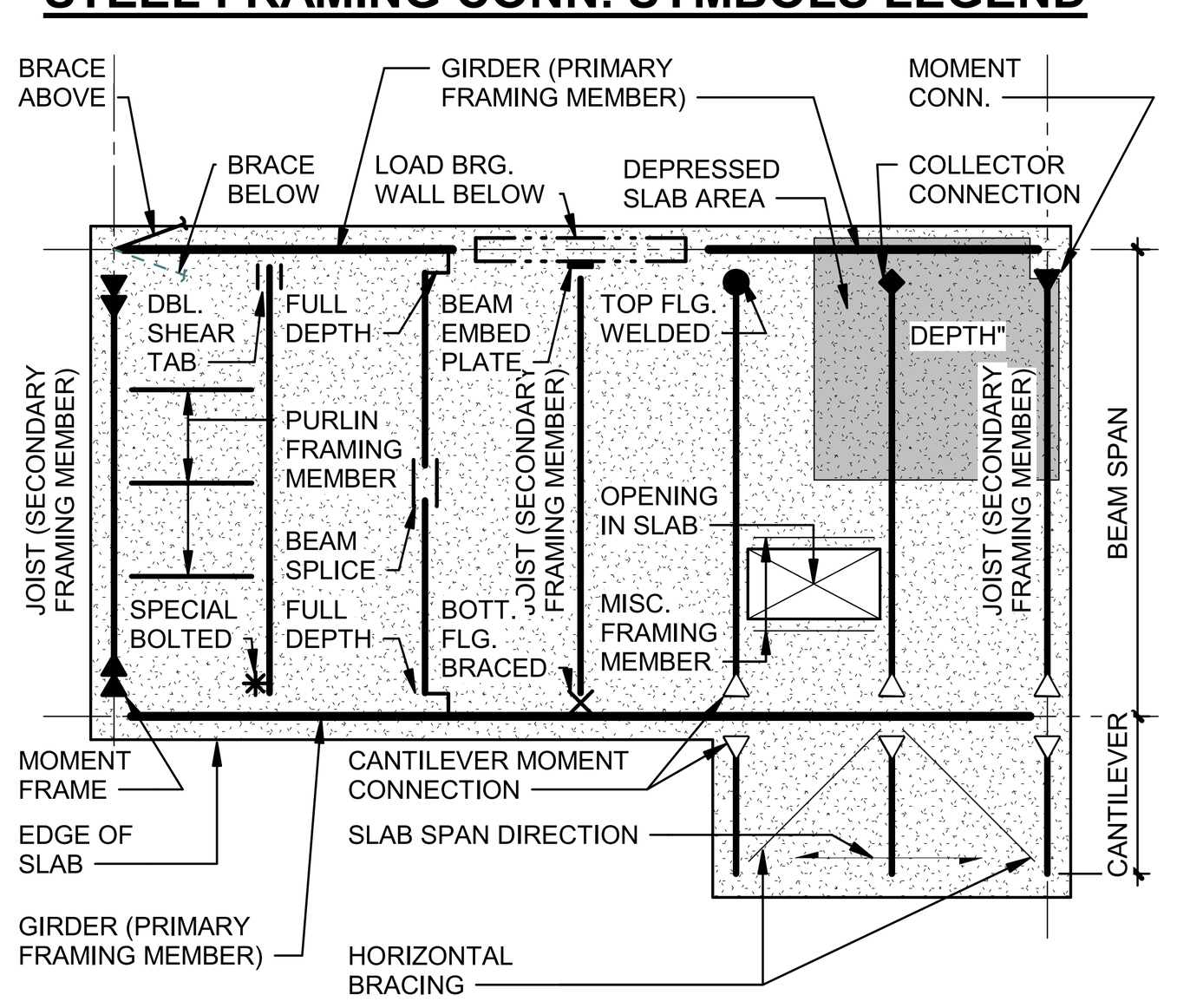
COLUMN GRID DESIGNATION



FOUNDATION PLAN SYMBOLS LEGEND



STEEL FRAMING CONN. SYMBOLS LEGEND



DRAWINGS & COORDINATION

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, AND DRAWINGS OF OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH THE STRUCTURAL WORK.
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS.
3. ANYTHING WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE PLANS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE CONSTRUCTION OF THE AFFECTED WORK MAY PROCEED.
4. DETAILS ARE MARKED AT THE SPECIFIC LOCATION WHERE THEY APPLY, BUT ALSO INDICATE GENERAL CONSTRUCTION REQUIREMENTS FOR OTHER LOCATIONS WITH SIMILAR CONDITIONS.
5. DETAILS NOTED AS "TYPICAL" MAY NOT BE REFERENCED ON THE DRAWINGS. TYPICAL DETAILS APPLY AT ALL LOCATIONS WHERE THE TYPE OF CONSTRUCTION SHOWN IN THE TYPICAL DETAIL OCCURS.

REINFORCING STEEL

1. DETAILING, FABRICATION, STORAGE, AND INSTALLATION OF REINFORCING, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315), BOTH BY THE AMERICAN CONCRETE INSTITUTE.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING STEEL WELDED TO EMBEDDED STEEL PLATES OR SHAPES SHALL CONFORM TO ASTM A706. DO NOT WELD REINFORCING BARS TO EACH OTHER.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. UNLESS NOTED OTHERWISE ON PLANS OR IN DETAILS, REINFORCING BARS MARKED ON THE PLANS AS BEING CONTINUOUS SHALL BE LAPPED AT SPLICE LOCATIONS AS SHOWN IN SCHEDULE. FOR SPLICES AT CORNERS OR INTERSECTIONS OF WALLS AND BEAMS, SEE TYPICAL DETAILS.
5. REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT BOND BETWEEN THE STEEL AND THE CONCRETE.
6. REINFORCING SHALL BE SECURELY TIED AND ANCHORED IN PLACE BEFORE CONCRETE PLACEMENT TO PREVENT DISLOCATION.
7. UNLESS OTHERWISE NOTED, CONCRETE COVERAGE ON REINFORCING STEEL SHALL BE AS FOLLOWS:
   - A. SLAB-ON-GRADE - TOP.. 1"
   - B. SLAB-ON-GRADE - BOTTOM.. 2"
   - C. SLAB ON ELEVATED DECK.. 3/4"
8. BARS SHALL BE BENT ONLY USING APPROVED METHODS. BARS SHALL NOT BE BENT AFTER PARTIAL EMBEDMENT IN HARDENED CONCRETE.

REINFORCED CONCRETE MASONRY

1. DETAILS FOR MASONRY CONSTRUCTION ON THE STRUCTURAL DRAWINGS ARE LIMITED IN SCOPE TO SHOW STRUCTURAL REQUIREMENTS ONLY. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS OF MASONRY CONSTRUCTION INCLUDING UNIT TYPES AND SIZES; PLACING PATTERNS; JOINT REINFORCING; VENEER TIES; CONTROL, ISOLATION, AND EXPANSION JOINTS; INSULATION; DAMPPROOFING; ETC. SEE DRAWINGS OF OTHER TRADES FOR OPENINGS AND OTHER SPECIAL REQUIREMENTS.
2. MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530. CONCRETE MASONRY BLOCK SHALL CONFORM TO ASTM C90. THE PORTLAND CEMENT/LIME MORTAR SHALL CONFORM TO ASTM C270, TYPE-S. GROUT FOR FILLED MASONRY SHALL BE FINE OR COARSE GROUT APPROPRIATELY SELECTED FOR THE WIDTH OF GROUT SPACE PER ACI 530. GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" FOR COARSE GROUT AND A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1019. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY SHALL BE AT LEAST 1500 PSI.
3. PROPORTIONING OF ALL MORTAR SHALL BE ONLY BY VOLUME MEASUREMENT, NOT BY SHOVEL COUNT. MORTAR SHALL BE PROPORTIONED USING THE SAME PORTLAND CEMENT, HYDRATED LIME AND FINE AGGREGATE THAT ARE SELECTED AND APPROVED FOR THE ENTIRE PROJECT. MORTAR SHALL BE MIXED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C270, "SPECIFICATION FOR MORTAR FOR UNIT MASONRY".
4. SOLID GROUT FILL SHALL BE PROVIDED IN ALL MASONRY BELOW GRADE, IN ALL CAVITIES WITH REINFORCING BARS, IN ALL CAVITIES WITH EMBEDDED OR DRILLED-IN ANCHORS, AND AS INDICATED. GROUT FILL SHALL COMPLETELY AND SOLIDLY FILL REQUIRED SPACES.
5. ALL MASONRY CAVITIES WHICH ARE TO BE FILLED WITH GROUT SHALL BE FILLED IN LIFTS NOT EXCEEDING 4'-0". IF NECESSARY TO OBTAIN COMPLETE FILL, LIFT HEIGHT SHALL BE REDUCED. CARE SHALL BE TAKEN WHILE LAYING BLOCK TO PREVENT MORTAR AND OTHER DEBRIS FROM FALLING INTO THE CAVITIES AND PREVENTING THE GROUT FROM COMPLETELY FILLING THE CAVITIES. GROUT SHALL BE CONSOLIDATED AT PLACEMENT AND AGAIN AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.
6. WHERE REINFORCING IS SPECIFIED TO BE PLACED IN MASONRY CAVITIES, REINFORCING SHALL BE SECURELY TIED IN POSITION AT THE PROPER LOCATION WITHIN THE MASONRY PRIOR TO FILLING WITH GROUT. PROVIDE BAR SUPPORTS AND POSITIONERS AS REQUIRED. INSERTION OF UNSECURED REINFORCEMENT INTO MASONRY CAVITIES OR INTO GROUT FILL SHALL NOT BE PERMITTED.
7. SEE MISCELLANEOUS LINTEL SCHEDULE FOR REQUIRED LINTELS IN MASONRY WALLS NOT OTHERWISE SHOWN ON DRAWINGS.
8. ALL CONCRETE MASONRY SHALL BE REINFORCED WITH THE MINIMUM REINFORCING SHOWN IN THE TYPICAL CONCRETE MASONRY REINFORCING DETAIL, UNLESS NOTED OTHERWISE.
9. PROVIDE BRACING AT TOP OF ALL MASONRY WALLS. SEE TYPICAL DETAILS.

CONCRETE

1. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED OTHERWISE. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28-DAY COMPRESSIVE STRENGTHS UNLESS NOTED OTHERWISE IN THE PLANS OR SPECIFICATIONS.
   - A. WALLS AND CURBS.. 4000 PSI
   - B. SLABS ON GRADE.. 4000 PSI
   - C. ELEVATED COMPOSITE SLAB.. 4000 PSI
2. CONCRETE PERMANENTLY EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND SHALL CONTAIN APPROXIMATELY 6% ENTRAINED AIR. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
3. CONCRETE SHALL BE BATCHED USING MATERIALS AND PROPORTIONS DESIGNATED IN THE APPROVED DESIGN MIXES. THE GENERAL CONTRACTOR SHALL PROVIDE QUALITY CONTROL OF THE CONCRETE MIX.
4. CONCRETE SLUMP SHALL BE AS INDICATED IN THE SPECIFICATIONS .
5. THE ADDITION OF WATER TO INCREASE SLUMPS ABOVE THE LEVEL SPECIFIED OR TO RETEMPER CONCRETE WHICH HAS EXPERIENCED SLUMP LOSS DUE TO EXCESSIVE MIXING OR HEAT BUILD-UP IS NOT PERMITTED.
6. CONCRETE SHALL BE HANDLED, PLACED, AND CONSOLIDATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS.
7. SEE SPECIFICATIONS FOR CURING AND HOT AND COLD WEATHER REQUIREMENTS FOR CONCRETE.
8. PROVIDE PRE-MOLDED EXPANSION-JOINT FILLER AT EDGES OF SLABS ON GRADE AGAINST VERTICAL SURFACES UNLESS NOTED OTHERWISE.
9. DOWELS FROM FOOTINGS SHALL BE ACCURATELY LOCATED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF THE CONCRETE. PLACEMENT OF DOWELS IN FRESH CONCRETE AFTER THE CONCRETE HAS BEEN PLACED WILL NOT BE PERMITTED. USE TEMPLATES FOR THE PLACEMENT OF DOWELS IN COLUMNS AND SHEAR WALLS.
10. THE CONTRACTOR SHALL USE INSTRUMENTS TO MAINTAIN A CONTINUOUS CHECK OF THE ELEVATIONS OF THE TOP SURFACES OF SLABS DURING THE PLACEMENT AND FINISHING OF THE CONCRETE. ADJUSTMENTS SHALL BE MADE TO MAINTAIN THE SURFACES WITHIN THE SPECIFIED TOLERANCES.
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL ANCHOR BOLTS, CLIPS, INSERTS, SLEEVES AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND IN COOPERATION WITH OTHER TRADES PRIOR TO THE PLACING OF CONCRETE.
12. CONCRETE FORMWORK SHALL NOT BE REMOVED UNTIL CONCRETE HAS REACHED SUFFICIENT STRENGTH TO NOT BE DAMAGED BY FORMWORK REMOVAL. SEE ALSO SPECIFICATIONS.

CONSTRUCTION

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE, OR LOSS.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS, AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT. SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED AT ALL TIMES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. THE DESIGNER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.
5. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON NEW AND/OR EXISTING STRUCTURES. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING, AND REMOVING ANY SHORING AND BRACING REQUIRED DURING CONSTRUCTION, INCLUDING BRACING REQUIRED FOR SIDES OF EXCAVATIONS DURING FOUNDATION CONSTRUCTION AND TEMPORARY BRACING FOR WALLS.
8. THE CONTRACTOR SHALL INFORM THE DESIGNER, IN WRITING, OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY VIRTUE OF THE DESIGNER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE DESIGNER OF SUCH DEVIATION AT TIME OF SUBMISSION, AND THE DESIGNER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATION.
9. NO OPENINGS NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE DESIGNER.
10. WHERE CONSTRUCTION TOLERANCES ALLOW FOR VARIATIONS IN LOCATION, SIZE, ETC. OF STRUCTURAL ELEMENTS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIALS AND LABOR NECESSARY TO MODIFY CONNECTION ELEMENTS AS REQUIRED TO PROVIDE A FINISHED PRODUCT WHICH IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. ANY SUCH MODIFICATIONS REQUIRED SHALL BE REVIEWED AND APPROVED BY THE DESIGNER PRIOR TO EXECUTION.
11. THE DESIGNER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ITEMS ARE READY FOR FIELD REVIEW. SUFFICIENT NOTICE SHALL BE GIVEN TO ALLOW SCHEDULING OF THE FIELD REVIEW.

ANCHORS & FASTENERS

1. GENERAL:
   - A. ALL ANCHOR AND FASTENER PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS BY PERSONNEL CERTIFIED BY THE MANUFACTURER IN THE USE OF THE PRODUCTS BEING INSTALLED. SUBMIT CERTIFICATION DOCUMENTS.
   - B. SEE DRAWINGS AND SPECIFICATIONS FOR SPECIFIC ANCHOR AND FASTENER REQUIREMENTS.
   - C. PRODUCT DATA SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION.
   - D. WHERE THE MANUFACTURER IS IDENTIFIED IN THE CONTRACT DOCUMENTS, IT IS PROVIDED AS THE PERFORMANCE STANDARD FOR THE ANCHOR OR FASTENER PRODUCT. ALTERNATE PRODUCTS MAY BE SUBMITTED FOR APPROVAL AND MUST PROVIDE AT LEAST THE SAME PERFORMANCE FOR THE DETAILED INSTALLATION AS THE REFERENCED PRODUCT.
   - E. DAMAGE TO EXISTING MATERIALS DUE TO ANCHOR INSTALLATION SHALL BE REPAIRED USING PROCEDURES AND MATERIALS APPROVED BY THE ENGINEER.
2. ANCHORAGE IN CONCRETE:
   - A. THE SUITABILITY OF POST-INSTALLED EXPANSION AND UNDER-CUT ANCHORS FOR USE IN CONCRETE SHALL HAVE BEEN DEMONSTRATED BY THE ACI 355.2 PREQUALIFICATION TESTS.
   - B. THE INSTALLATION OF ANCHORS IN HARDENED CONCRETE SHALL NOT DAMAGE THE SURROUNDING CONCRETE OR ANYTHING EMBEDDED IN THE CONCRETE. PRIOR TO DRILLING FOR ANCHOR INSTALLATION, LOCATE MATERIALS EMBEDDED IN THE CONCRETE USING NON-DESTRUCTIVE METHODS. ADJUST ANCHOR LOCATIONS TO AVOID EMBEDDED MATERIALS. SUBMIT POSITIONS OF RELOCATED ANCHORS TO ENGINEER FOR APPROVAL PRIOR TO DRILLING. PRE-DRILL PROBE HOLES USING A SMALL DIAMETER DRILL BIT AT FINAL ANCHOR LOCATION TO CONFIRM A CLEAR DRILLING PATH.
   - C. ADHESIVE ANCHORS SHALL BE INSTALLED PER THESE NOTES AND PER TYPICAL DETAILS.
   - D. UNLESS OTHERWISE NOTED, ANCHORAGE IN NEW POST-TENSIONED CONCRETE CONSTRUCTION SHALL BE MADE USING ANCHOR INSERTS PLACED IN THE FORMWORK PRIOR TO CONCRETE PLACEMENT.

SUBMITTAL NOTES

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL. SUBMITTAL WITHOUT CONTRACTOR REVIEW WILL RESULT IN DELAYS. THE CONTRACTOR SHALL CONFIRM THAT SHOP DRAWINGS HAVE BEEN COMPLETED AND CHECKED BY THE SUPPLIER PRIOR TO SUBMISSION.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN ELECTRONIC FORMAT.
3. SHOP DRAWINGS SUBMITTALS REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL SPECIFICATIONS. CHANGES OR ADDITIONS MADE ON RESUBMITTED SHOP DRAWINGS SHALL BE CLEARLY INDICATED, AND THE PURPOSE OF THE RESUBMITTAL SHALL BE NOTED ON THE TRANSMITTAL. REVIEW OF THE RESUBMITTED SHOP DRAWINGS SHALL BE LIMITED SPECIFICALLY TO THE ITEMS NOTED FOR CORRECTION ON THE PREVIOUS SUBMITTAL.
4. THE GENERAL CONTRACTOR SHALL SUBMIT THE FOLLOW SHOP DRAWINGS FOR STRUCTURE ENGINEER AND ARCHITECT REVIEW:
   - CONCRETE MIX DESIGN
   - REINFORCING STEEL
   - STRUCTURAL STEEL (a)
   - COLD FORMED METAL FRAMING MASONRY
5. THE NOTATIONS FOLLOWING SUBMITTAL ITEMS INDICATE THE FOLLOWING:
   - A. INCLUDE A CERTIFICATE OF COMPLIANCE WITH CONTRACT DOCUMENTS SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THE DESIGN.
   - B. SUBMIT ONE COPY FOR INFORMATION AND RECORD ONLY.
   - C. CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER THAT IS REGISTERED IN THE STATE WHERE THE BUILDING IS LOCATED.
6. MANUFACTURER'S LITERATURE: SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION OF PROJECT.
7. THE ENGINEERS'S REVIEW OF SHOP DRAWINGS IF FOR GENERAL CONFORMANCE OF THE DESIGN CONCEPT. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWINGS SUBMITTALS THAT IS ACCEPTABLE TO BOTH CONTRACTOR AND ENGINEER. AFTER THE CONTRACTOR HAS REVIEW THE SHOP DRAWINGS, PROMPT REVIEW BY THE ENGINEER WILL BE MADE OF ALL SUBMITTALS FOR LARGE SUBMITTALS, REASONABLE REVIEW TIME SHALL BE ALLOW AND MAY EXCEED TWO WEEKS. THE CONCURRENT SUBMITTAL OF MULTIPLE SHOP DRAWINGS ("DUMPING") WILL FURTHER EXTEND THE REVIEW PROCESS AND TIME FRAME NECESSARY TO PROPERLY REVIEW EACH SUBMITTAL.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROPER CHECKING AND COORDINATION OF DETAILS, DIMENSIONS, SIZES AND QUANTITIES AS REQUIRED TO FACILITATE COMPLETE AND ACCURATE FABRICATION AND ERECTION.
9. REPRODUCTION OF THESE CONTRACT DOCUMENTS FOR USE IN SHOP DRAWINGS IS NOT PERMITTED.

STRUCTURAL DESIGN DATA

1. CODES AND STANDARDS:
   - A. **2018 N. C. REVISIONS TO THE 2015 INTERNATIONAL BUILDING CODE**.
   - B. MIN. DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-10.
   - C. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-14.
   - D. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530-13.
   - E. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-10.
   - F. AF&PA - NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.
2. FOUNDATIONS:
3. GRAVITY LOADS:
   - A. FLOOR LIVE LOADS:
     1. OFFICE...50 PSF
     2. CORRIDORS FIRST FLOOR.......................................100 PSF
     3. CORRIDORS ABOVE FIRST FLOOR...........................80 PSF
     4. STAIRS...100 PSF
     5. PARTITION...15 PSF
4. WIND LOADS:
   - A. ULTIMATE WIND SPEED..155 MPH
   - B. RISK CATEGORY..III
   - C. IMPORTANCE FACTOR..1.00
   - D. EXPOSURE CATEGORY.. C
   - E. INTERNAL PRESSURE COEFFICIENT................................. +/-0.18
5. EARTHQUAKE LOADS:
   - A. MAPPED SPECTRAL RESPONSE ACCELERATION:
     1. SHORT PERIOD.. SS = 0.217
     2. SECOND PERIOD.. S1 = 0.092
   - B. DESIGN SPECTRAL RESPONSE ACCELERATION:
     1. SHORT PERIOD.. SDS = 0.232
     2. SECOND PERIOD.. SD1 = 0.146
   - C. SITE CLASS.. **D**
   - D. RISK CATEGORY (SEISMIC USE GROUP)...........................III
   - E. IMPORTANCE FACTOR..1.25
   - F. SEISMIC DESIGN CATEGORY..C
   - G. SEISMIC FORCE RESISTING SYSTEM (PHASE 2)
     1. STEEL ORDINARY CONCENTRICALLY BRACE FRAMES
     2. RESPONSE MODIFICATION COEFFICIENT (R)......... 3.25
     3. SYSTEM OVERSTRENGTH FACTOR (ΩO).................2
     4. DEFLECTION AMPLITUDE FACTOR (Cd)...................3.25
     5. SEISMIC RESPONSE COEFFICIENT (Cs)...................0.089
   - H. ANLYSIS PROCEDURE - EQUIVALENT LATERAL FORCE
   - I. DESIGN BASE SHEAR (PAHSE 2)
     1. EAST-WEST DIRECTION..40 KIPS
     2. NORTH-SOUTH DIRECTION. ....40 KIPS
     *BASE SHEARS LISTED ARE ONLY CONSIDERING THE STRUCTRURAL SYSTEMS PER PHASE.

DRAWING INDEX - PHASE 2

S-001B	ABBREV, MATERIALS, SYMBOL LEGENDS & GENERAL NOTES
S-101B	FLOOR PLAN - LEVEL 1 PHASE 2
S-102B	FRAMING PLAN - LEVEL 2 PHASE 2
S-501B	BRACED FRAME ELEVATIONS AND DETAILS
S-601B	FOUNDATION SECTIONS
S-701B	FOUNDATION TYPICAL DETAILS AND SCHEDULES
S-702B	FOUNDATION TYPICAL DETAILS AND SCHEDULES
S-801B	FRAMING SECTIONS
S-901B	FRAMING TYPICAL DETAILS AND SCHEDULES
S-902B	FRAMING TYPICAL DETAILS AND SCHEDULES

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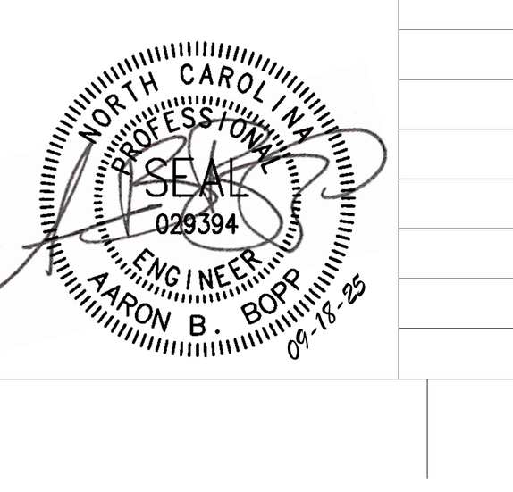

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*UNLESS OTHERWISE SPECIFIED
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3 PLACE DECIMALS ± ANGLES ±

GE VERNOVA — GE Hitachi Nuclear Energy, Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO ABBREV, MATERIALS, SYMBOL LEGENDS & GENERAL NOTES

ISSUE DATE: 2025.09.18 DWG NO. **S-001B** REV.

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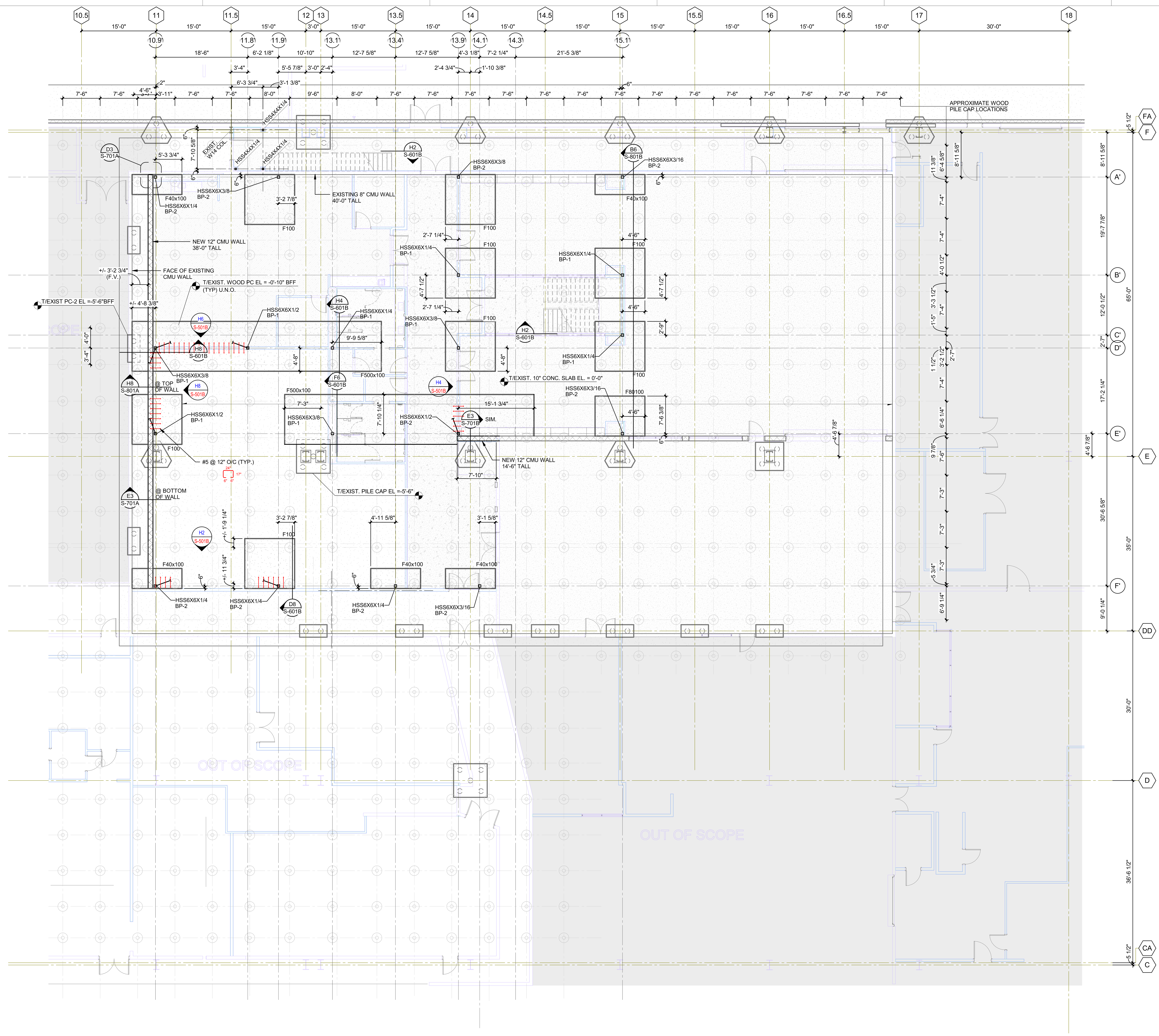

A1
S-101B
FLOOR PLAN - LEVEL 1 PHASE 2
1/8" = 1'-0"

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	BOTT. REINFORCING	TOP REINFORCING	REMARKS
F40X100	10'-0"	4'-0"	1'-6"	(11) #6 SW, (11) #6 LW	(11) #6 SW, (11) #6 LW	--
F100	10'-0"	10'-0"	1'-6"	(6) #6 SW, (11) #6 LW	(6) #6 SW, (11) #6 LW	--
F500x100	50'-0"	10'-0"	1'-6"	(9) #6 SW, (11) #6 LW	(9) #6 SW, (11) #6 LW	--
F80100	10'-0"	8'-0"	1'-6"	(11) #6 SW, (51) #6 LW	(11) #6 SW, (51) #6 LW	--

FOOTING SCHEDULE NOTES

GENERAL NOTES:

1. FOOTING MARKS "F__" DESIGNATE THE PLAN SIZE OF THE FOOTING IN TENTHS OF A FOOT. RECTANGULAR FOOTINGS ARE NOTED WITH A DUAL DESIGNATION. VARIATIONS OF FOOTINGS WITH THE SAME PLAN DIMENSIONS ARE IDENTIFIED WITH A SUFFIX IN PARENTHESIS (-).
2. SEE DETAIL: "TYPICAL COLUMN FOOTING AND ISOLATION JOINT".
3. UNLESS NOTED OTHERWISE, CENTER FOOTING BELOW COLUMN OR COLUMN PIER.

REMARKS:

1. NONE.

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL NEW CMU WALL DIMENSIONS & LOCATIONS.
2. SEE SHEET S-001B FOR GENERAL NOTES, ABBREVIATION, DRAWING LEGENDS AND SHEET INDEX.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS RELATED TO THE EXISTING BUILDING BEFORE FABRICATIONAND CONSTRUCTION.
4. TOP OF NEW COLUMN FOOTING ELEVATION -0'-6" BFF.
5. SEE H8/S-701B FOR CMU REINFORCING. (TYP)
6. SHEET SHEET S-701B FOR TYPICAL FOUNDATION DETAILS AND SECTIONS.
7. "L-_" INDICATES MASONRY LINTEL. SEE E5/S-701B FOR LINTEL SCHEDULE.
8. " "INDICATES EXISTING WOOD PILES BELOW SLAB.
9. SEE SHEET S-801B FOR TYPICAL ROOF SECTIONS AND DETAILS.
10. "F__" INDICATES NEW COLUMN FOOTING MARK. SEE THIS SHEET FOR FOOTING SCHEDULE.
11. "BP-_" INDICATES COLUMN BASE PLATE MARK. SEE F4/S-702B FOR BASE PLATE & ANCHOR ROD SCHEDULE.
12. LOCATION OF WOOD PILES WHERE TAKEN FROM EXISTING DRAWINGS. FIELD VERIFY LOCATIONS BEFORE INSTALLATION OF FOUNDATIONS.

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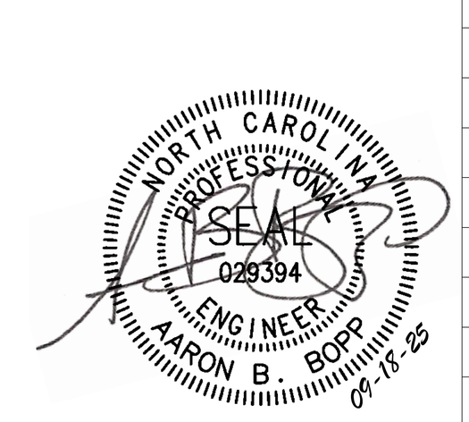

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GE VERNOVA
GE Hitachi Nuclear Energy
Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO FLOOR PLAN - LEVEL 1 PHASE 2

ISSUE DATE: 2025.09.18
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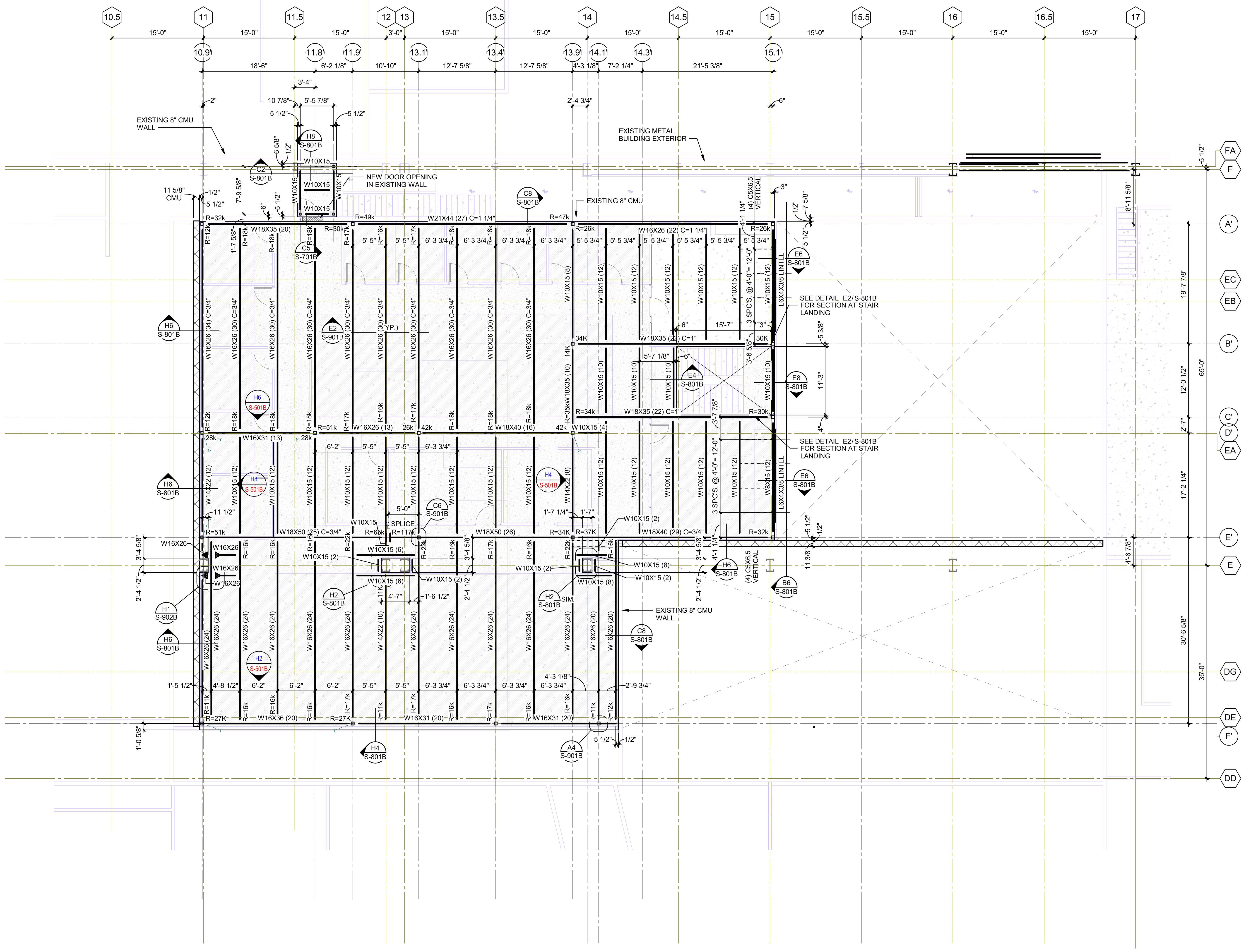


C8 SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"

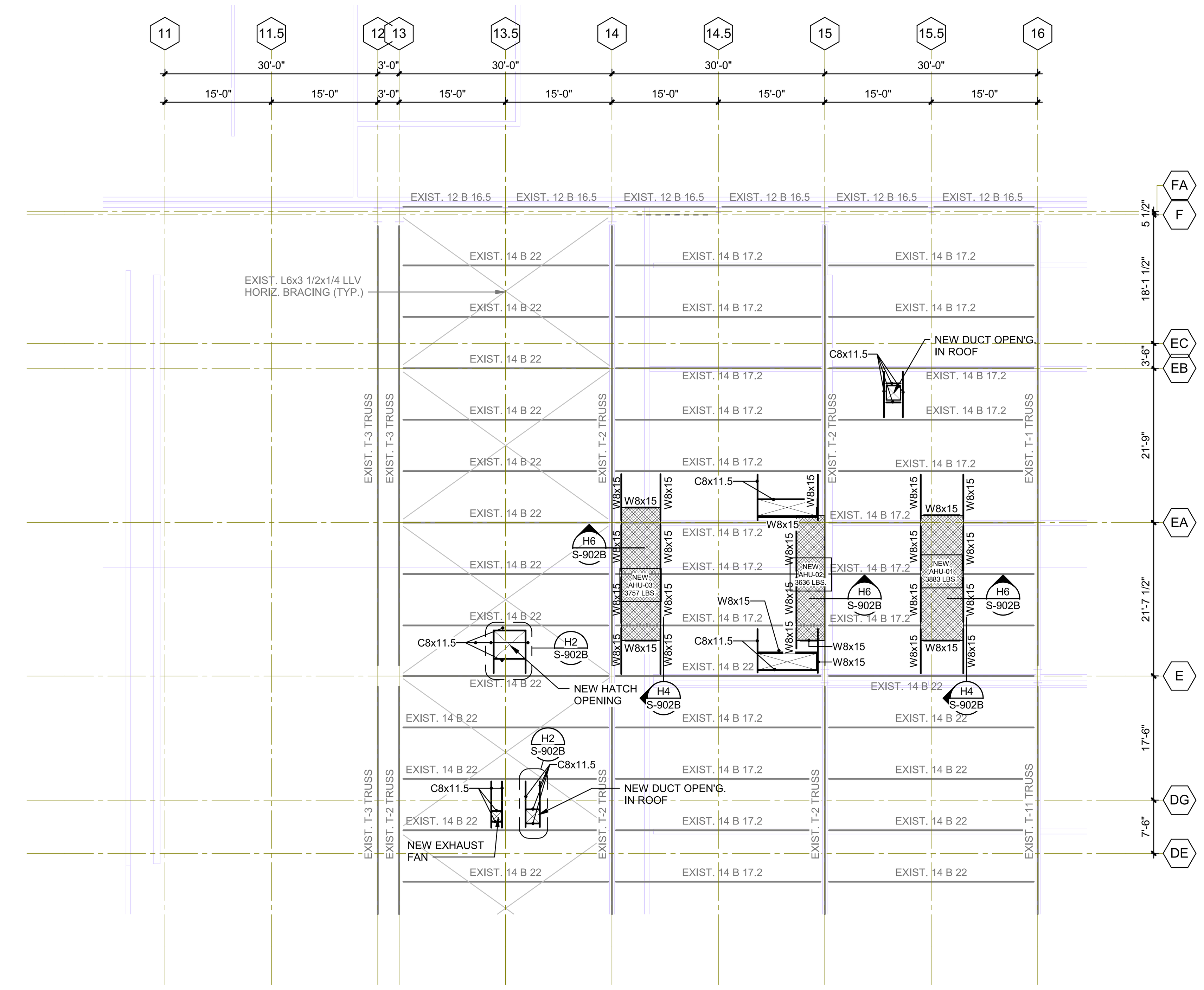
PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS & LOCATIONS.
2. BEAMS EQUALLY SPACED BETWEEN COLUMNS U.N.O. (TYP.).
2. SEE SHEET S-001B FOR GENERAL NOTES, ABBREVIATION, DRAWING LEGENDS AND SHEET INDEX.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS RELATED TO THE EXISTING BUILDING BEFORE FABRICATIONAND CONSTRUCTION.
4. SHEET SHEET S-801B FOR TYPICAL FRAMING DETAILS AND SECTIONS.
5. CONNECTION DESIGN FORCES SHOWN ARE USING ULTIMATE STRENGTH DESIGN. FORCES 10 KIPS OR LESS ARE NOT SHOWN.

COMPOSITE BEAM LEGEND

BEAM SIZE → W16X32
STUDS QUANITY → (32)
CAMBER → C=1"
LRFD BEAM REACTION → R=16k

NOTE:
FOR BEAMS SUPPORTING COMPOSITE SLAB & W/ NO STUDS CALLED OUT, PROVIDE STUDS @ 12 O/C TYP.



E3 EXISTING ROOF PLAN - Phase 2

3/32" = 1'-0"

ROOF PLAN NOTES:

1. SEE MECHANICAL DRAWINGS FOR NEW AHU LOCATIONS.
2. CORDINATE ALL MECHANICAL OPENING SIZE AND LOCATIONS WITH MECHANICAL DRAWINGS.

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Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO FRAMING PLAN - LEVEL 2 PHASE 2

ISSUE DATE: 2025.09.18
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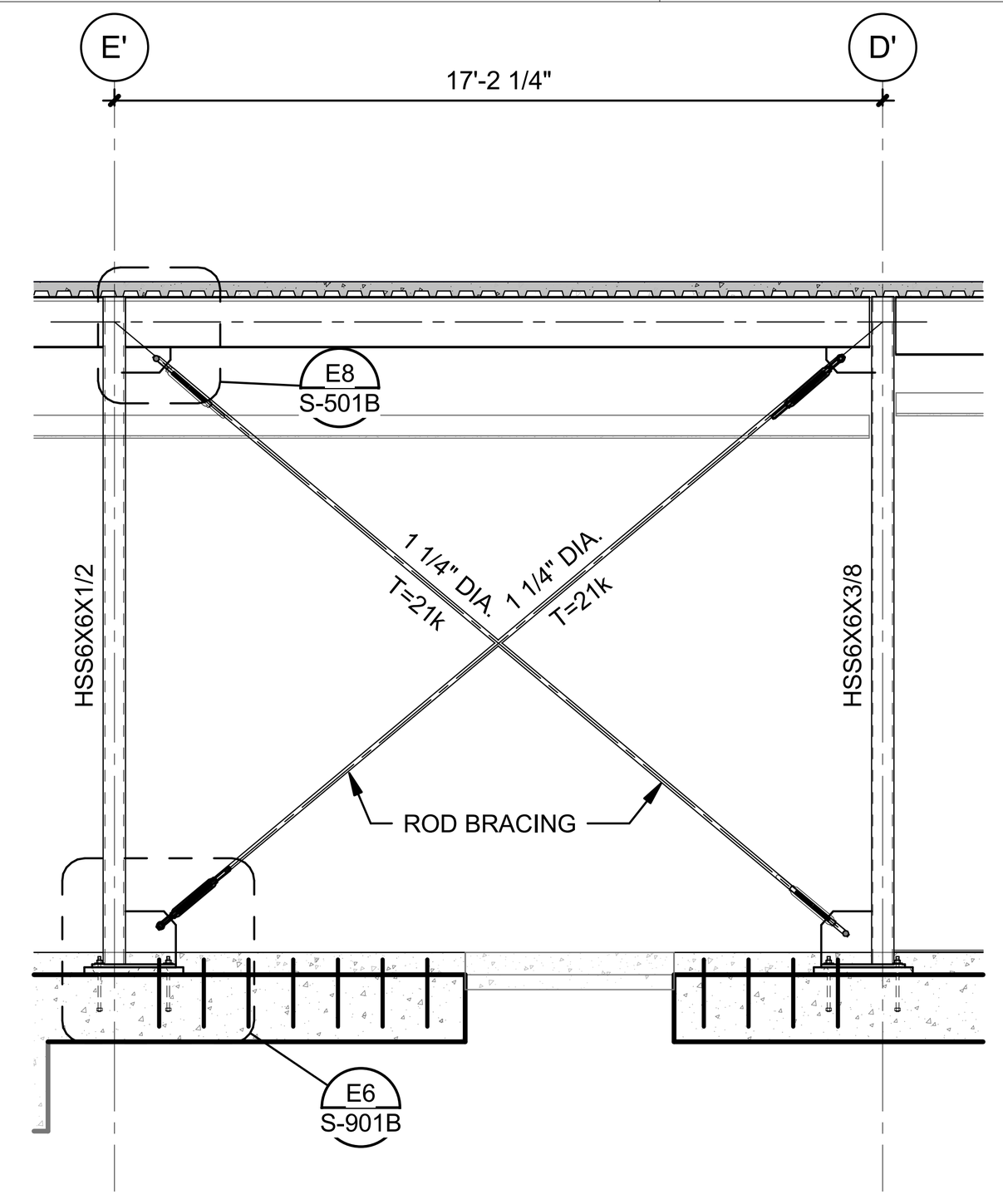
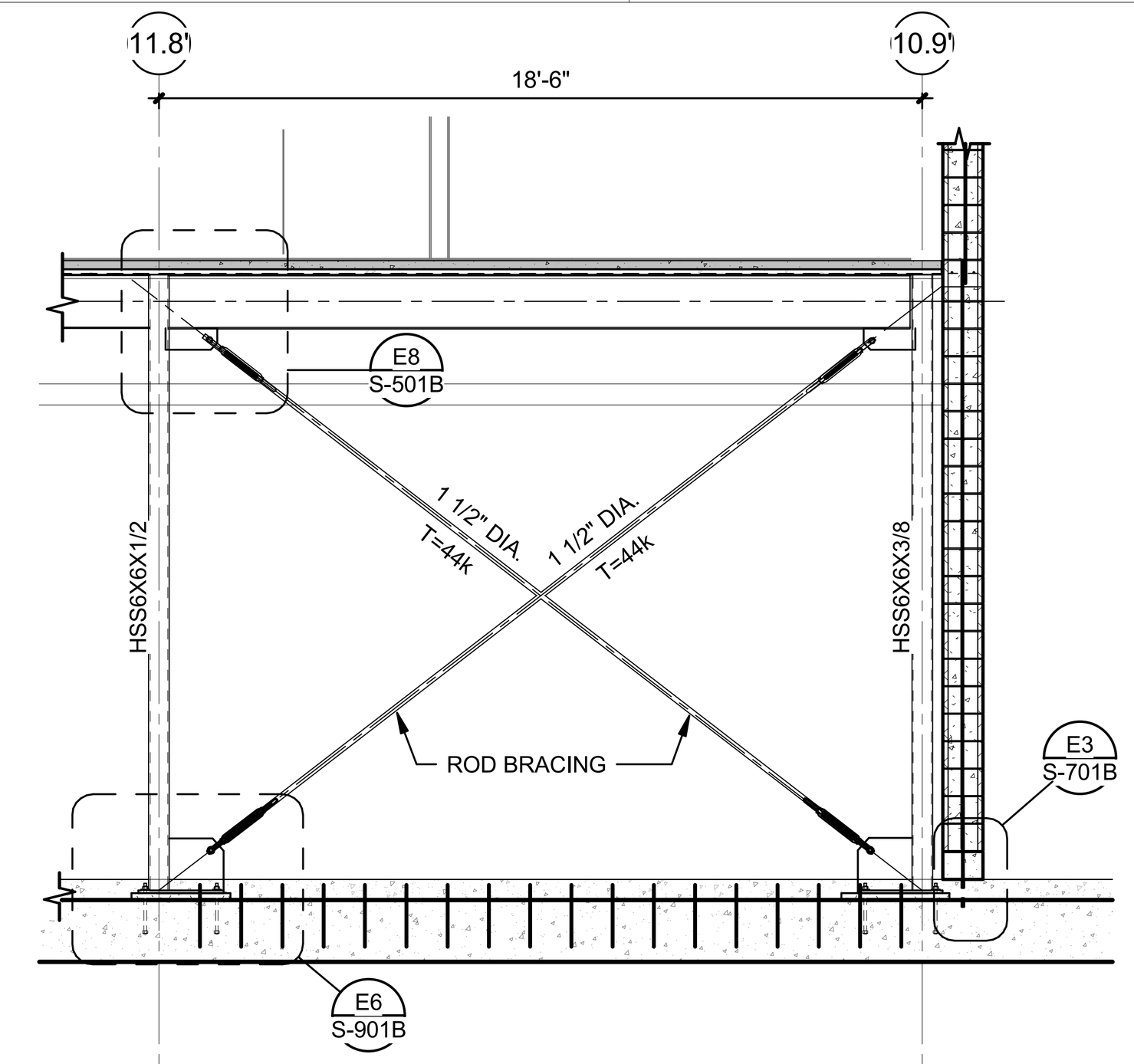
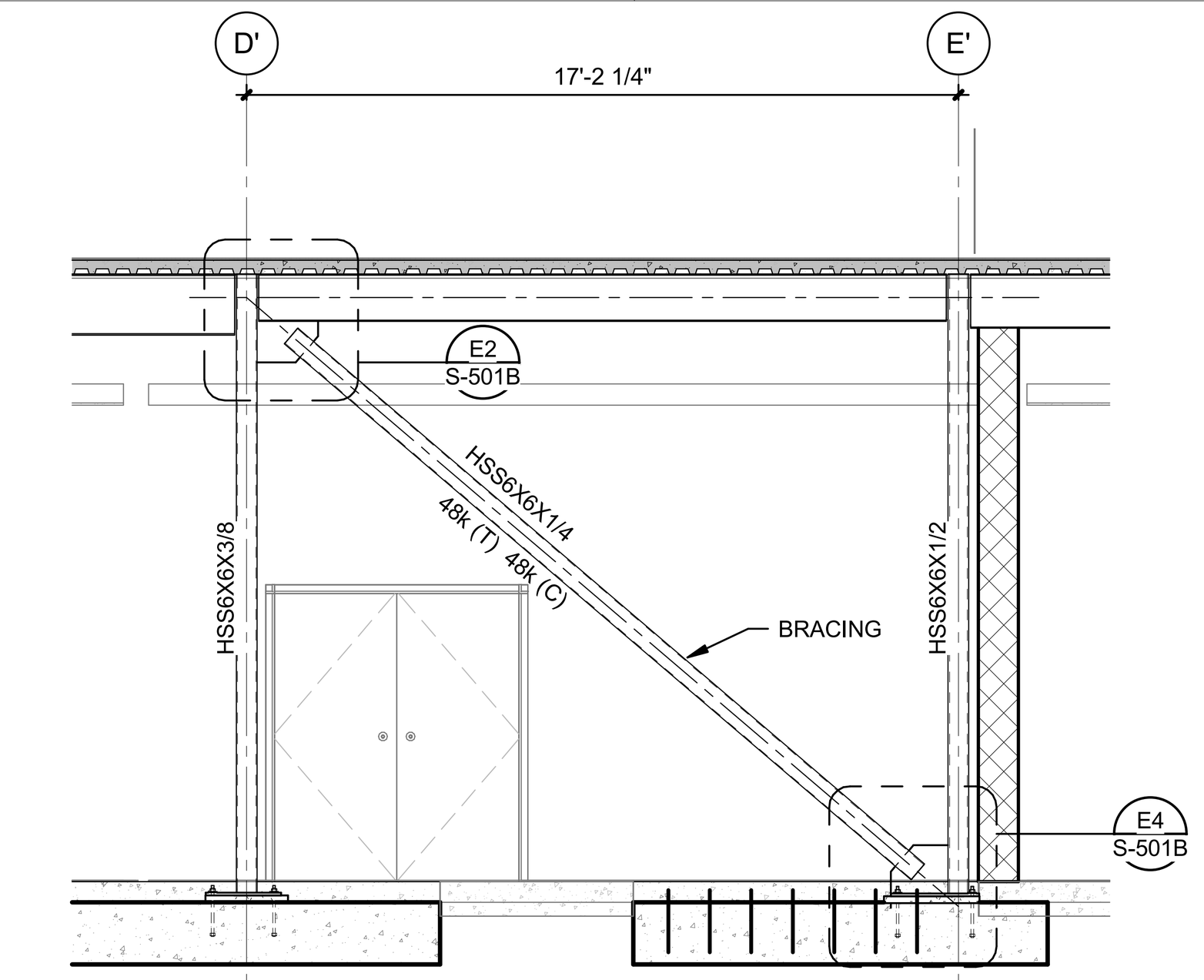


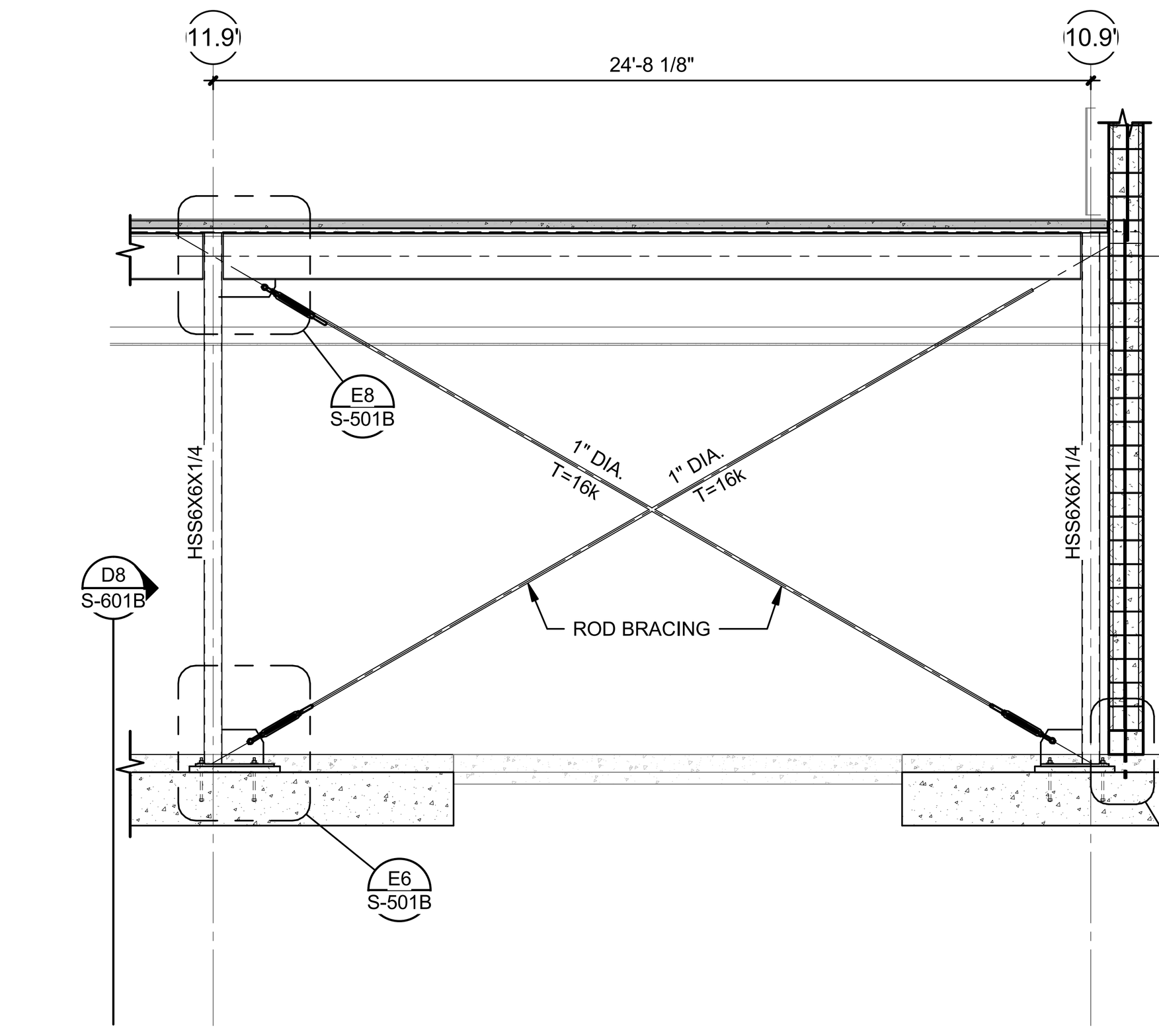
H8 **BRACED FRAME ELEVATION AT GRIDS E' & D'**
S-501B 1/4" = 1'-0"



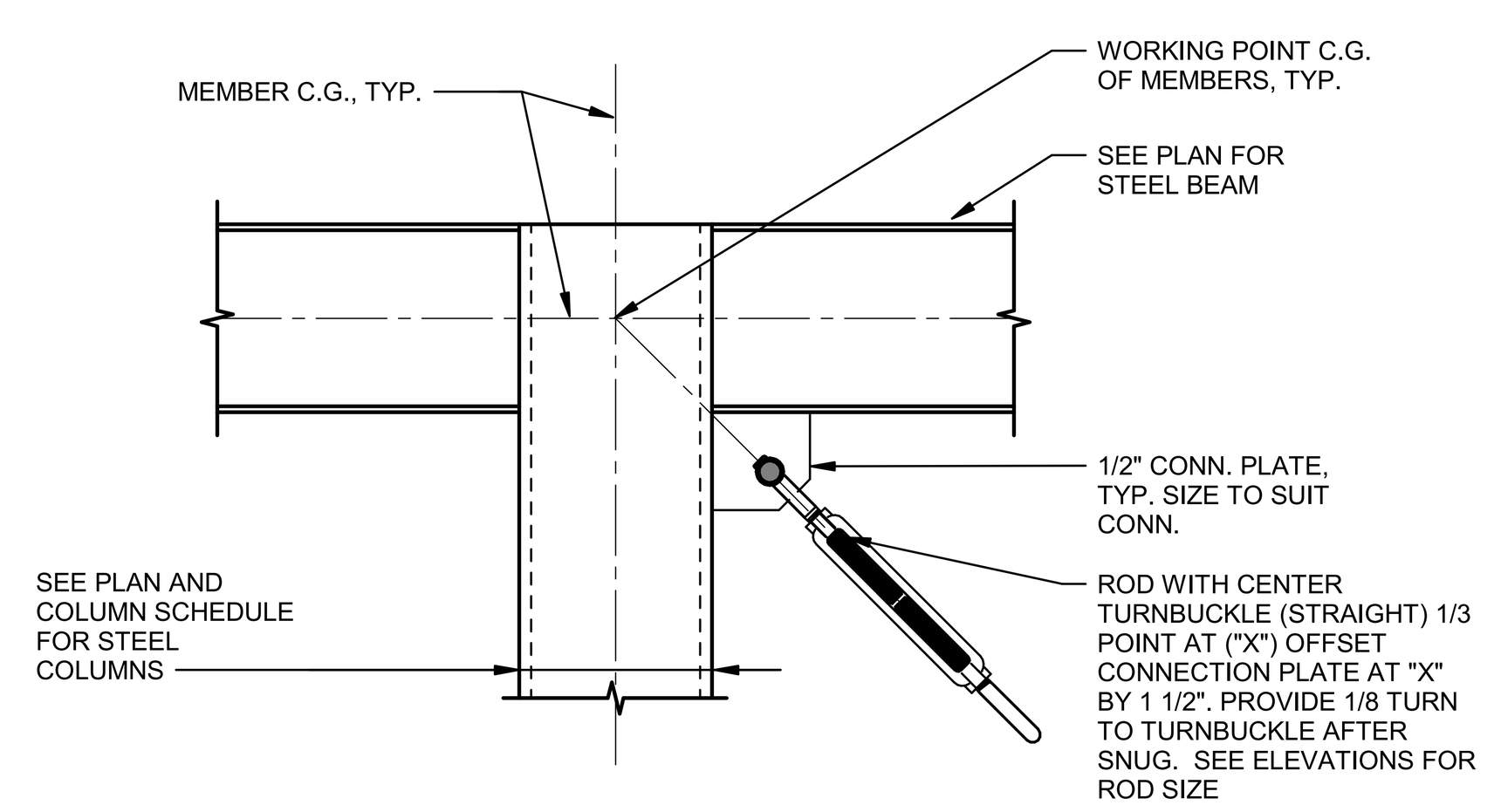
H6 **BRACED FRAME ELEVATION AT GRIDS 11.8' & 10.9'**
S-501B 1/4" = 1'-0"



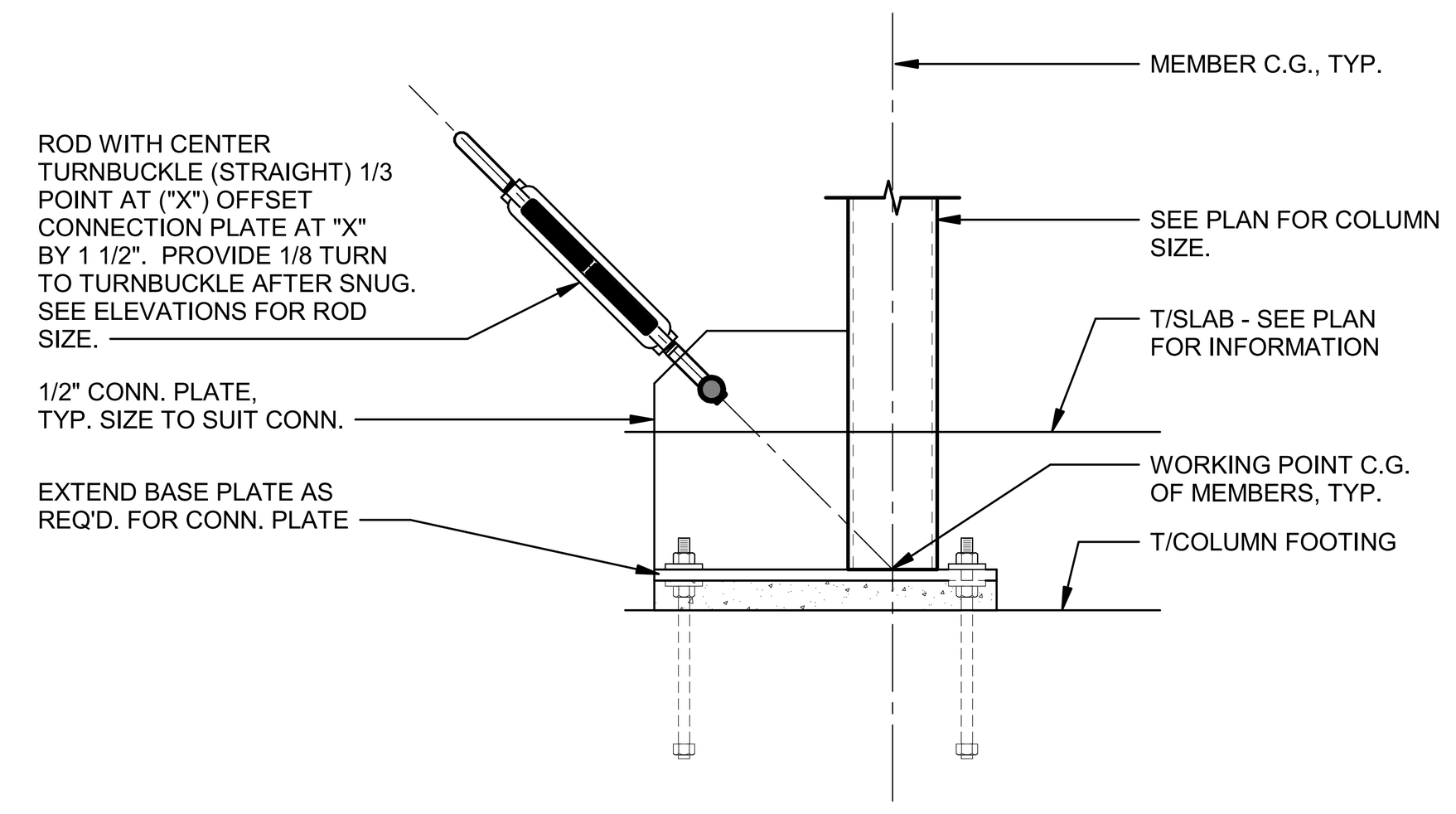
H4 **BRACED FRAME ELEVATION AT GRIDS D' & E'**
S-501B 1/4" = 1'-0"



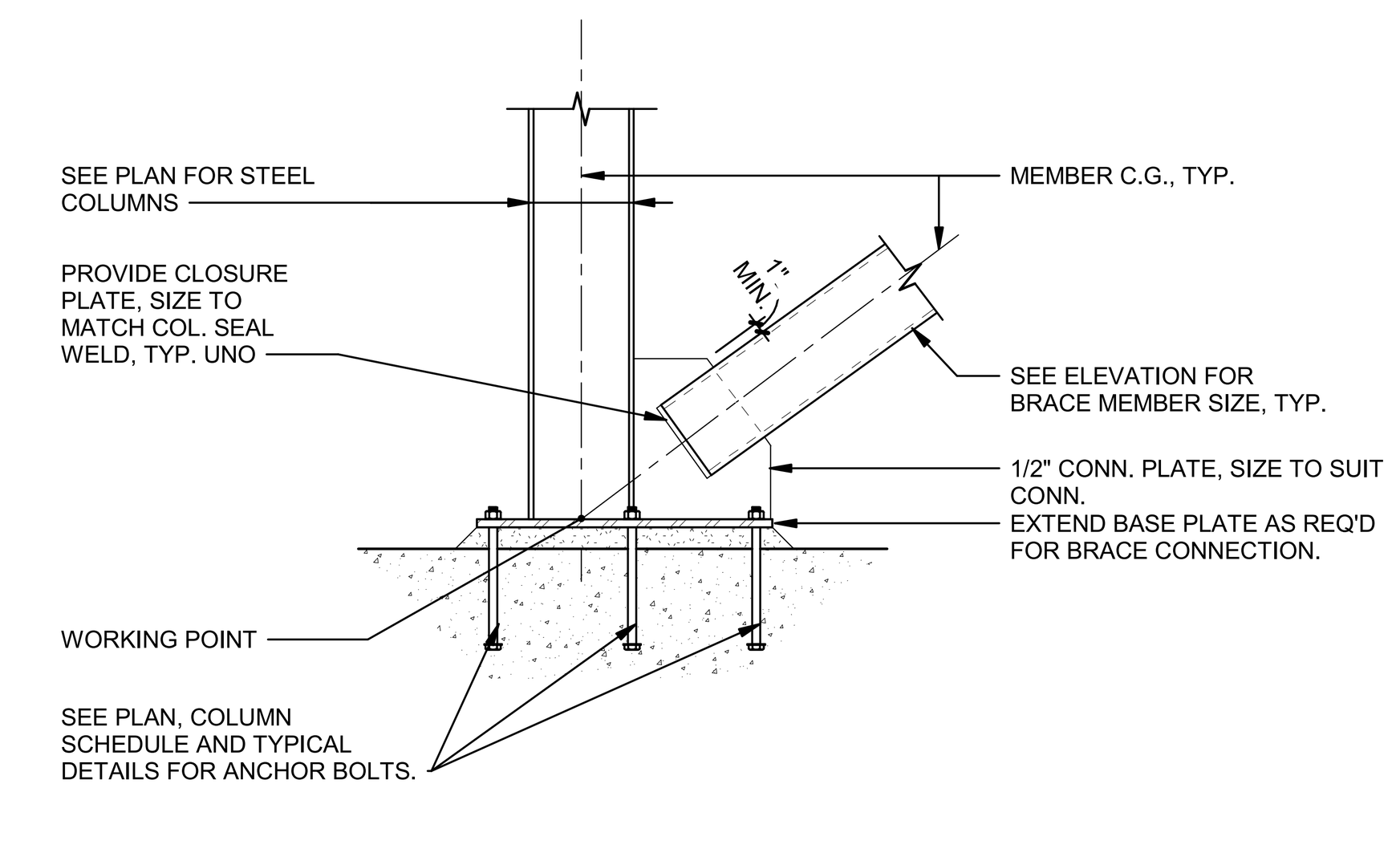
H2 **BRACED FRAME ELEVATION AT GRIDS 11.9' & 10.9'**
S-501B 1/4" = 1'-0"



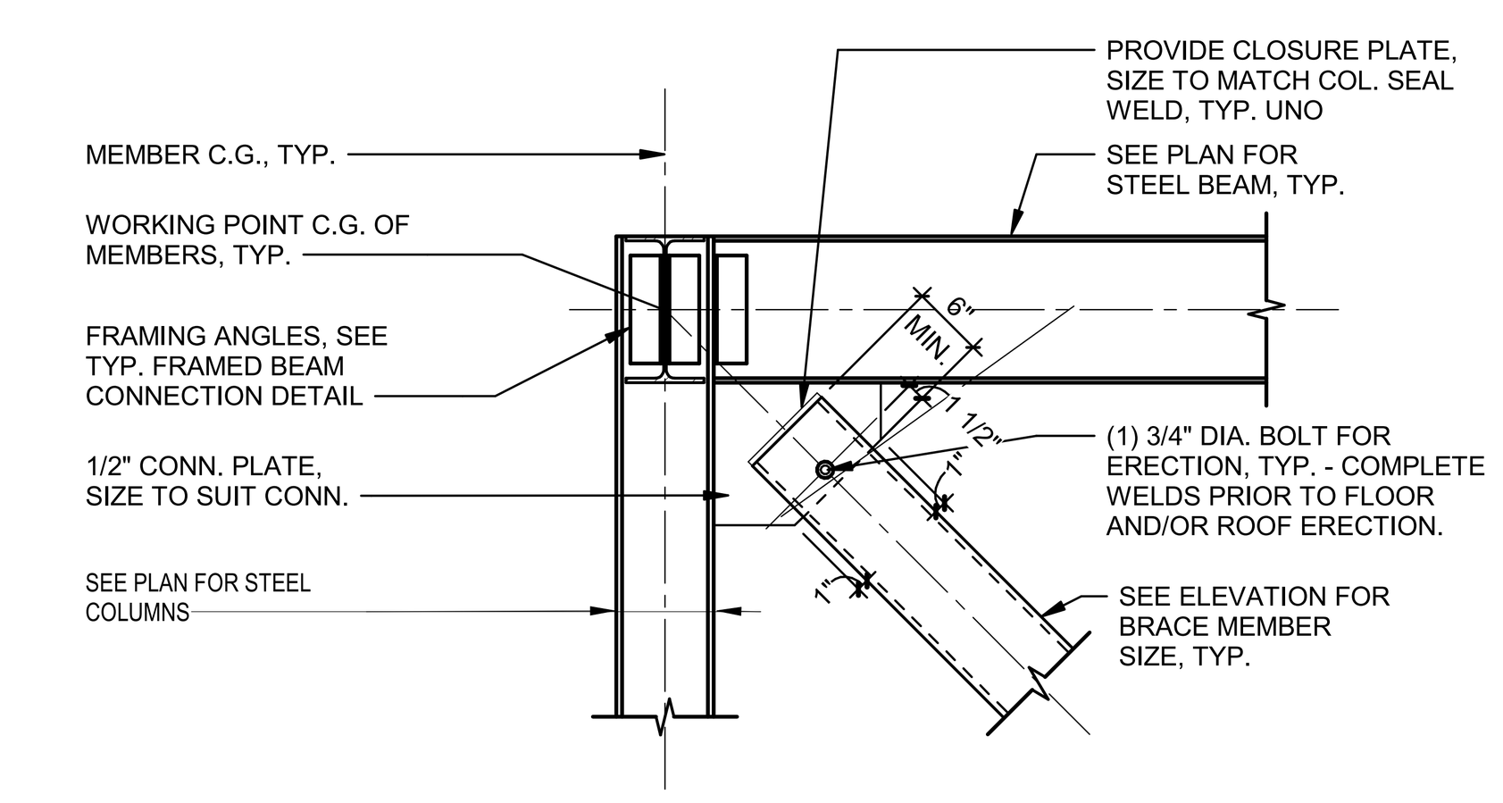
E8 **TYPICAL ROD BRACING DETAIL**
S-501B 1" = 1'-0"



E6 **COLUMN BRACE AT BASE PLAN**
S-501B 1" = 1'-0"



E4 **HSS BRACE CONNECTION DETAIL**
S-501B 3/4" = 1'-0"



E2 **HSS BRACE CONNECTION DETAIL**
S-501B 3/4" = 1'-0"

VERTICAL BRACE NOTES

1. THESE NOTES APPLY TO THE FABRICATION AND ERECTION OF ALL THE STEEL BRACING MEMBERS SHOWN ON THE STRUCTURAL FRAMING PLANS EXCEPT AS NOTED OTHERWISE ON THE BRACED FRAME ELEVATIONS AND DETAILS.
2. THE ERECTOR SHALL BE RESPONSIBLE FOR ERECTION PROCEDURES AND ALL TEMPORARY BRACING AND SHORING NEEDED DURING ERECTION AND UNTIL ALL OTHER ROOF STRUCTURE AND BRACING ARE IN PLACE AND CONNECTED.
3. FORCES SHOWN ON THE BRACE MEMBERS ARE IDENTIFIED AND DEFINED AS FOLLOWS:
   - T = TENSION
   - C = COMPRESSION
   - F = FORCE (TENSION OR COMPRESSION)
   - K = KIP (1000 LBS.)
4. ALL BRACE MEMBERS SHALL BE FABRICATED SO THAT THE CENTROID OF EVERY MEMBER AT EACH JOINT INTERSECTS AT A COMMON POINT.
5. PROVIDE GUSSET PLATES (MIN. 1/2") AS REQUIRED TO DEVELOP THE REQUIRED MEMBER CONNECTION FORCE. ALL PLATES SHALL BE SHOP WELDED TO THE MAIN FRAMING MEMBERS WITH FULL PENETRATION WELDS WITH 45 DEGREE BEVELS ON EACH SIDE. PLATES SHALL BE STIFFENED AS REQUIRED FOR GIVEN COMPRESSIVE FORCES.
6. TUBE OR PIPE BRACES SHALL BE CONNECTED TO GUSSET PLATES BY SAWCUT SLOTTING ON THE MEMBER CENTERLINE. PROVIDE HOLES IN GUSSETS AND BRACE MEMBERS ON BRACE CENTERLINE FOR ERECTION BOLTING AND PROPER CENTERING AND ALIGNMENT FOR WELDING. WELD BRACES TO GUSSETS WITH FILLET WELDS EQUAL TO THE THICKNESS OF THE BASE METAL. WELDS SHALL BE PLACED ON ALL SURFACES AND SHALL EXTEND FOR THE FULL LENGTH OF THE LAP WITH THE GUSSET PLATE.
7. SLEEVE NUTS, TURNBUCKLES, AND CLEVISES ON ROD BRACES SHALL BE SIZED TO DEVELOP THE REQUIRED BRACE FORCE. USE 5:1 SAFETY FACTOR FOR CLEVISES. MINIMUM THREAD ENGAGEMENT OF ROD IN SLEEVE NUTS SHALL BE FIELD VERIFIED. PROVIDE PAINT MARK ON TREADED ENDS OF RODS AT POINT OF MINIMUM SLEEVE NUT ENGAGEMENT.
8. AFTER STEEL FRAMING IS PROPERLY ALIGNED, TIGHTEN ROD BRACES TO HAVE EQUAL TENSION AND TO REMOVE ALL SAG. RODS SHOULD BE IN FIRM CONTACT AT INTERSECTION AFTER TIGHTENING.

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GE VERNOVA
GE Hitachi Nuclear Energy
Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO
BRACED FRAME ELEVATIONS AND DETAILS

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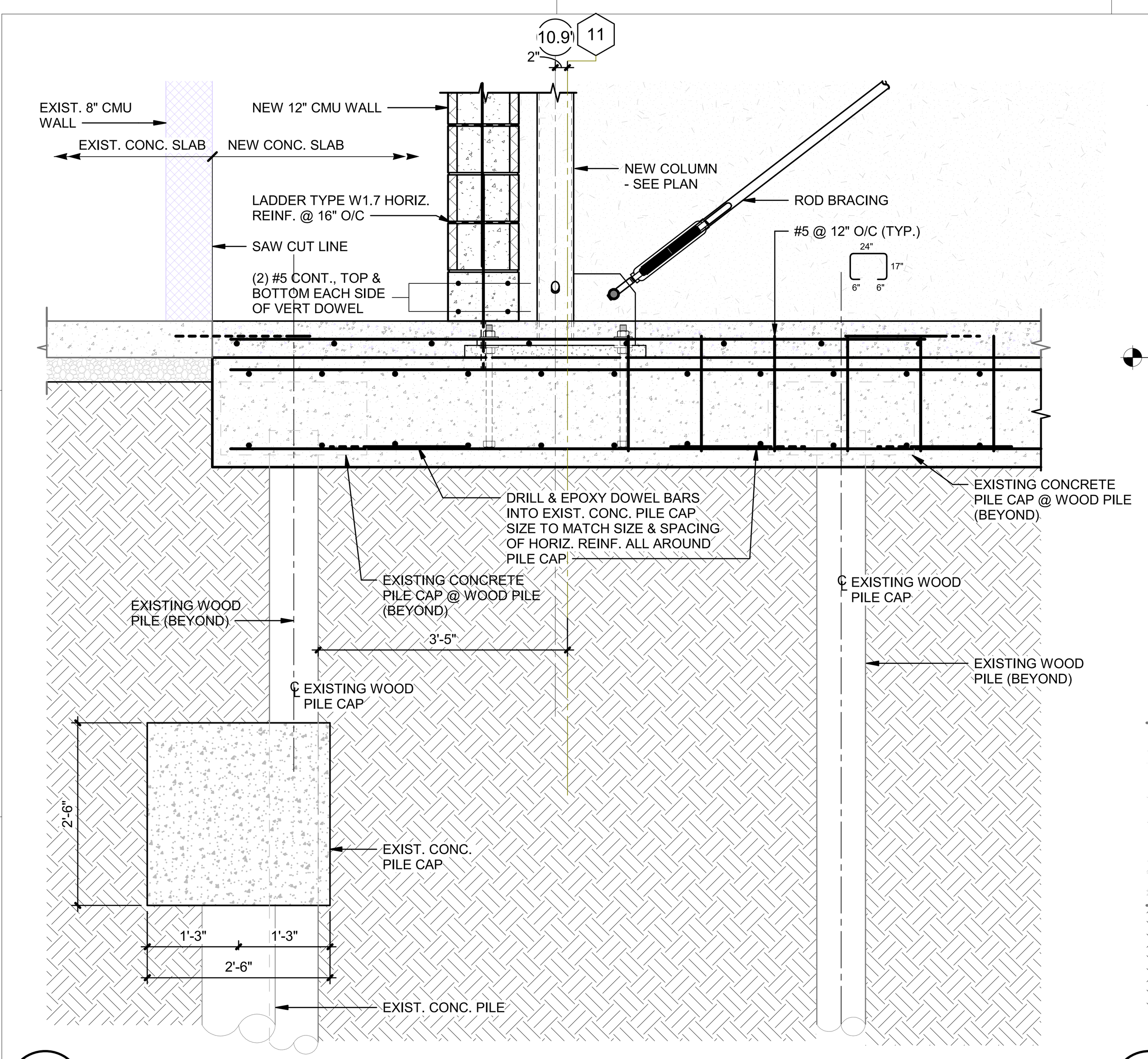
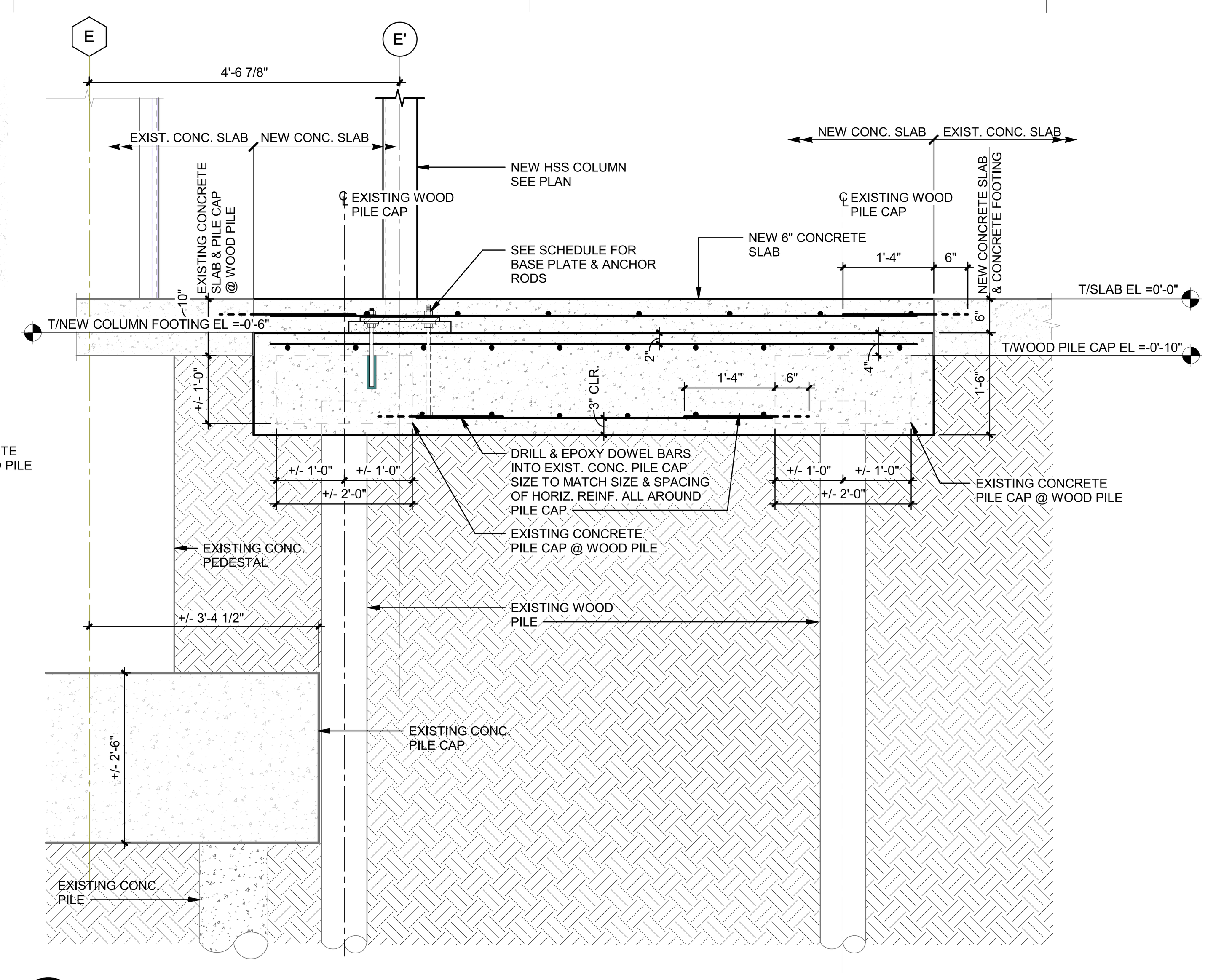
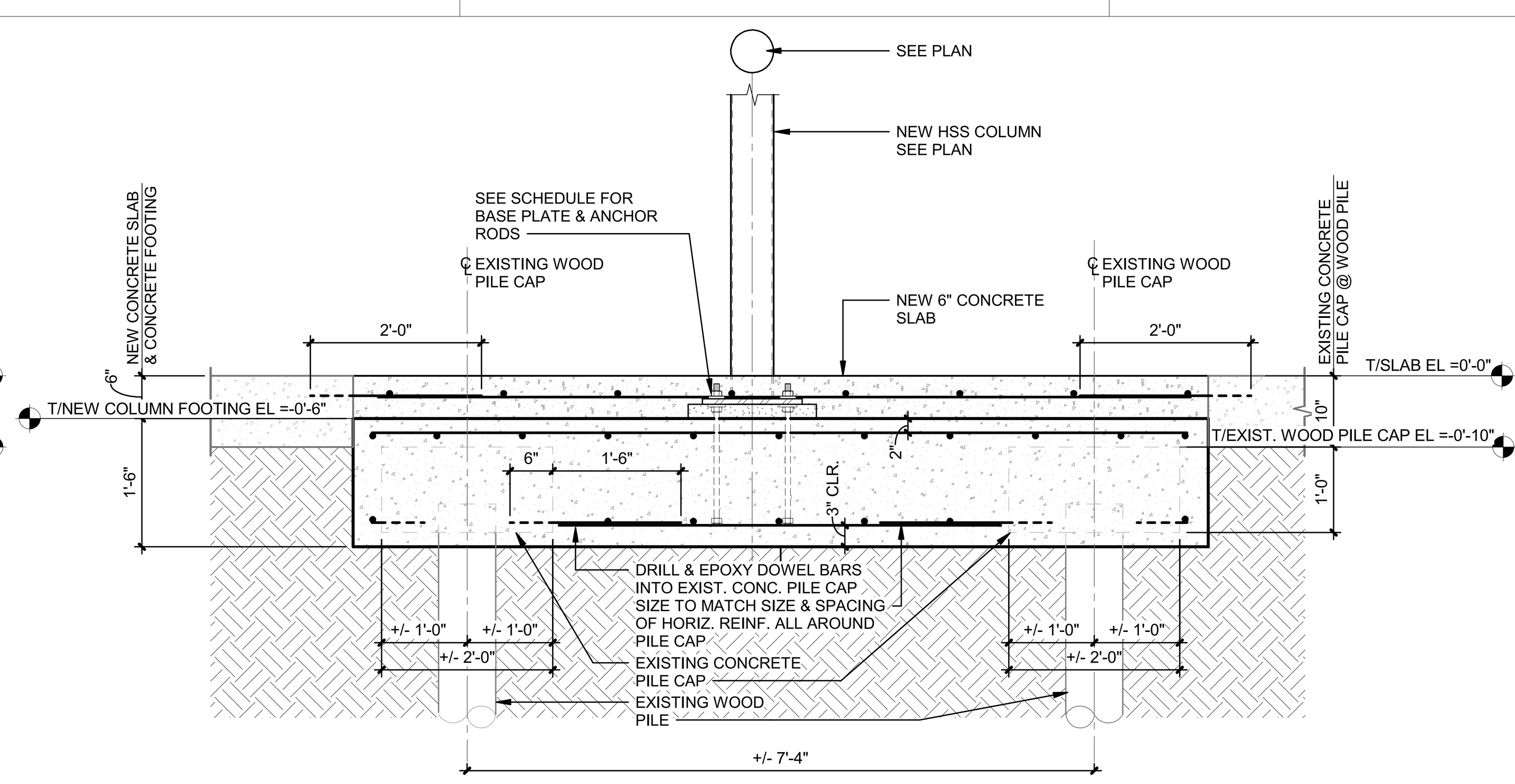


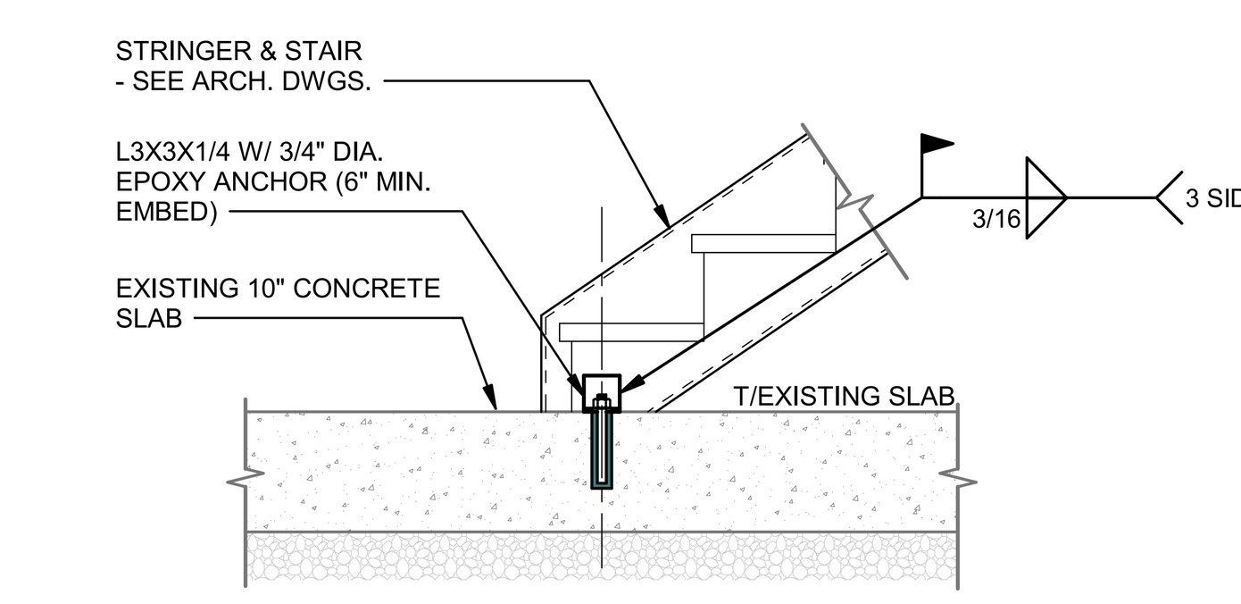
H8 SECTION
S-601B 3/4" = 1'-0"



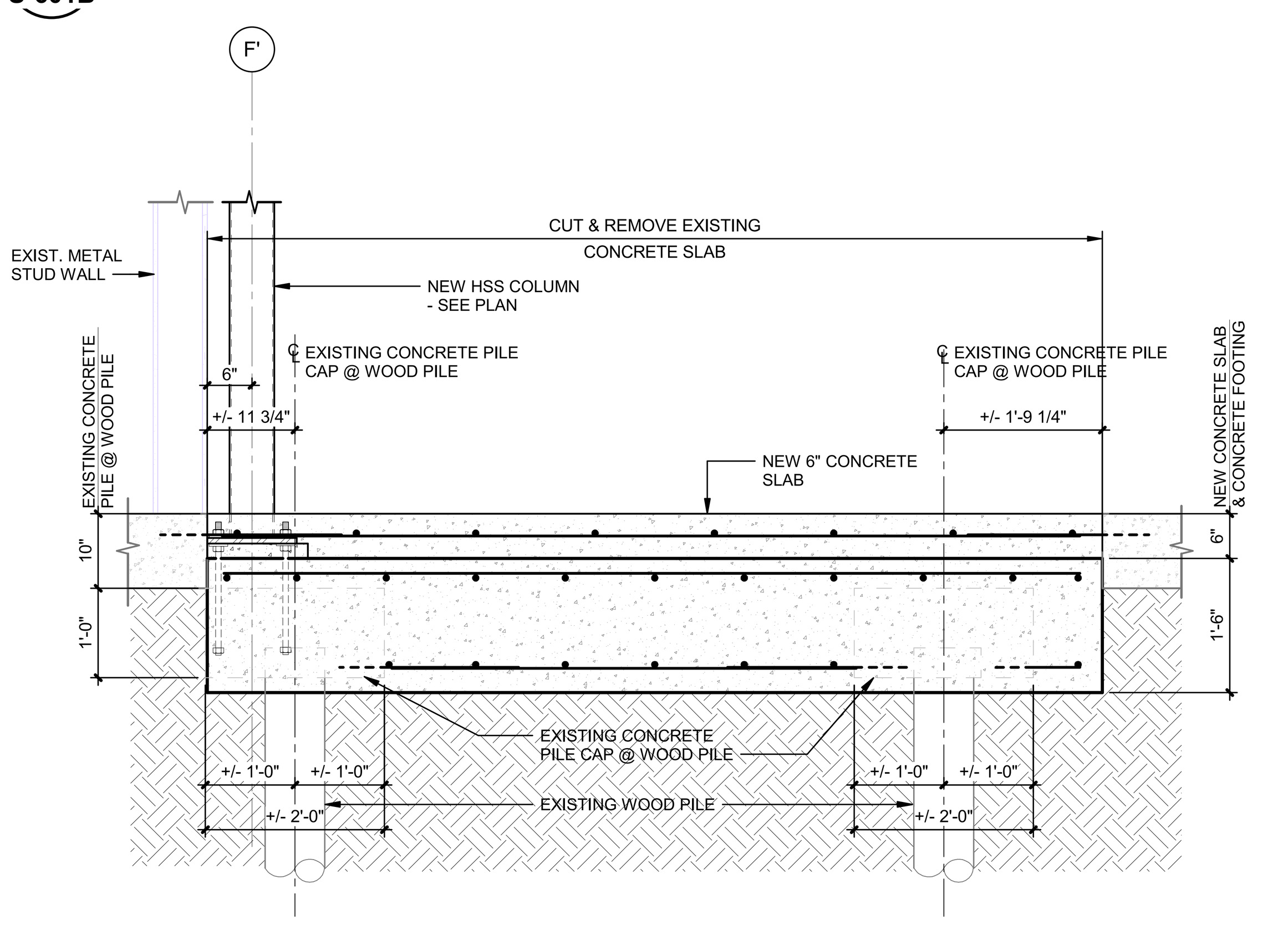
F6 SECTION
S-601B 3/4" = 1'-0"



H4 SECTION
S-601B 3/4" = 1'-0"



H2 SECTION AT STAIR STRINGER TO SLAB-ON-GRADE
S-601B 3/4" = 1'-0"



D8 SECTION
S-601B 3/4" = 1'-0"

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ALL SURF.

GE VERNOVA
GE Hitachi Nuclear Energy Wilmington, NC

GE VERNOVA-FMO
FOUNDATION SECTIONS

2025.09.18
S-601B

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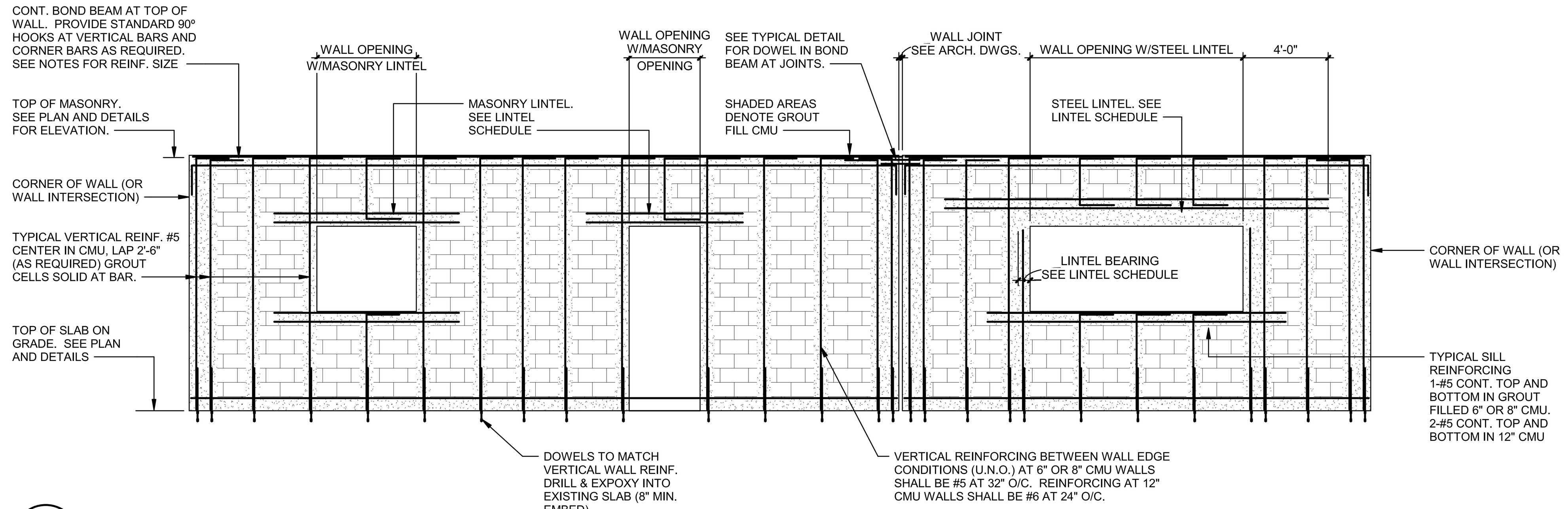
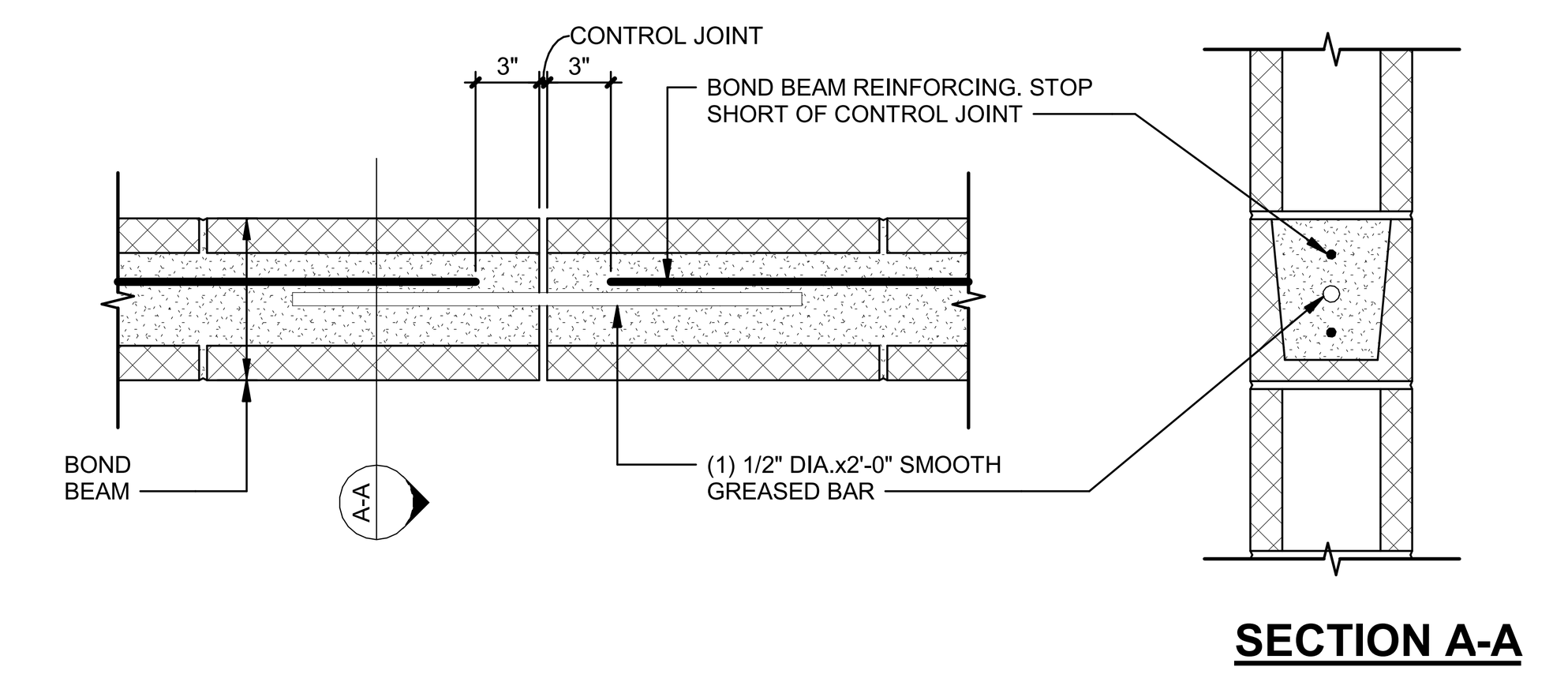
NOTES:

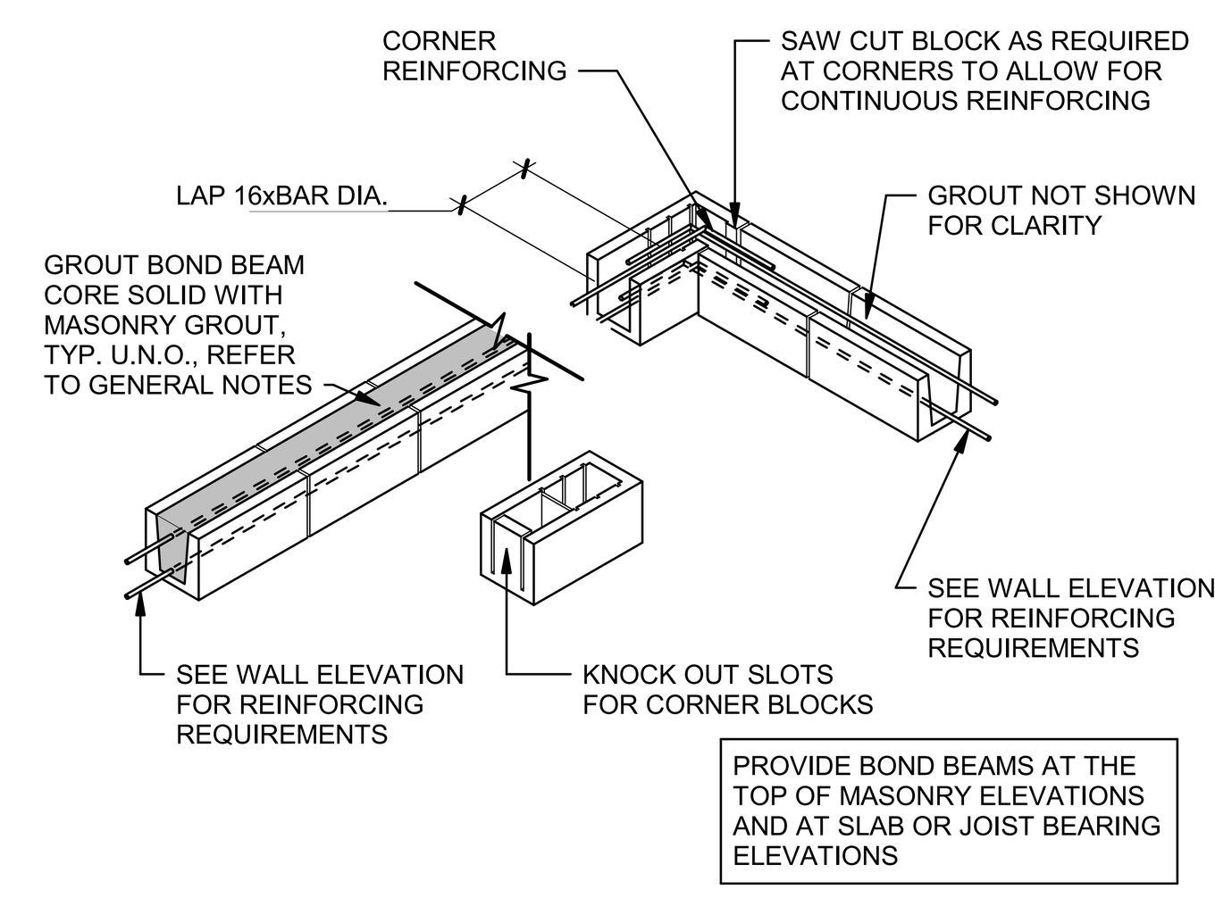
1. BRACE TOP OF ALL MASONRY WALLS AS SHOWN ON OTHER DETAILS.
2. REFER TO DRAWINGS OF OTHER DISCIPLINES FOR ALL OPENING SIZES AND LOCATIONS THROUGH MASONRY WALLS.
3. WHERE DETAILS SHOWN ON OTHER SHEETS NOTE REINFORCING OF GREATER SIZE AND/ OR CLOSER SPACING, THE REINFORCING REQUIREMENT IN SAID DETAIL SHALL GOVERN.
4. MINIMUM HORIZONTAL JOINT REINFORCING SHALL BE LADDER TYPE WITH W1.7 WIRES SPACED AT 16" O/C VERTICAL U.N.O.
5. AT STACKED BOND CONSTRUCTION, PROVIDE CONTINUOUS HORIZONTAL BOND BEAMS AT 4'-0" O/C MAXIMUM SPACING.
6. WHERE CONTINUOUS 6" OR 8" BOND BEAMS REQUIRED, PROVIDE (1) #5 BAR TOP AND BOTTOM, U.N.O.
7. WHERE CONTINUOUS 12" BOND BEAM REQUIRED, PROVIDE (2) #5 BARS TOP AND BOTTOM, U.N.O.
8. PROVIDE CONTINUOUS BOND BEAM AT EVERY 8'-8" HEIGHT OF WALL FOR WALLS GREATER THAN 12'-0" HEIGHT.



H8 S-701B MINIMUM MASONRY WALL REINFORCING
1/4" = 1'-0"

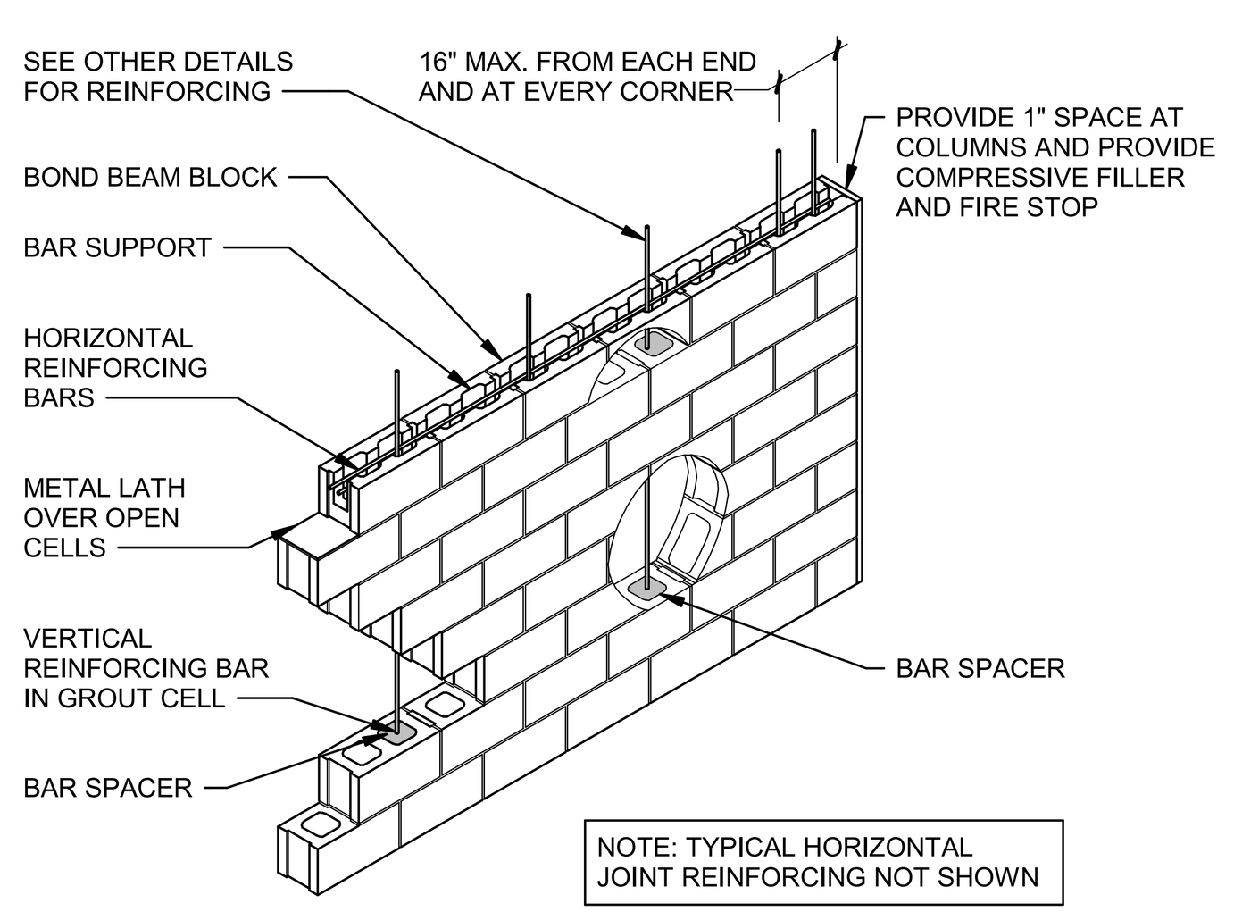


H5 S-701B BOND BEAM CONTROL JOINT
1 1/2" = 1'-0"

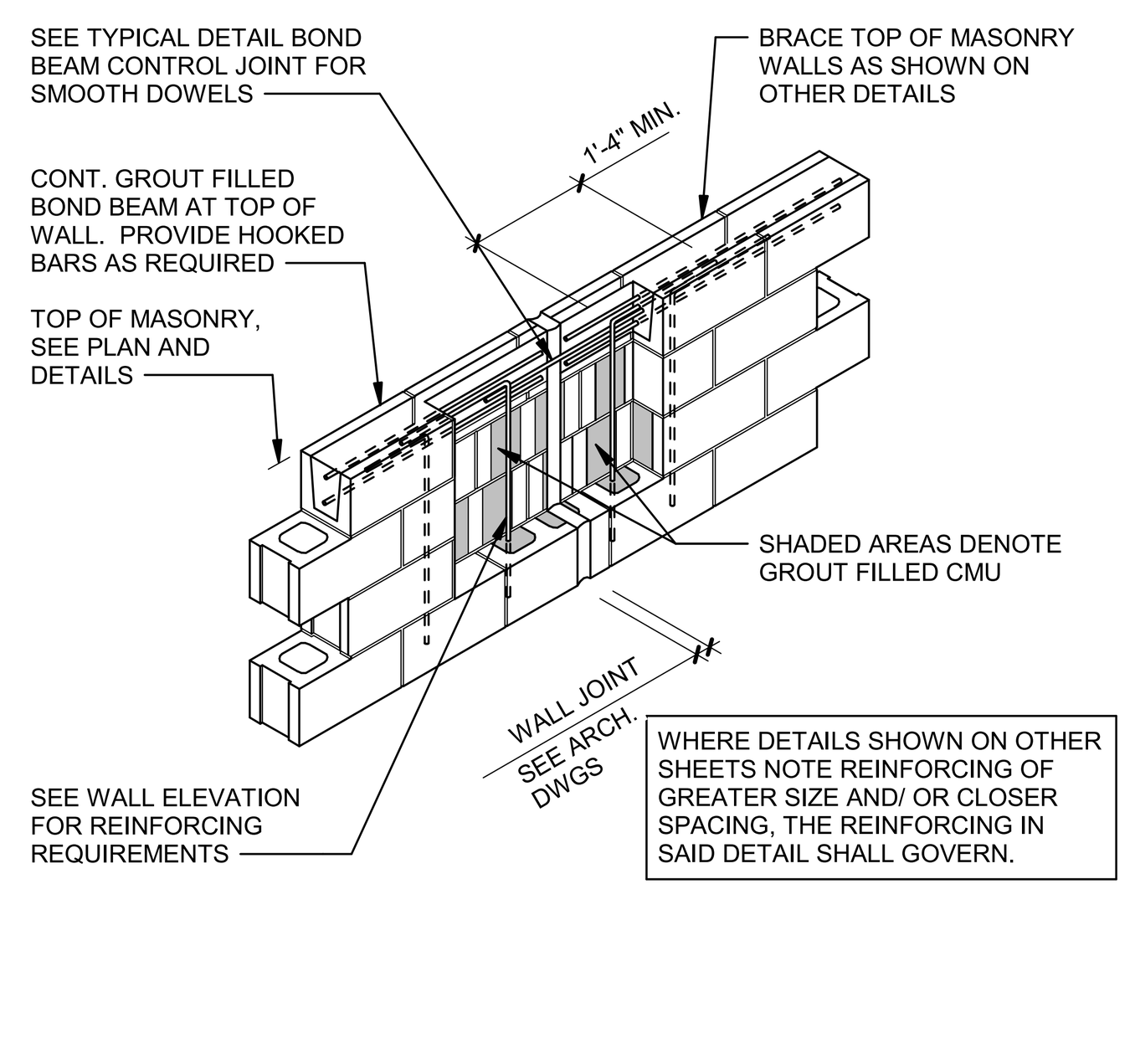


H2 S-701B BOND BEAM
1/2" = 1'-0"

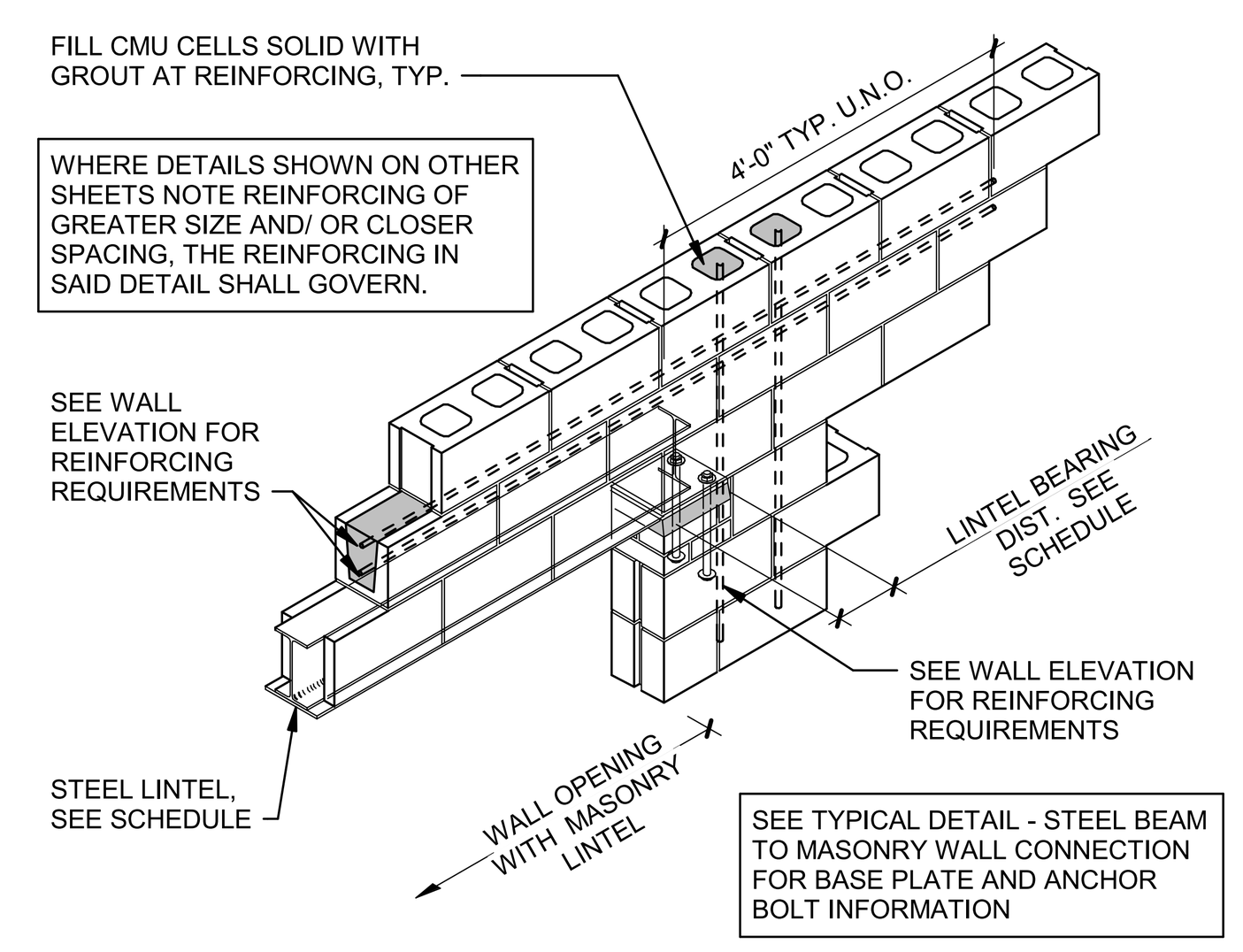
LINTEL SCHEDULE					
Mark	TYPE	DESCRIPTION	MIN. BEARING	LINTEL DEPTH	REMARKS
L-1	TYPE-B	12"x24" U BLOCK W/ (2) #6 T & B	8"	24"	
L-2	TYPE-B	12"x24" U BLOCK W/ (2) #6 T & B	8"	36"	
		12"x8" U BLOCK W/ (2) #6 B		8"	



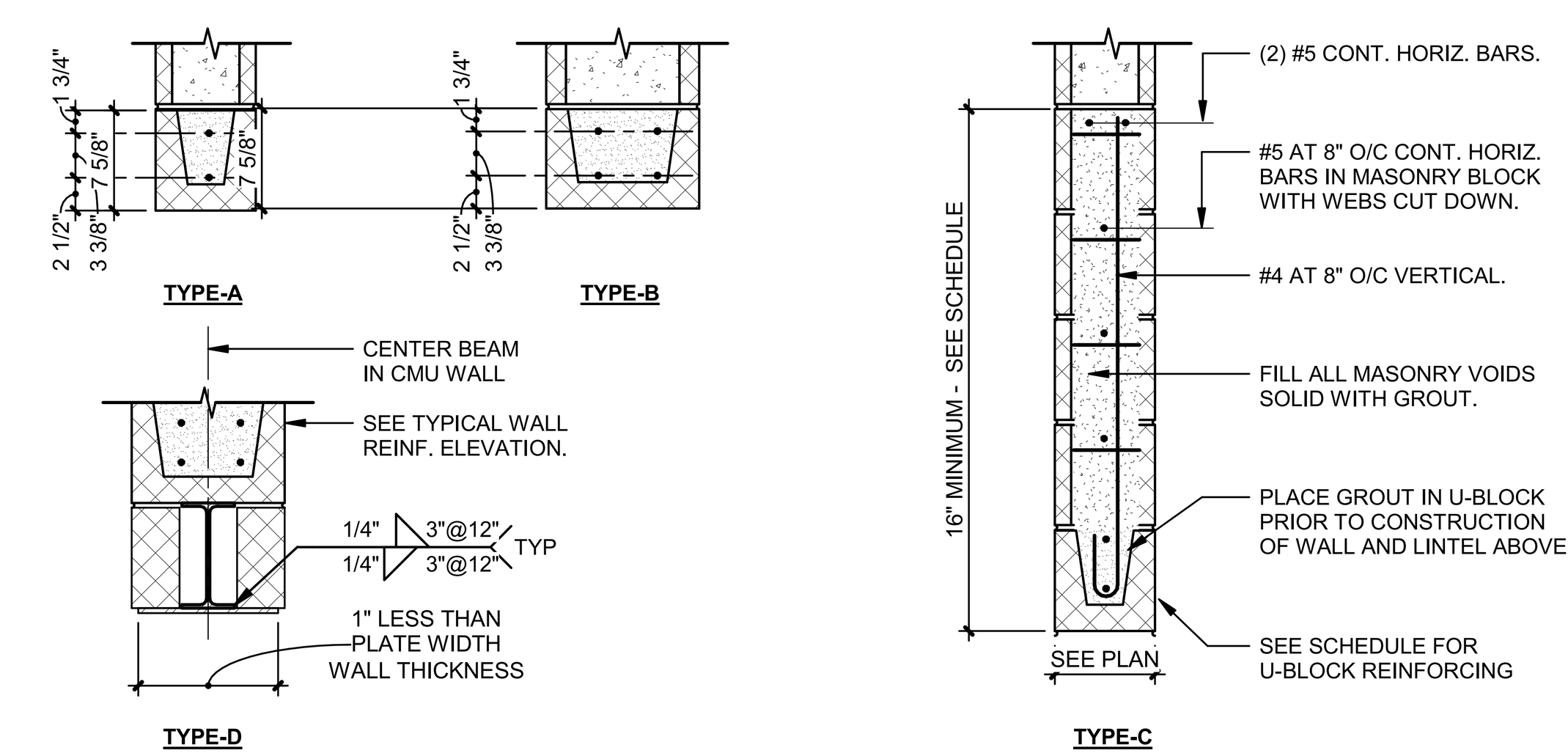
E8 S-701B MASONRY REINFORCING
3/8" = 1'-0"



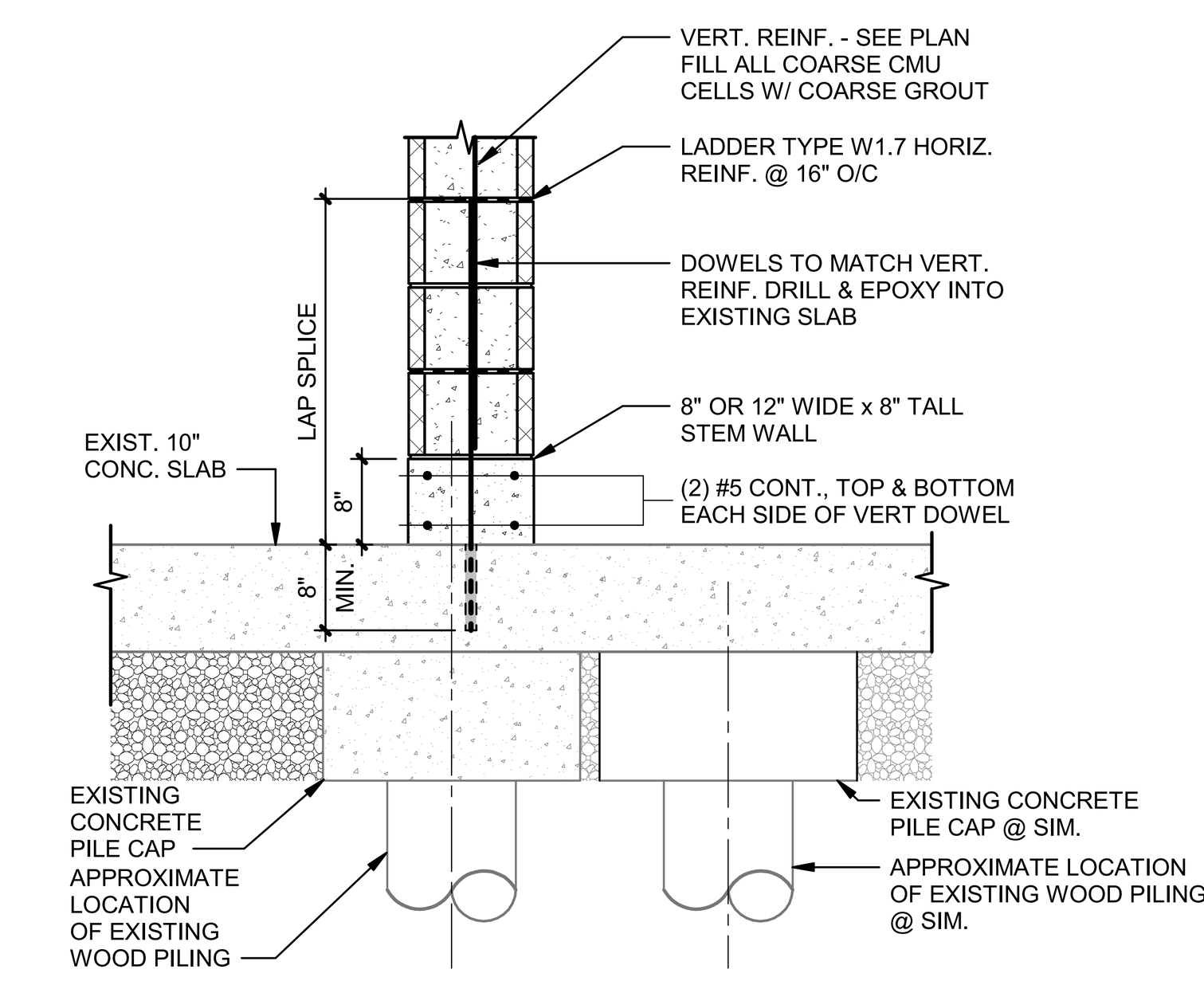
E7 S-701B WALL JOINT REINFORCING
1/2" = 1'-0"



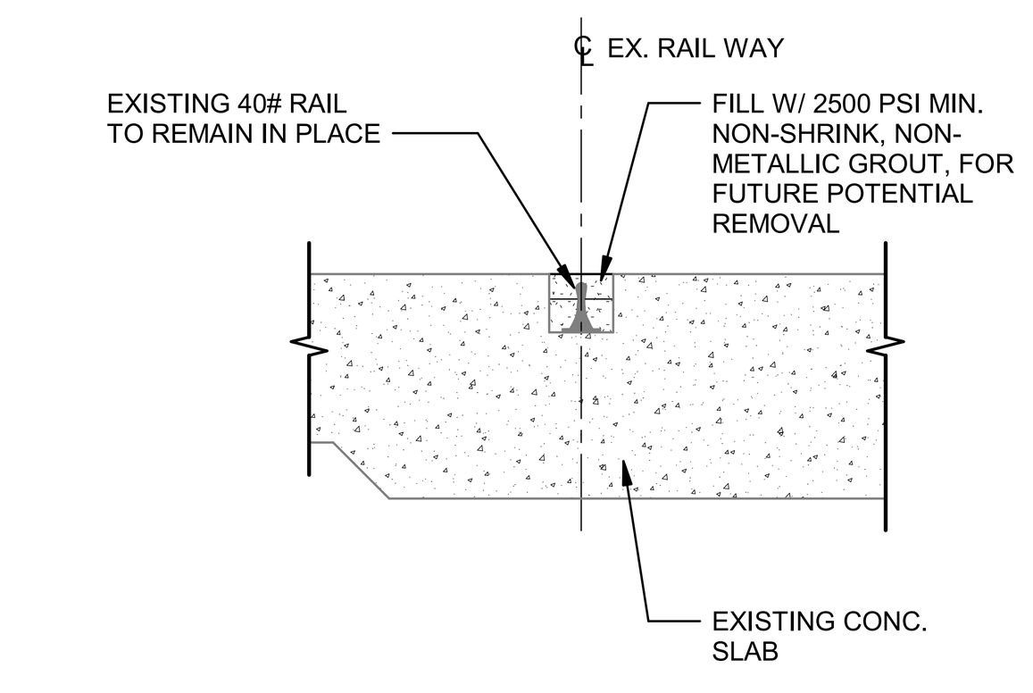
E6 S-701B OPENING WITH STEEL LINTEL
1/2" = 1'-0"



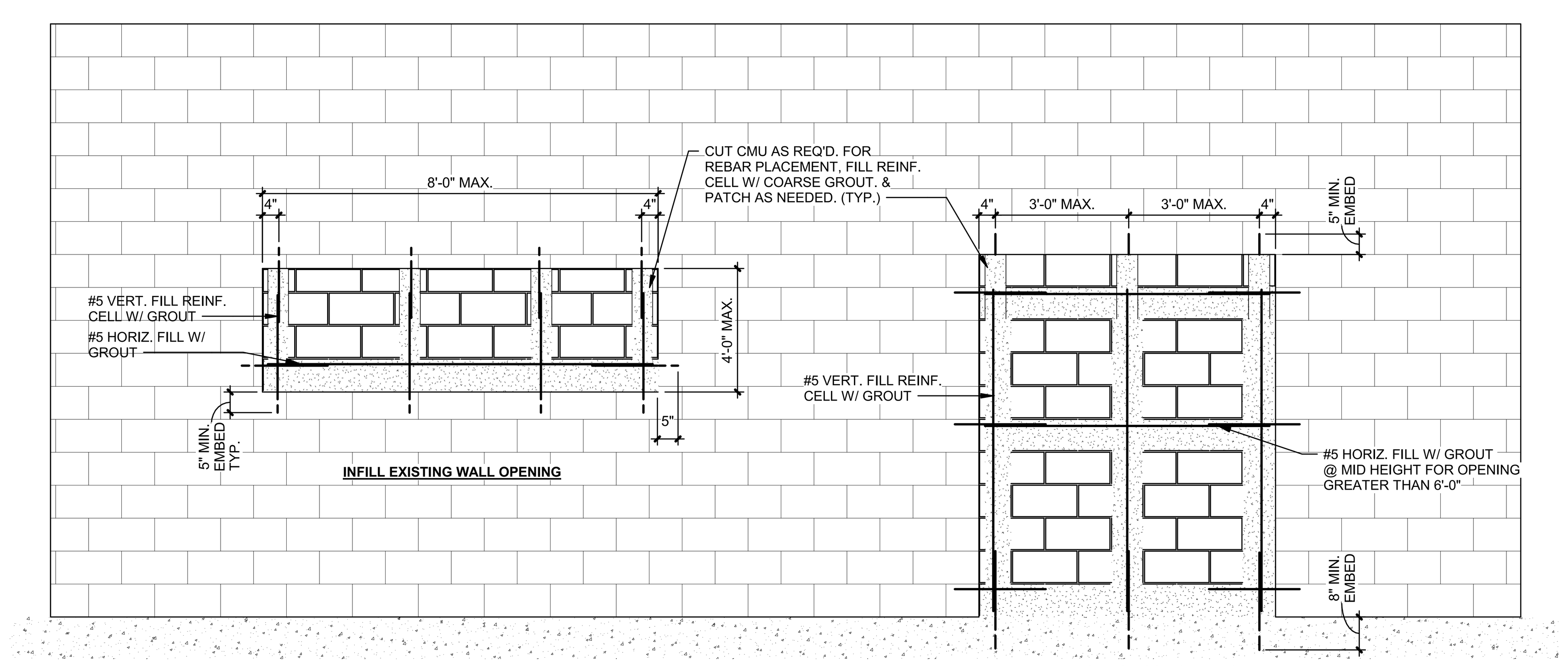
E5 S-701B MASONRY LINTEL TYPES
1" = 1'-0"



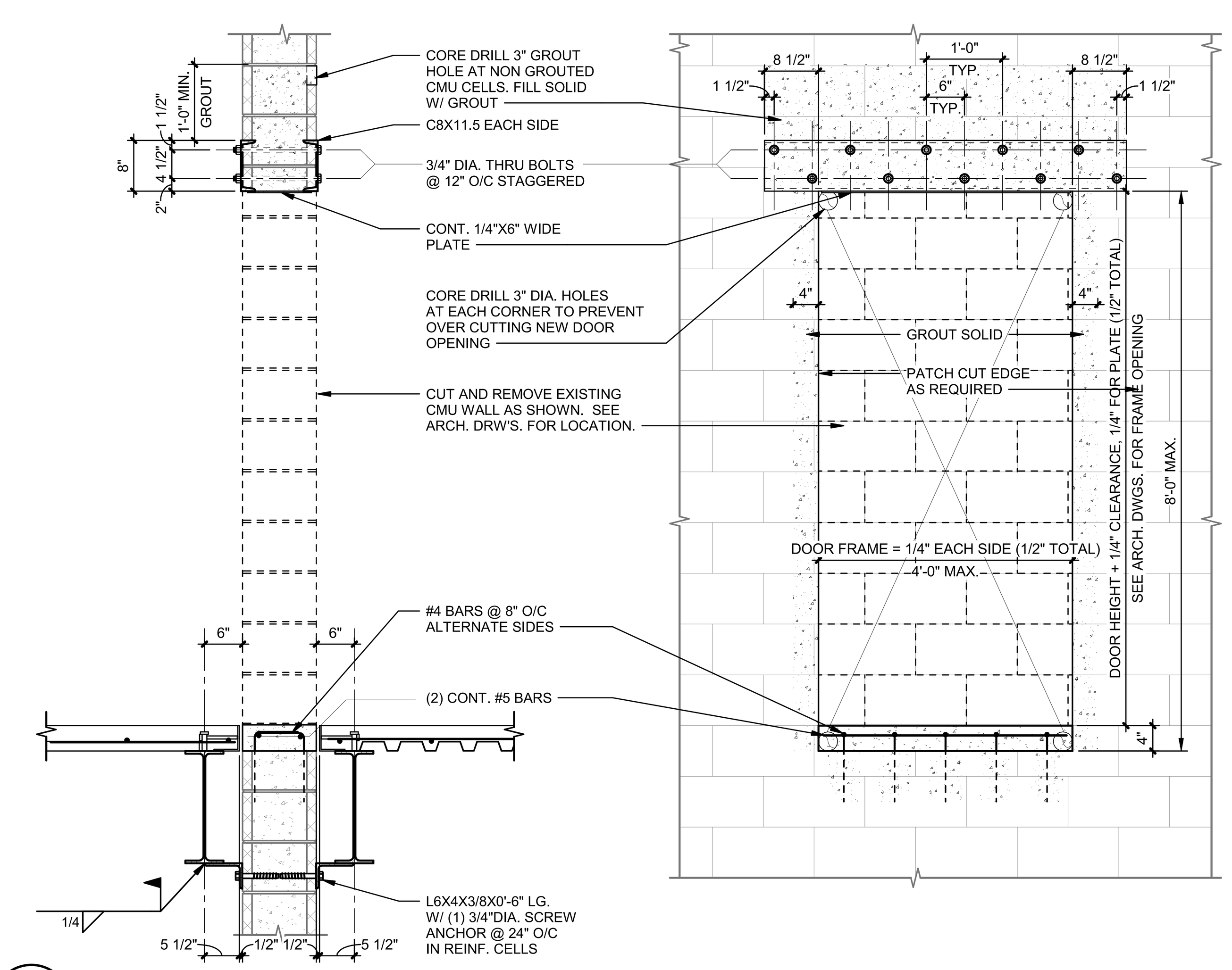
E3 S-701B NEW CMU WALL AT EXISTING SLAB
3/4" = 1'-0"



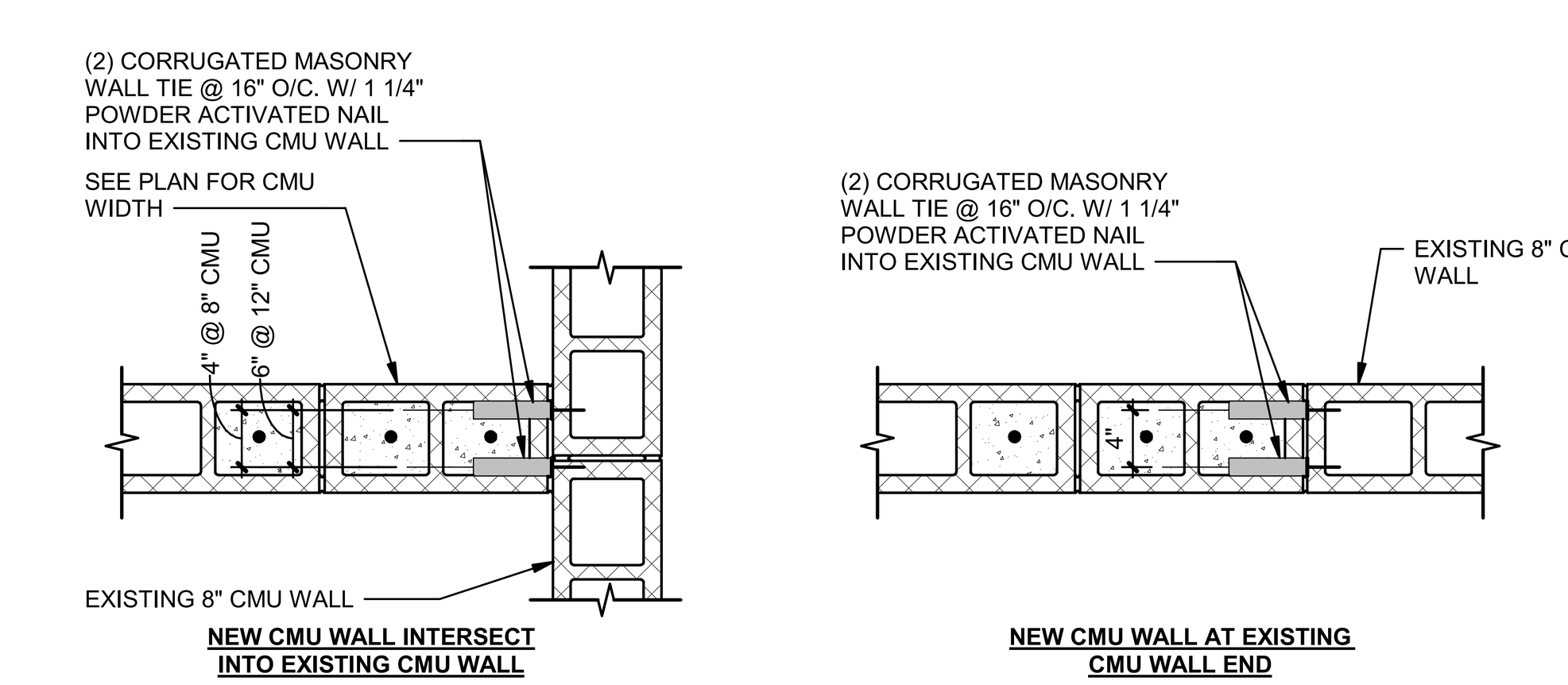
1 S-701B SECTION AT EXISTING RAILS
1" = 1'-0"



C8 S-701B TYPICAL INFILL EXISTING CMU WALL
1/2" = 1'-0"



C5 S-701B NEW DOOR OPENING IN EXISTING CMU WALL
3/4" = 1'-0"



D3 S-701B NEW CMU TO EXISTING CMU WALL
1" = 1'-0"

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SKA Project Number:
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REV	DESCRIPTION	BY	CR#	APPROVAL	DATE

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REFERENCE DRAWINGS

SCALE ___ ALL SURF.
*UNLESS OTHERWISE SPECIFIED
2 PLACE DECIMALS ± FRACTIONS ±
3 PLACE DECIMALS ± ANGLES ±

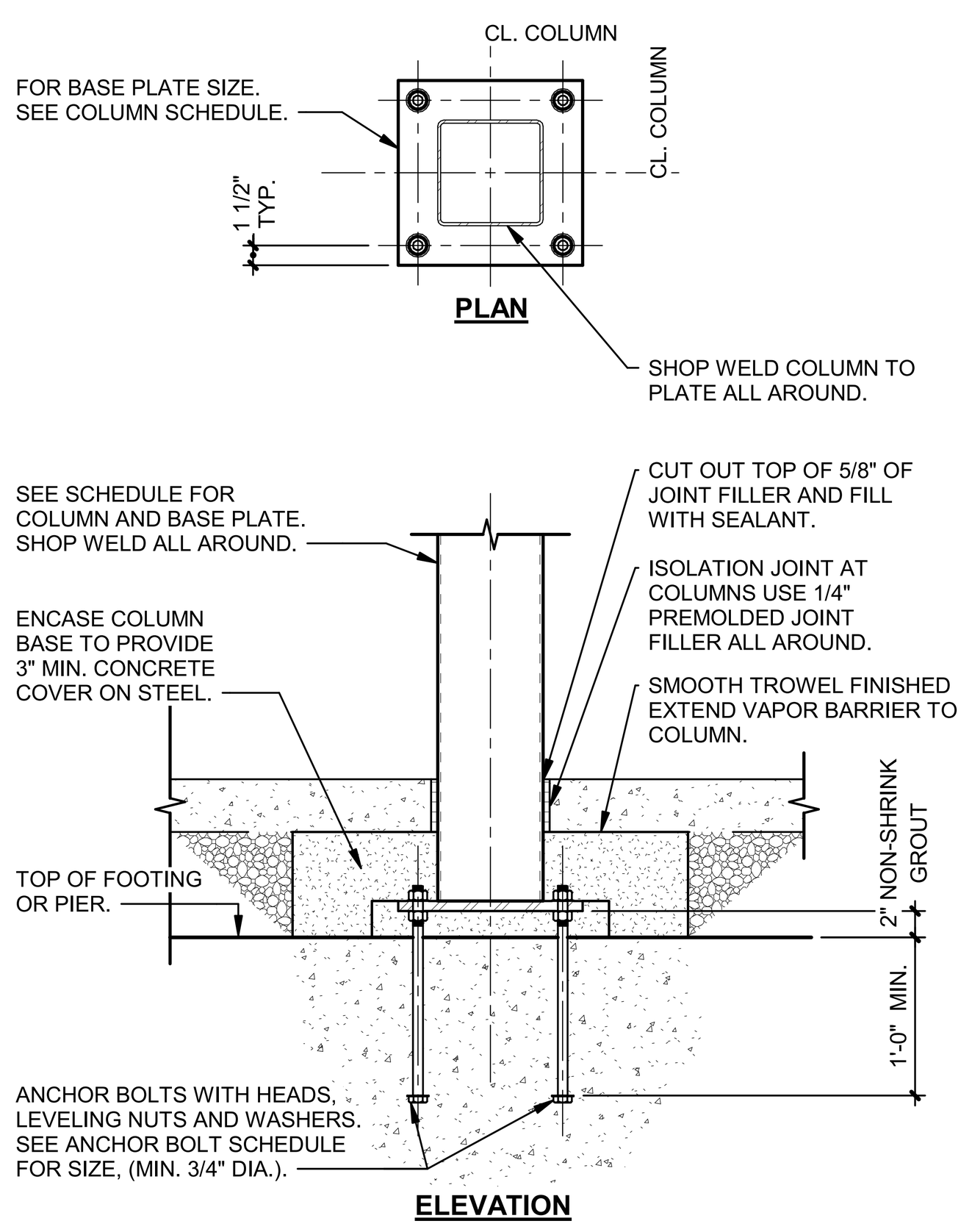
GE VERNOVA — GE Hitachi Nuclear Energy, Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO FOUNDATION TYPICAL DETAILS AND SCHEDULES

ISSUE DATE 2025.09.18 DWG NO. S-701B REV.

CONTROLLED BY: ISSUED TO: FILE NAME PIXEL SH NO. CONT ON

TRUE NORTH PROJECT NORTH

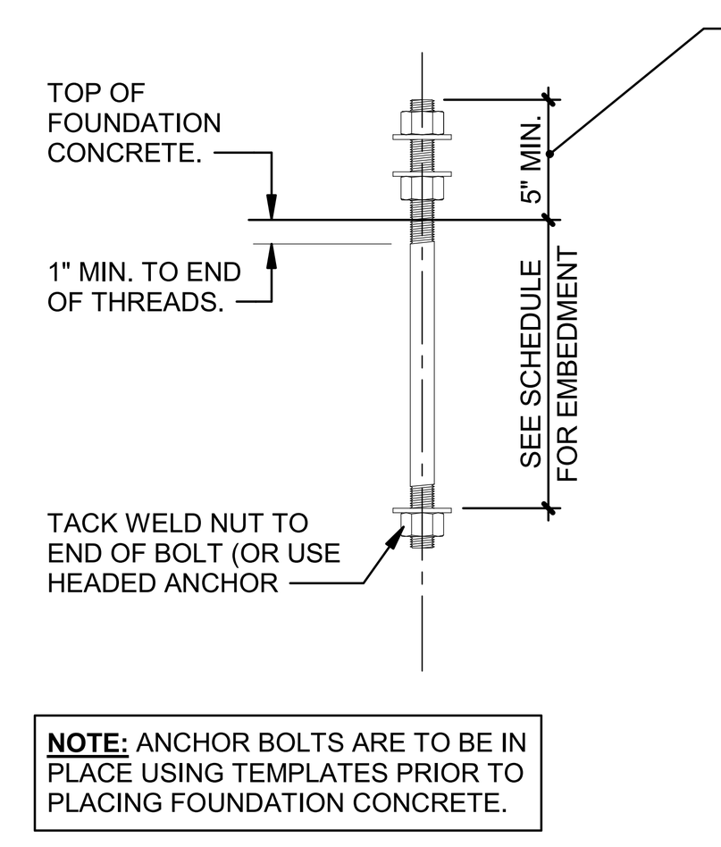


NOTE:

1. NON-SHRINK GROUT BENEATH PLATES TO BE AS SPECIFIED. PLACE BY POURING TO A WOOD FORM 2" CLEAR FROM EDGES OF BASE PLATE (ALL SIDES). POUR A FLOWABLE MIX TO THE FORM AND UP TO THE TOP OF THE BASE PLATE. TAP TOP OF PLATE TO ELIMINATE TRAPPED AIR IN THE GROUT.
2. ALL STEEL BELOW GRADE SHALL BE COATED WITH ASPHALTIC PAINT PRIOR TO COVERING WITH CONCRETE.

F8 / S-702B — RECTANGLE HSS COLUMN BASE PLATE

1" = 1'-0"



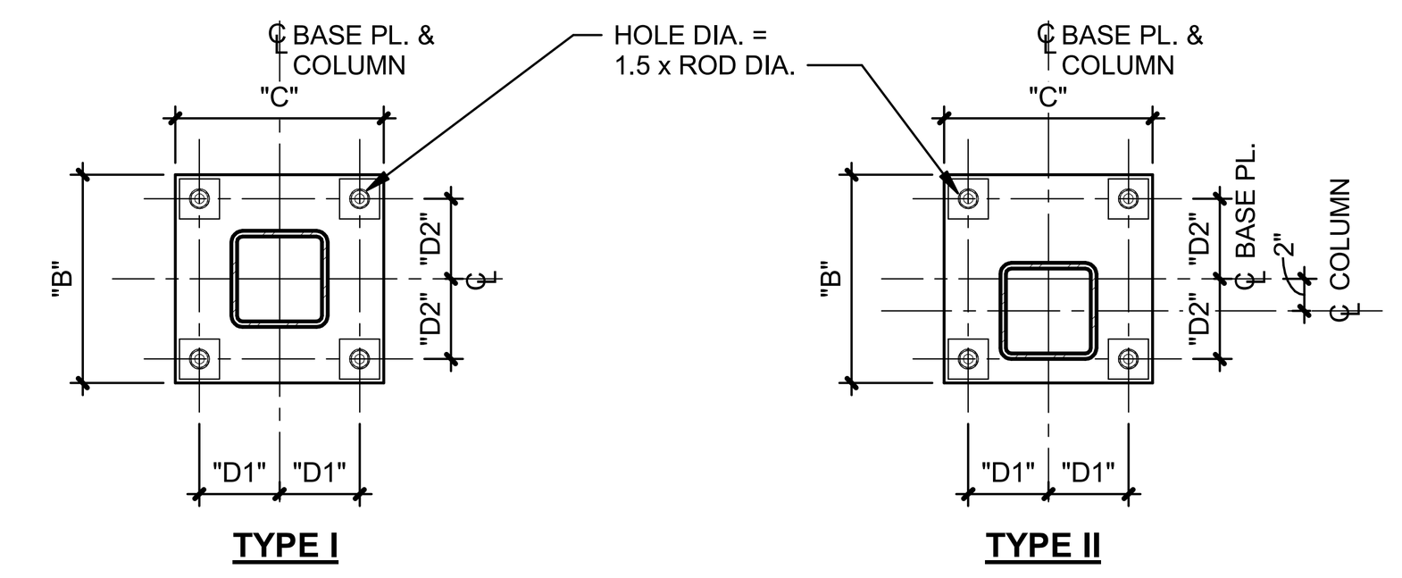
SIZE	MINIMUM EMBEDMENT LENGTH
3/4" DIA.	1'-0"
1" DIA.	1'-0"
1 1/4" DIA.	1'-3"
1 1/2" DIA.	1'-6"
1 3/4" DIA.	1'-9"
2" DIA.	2'-0"

NOTE: ANCHOR BOLTS ARE TO BE IN PLACE USING TEMPLATES PRIOR TO PLACING FOUNDATION CONCRETE.

H6 / S-702B — ANCHOR RODS

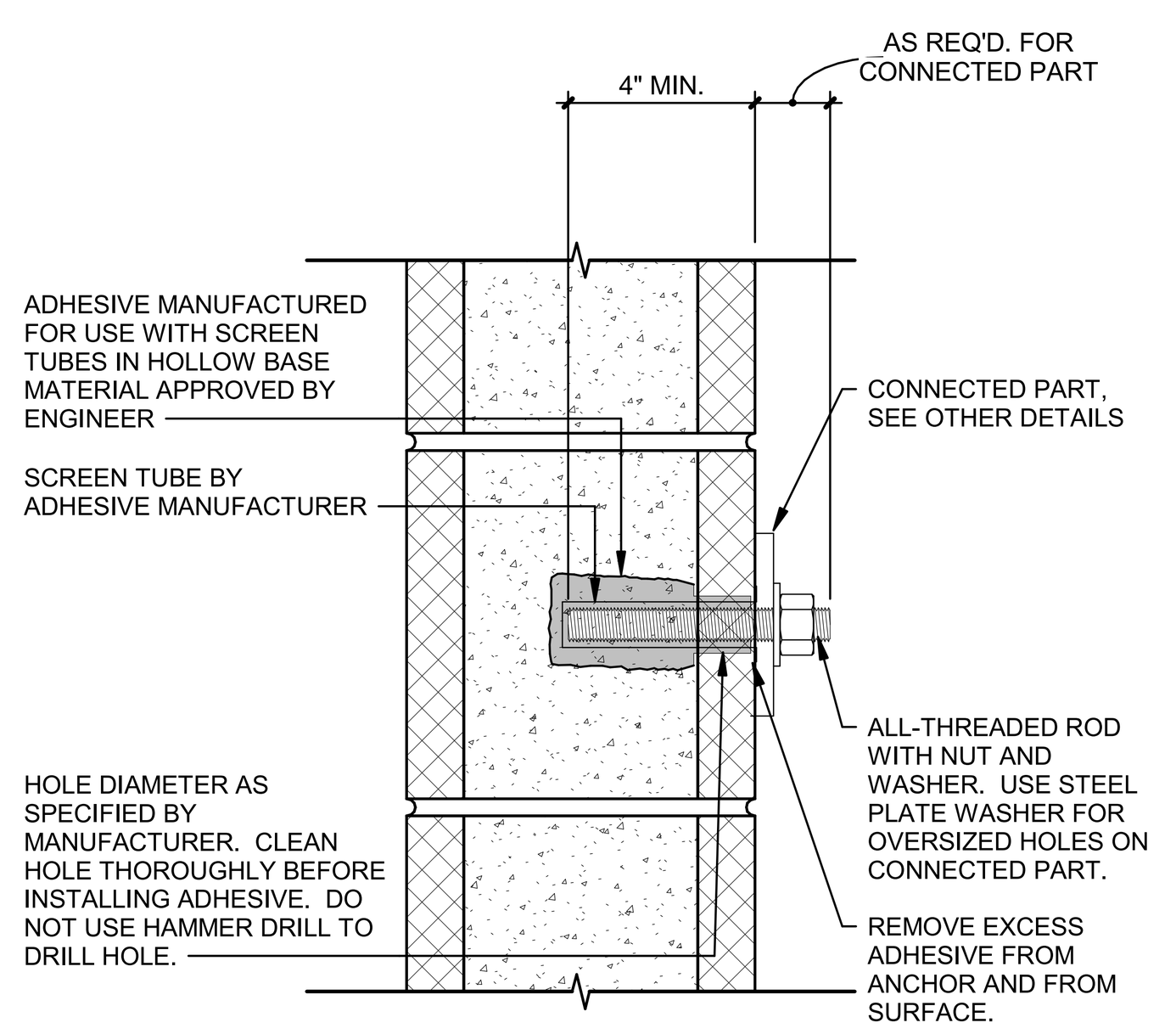
1 1/2" = 1'-0"

BASE PLATE MARK	TYPE	BASE PLATE			ANCHOR BOLTS	
		THICKNESS	B	C	No.	DIA.
BP-1	I	1"	12"	12"	4	3/4"
BP-2	II	1"	12"	12"	6	3/4"



F4 / S-702B — BASE PLATE & ANCHOR BOLT SCHEDULE

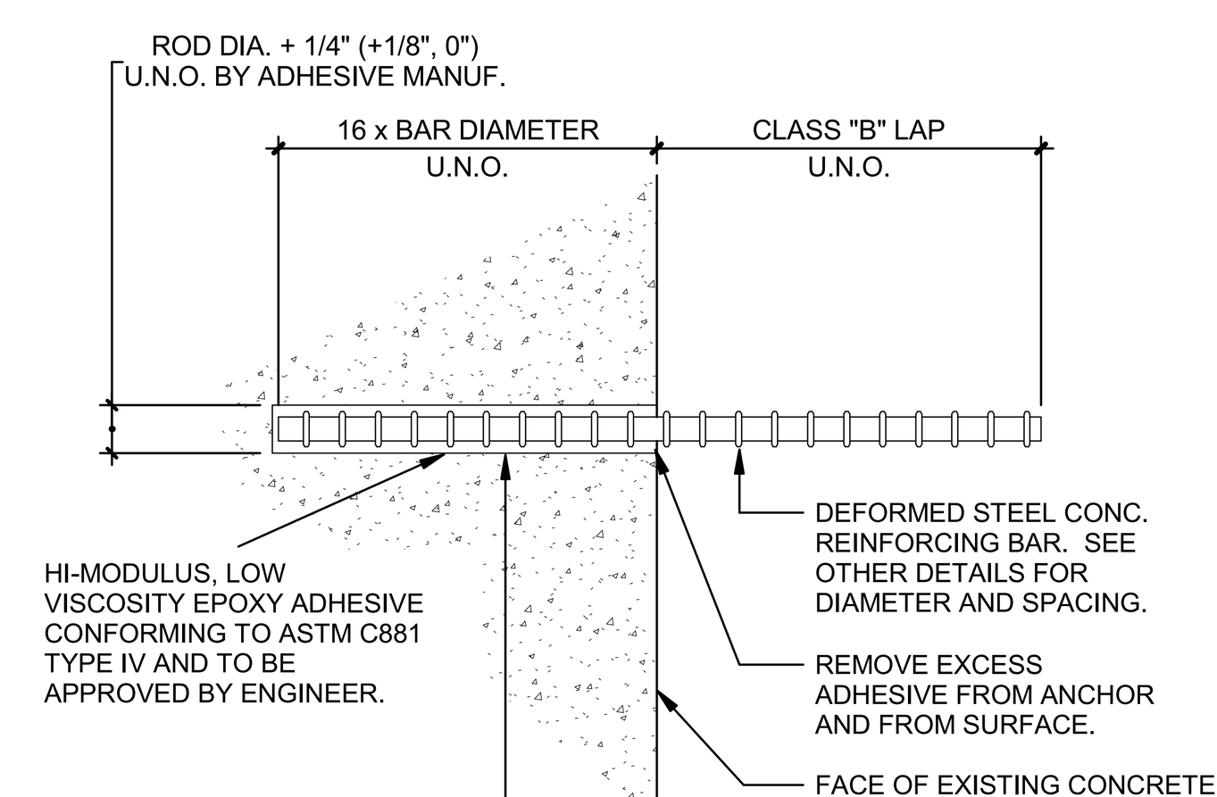
1" = 1'-0"



SEE GENERAL NOTES AND ADHESIVE ANCHOR INSTALLATION NOTES.

D8 / S-702B — ADH. ANCH. THREADED ROD IN HOLLOW MAT'L

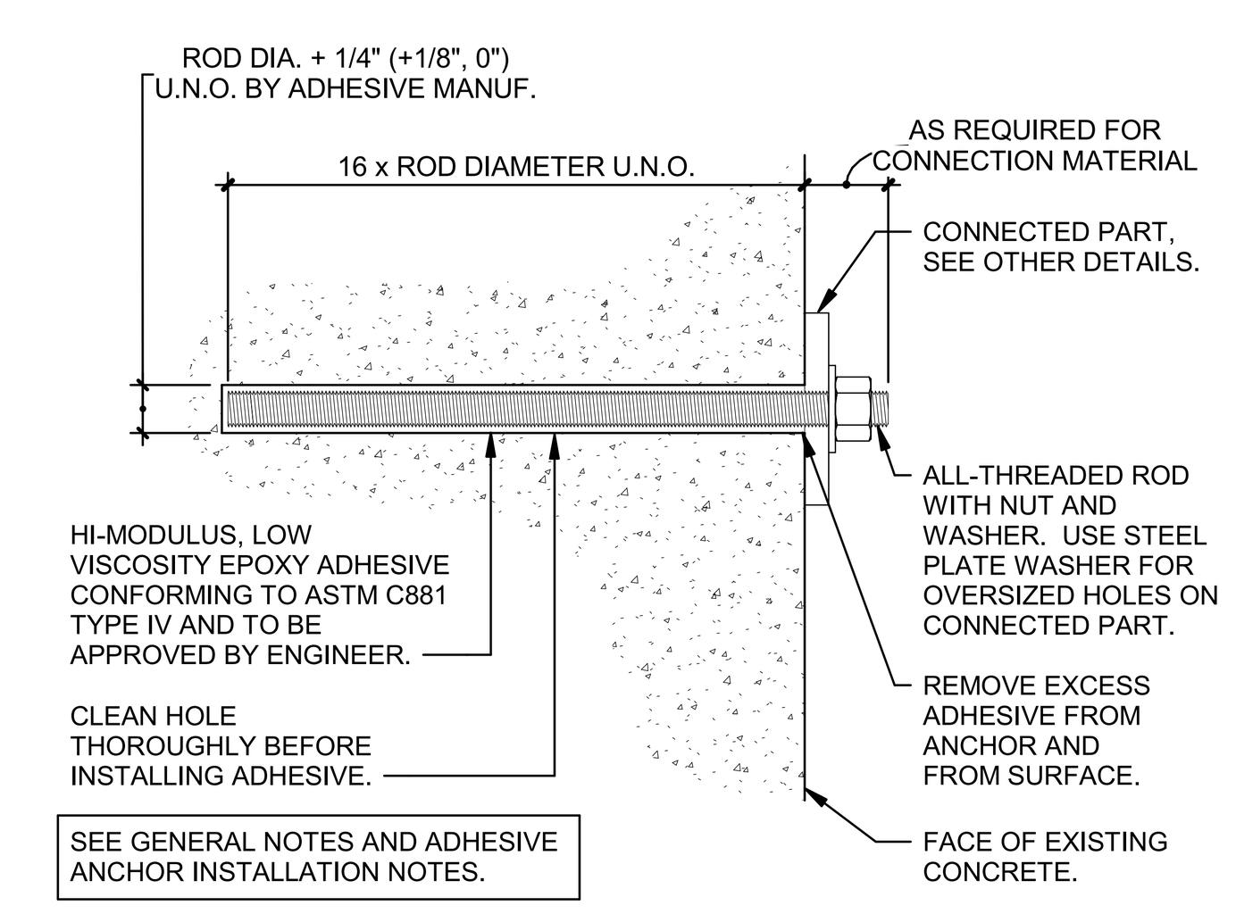
3" = 1'-0"



SEE GENERAL NOTES AND ADHESIVE ANCHOR INSTALLATION NOTES.

D6 / S-702B — ADHESIVE ANCH. CONCRETE REINFORCING BAR

3" = 1'-0"



SEE GENERAL NOTES AND ADHESIVE ANCHOR INSTALLATION NOTES.

D4 / S-702B — ADHESIVE ANCHOR THREADED ROD IN SOLID MATERIAL

3" = 1'-0"

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3 PLACE DECIMALS.__ ± ANGLES.__ ±

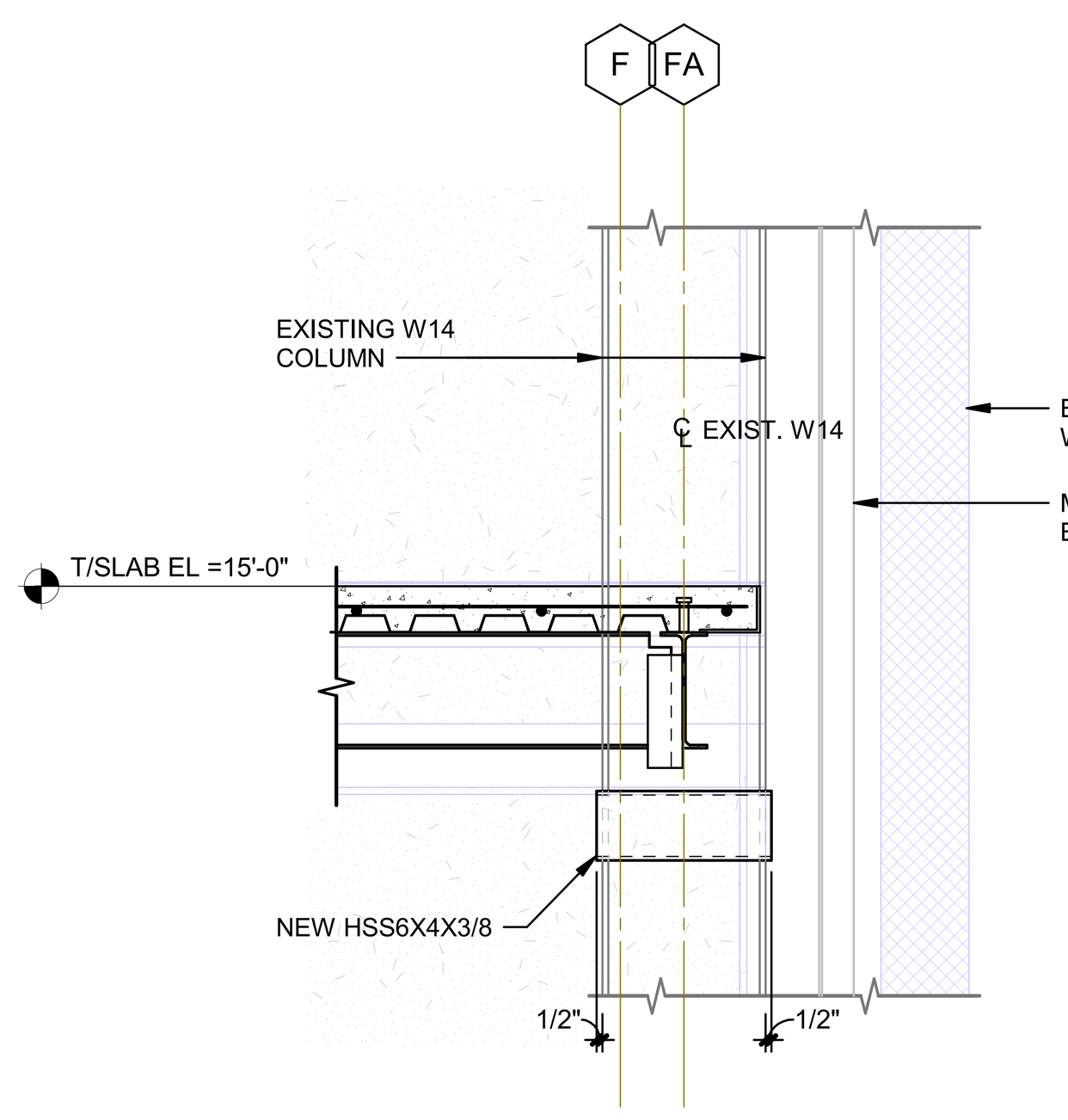
GE VERNOVA — GE Hitachi Nuclear Energy, Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO FOUNDATION TYPICAL DETAILS AND SCHEDULES

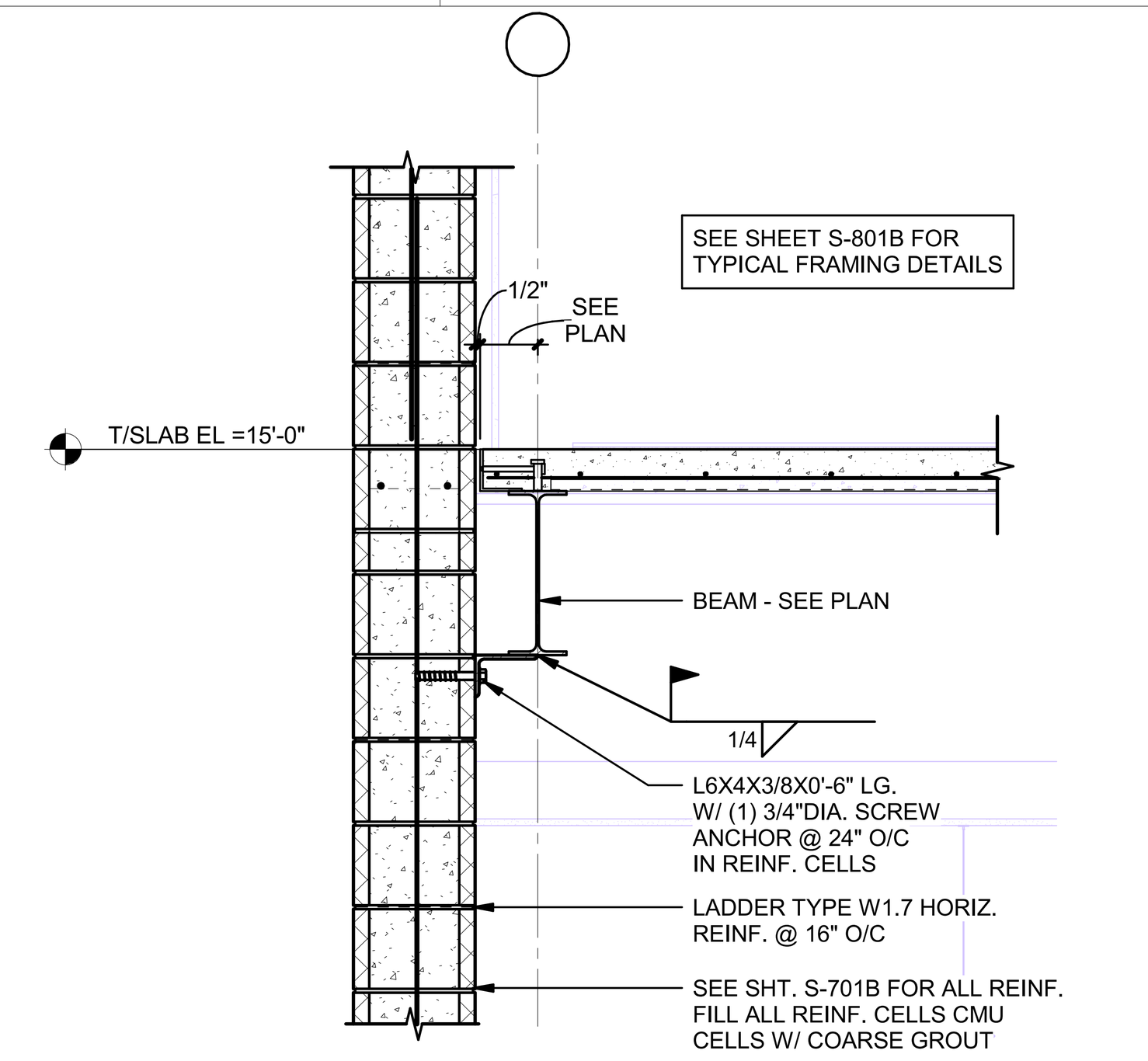
ISSUE DATE: 2025.09.18 DWG NO.: S-702B REV.:

CONTROLLED BY: ISSUED TO: FILE NAME: PIXEL SH NO. CONT ON

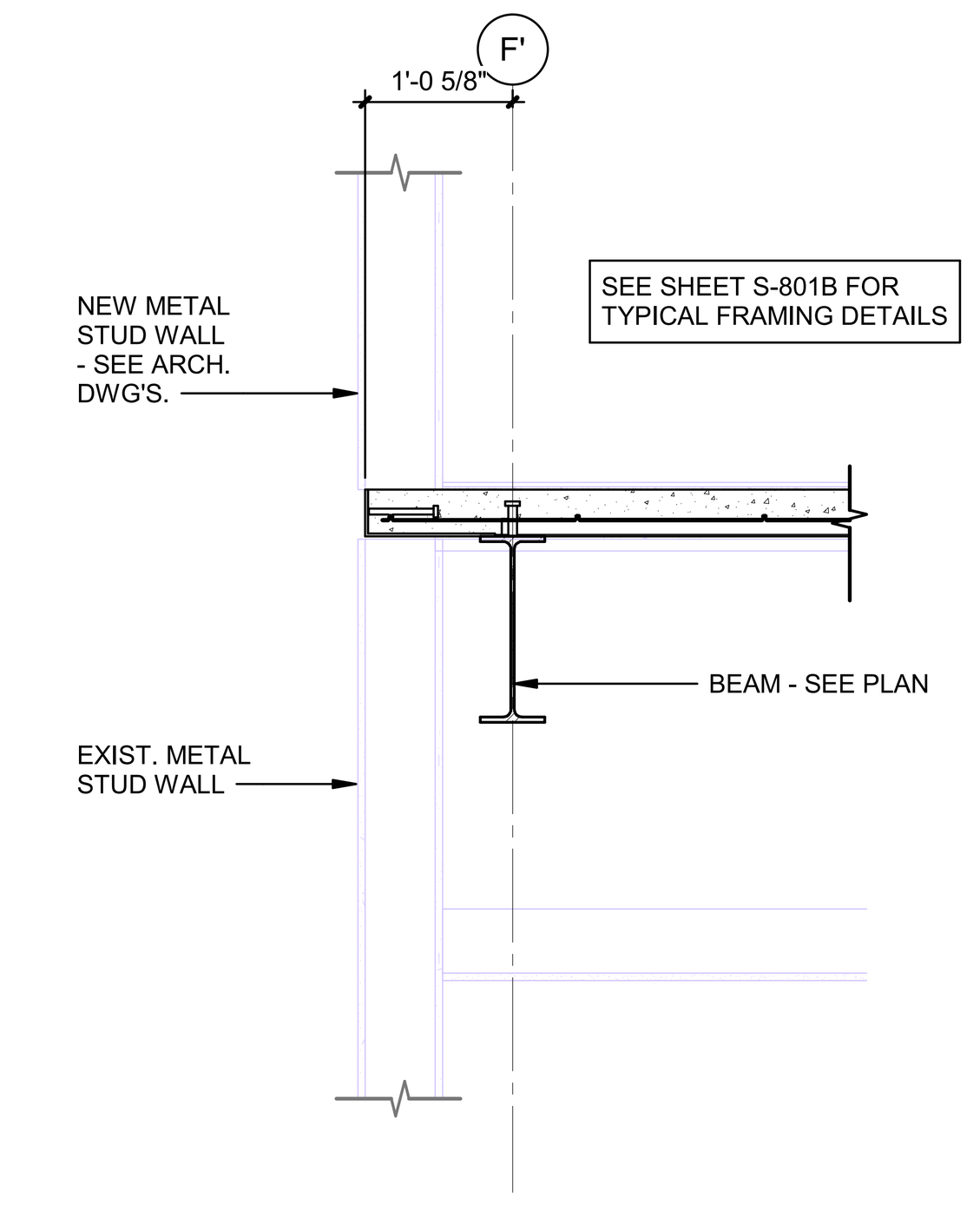
TRUE NORTH PROJECT NORTH



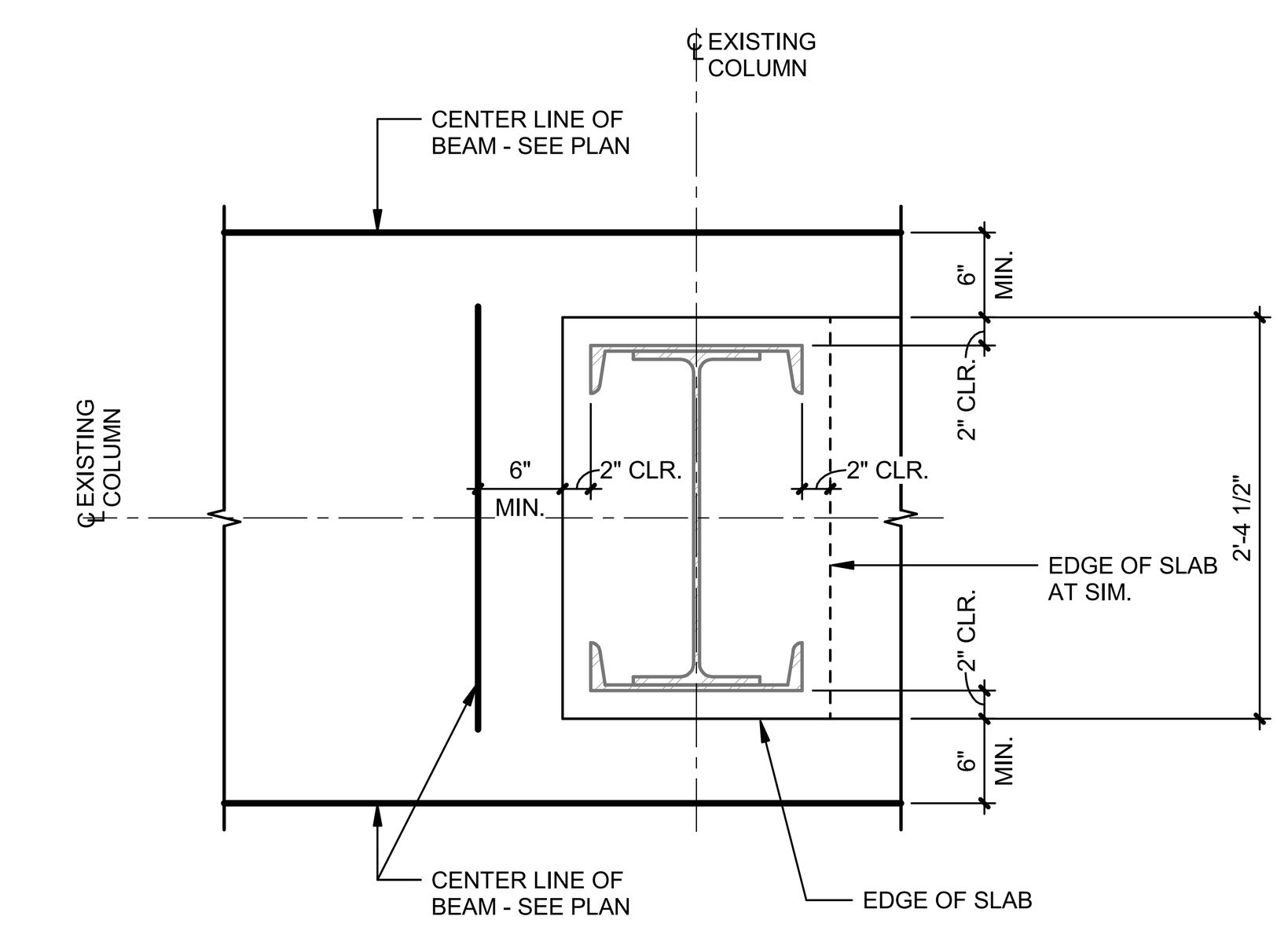
H8 S-801B SECTION
3/4" = 1'-0"



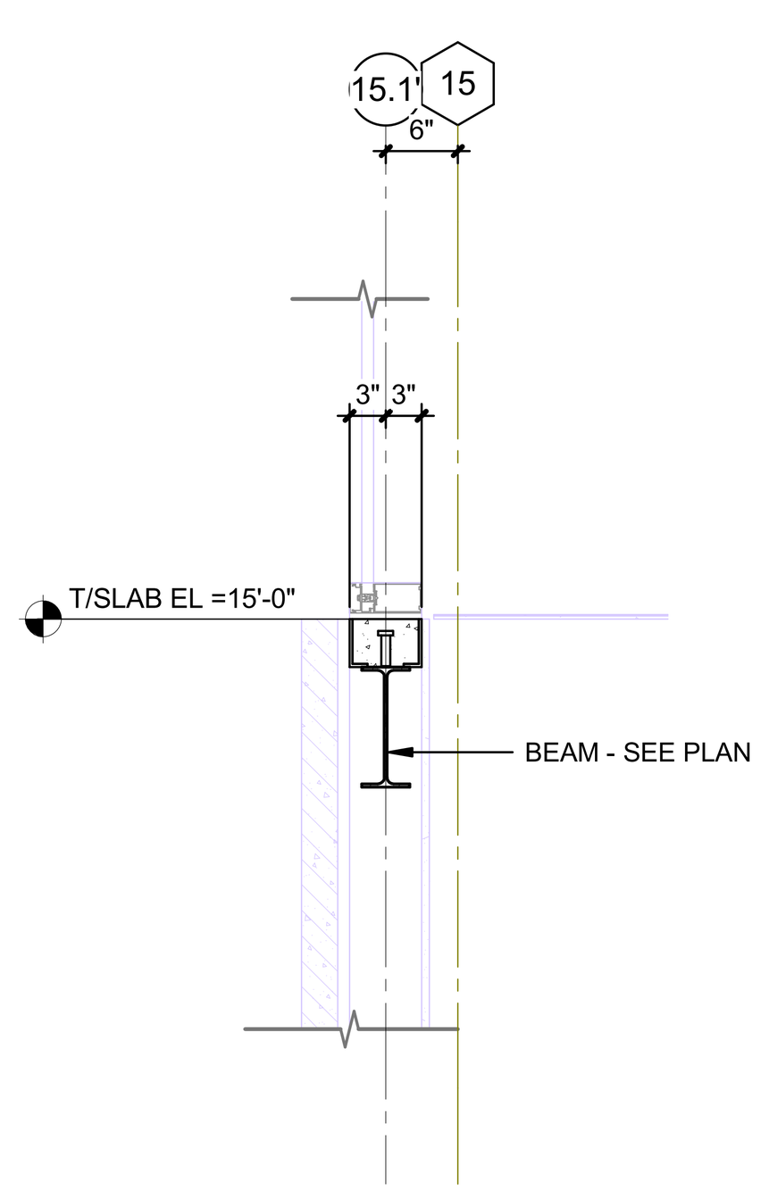
H6 S-801B SECTION
3/4" = 1'-0"



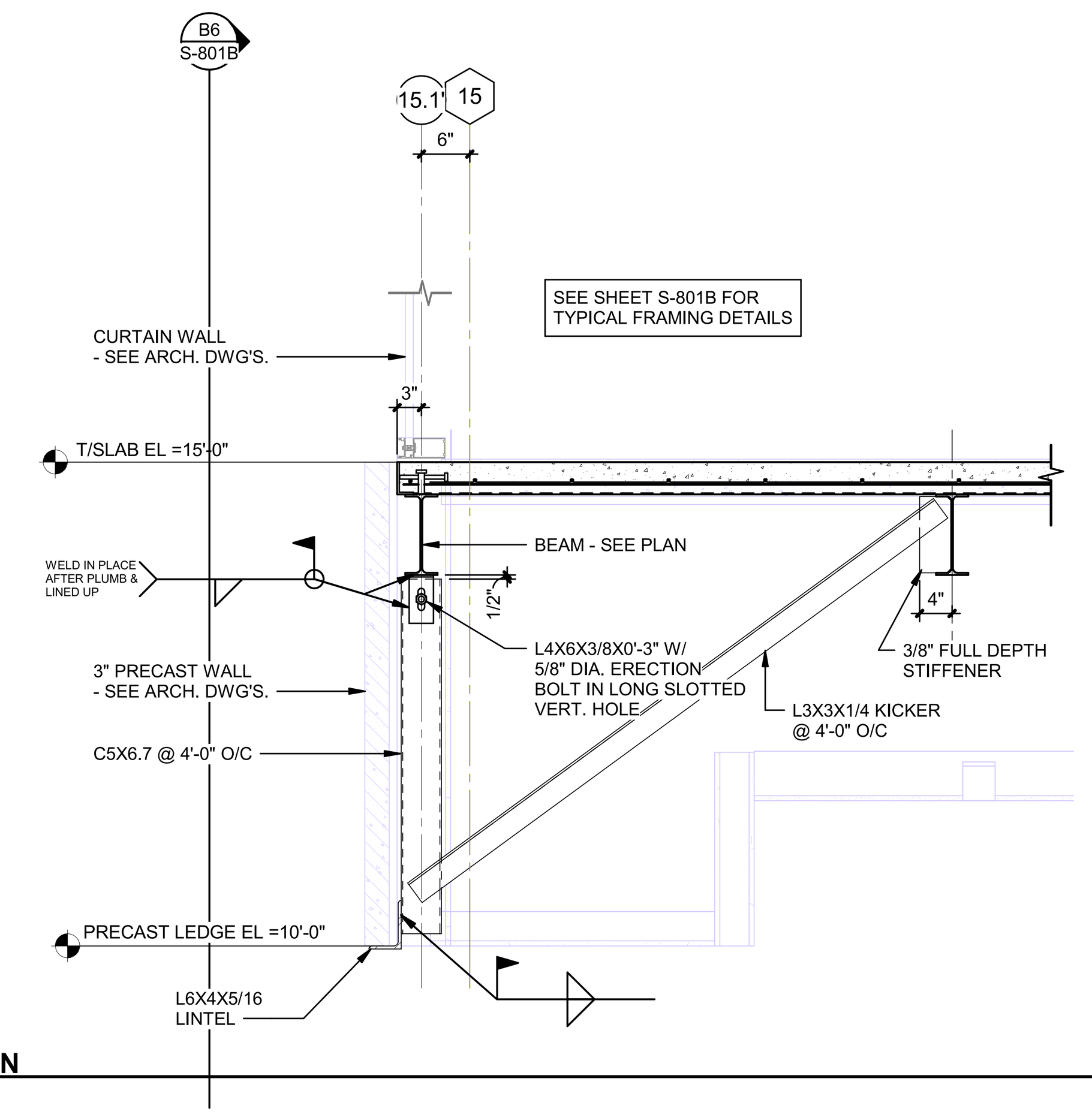
H4 S-801B SECTION
3/4" = 1'-0"



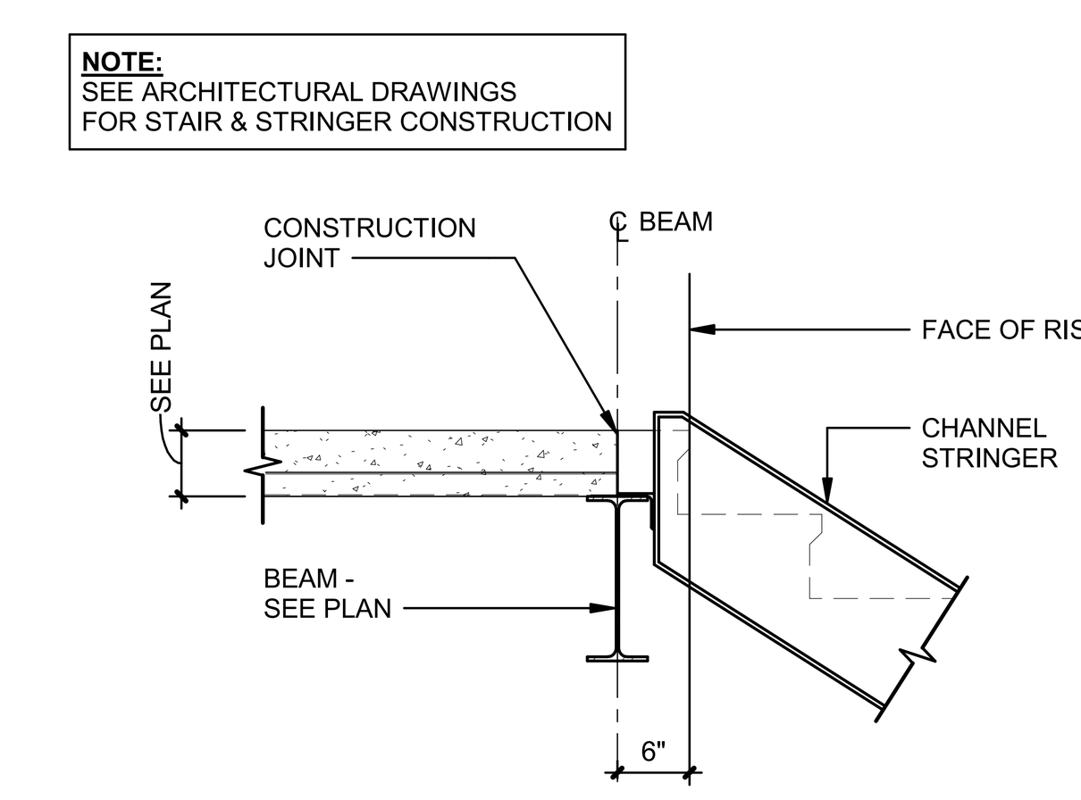
H2 S-801B PLAN VIEW
1" = 1'-0"



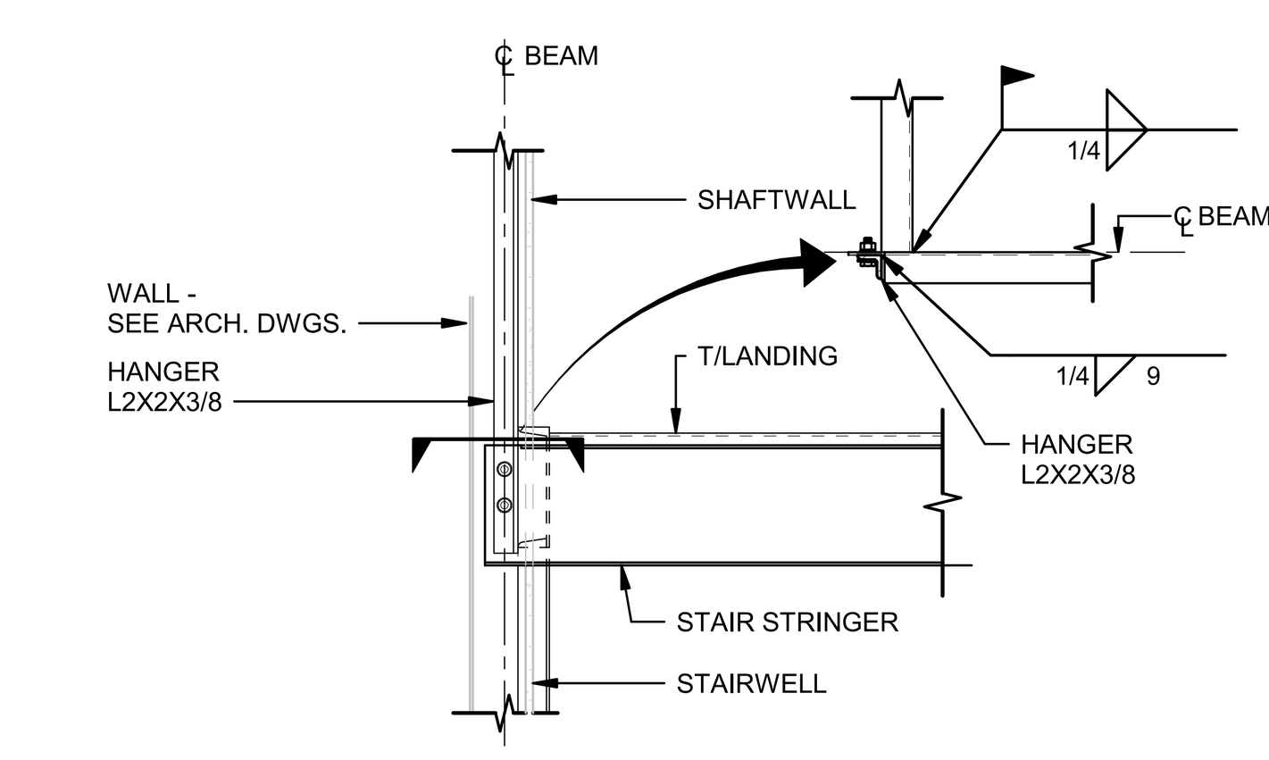
E8 S-801B SECTION
3/4" = 1'-0"



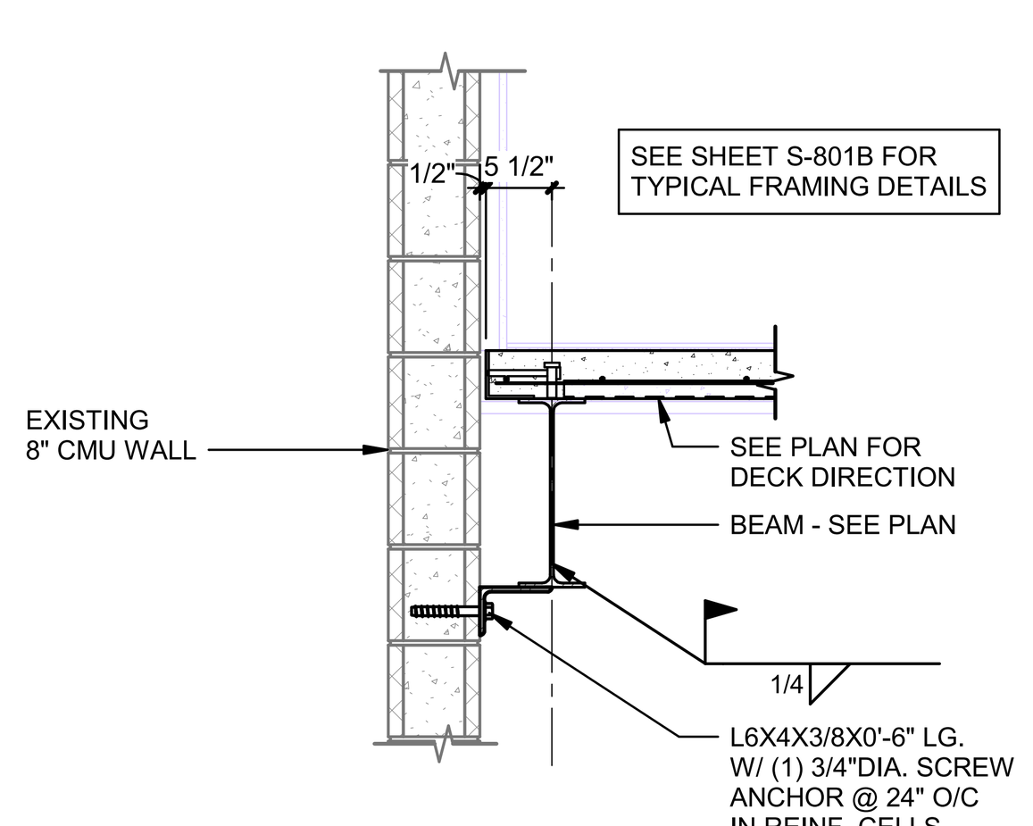
E6 S-801B SECTION
3/4" = 1'-0"



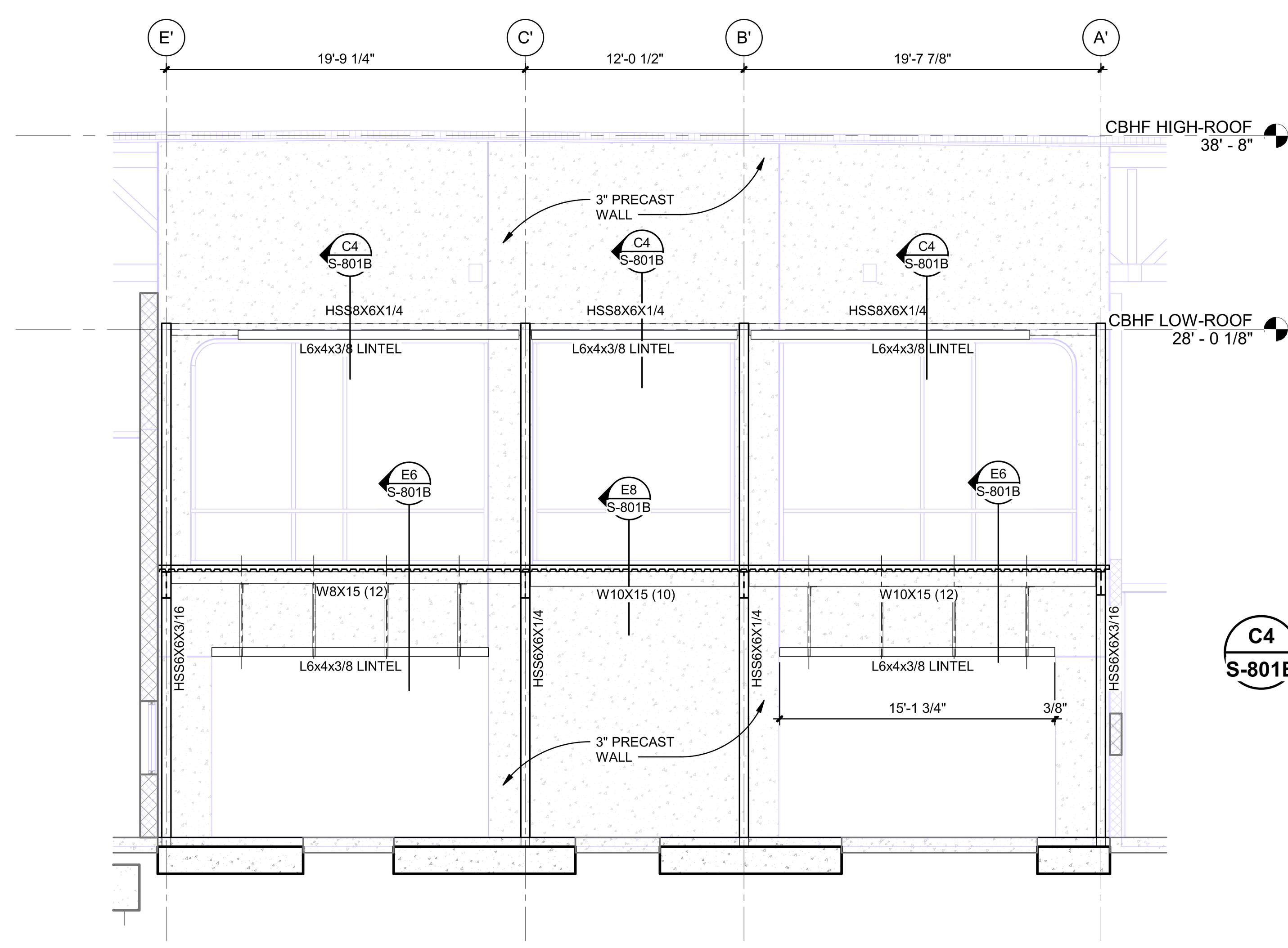
E4 S-801B TYPICAL STAIR STRINGER TO BEAM CONNECTION
3/4" = 1'-0"



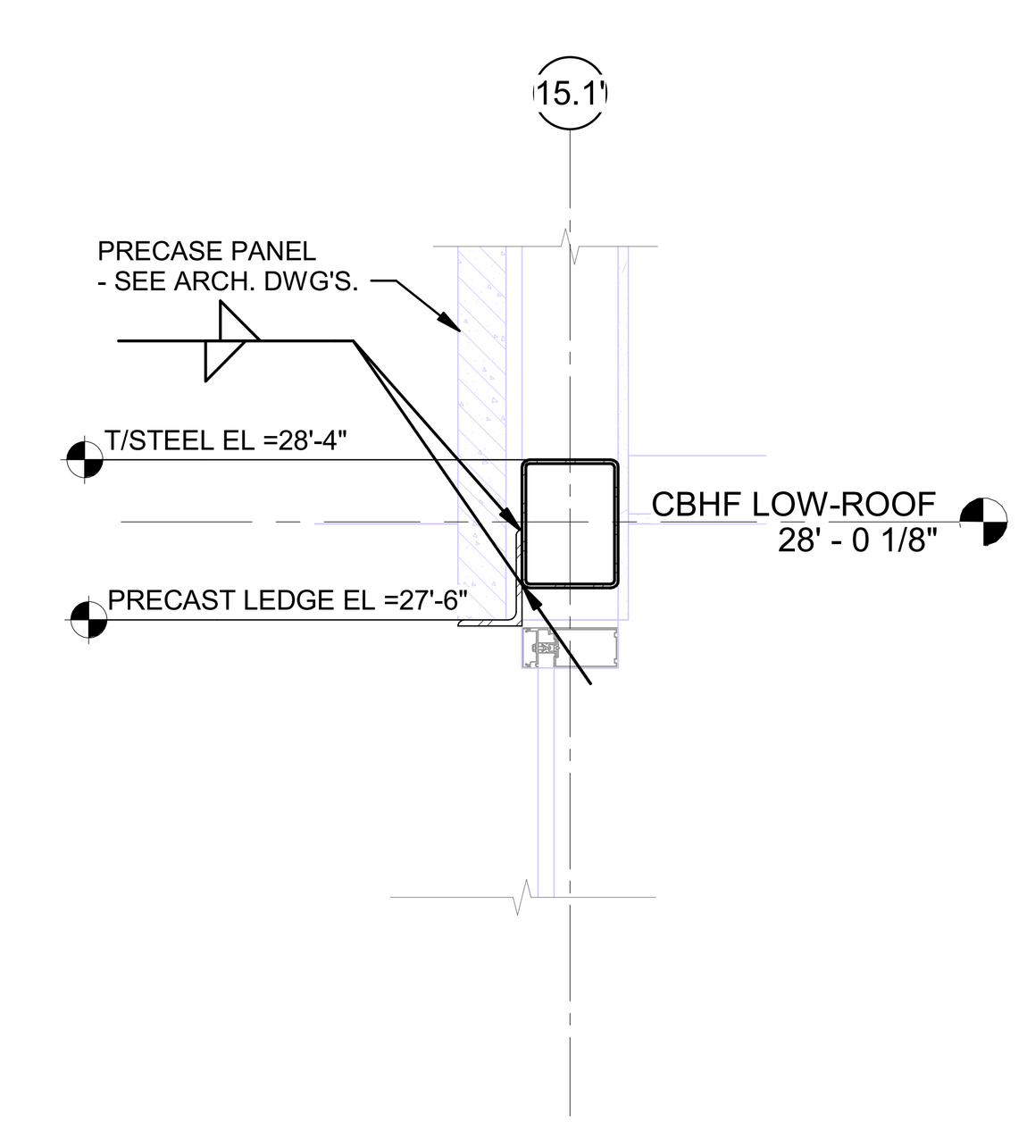
E2 S-801B SECTION AT STAIR LANDING
3/4" = 1'-0"



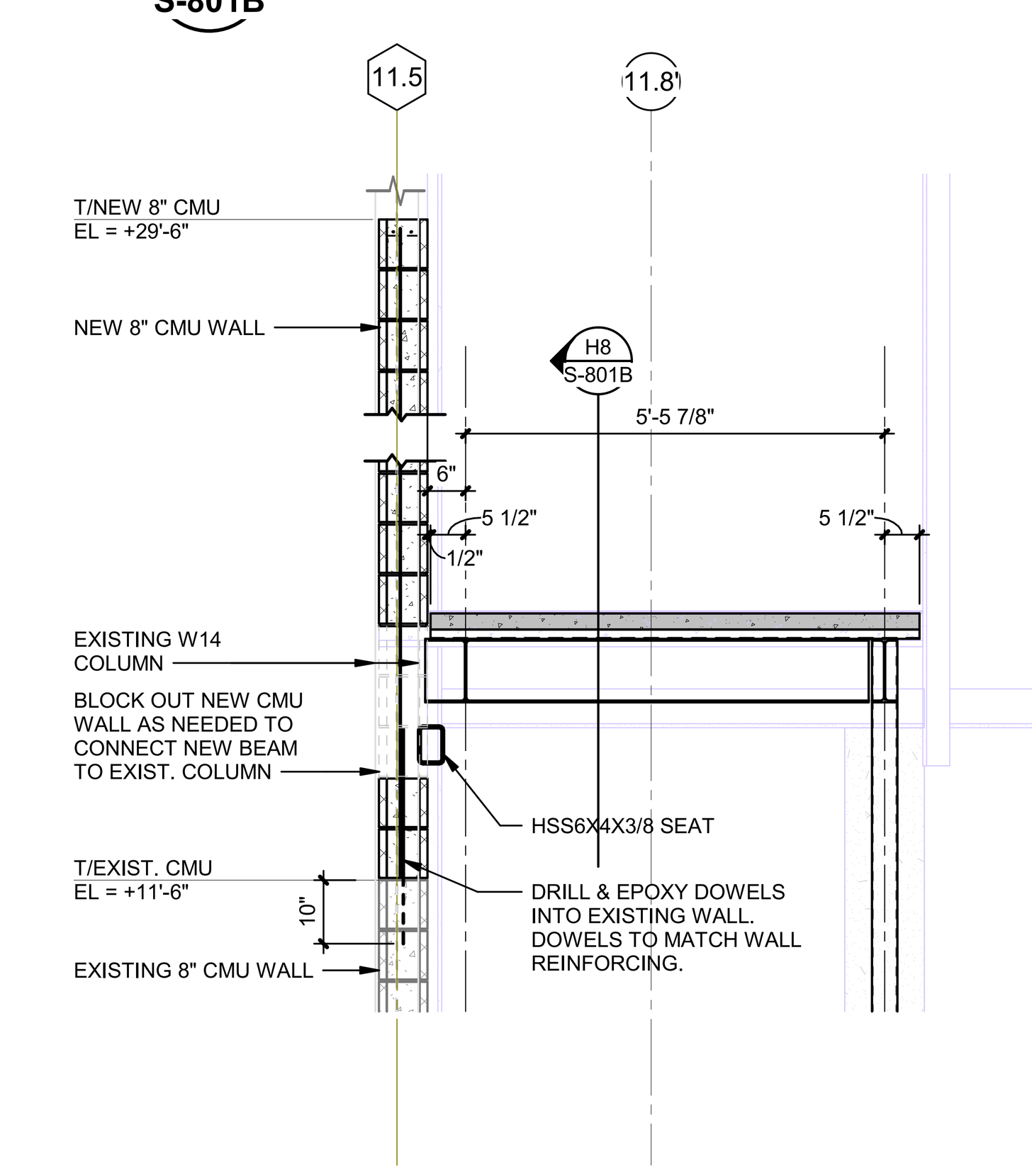
C8 S-801B SECTION
3/4" = 1'-0"



B6 S-801B ELEVATION
3/16" = 1'-0"



C4 S-801B SECTION
1" = 1'-0"



C2 S-801B SECTION AT STAIR LANDING
1/2" = 1'-0"

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3 PLACE DECIMALS ± ANGLES ±
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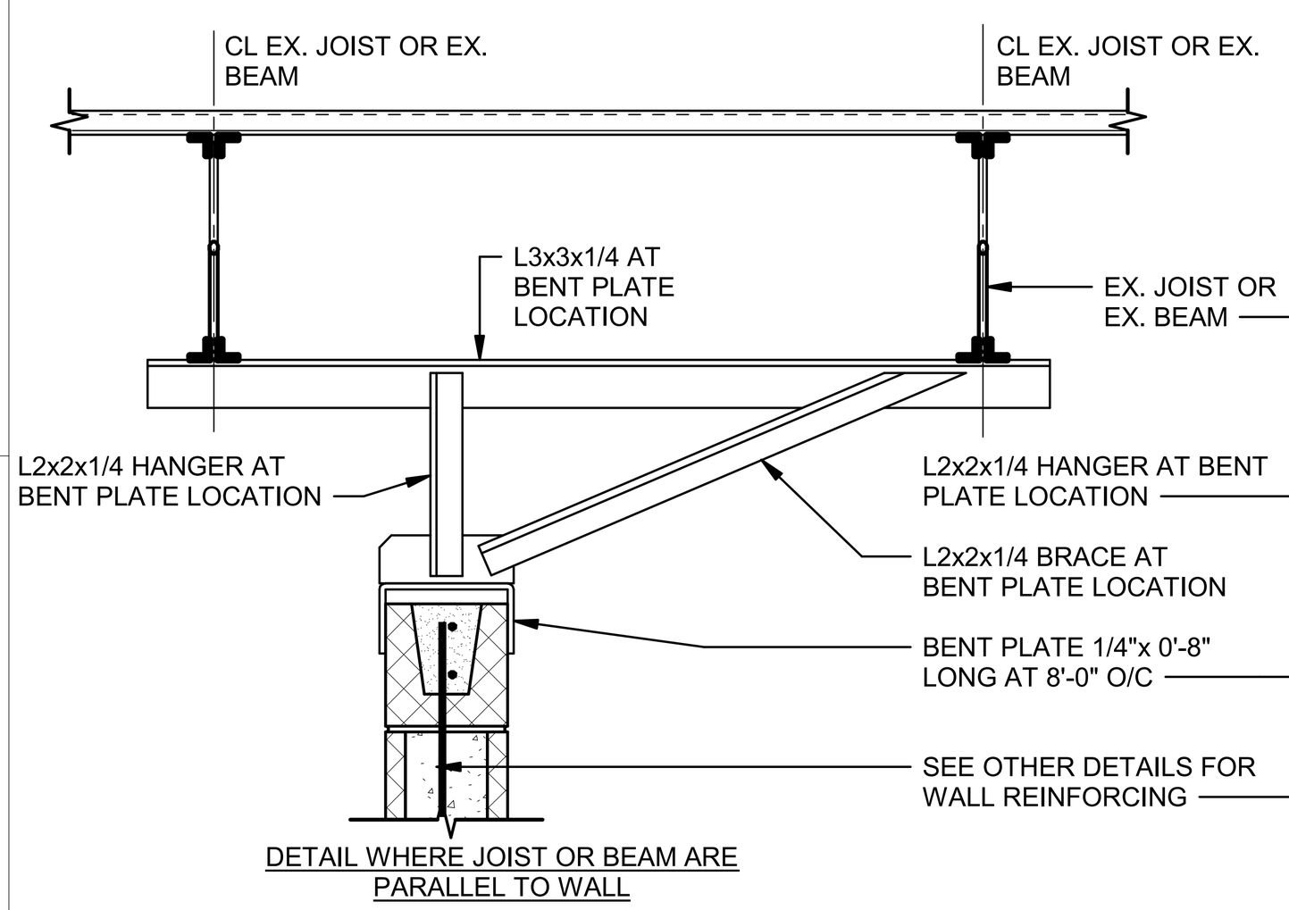
GE VERNOVA
GE Hitachi Nuclear Energy
Wilmington, NC

GE VERNOVA-FMO
FRAMING SECTIONS

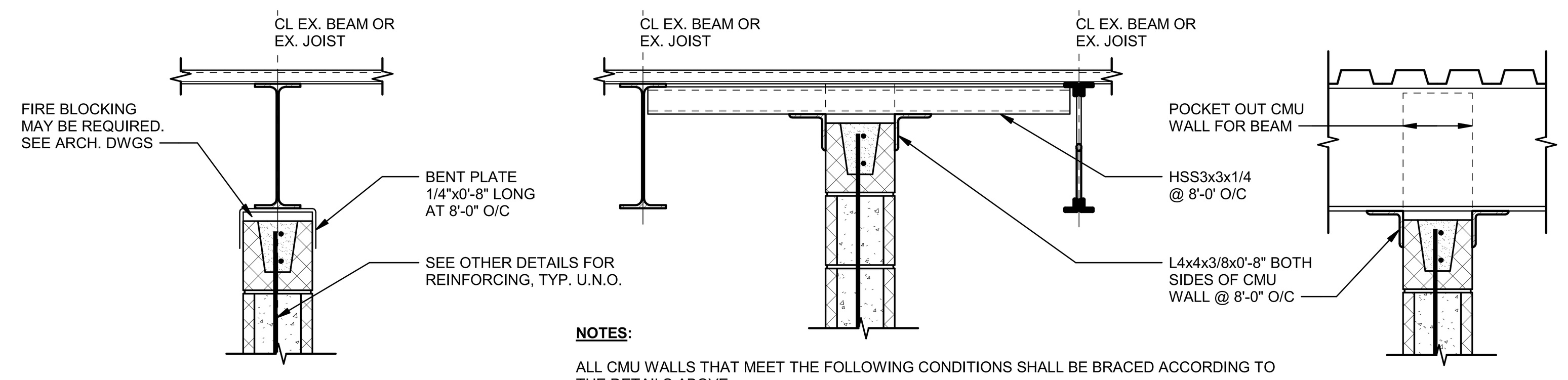
2025.09.18

S-801B

TRUE NORTH
PROJECT NORTH



H8 S-901B TOP OF NON-BEARING MASONRY WALL BRACE
1" = 1'-0"



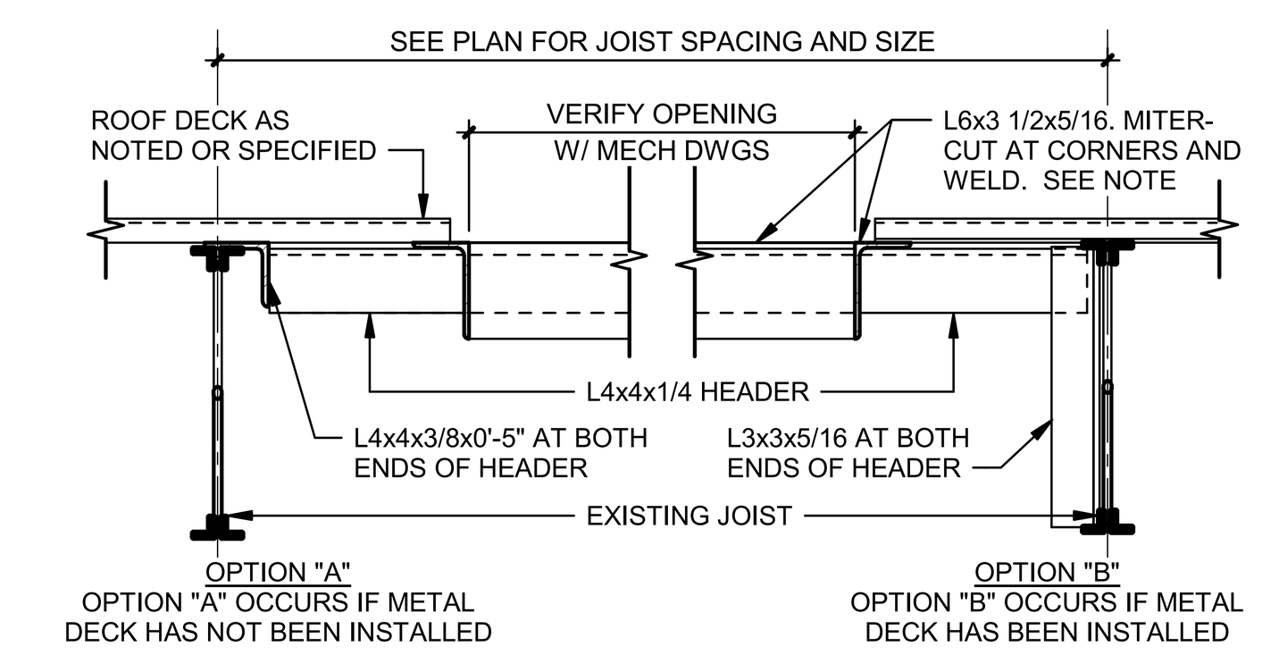
NOTES:

ALL CMU WALLS THAT MEET THE FOLLOWING CONDITIONS SHALL BE BRACED ACCORDING TO THE DETAILS ABOVE:
1. ALL CMU PARTITIONS ON THE EXTERIOR WALLS OF THE BUILDING.
2. ALL STAIR ENCLOSURE WALLS.
3. ALL MECHANICAL AND ELEVATOR SHAFT WALLS.
4. AT 8" CMU NON-BEARING INTERIOR PARTITION WHERE THE FREESTANDING WALL HEIGHT EXCEED 10'-0" AND THE HORIZ. DISTANCE BETWEEN INTERSECTING WALLS EXCEEDS 24'-0"
5. AT CMU NON-BEARING INTERIOR PARTITION WHERE THE FREESTANDING WALL HEIGHT EXCEED 7'-6" AND THE HORIZ. DISTANCE BETWEEN INTERSECTING WALLS EXCEEDS 18'-0".

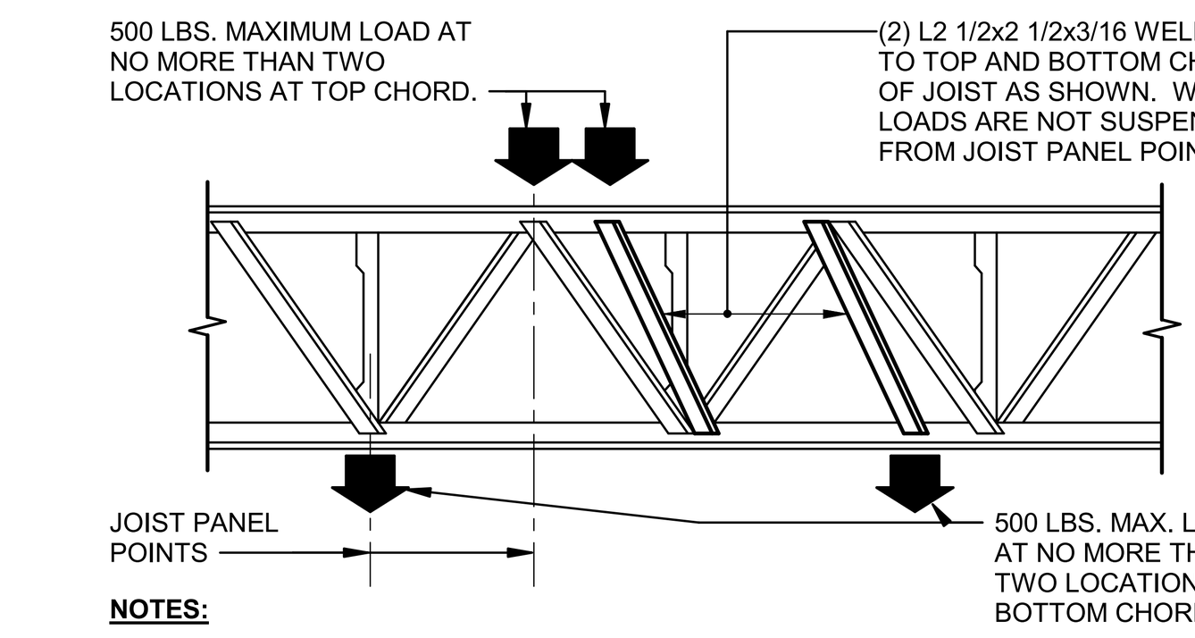
H6 S-901B TOP OF MASONRY WALL BRACING
1" = 1'-0"

NOTES:

1. LONG LEG OF ANGLE (6") MAY BE TURNED UP OR DOWN AS REQUIRED TO SUIT NEEDS OF CURB. INSTALLER VERIFY OTHER FEATURES SUCH AS ROOF MATERIALS, WOOD BLOCKING, FLASHING ETC. ARE NOT SHOWN. SEE OTHER DRAWINGS.
2. DETAIL APPLIES FOR MECHANICAL OPENINGS WITH MAXIMUM DIMENSION OF 6'-0"x6'-0".



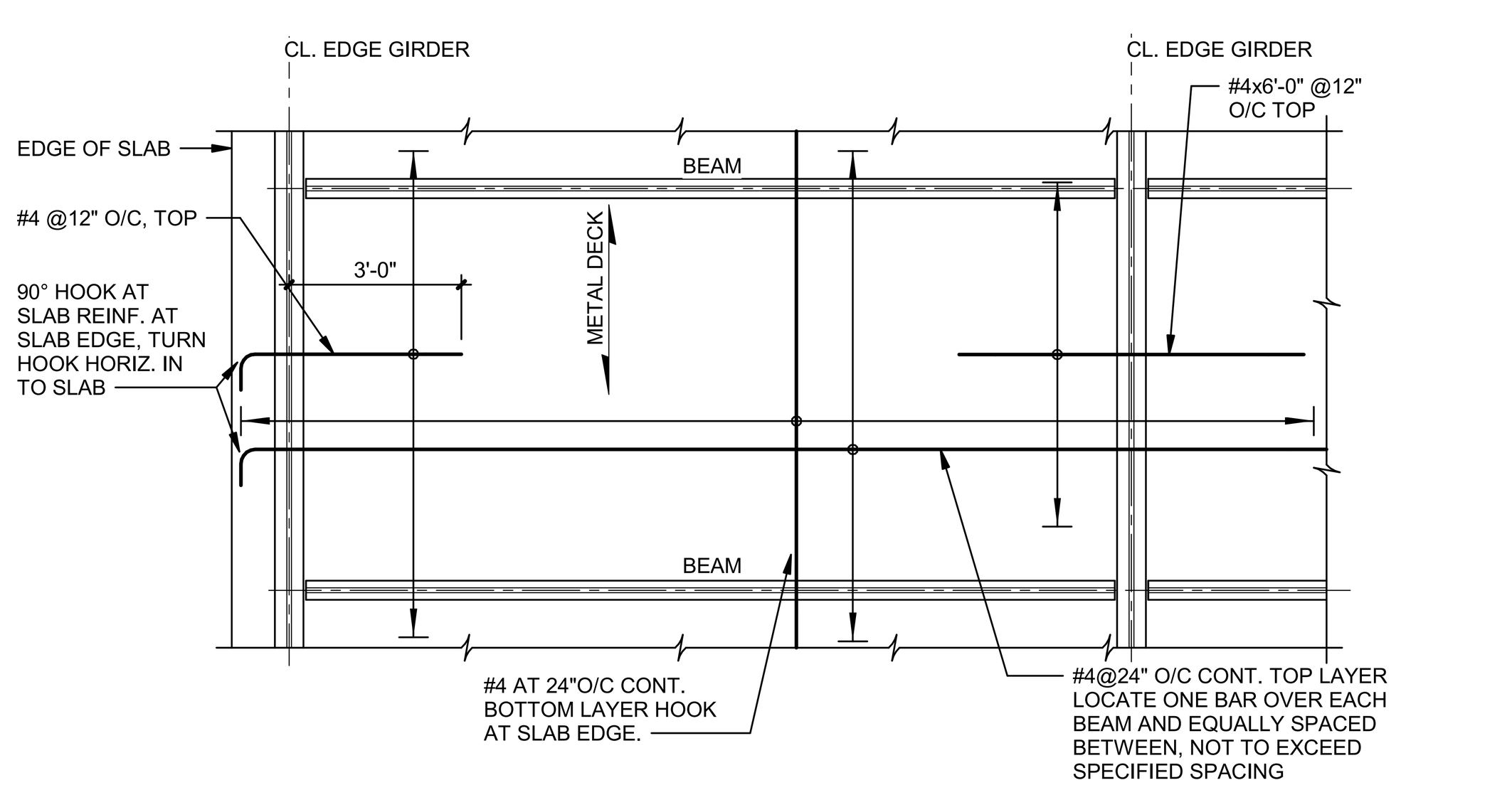
H3 S-901B FRAMED ROOF OPENING
1" = 1'-0"



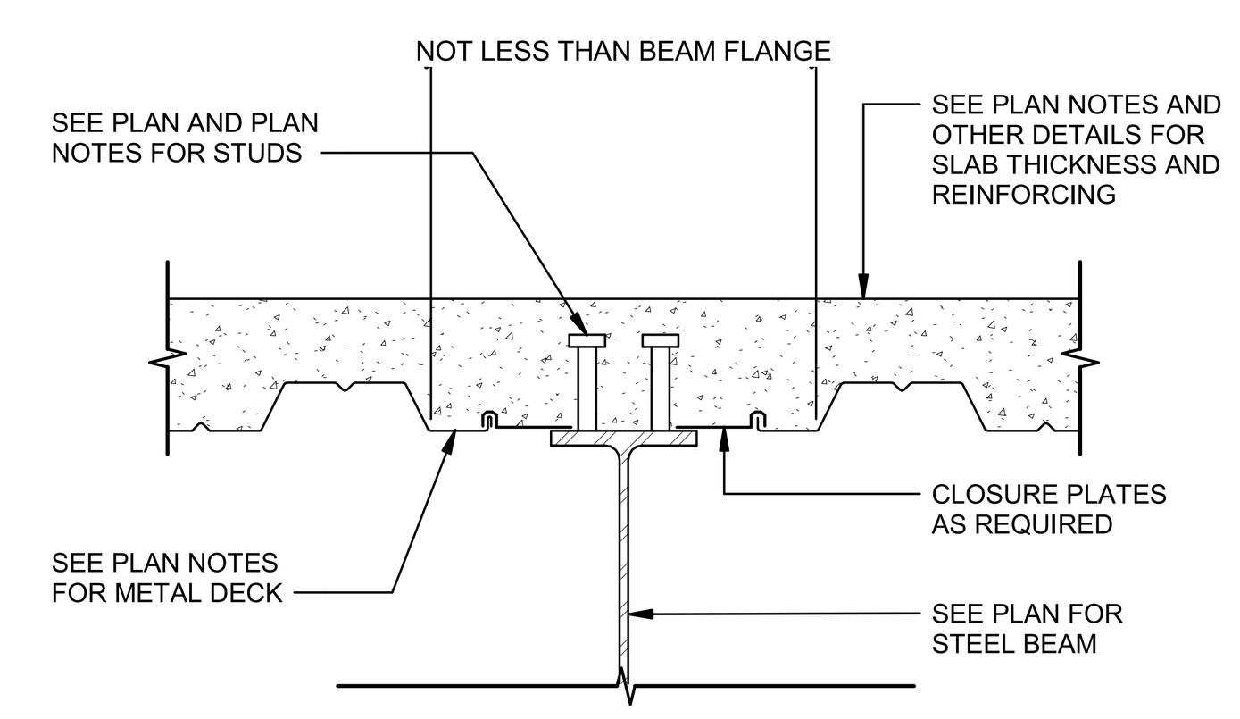
NOTES:

1. WHERE POSSIBLE ALL LOADS ARE TO BE SUPPORTED FROM PANEL POINTS. WHERE NOT POSSIBLE, ADD ANGLES AS SHOWN.
2. LOADS LESS THAN 100 LBS. REQUIRE NO ANGLES. LOADS LARGER THAN 500 LBS. PER JOIST REQUIRE SPECIAL SUPPORT CONDITIONS TO BE APPROVED BY ENGINEER AND JOIST MANUFACTURER.
3. TOTAL ADDED CONCENTRATED LOADS NOT TO EXCEED 1000 LBS. PER JOIST.

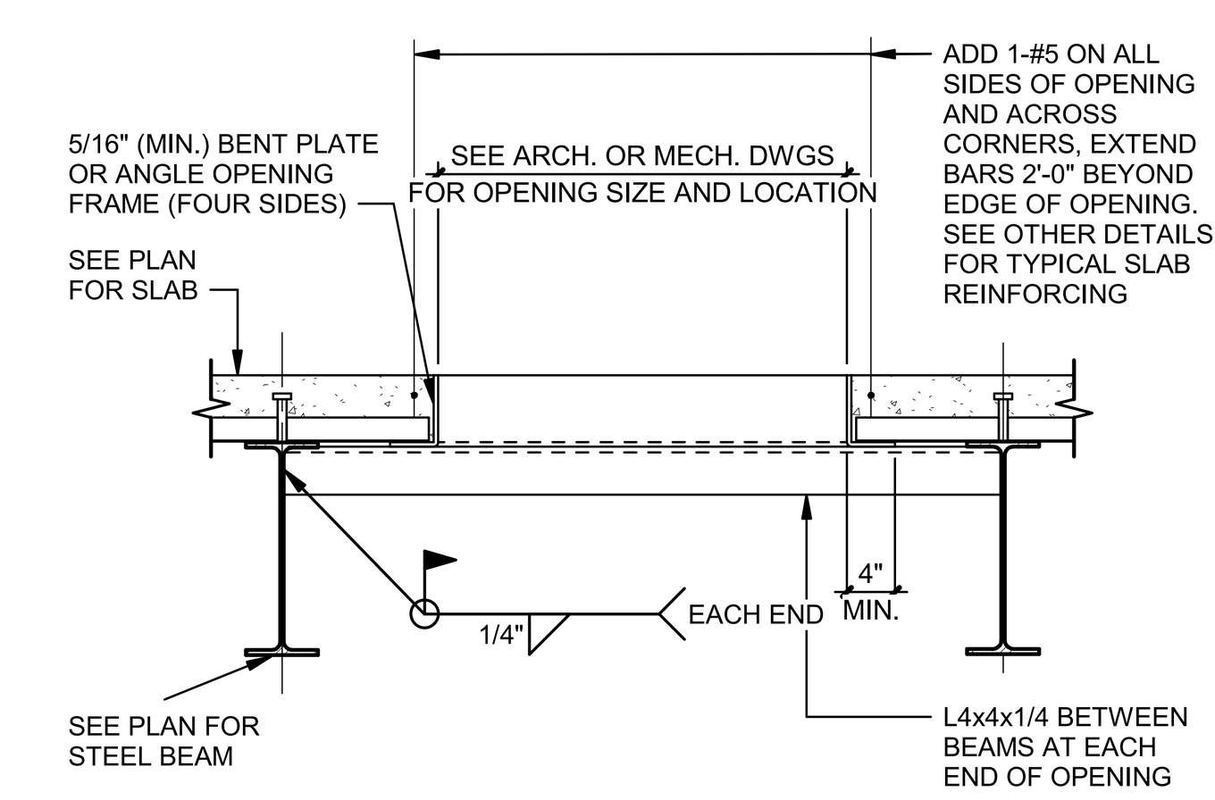
H2 S-901B CONCENTRATED LOADS ON LH AND DLH JOIST
1/2" = 1'-0"



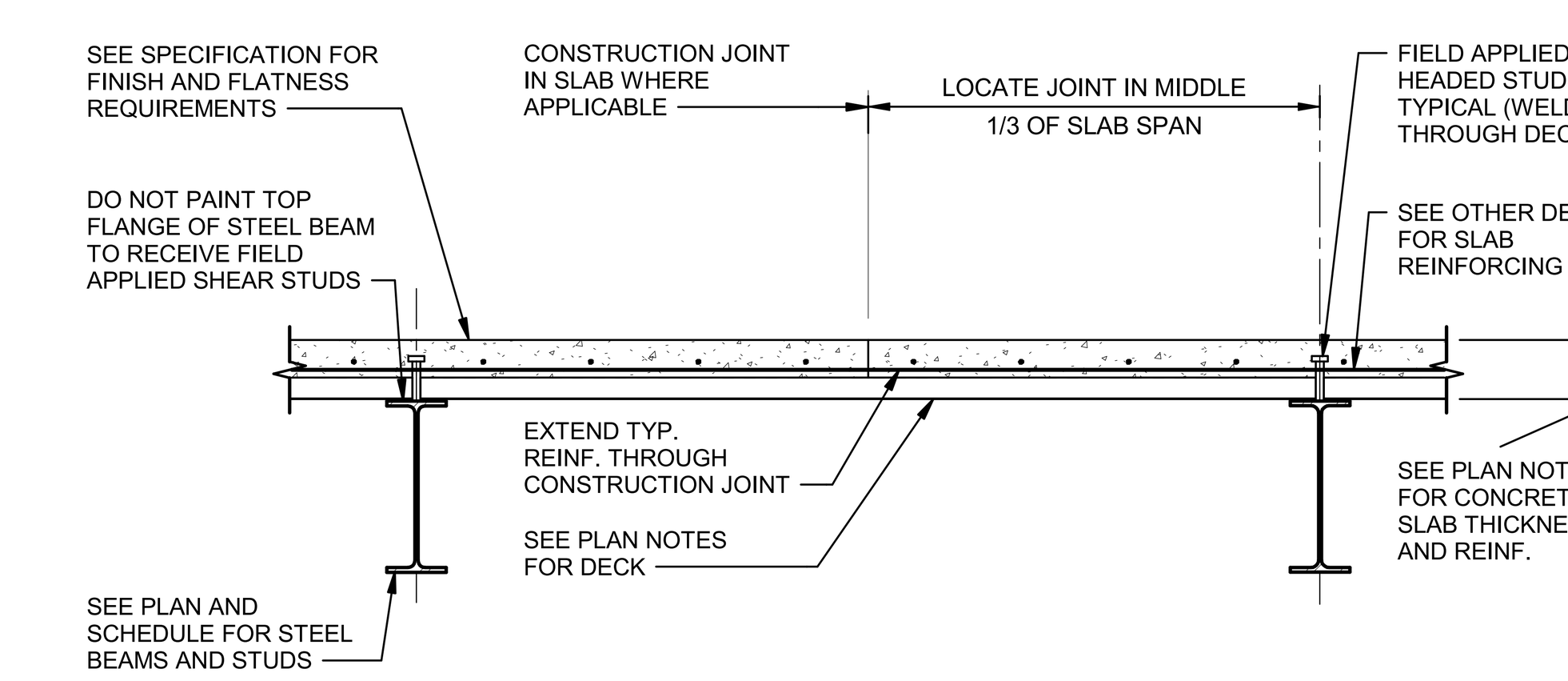
E8 S-901B FLOOR SLAB REINFORCING
3/8" = 1'-0"



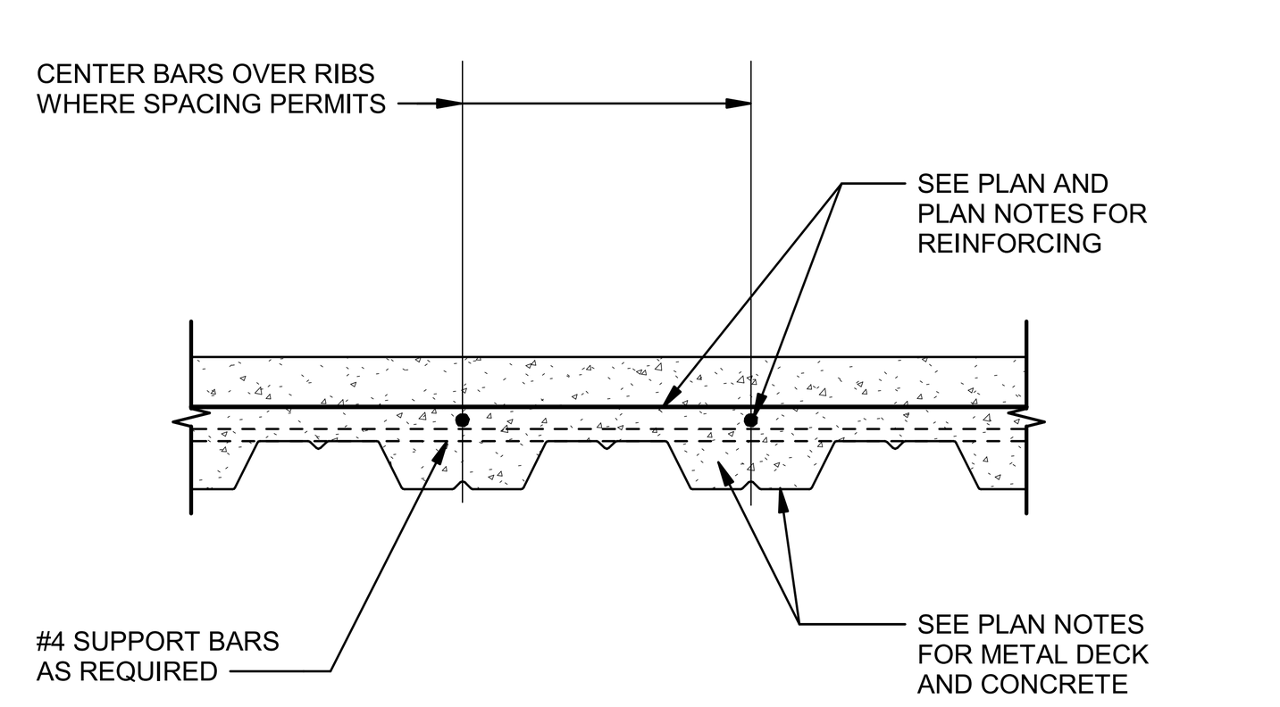
E6 S-901B DECK AT COMPOSITE GIRDER
1 1/2" = 1'-0"



E4 S-901B OPENING FRAMING IN FLOOR SLAB
3/4" = 1'-0"



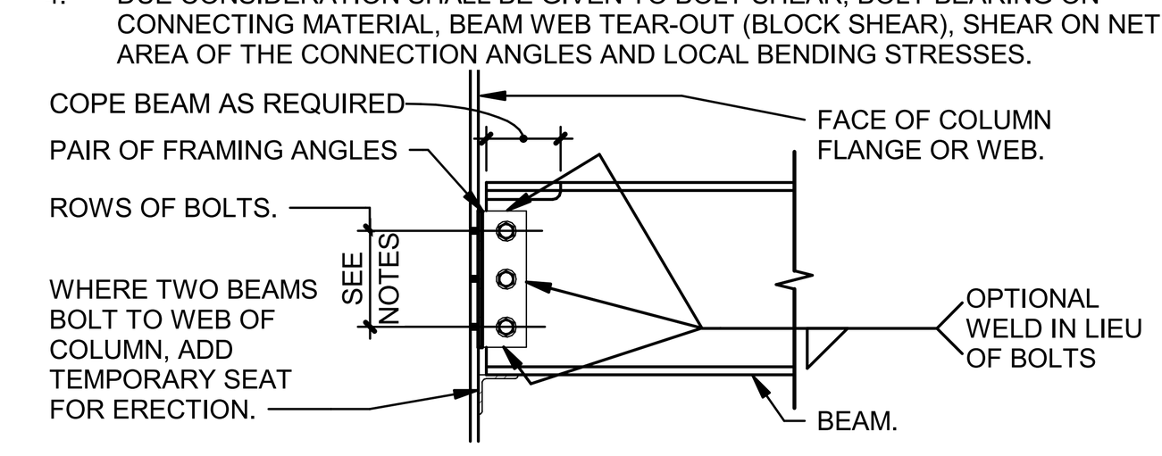
E2 S-901B COMPOSITE SLAB AND BEAM
3/4" = 1'-0"



C8 S-901B SLAB REINFORCING
1 1/2" = 1'-0"

NOTES:

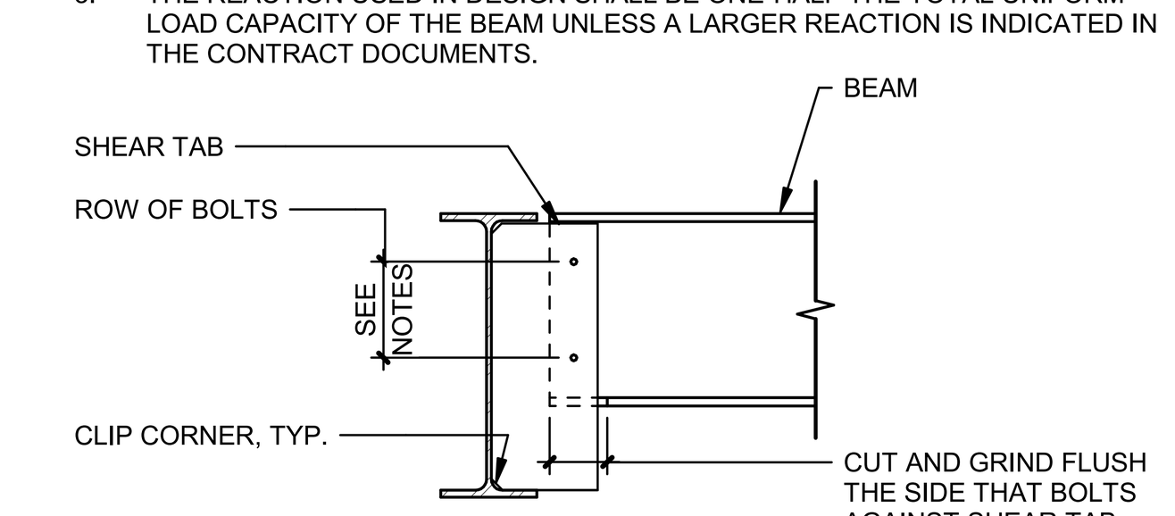
1. CONNECTIONS SHALL BE DESIGNED AND DETAILED BY STEEL FABRICATOR ACCORD WITH ALL APPLICABLE PROVISIONS OF THE AISC MANUAL OF STEEL CONSTRUCTION AND APPROVED BY THE ARCHITECT/ENGINEER.
2. MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE AS FOLLOWS: (2) ROWS FOR W8" AND W10"; (3) ROWS FOR W12" AND W14"; (4) ROWS FOR W16" AND W18"; (5) ROWS FOR W21" AND W24"; (6) ROWS FOR W27" AND W30"; AND (7) ROWS FOR W33" AND W36" BEAMS.
3. THE REACTION USED IN DESIGN SHALL BE ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAM UNLESS A LARGER REACTION IS INDICATED IN THE CONTRACT DOCUMENTS.
4. DUE CONSIDERATION SHALL BE GIVEN TO BOLT SHEAR, BOLT BEARING ON CONNECTING MATERIAL, BEAM WEB TEAR-OUT (BLOCK SHEAR), SHEAR ON NET AREA OF THE CONNECTION ANGLES AND LOCAL BENDING STRESSES.



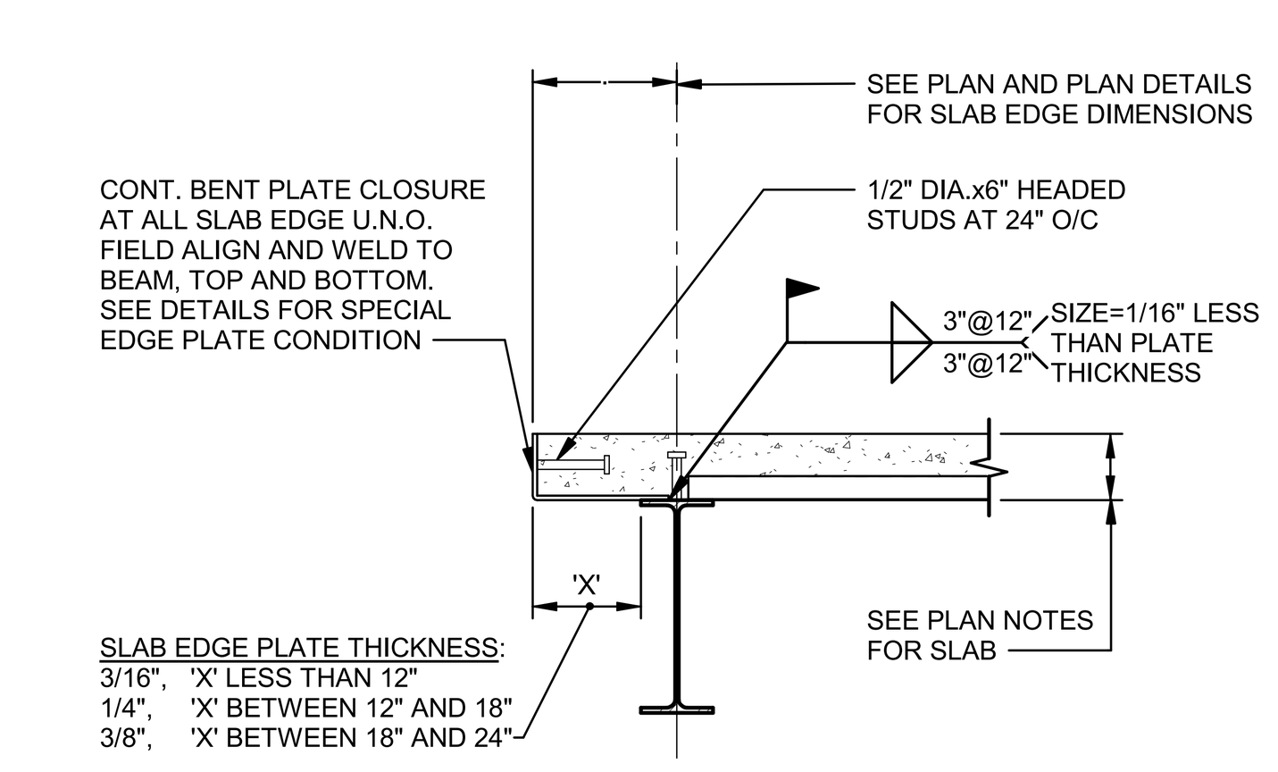
C6 S-901B FRAMED BEAM CONNECTION (U.N.O.)
1" = 1'-0"

NOTES:

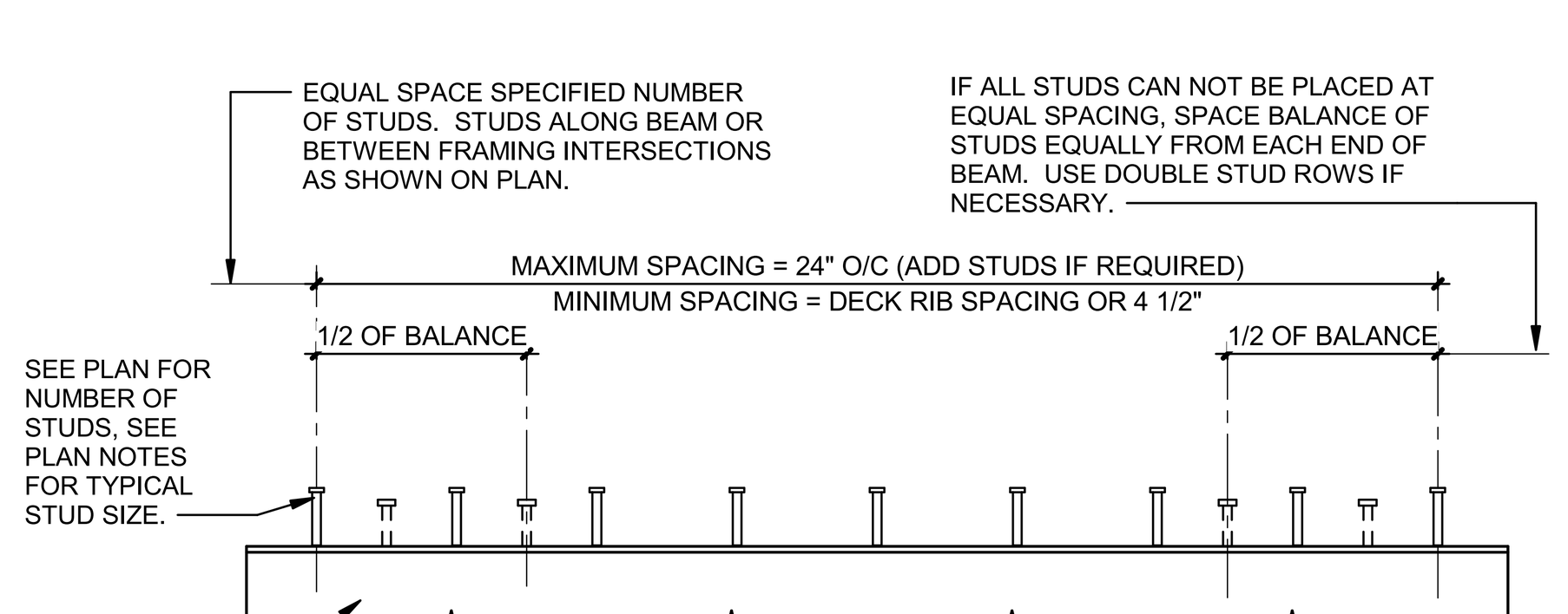
1. CONNECTIONS SHALL BE DESIGNED AND DETAILED BY STEEL FABRICATOR ACCORD WITH ALL APPLICABLE PROVISIONS OF THE AISC MANUAL OF STEEL CONSTRUCTION AND APPROVED BY THE ARCHITECT/ENGINEER.
2. MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE AS FOLLOWS: (2) ROWS FOR W8" AND W10"; (3) ROWS FOR W12" AND W14"; (4) ROWS FOR W16" AND W18"; (5) ROWS FOR W21" AND W24"; (6) ROWS FOR W27" AND W30"; AND (7) ROWS FOR W33" AND W36" BEAMS.
3. THE REACTION USED IN DESIGN SHALL BE ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAM UNLESS A LARGER REACTION IS INDICATED IN THE CONTRACT DOCUMENTS.



C4 S-901B SHEAR TAB CONNECTION
1" = 1'-0"

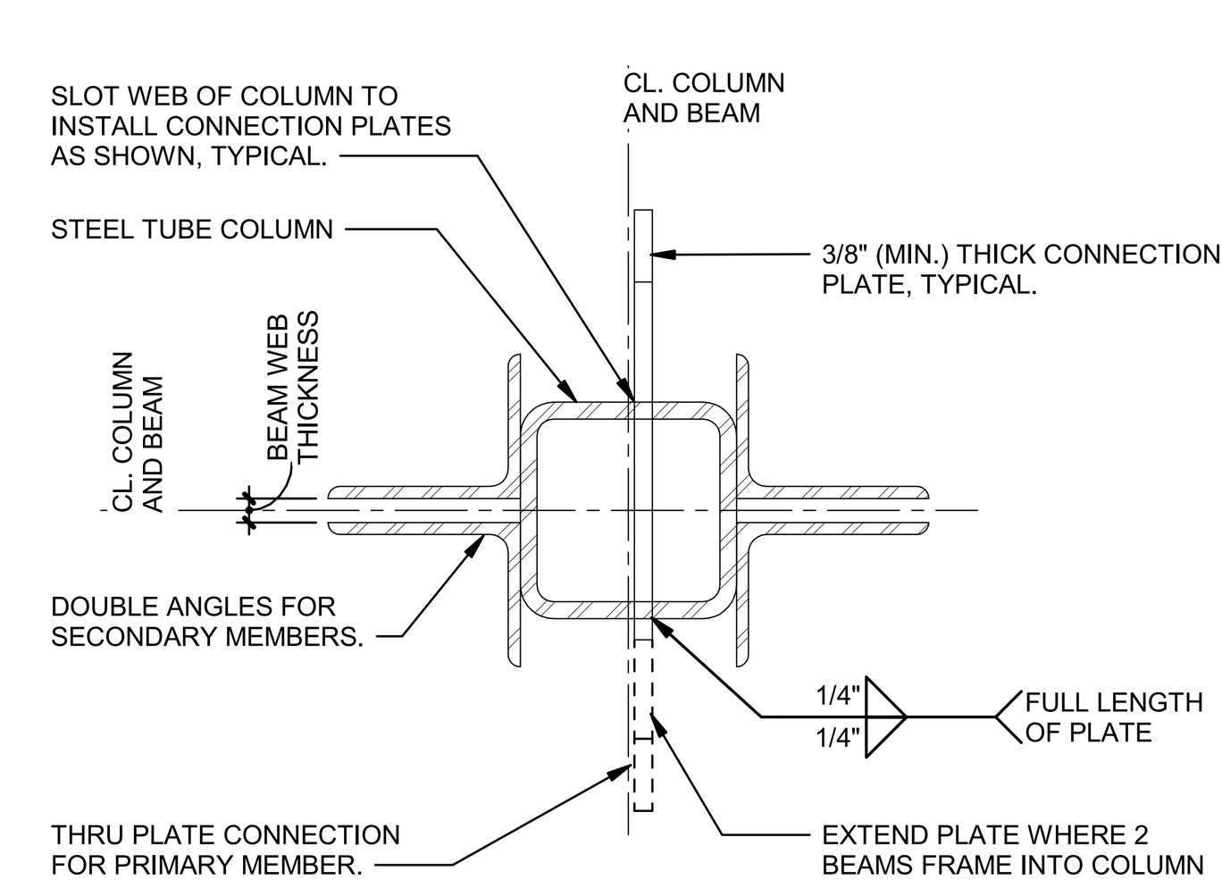


C2 S-901B SLAB EDGE PLATE
3/4" = 1'-0"

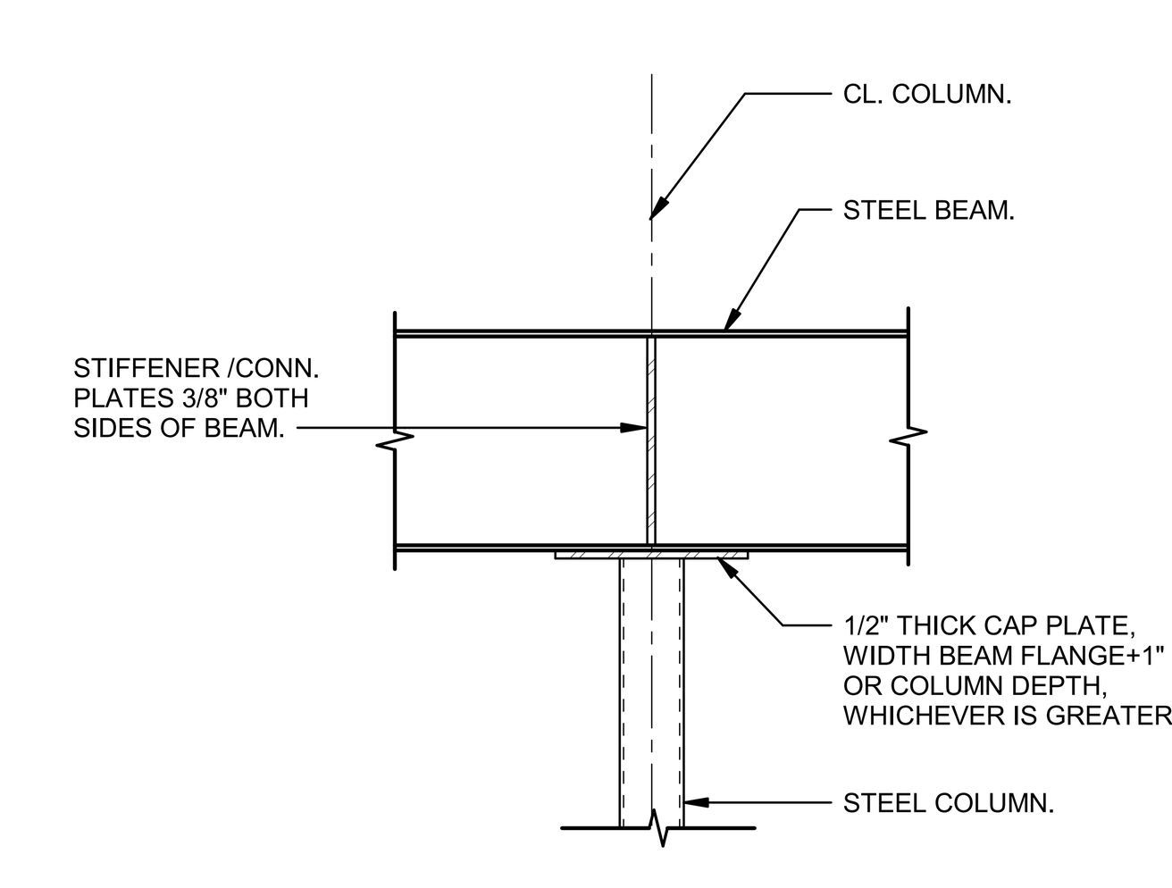


NOTES:
1. DO NOT WELD STUDS ON BEAM UNTIL STUD ARRANGEMENT IS FINALIZED.
2. SINGLE OR DOUBLE ROWS OF STUDS SHALL BE CENTERED OVER BEAM WEB. FOR DOUBLE STUD ROWS MINIMUM SPACING ACROSS THE BEAM FLANGE IS 3".

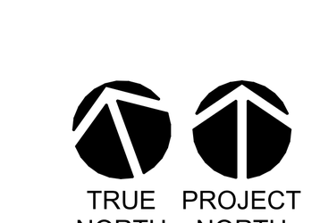
A8 S-901B STUD SPACING ON BEAM
3/4" = 1'-0"



A6 S-901B SHEAR TAB CONNECTION AT COLUMN
3" = 1'-0"



A4 S-901B TOP OF COLUMN
1" = 1'-0"



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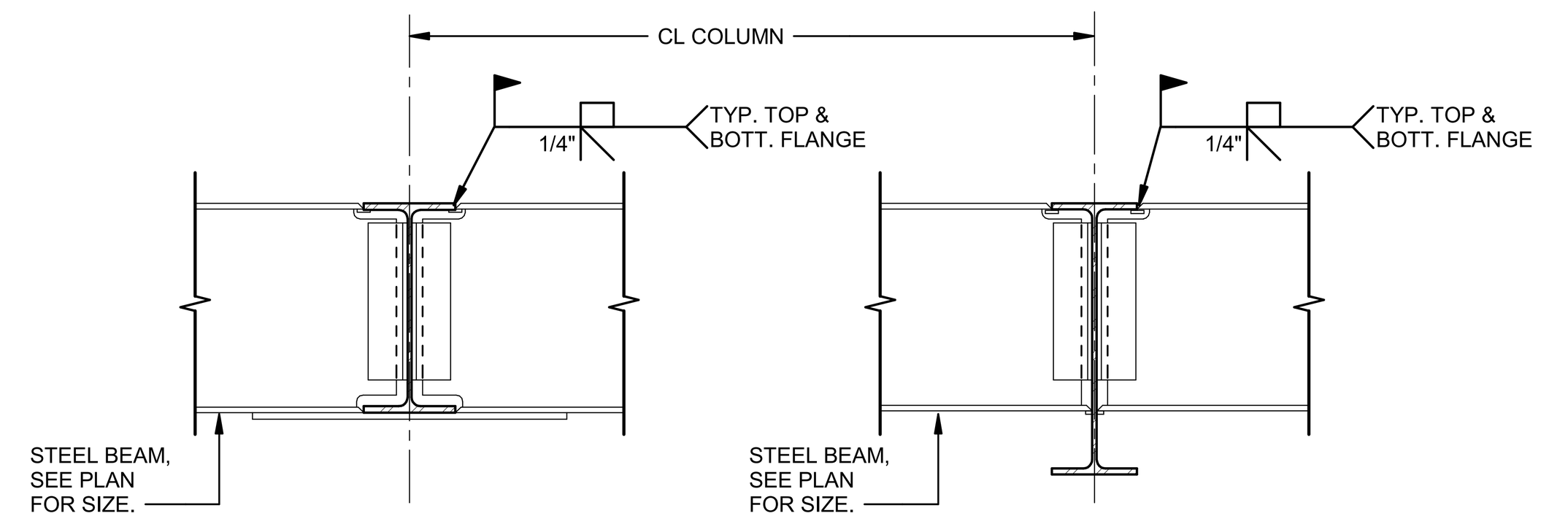
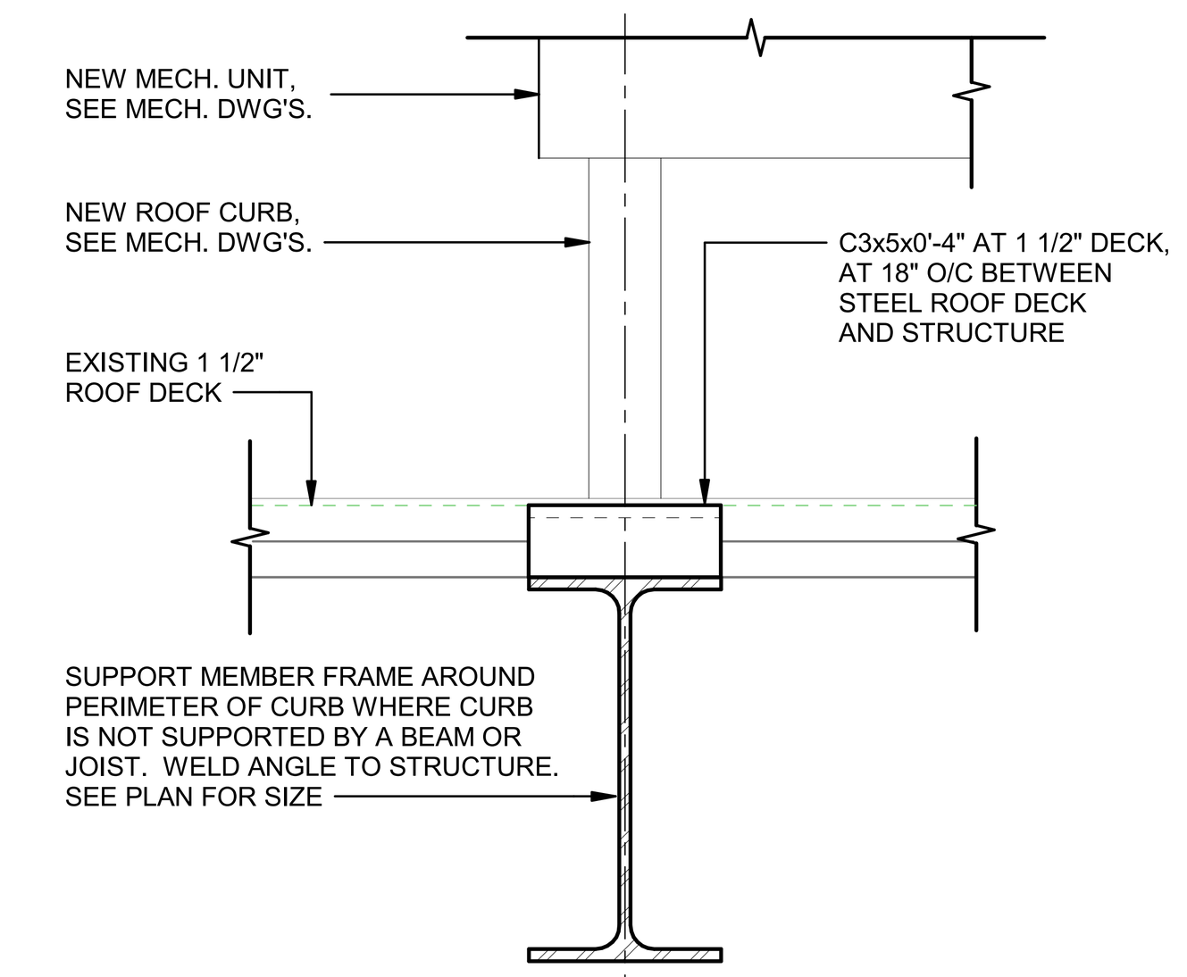
GE Hitachi Nuclear Energy
Wilmington, NC

GE VERNOVA-FMO
FRAMING TYPICAL DETAILS AND SCHEDULES

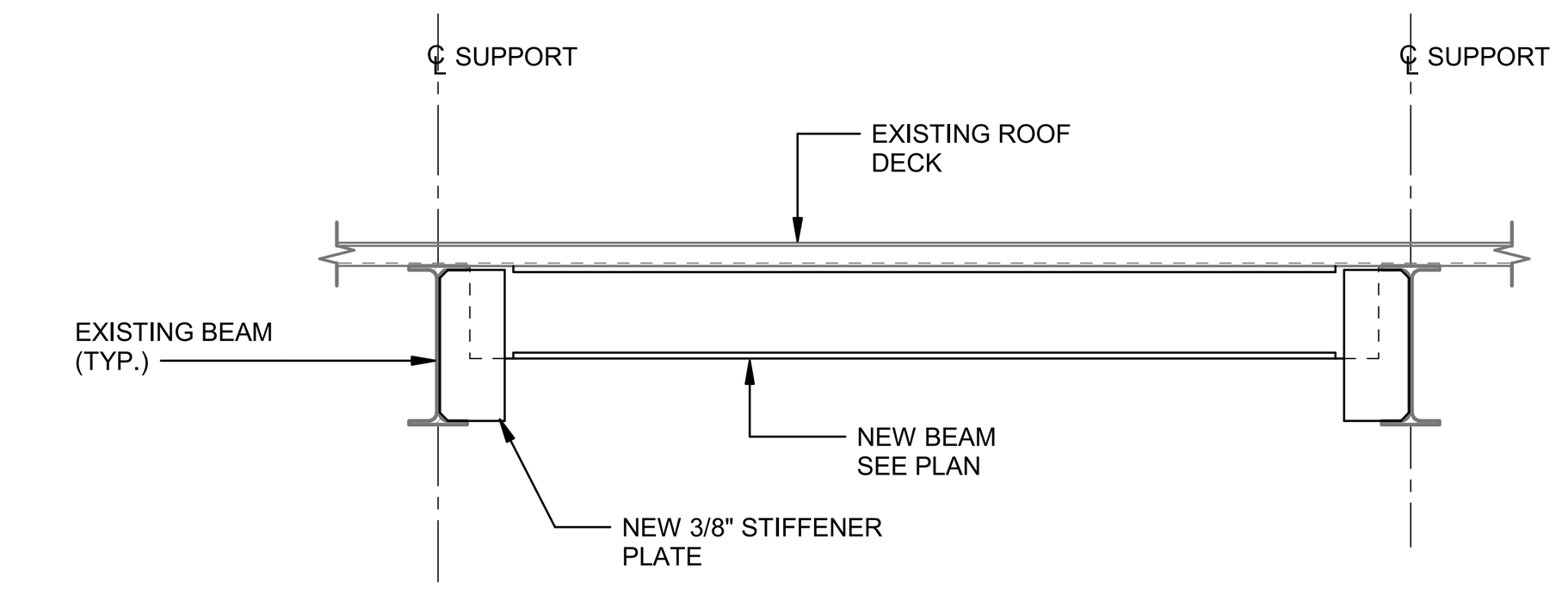
2025.09.18 **S-901B**



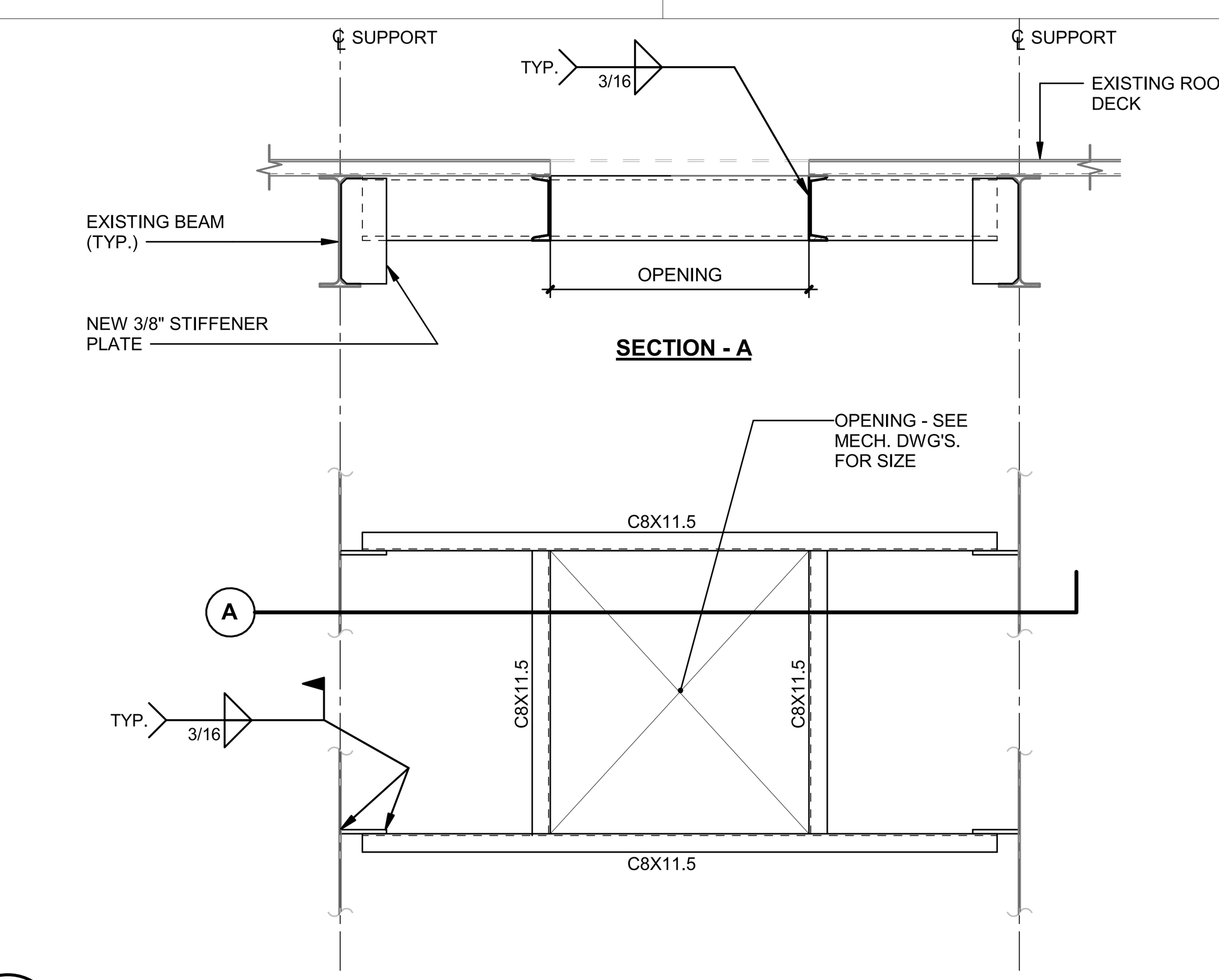
H1 S-902B **MOMENT CONNECTION AT BEAM**
1" = 1'-0"



H6 S-902B **NEW FRAMING BELOW NEW ROOF CURBS & EXSITNG DECK**
3" = 1'-0"



H4 S-902B **NEW ROOF TOP UNIT SUPPORT AT EXISTING ROOF**
3/4" = 1'-0"



H2 S-902B **CHANNEL ROOF OPENING FRAME AT EXISTING ROOF**
3/4" = 1'-0"

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REV	DESCRIPTION	BY	CR#	APPROVAL	DATE

REVISIONS

SIGNATURES		DATE
DRAWN	KAT	09.08.2025
CHECKED	AB	09.08.2025
ENGRG	MS	09.08.2025
ENGRG	AB	09.08.2025

REFERENCE DRAWINGS

SCALE
ALL SURF.
*UNLESS OTHERWISE SPECIFIED
2 PLACE DECIMALS ± FRACTIONS ±
3 PLACE DECIMALS ± ANGLES ±

NORTH CAROLINA PROFESSIONAL SEAL 029394 ENGINEER AARON B. BOPP 09-18-25

TRUE NORTH PROJECT NORTH

GE VERNOVA
GE Hitachi Nuclear Energy
Wilmington, NC

TYPE OF DRAWING: GE VERNOVA-FMO FRAMING TYPICAL DETAILS AND SCHEDULES

ISSUE DATE: 2025.09.18 DWG NO.: **S-902B** REV.

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