

SEAL

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CONSULTANTS

ISSUE DATE NUMBER

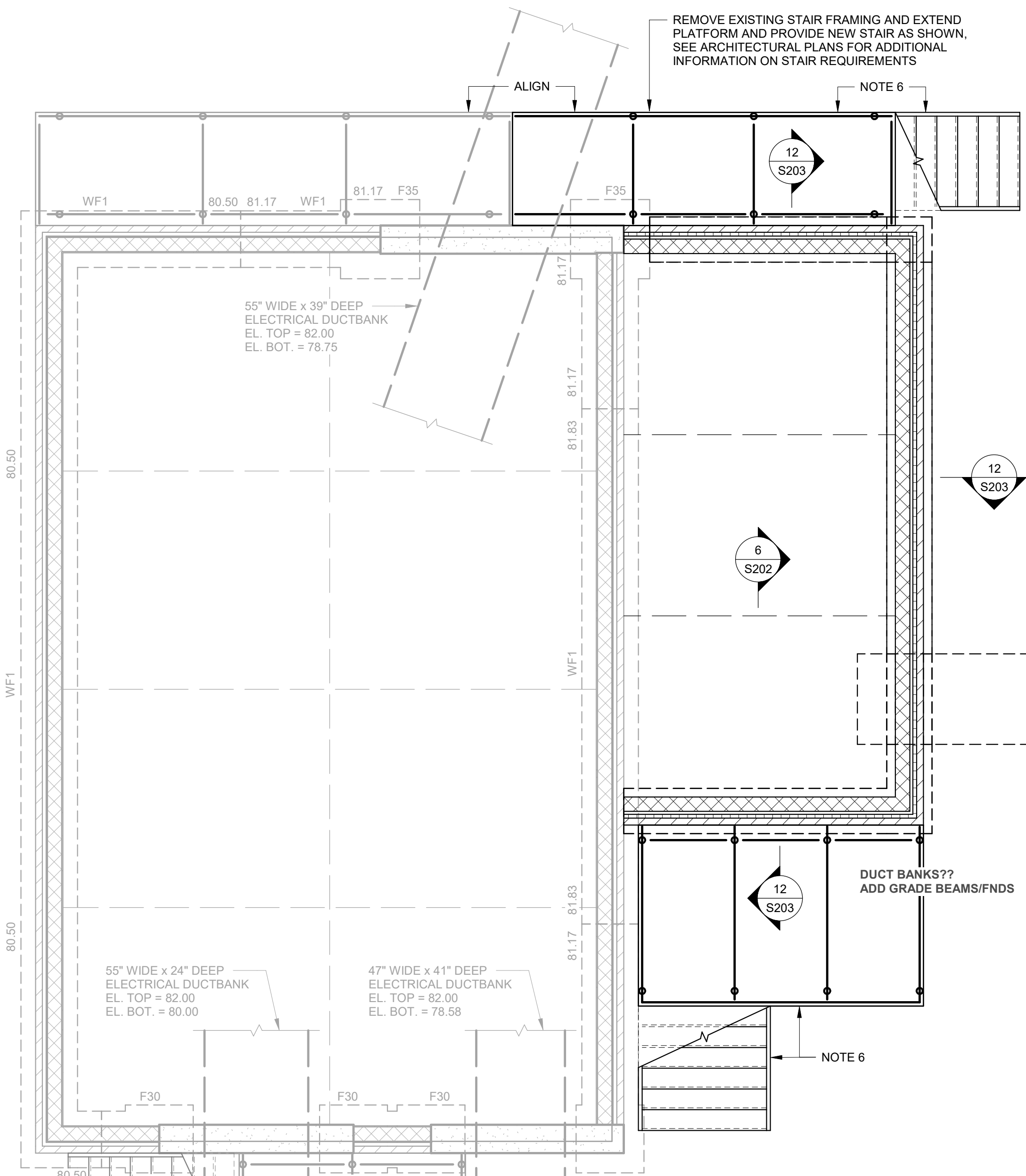
CLIENT  
 MedStar Union Memorial Hospital  
**MEDSTAR ST. MARY'S HOSPITAL**

PROJECT TITLE  
**NORMAL POWER SERVICE UPGRADE**

DATE  
 CRGA PROJECT NUMBER 21.099.8

DRAWING TITLE  
**FOUNDATION AND GROUND FLOOR PLAN & ROOF FRAMING PLAN**

DRAWING NUMBER  
**S101**



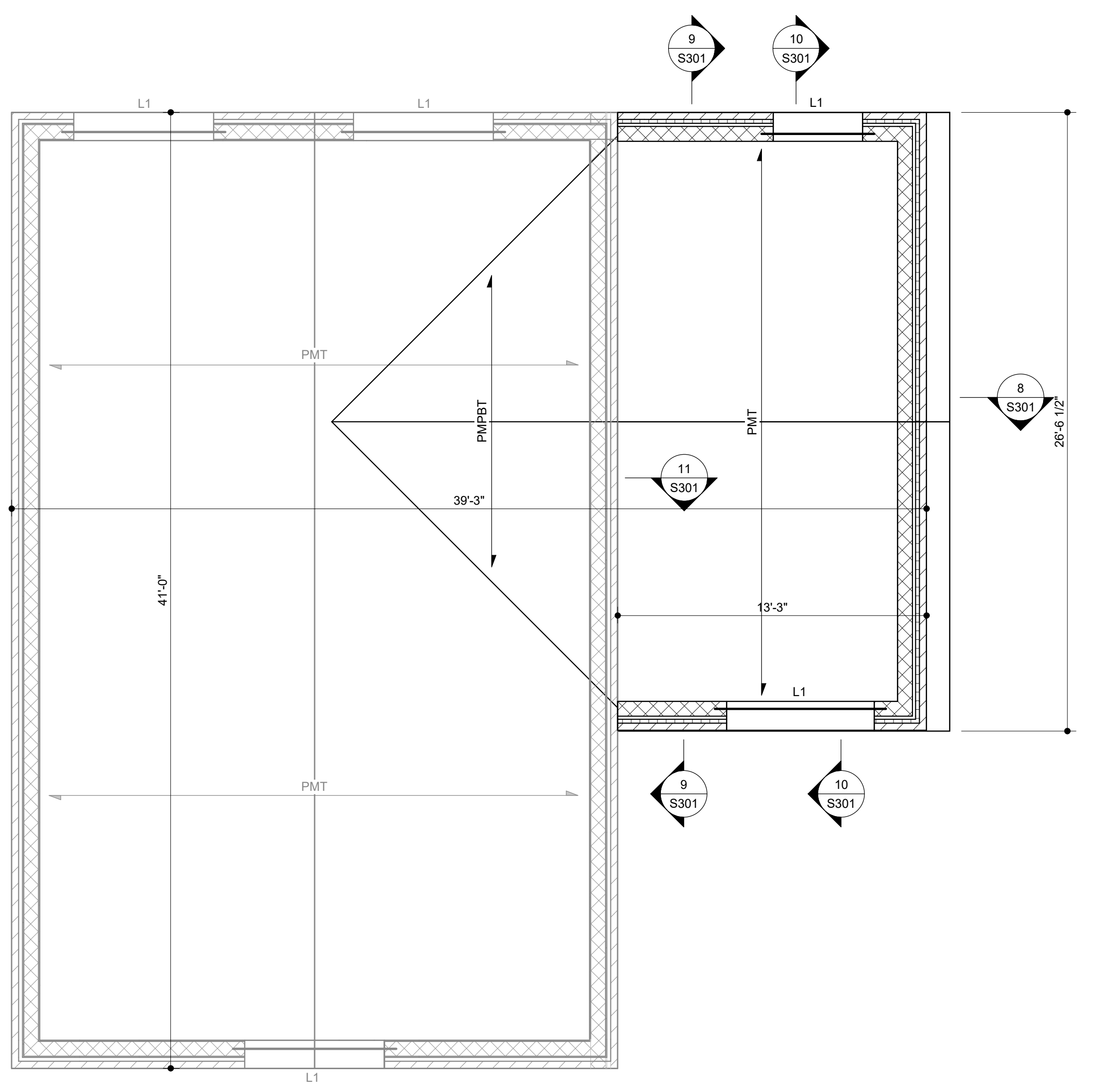
**FOUNDATION AND GROUND FLOOR PLAN** SCALE: 1/4" = 1'-0"

- ELEVATION TOP OF STRUCTURAL SLAB ON GRADE = EL. 89.50 (U.N.O.)
- STRUCTURAL SLAB SHALL BE 5" CONCRETE SLAB ON GRADE (f<sub>c</sub> = 3000 PSI) REINFORCED WITH 6" x 6" - W2 9 / W2 9 WELDED WIRE FABRIC POURED OVER VAPOR BARRIER OVER 4" POROUS FILL.
- ELEVATION BOTTOM OF FOOTING IS SHOWN ON PLAN.
- ASSUMED SOIL BEARING VALUE = 2000 PSF WAS USED IN DESIGN OF THE STRUCTURE. THIS VALUE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO THE INSTALLATION OF ANY FOUNDATIONS. CONTRACTOR SHALL SUBMIT GEOTECHNICAL REPORT PRIOR TO THE ONSET OF CONSTRUCTION.
- WALL TYPES INDICATED ON PLAN THUS:  
 REINFORCED MASONRY BLOCK WALLS (ASTM C-90) WITH BRICK FACADE. SEE SCHEDULE ON S101 FOR REINFORCING
- PRE-ENGINEERED METAL STAIRS AND LANDINGS SHALL BE DESIGNED FOR 100 POUNDS PER SQUARE FOOT LIVE LOAD. SUBMIT SIGNED AND SEALED SHOP DRAWINGS TO ENGINEER FOR REVIEW. SEE ARCHITECTURAL DRAWINGS FOR RISER AND TREAD DIMENSIONS AND INTERFACE AT BUILDING EXTERIOR. STAIR AND LANDING FRAMING CONNECTIONS AND SUPPORT AT GRADE ARE PART OF THE DELEGATED DESIGN AND SHALL BE INCLUDED IN THE CONTRACTORS SUBMITTAL. POST FOUNDATIONS SHALL BE A MINIMUM OF 16" DIAMETER SONOTUBES REINFORCED WITH 5#6 VERTICAL BARS AND #3 TIES AT 12" O.C. A SONOTUBE OR TURNDOWN SLAB SHALL BE PROVIDED TO SUPPORT THE STAIR STRINGERS AT GRADE. STAIRS AND LANDINGS SHALL BE DESIGNED TO BE DISASSEMBLED FOR FUTURE BUILDING EXPANSION. USE BOLTED CONNECTIONS WHERE POSSIBLE.
- CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND SITE DRAWINGS PRIOR TO CONSTRUCTION.
- PROVIDE FOOTING IN SLAB ON GRADE AT ALL NON-LOAD BEARING BLOCK PARTITIONS PER DETAIL 12 ON S202. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF ANY MASONRY PARTITIONS NOT SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
- PROVIDE SLAB DEPRESSIONS AT ALL ELECTRICAL FLOORING BOXES AND RECESSED RACEWAYS IN SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON S202 FOR ADDITIONAL INFORMATION. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATIONS.
- PROVIDE EQUIPMENT PADS WHERE INDICATED ON MEP PLANS. REFER TO DETAIL 8 ON S202 FOR ADDITIONAL INFORMATION.
- LOCATION OF CONCRETE ENCASED CONDUITS ENTERING THE BUILDING ARE SHOWN ON PLAN BASED ON MEP DRAWINGS. COORDINATE EXACT SIZE AND LOCATION WITH MEP PRIOR TO INSTALLATION. IF CONDITIONS DIFFER FROM WHAT IS SHOWN ON THE FOUNDATION PLAN CONTACT MORABITO CONSULTANTS FOR ADDITIONAL REVIEW.

**FOOTING SCHEDULE**

MARK	SIZE	REINFORCING	REMARKS
WF1	2'-6" x 12" CONT.	3#6 CONT. WITH #5 AT 12" O.C. BOT.	
F30	3'-0" x 3'-0" x 12"	#4 E.W. BOT.	

- FOOTING SCHEDULE NOTES:**
- FOOTINGS HAVE BEEN DESIGNED USING AN ALLOWABLE BEARING PRESSURE OF 2000 PSF. THIS VALUE SHALL BE FIELD VERIFIED PER PROJECT INSPECTION REQUIREMENTS BY A MARYLAND REGISTERED GEOTECHNICAL ENGINEER.
  - THE CONCRETE COMPRESSIVE STRENGTH (f<sub>c</sub>) FOR ALL FOOTINGS SHALL BE 3000 PSI.



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

- ELEVATION OF ROOF TRUSS BEARING = EL. 102.50 (102.17 per RFI from previous project)
- STRUCTURAL ROOF SHALL BE 1 1/2" x 22 GAUGE TYPE 'B' GALVANIZED METAL DECK SUPPORTED BY PRE-ENGINEERED METAL STUD ROOF TRUSSES AT 4'-0" O.C. MAX. SEE S301 FOR DECK FASTENING REQUIREMENTS.
- PRE-ENGINEERED METAL STUD ROOF TRUSSES ARE NOTED ON PLAN THUS:  
 PMT = PRE-ENGINEERED METAL ROOF TRUSS  
 PMPBT = PRE-ENGINEERED METAL PIGGYBACK TRUSS
- REFER TO ARCHITECTURAL DRAWINGS FOR WORKING POINTS AND PITCHES OF PRE-ENGINEERED METAL STUD TRUSSES.
- FOR ROOF PROFILE AND LOCATION OF RIDGE, REFER TO ARCHITECTURAL DRAWINGS.
- WALL TYPES INDICATED ON PLAN THUS:  
 REINFORCED MASONRY BLOCK WALLS (ASTM C-90) WITH BRICK FACADE. SEE SCHEDULE ON S101 FOR REINFORCING
- PROVIDE 8" WIDE x 8" DEEP CONT. BOND BEAM AROUND THE PERIMETER OF THE BUILDING WITH 2#5 CONT. BOTTOM REINFORCING AND FILLED SOLID WITH 3000 PSI GROUT AT ROOF TRUSS BEARING. PROVIDE 90 DEGREE HOOK BARS AT CORNERS.
- CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND SITE DRAWINGS PRIOR TO CONSTRUCTION.
- FOR LOCATIONS AND SIZES FOR ANY HUNG MECHANICAL UNITS, SEE MECHANICAL DRAWINGS. COORDINATE WEIGHTS AND LOCATIONS WITH TRUSS DESIGNER.
- FOR LINTEL/BEAM SCHEDULE SEE S101. ALL LINTELS SHALL BE INSTALLED AT THE TOP OF THE DOOR OR LOUVER OPENING. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS OF THE HEAD OF OPENINGS AND LOUVER LOCATIONS.
- COORDINATE ANY NEW DUCT/CONDUIT/PIPE PENETRATION SIZES AND LOCATIONS INTO EXISTING BUILDING EXTERIOR WALL WITH ARCHITECT AND MEP. EXISTING EXTERIOR WALLS ARE CMU WITH BRICK FACADE. FOR NEW OPENINGS GREATER THAN 2'-0" AND LESS THAN 5'-0" PROVIDE (1) 1/4" x 1/2" x 1/4" ANGLE (LLV) PER 4" WIDTH OF WALL. FOR ANY NEW OPENINGS LARGER THAN 5'-0" CONTACT THE ENGINEER OF RECORD FOR REVIEW.

**LINTEL SCHEDULE**

MARK	MEMBER	TYPE	REMARKS
L1	PRECAST CONCRETE LINTEL		8" MIN. BEARING AT EACH END

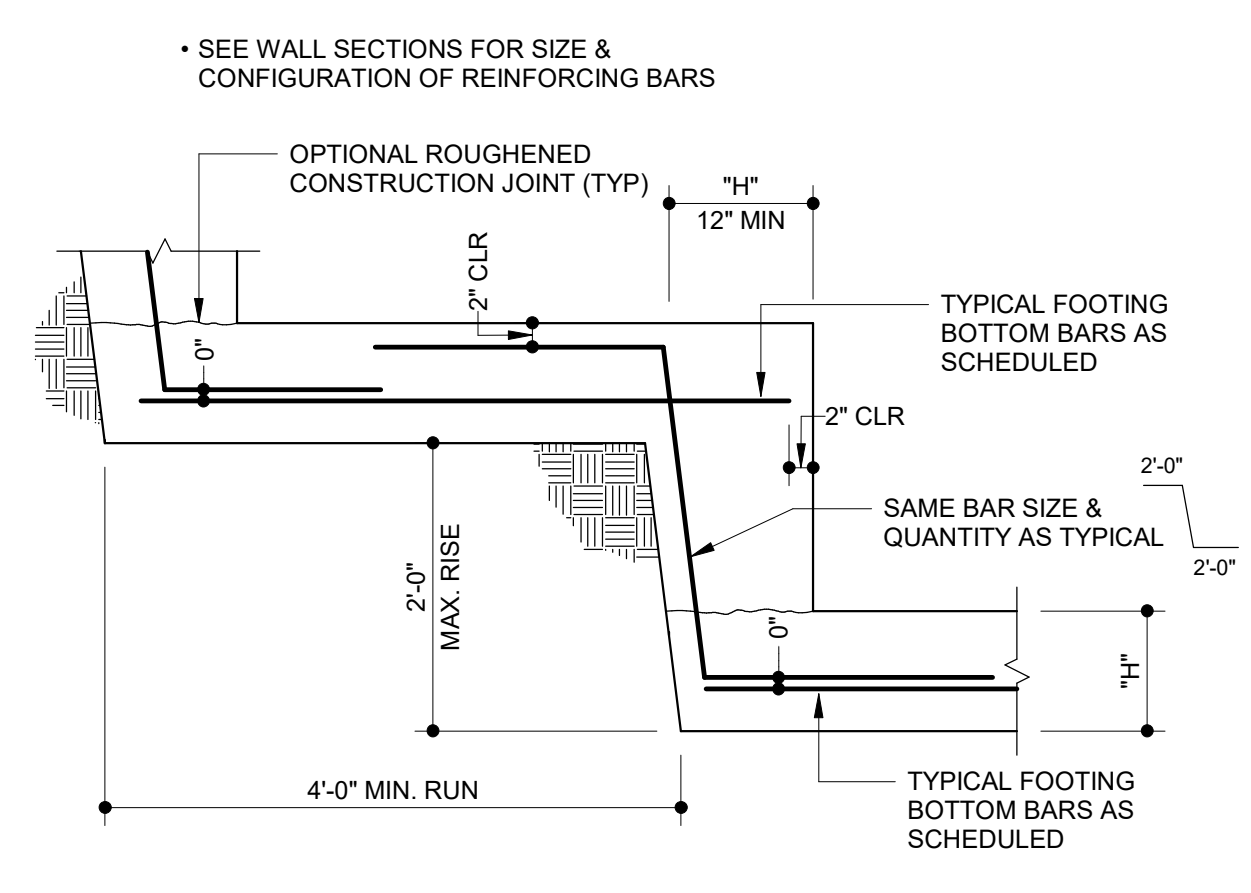
- LINTEL SCHEDULE NOTES:**
- FOR EXACT SIZE AND LOCATION OF WALL OPENINGS, SEE ARCHITECTURAL DRAWINGS.
  - PRECAST LINTEL DESIGN SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL. ALL REQUIRED CONNECTIONS OF THE PRECAST TO THE STRUCTURE ARE CONSIDERED TO BE A PART OF THE PRECAST LINTEL DESIGN SUBMISSION.
  - ALL STRUCTURAL STEEL IN CONTACT WITH MASONRY SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATIONS.
  - FILL ALL MASONRY JAMBS SOLID EACH SIDE OF OPENING WITH 3000 PSI GROUT. SEE DETAIL 11 ON S203 FOR ADDITIONAL INFORMATION. FOR TYPICAL JAMB REINFORCING REQUIREMENTS SEE DETAILS ON S203.

**MASONRY WALL SCHEDULE**

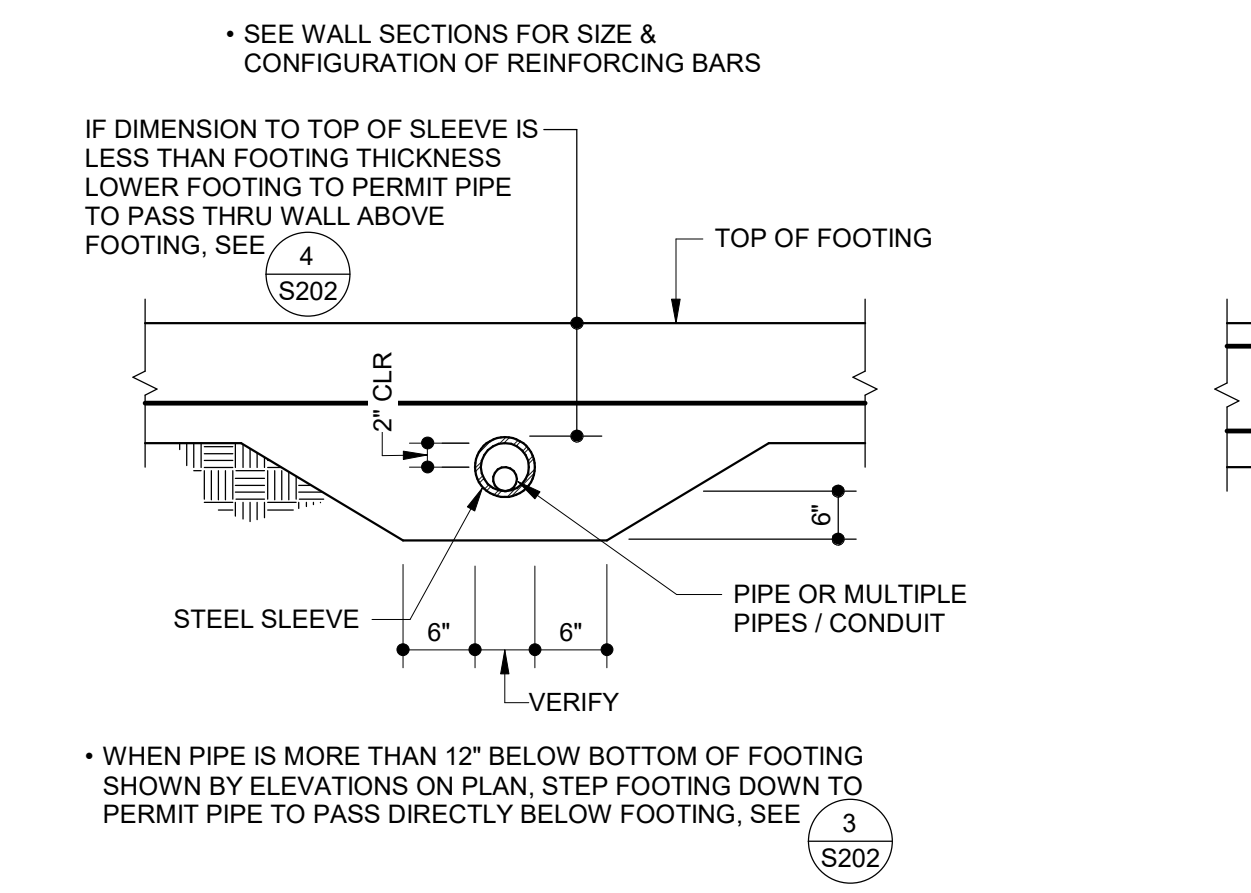
MARK	EXTERIOR MASONRY WALLS
BLOCK SIZE	8" CMU
1 TO ROOF	#6 AT 24" O.C.

- ALL MASONRY REINFORCING SHALL HAVE THE LAP SPICES PER SCHEDULE
- ALL REINFORCED MASONRY SHALL BE FILLED 100% SOLID WITH 3000 PSI GROUT.
- PROVIDE ADDITIONAL VERTICAL BARS AT END OF WALL, CORNERS, AND JAMBS PER DETAILS 1 THROUGH 5 ON S203. BAR SIZE SHALL MATCH SIZE INDICATED IN MASONRY WALL SCHEDULE.

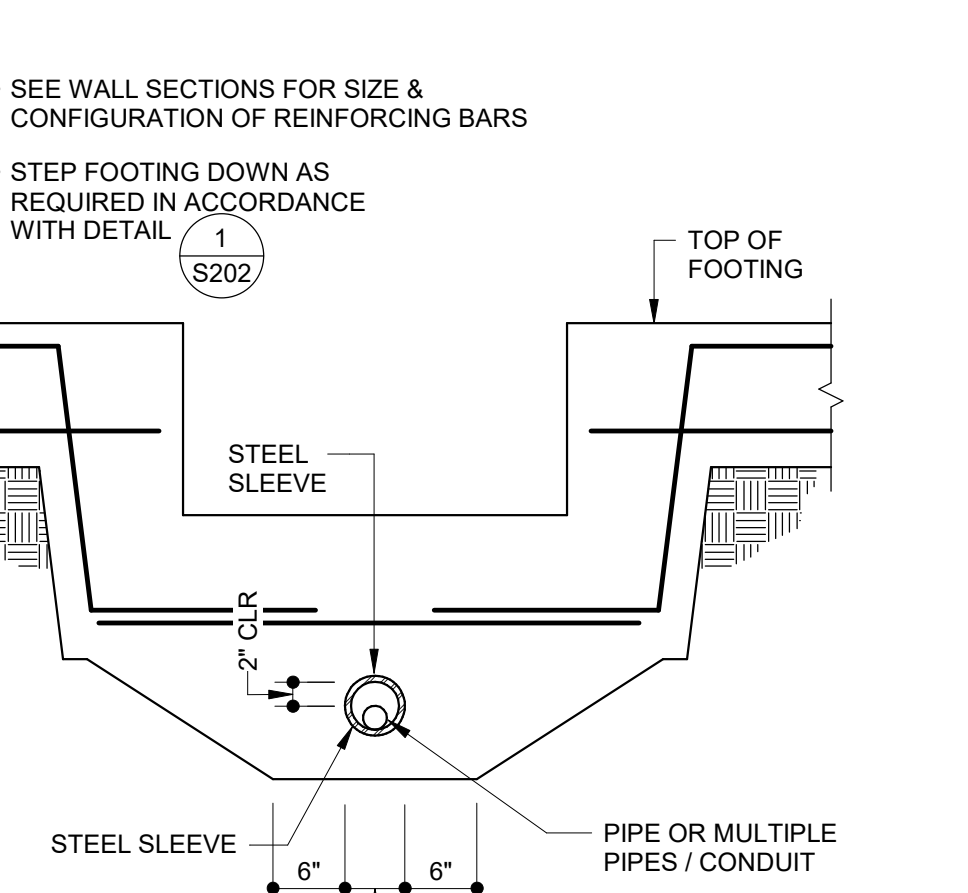




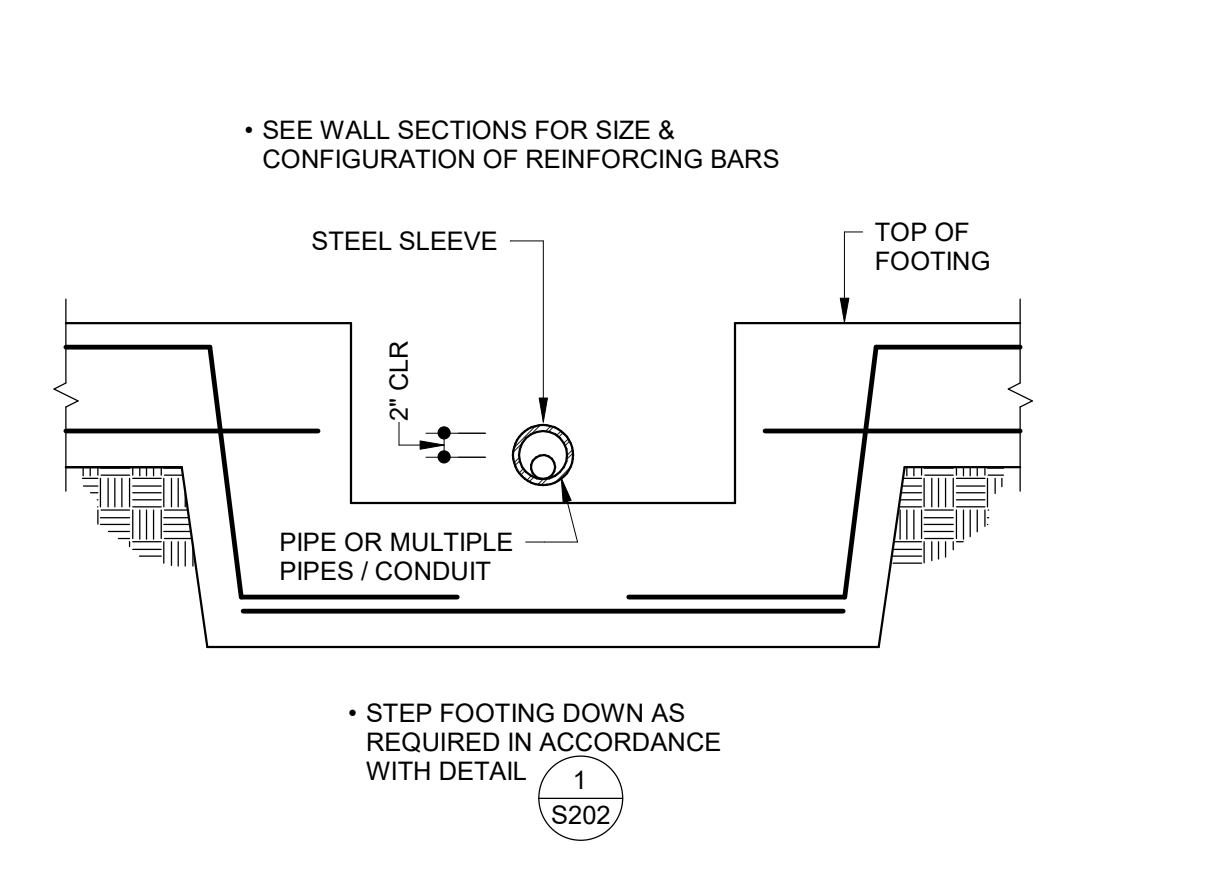
**1 TYPICAL STEPPED FOOTING WITH BAR**  
 3/4" = 1'-0"



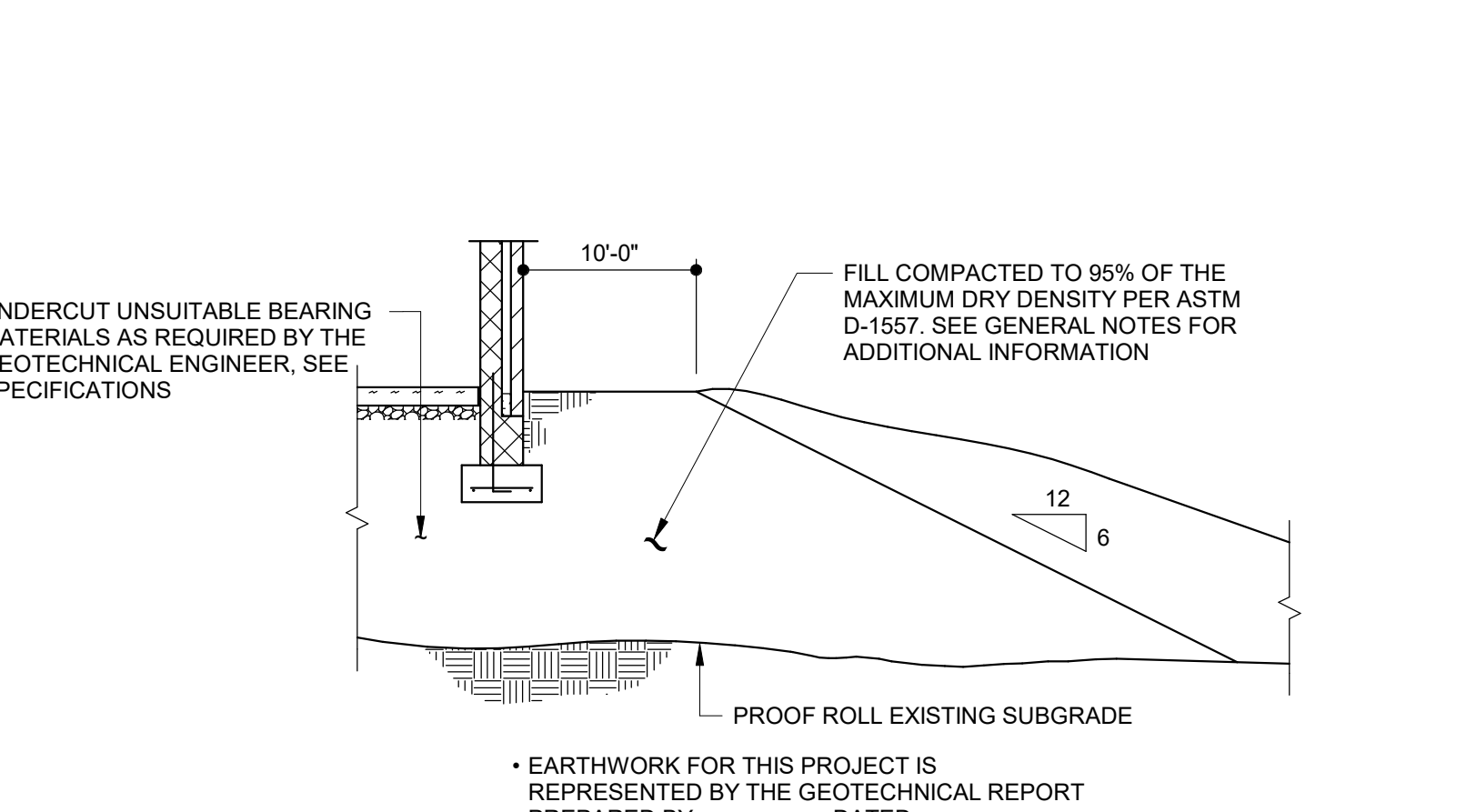
**2 TYPICAL PIPE SLEEVE THRU FOOTING**  
 3/4" = 1'-0"



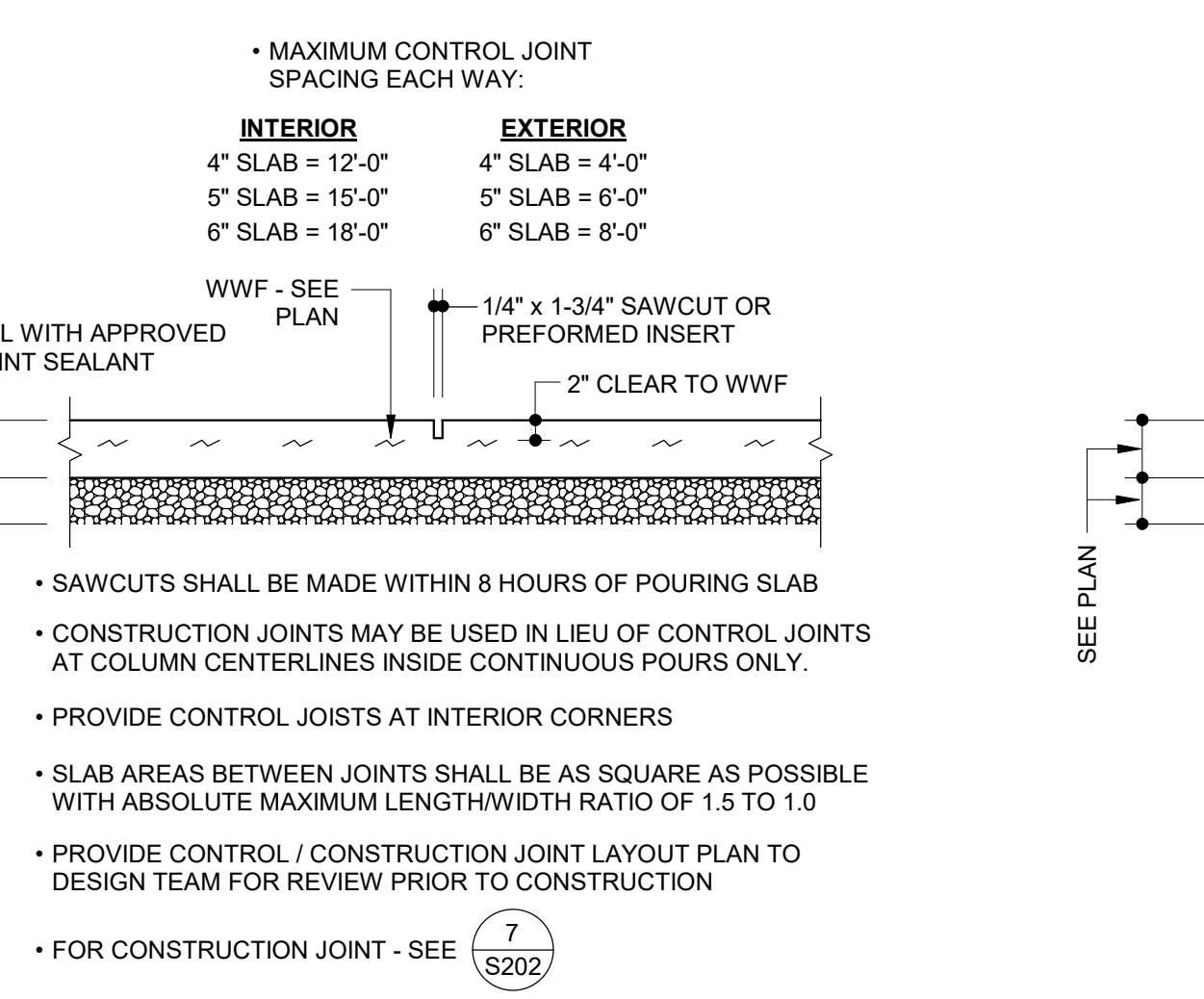
**3 FOOTING STEPPED DOWN AT PIPE SLEEVE**  
 3/4" = 1'-0"



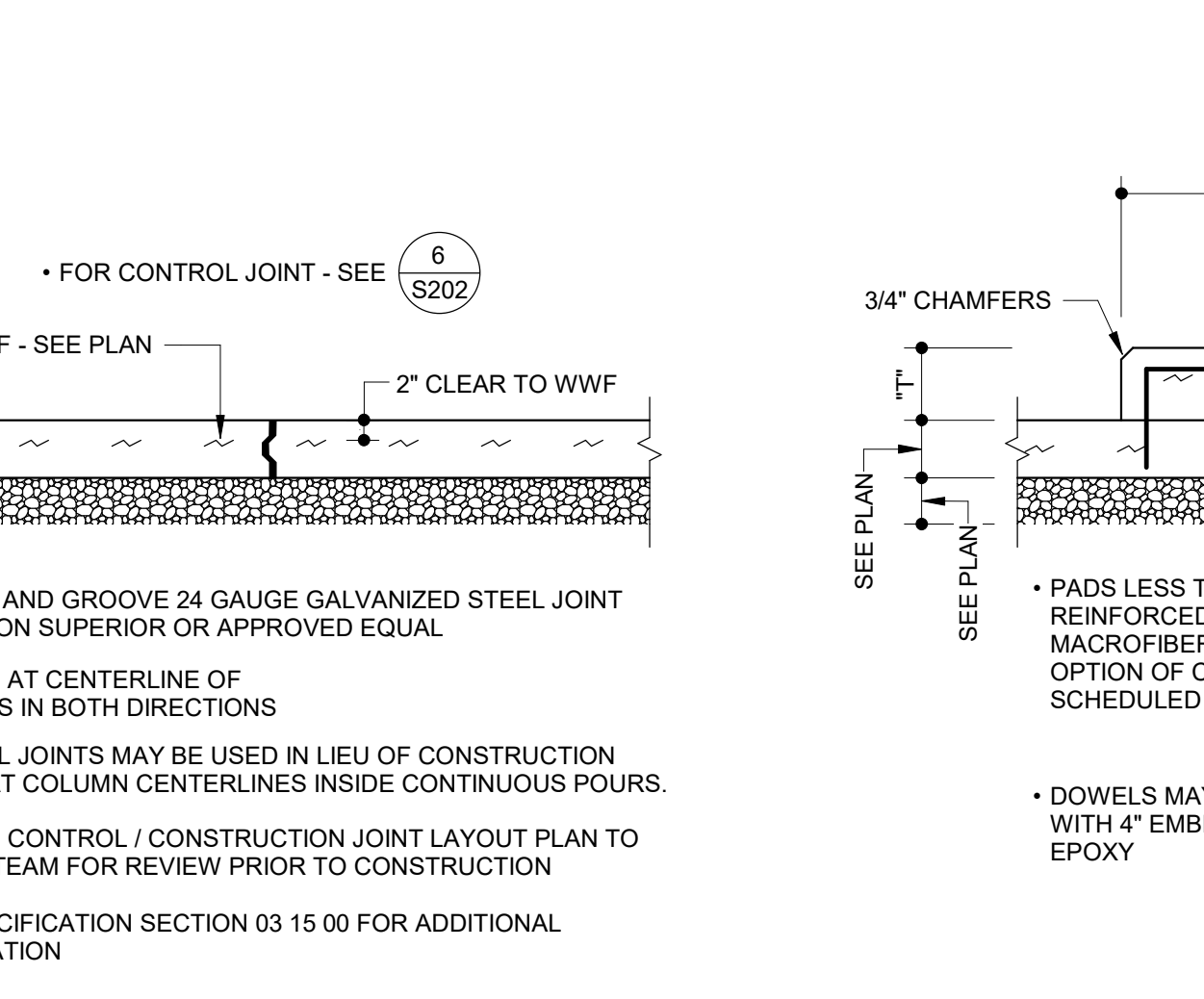
**4 FOOTING STEPPED UNDER PIPE SLEEVE**  
 3/4" = 1'-0"



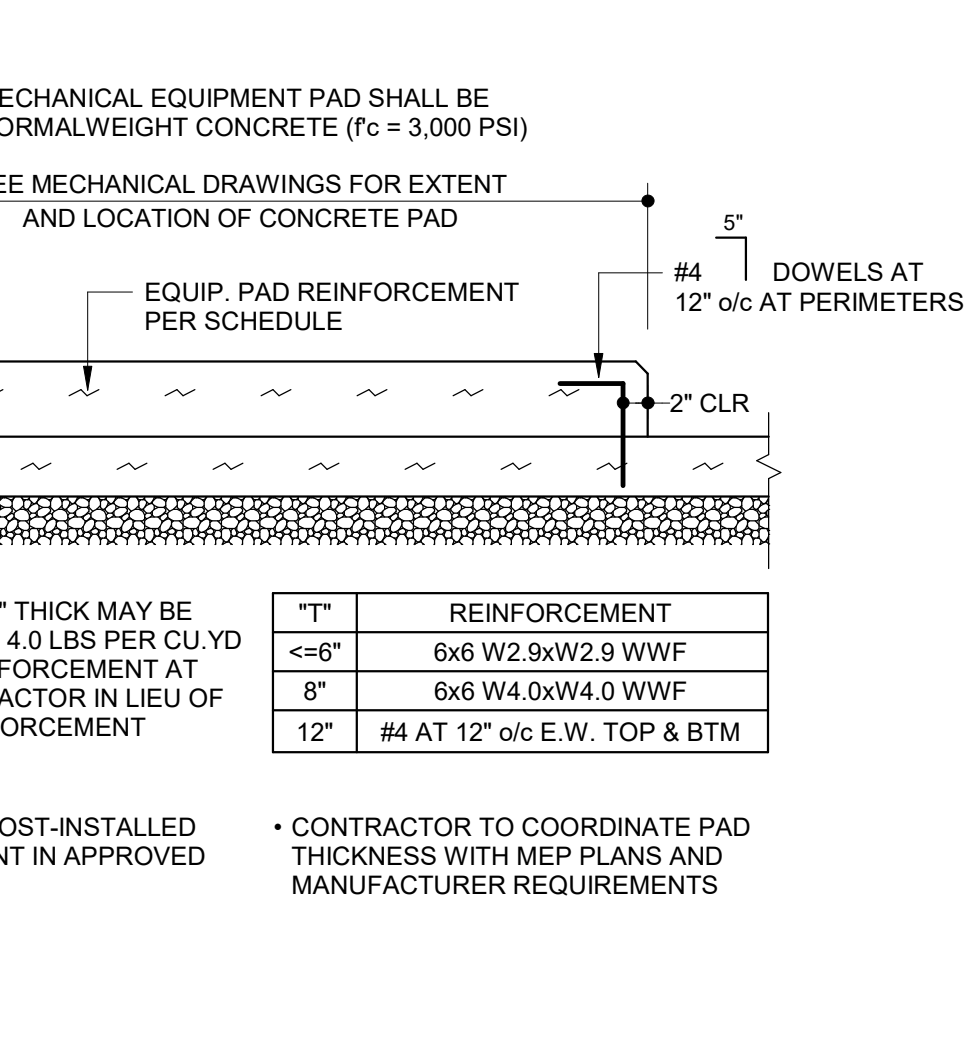
**5 EXTENT OF COMPACTED FILL FOR BUILDING STRUCTURE**  
 3/4" = 1'-0"



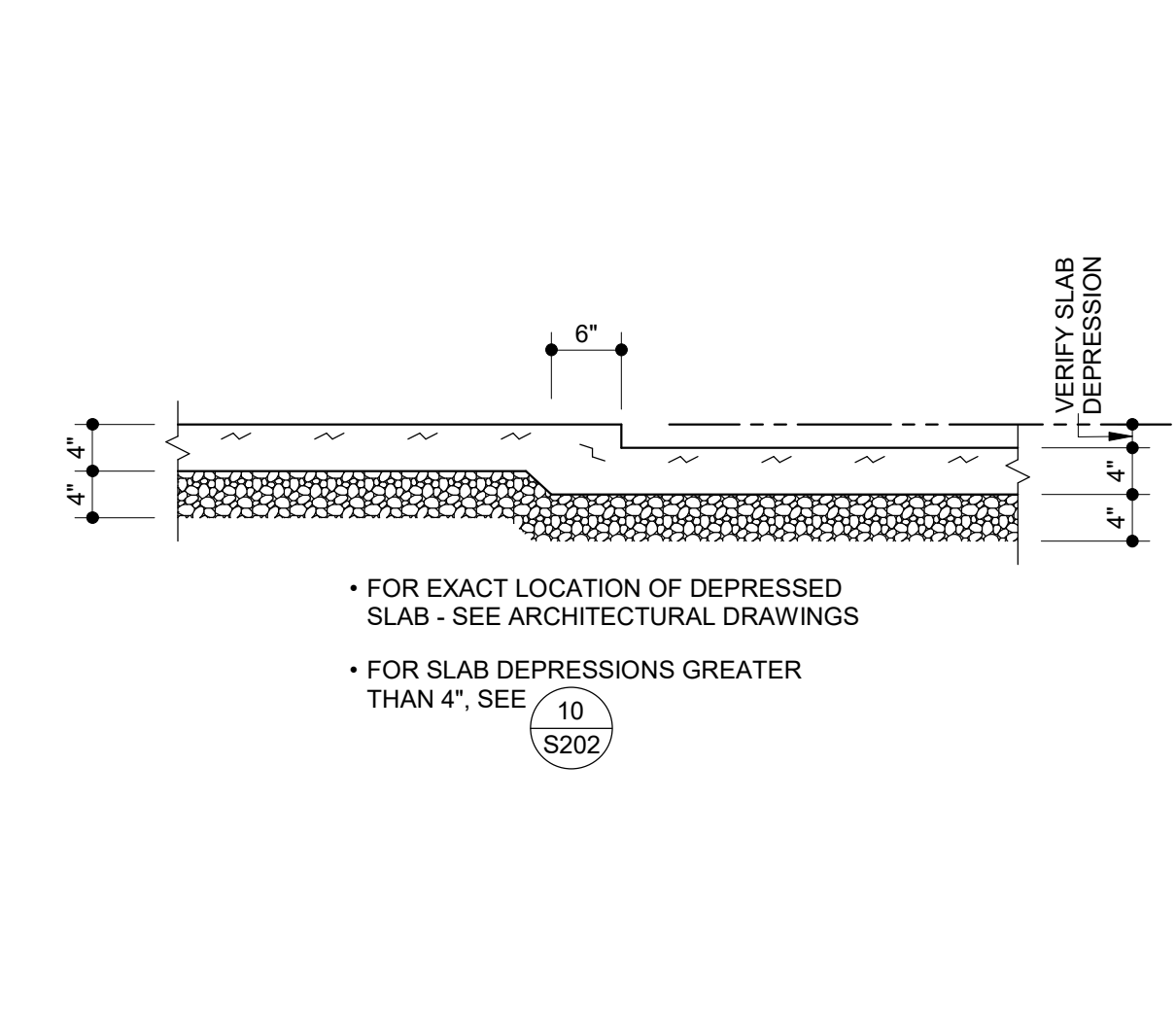
**6 TYPICAL CONTROL JOINT IN SLAB ON GRADE**  
 3/4" = 1'-0"



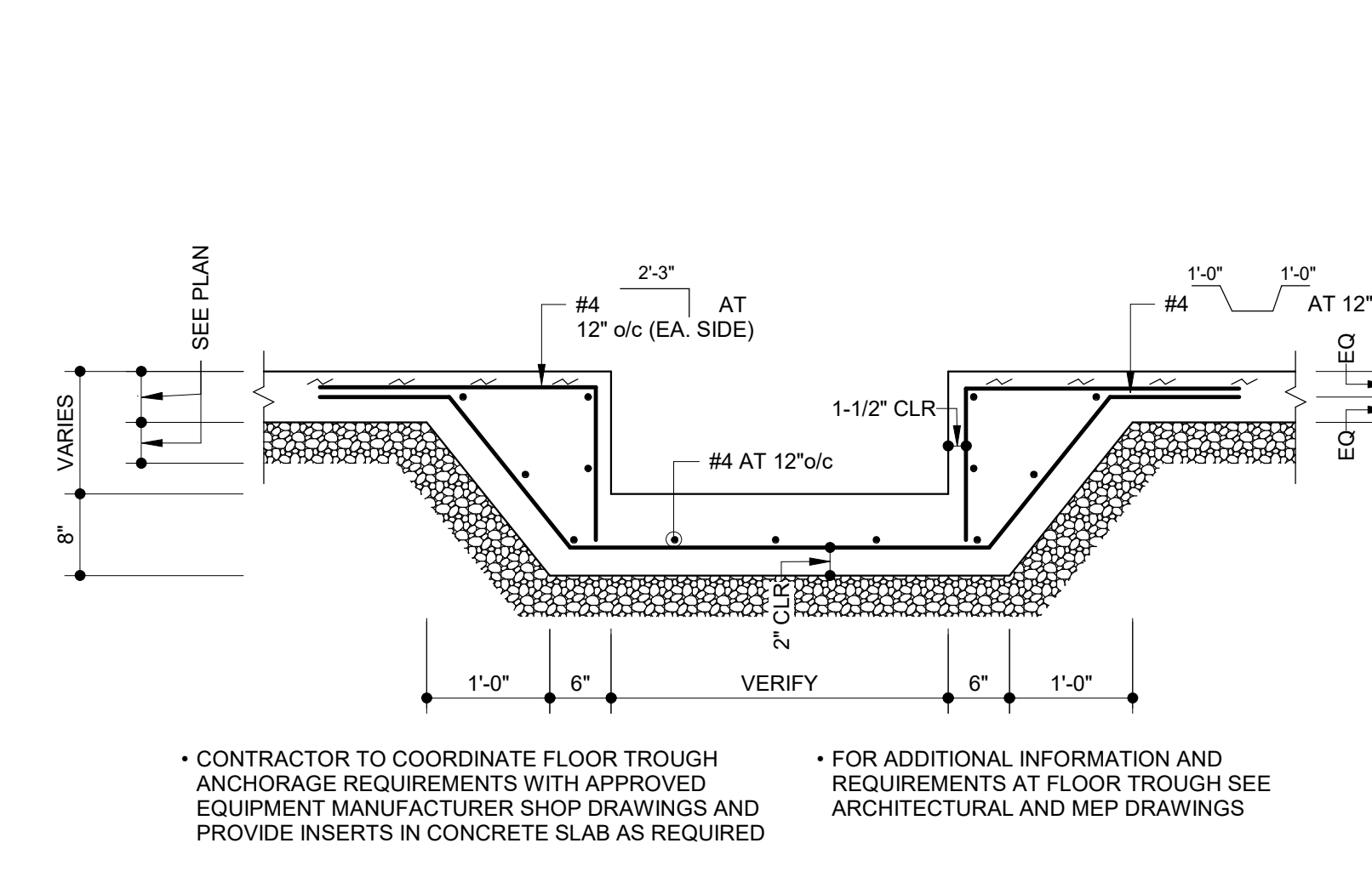
**7 TYPICAL CONSTRUCTION JOINT IN SLAB ON GRADE**  
 3/4" = 1'-0"



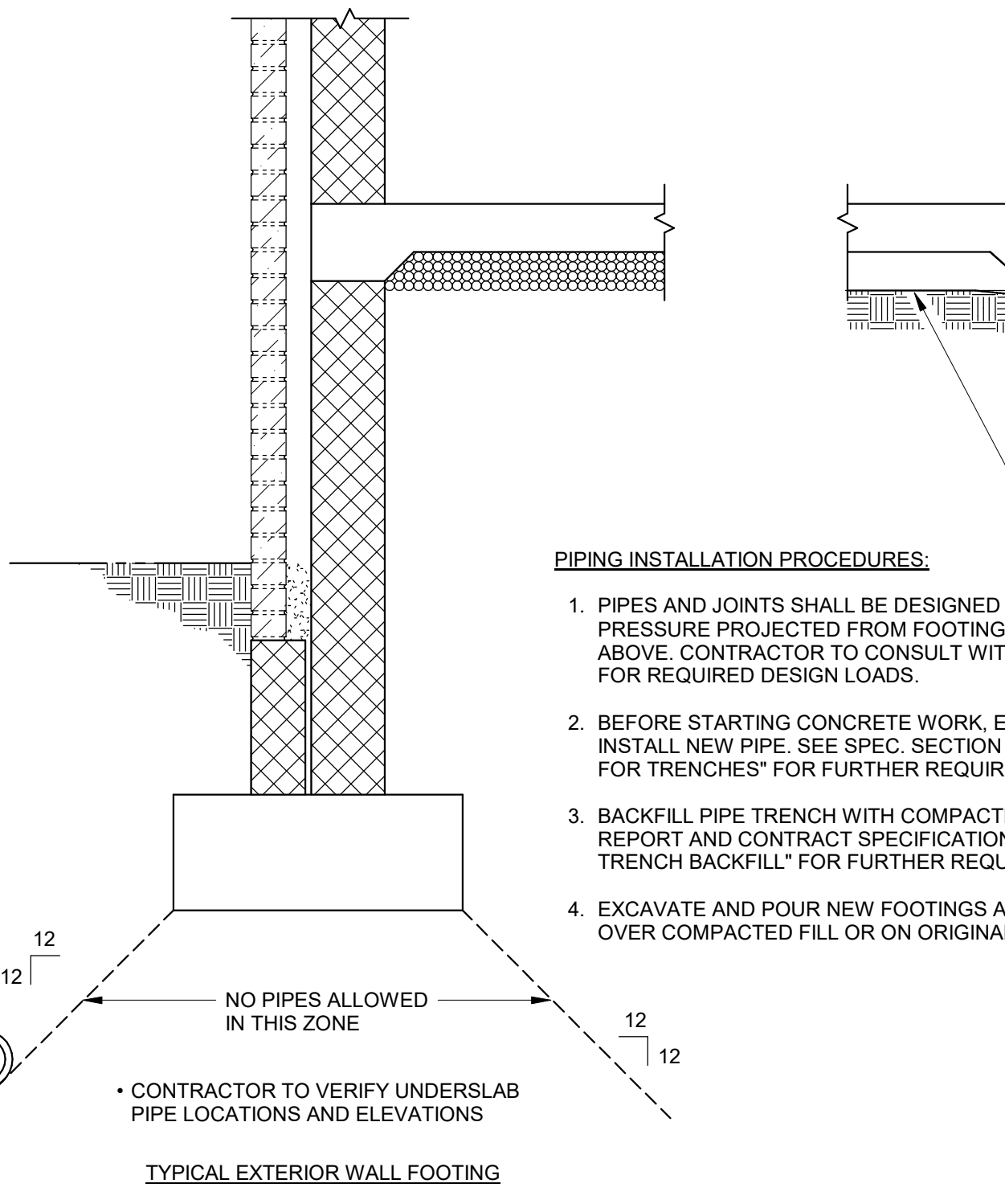
**8 TYPICAL INTERIOR EQUIPMENT HOUSEKEEPING PAD**  
 3/4" = 1'-0"



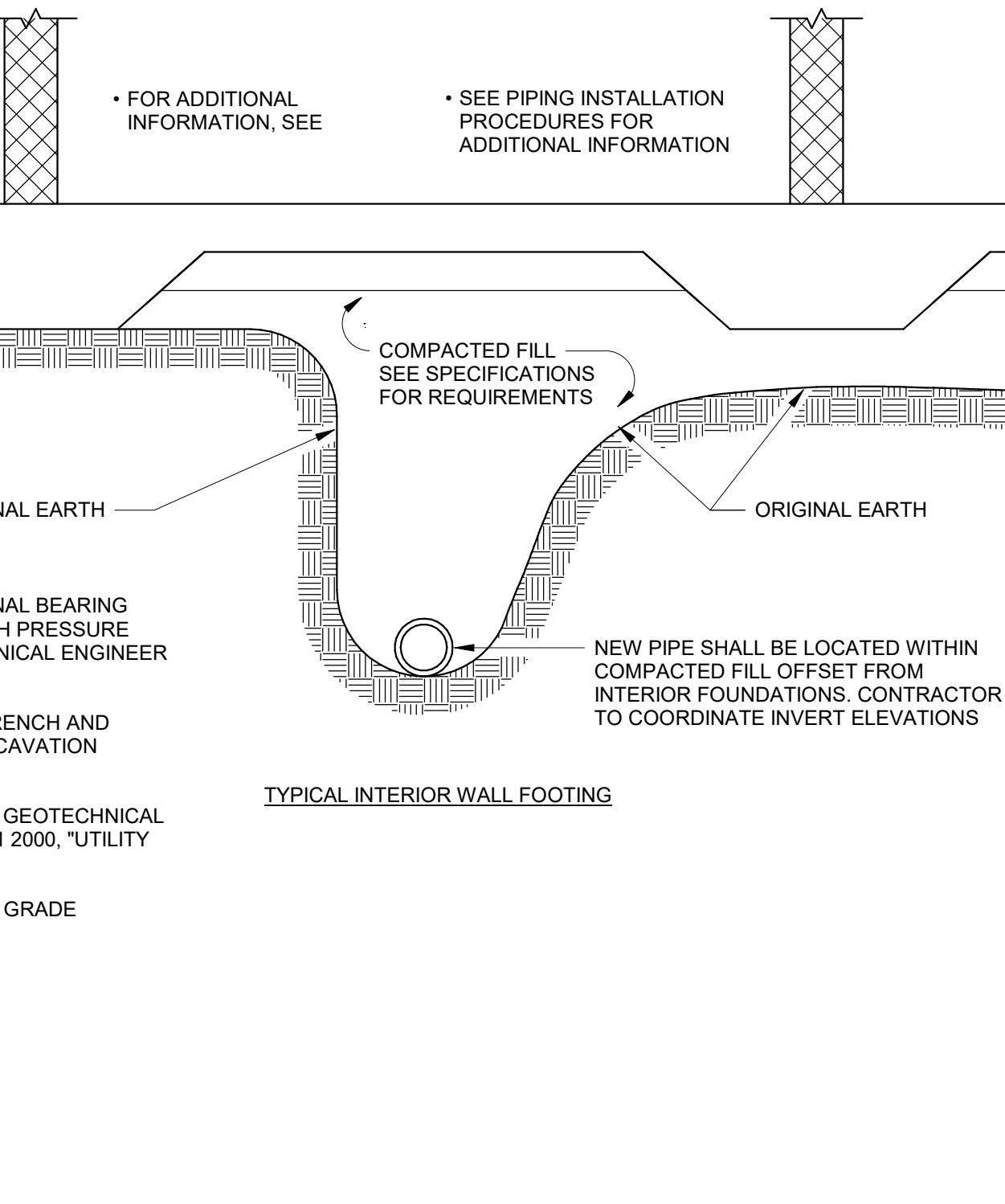
**9 TYPICAL SLAB ON GRADE DEPRESSION**  
 3/4" = 1'-0"



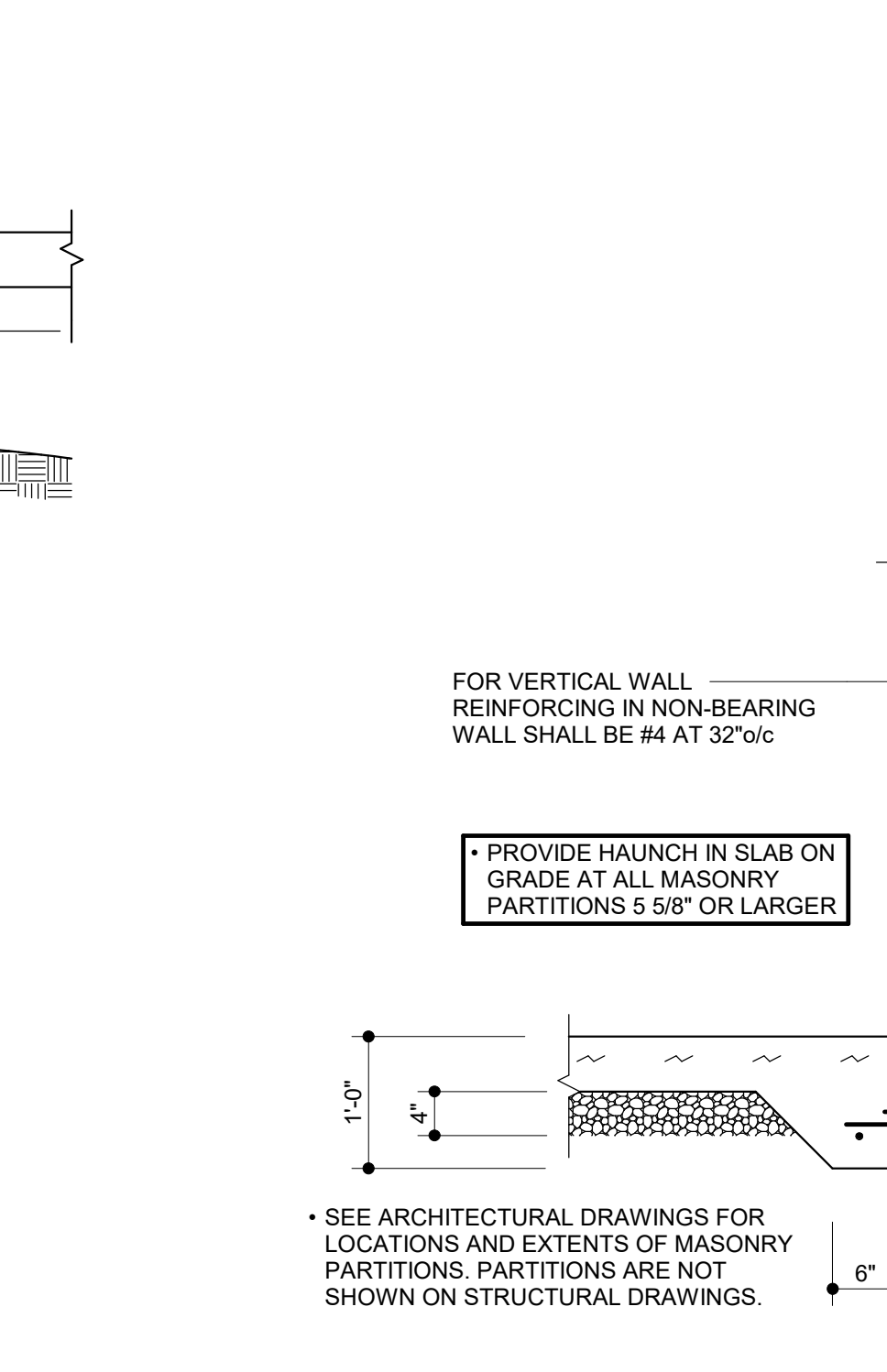
**10 FLOOR TROUGH**  
 3/4" = 1'-0"



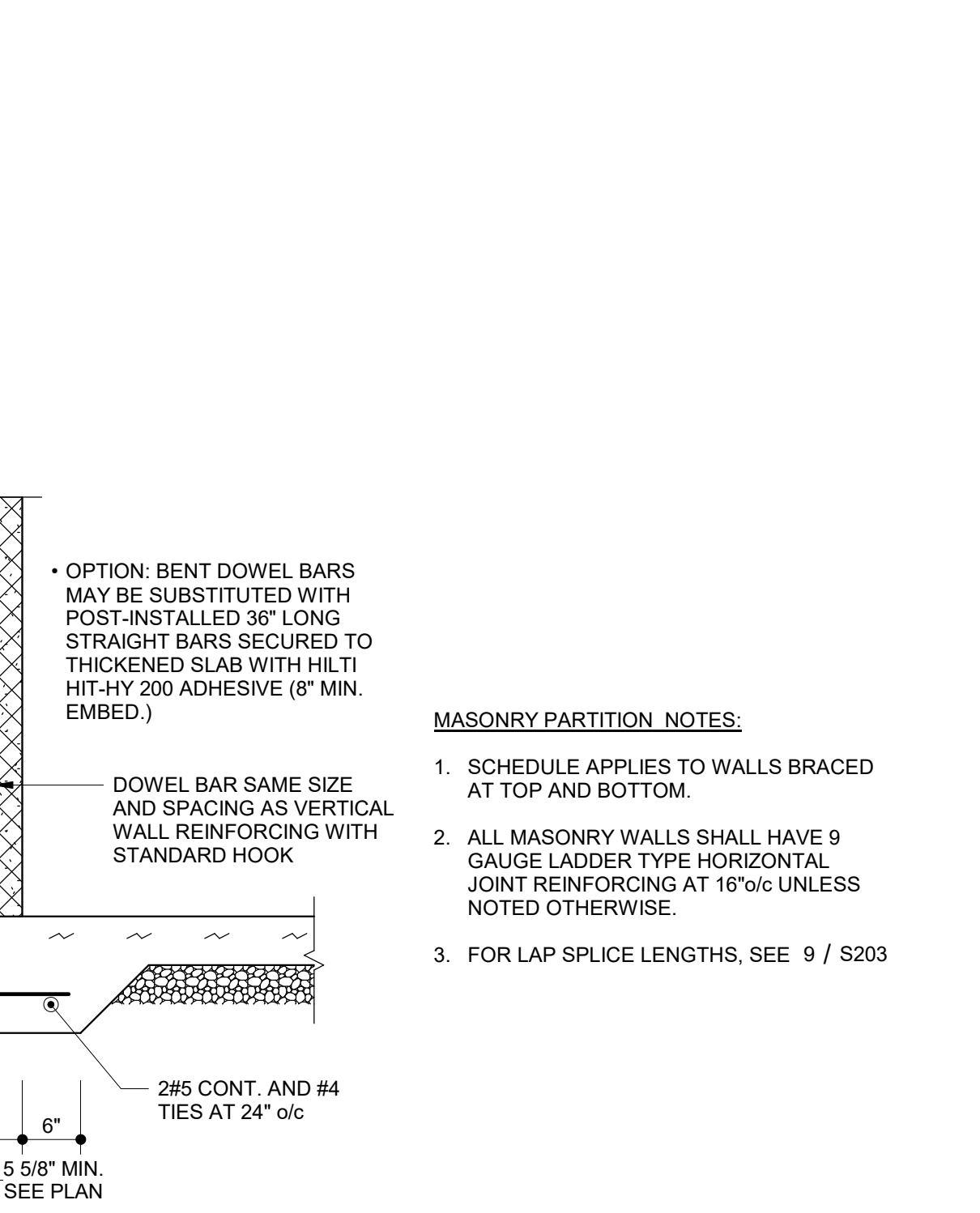
**11 PIPE NEAR FOOTINGS**  
 3/4" = 1'-0"



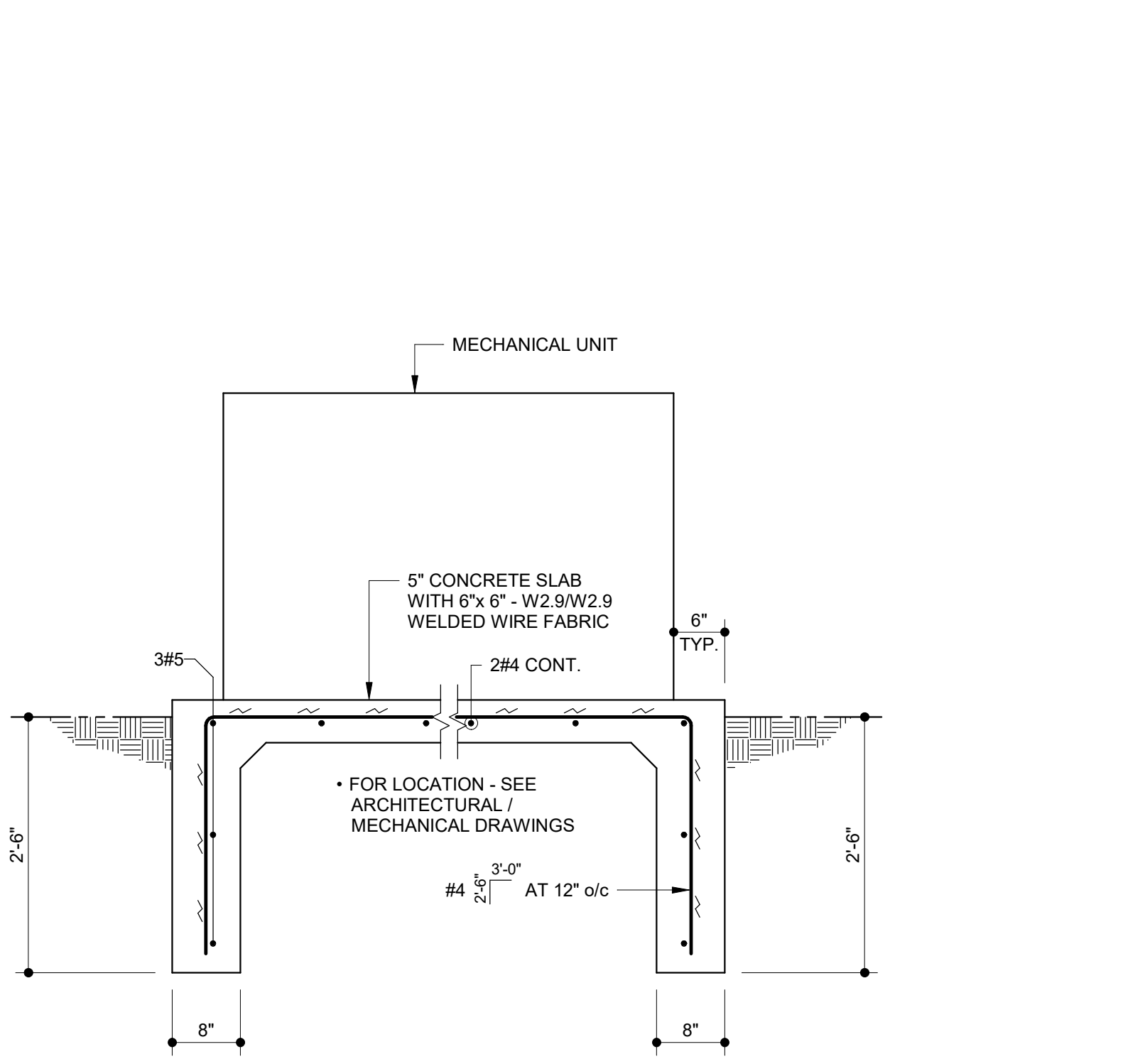
**12 THICKENED SLAB FOR REINFORCED NON-BEARING CMU WALL (NON-CANTILEVERED)**  
 3/4" = 1'-0"



**13 EXTERIOR CONCRETE PAD**  
 3/4" = 1'-0"



**14 TYPICAL INTERIOR WALL FOOTING**  
 3/4" = 1'-0"



**15 MASONRY PARTITION NOTES**  
 3/4" = 1'-0"

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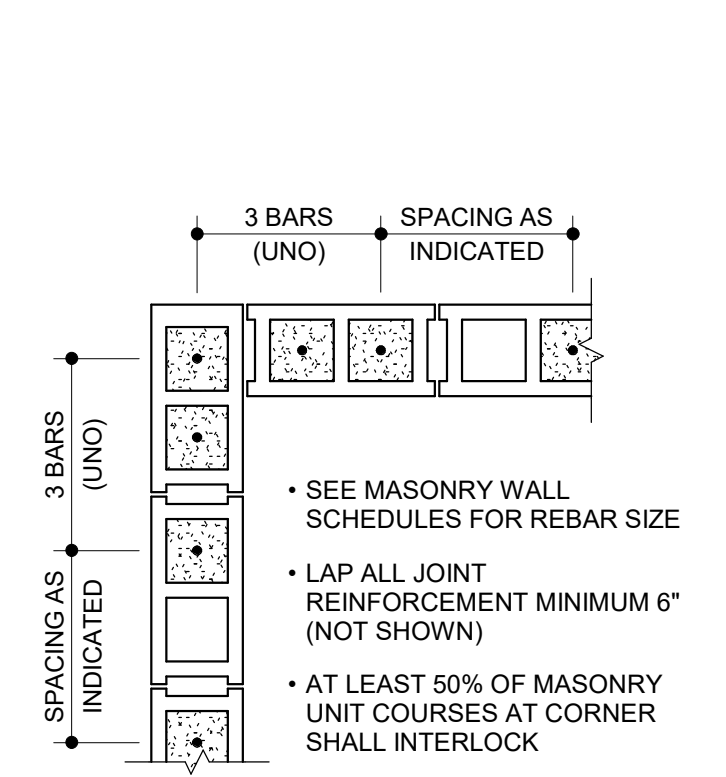
CONSULTANTS

CLIENT  
 MedStar Union Memorial Hospital  
**MEDSTAR ST. MARY'S HOSPITAL**

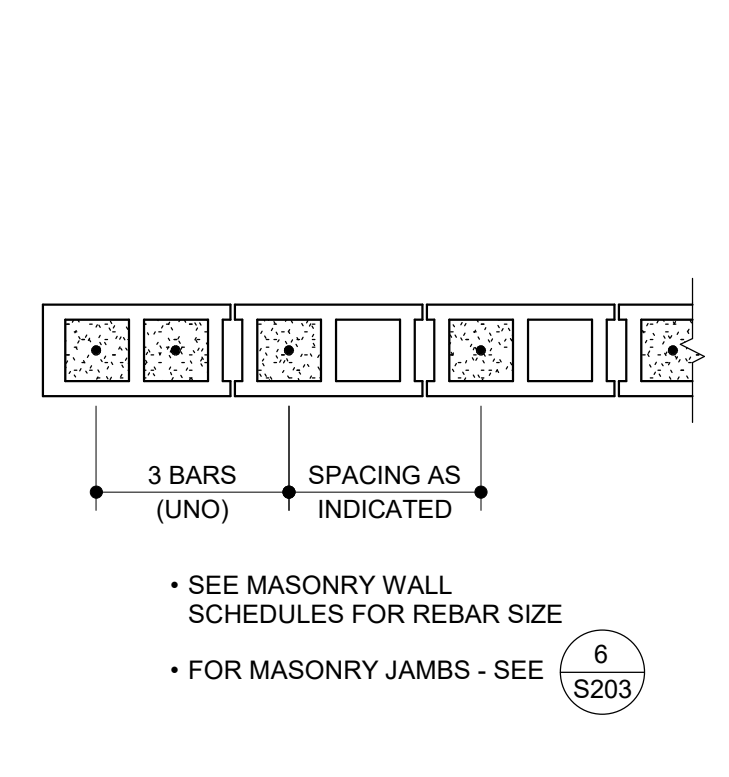
PROJECT TITLE  
**NORMAL POWER SERVICE UPGRADE**

DATE  
 CRGA PROJECT NUMBER 21.099.8  
 DRAWING TITLE  
**TYPICAL FOUNDATION AND SLAB ON GRADE DETAILS**

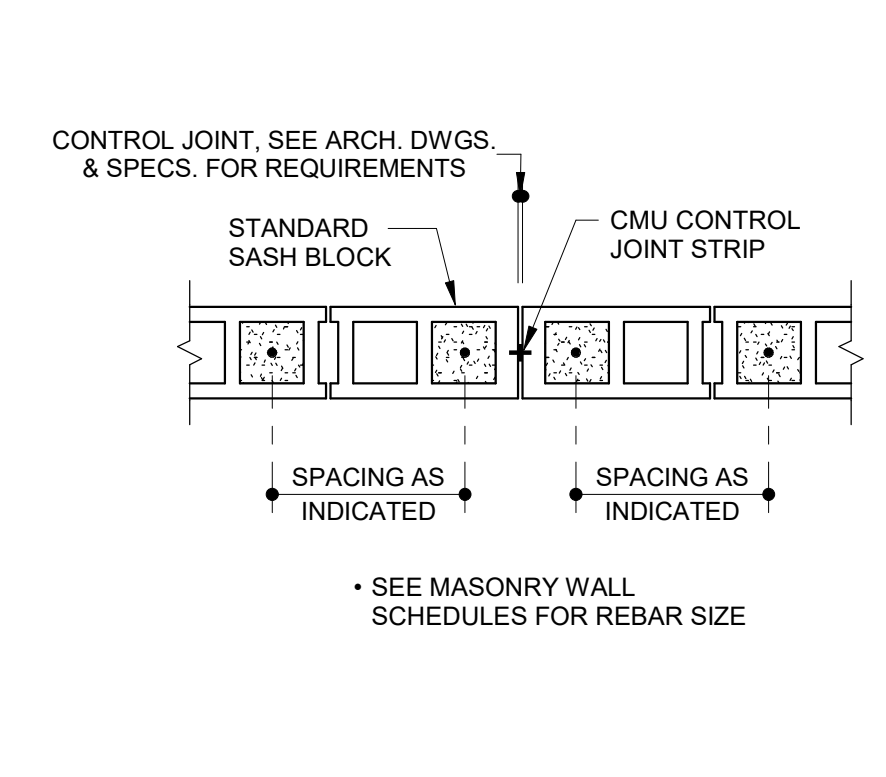
DRAWING NUMBER  
**S202**



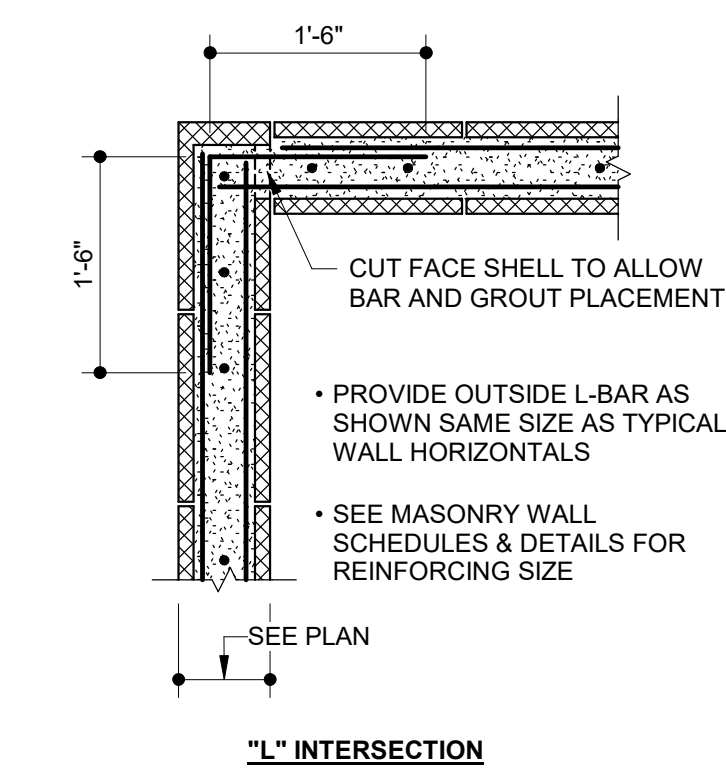
**1 TYPICAL CORNER OF MASONRY WALL**  
 3/4" = 1'-0"



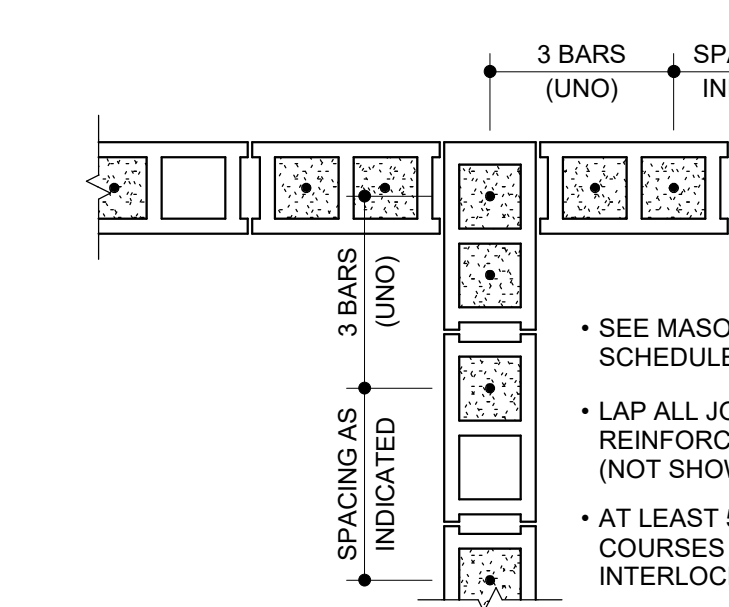
**2 TYPICAL END OF MASONRY WALL DETAIL**  
 3/4" = 1'-0"



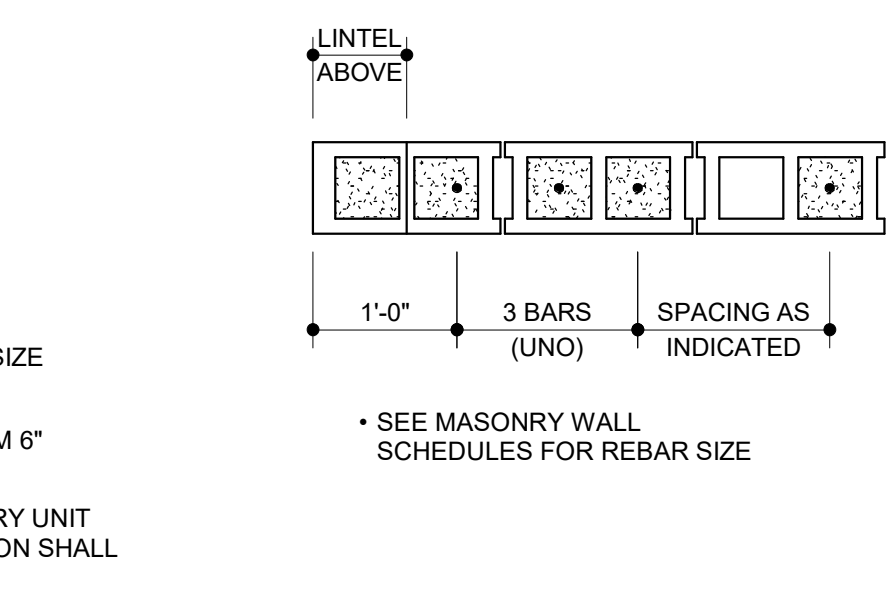
**3 TYPICAL REINFORCED MASONRY WALL CONTROL JOINT**  
 3/4" = 1'-0"



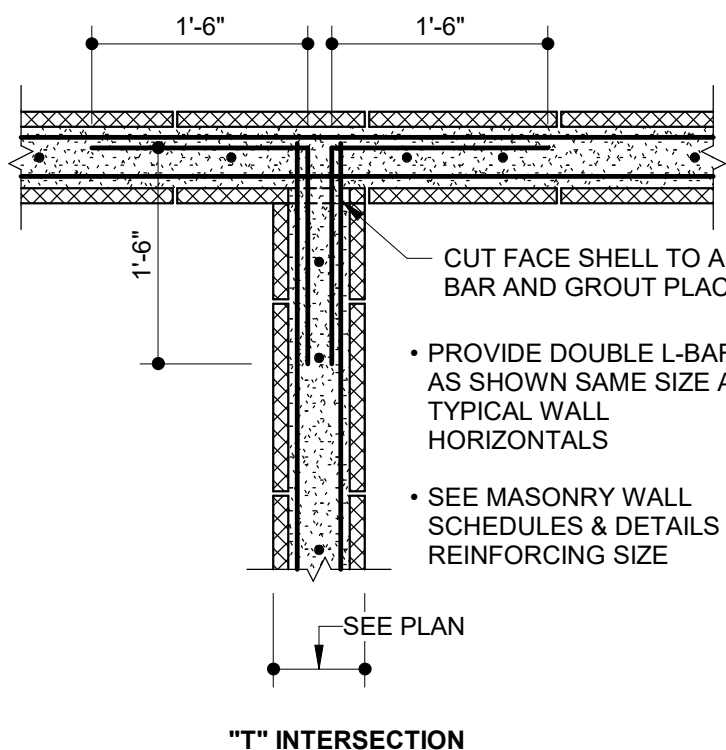
**4 TYPICAL JAMB AT CORNER OF MASONRY WALL**  
 3/4" = 1'-0"



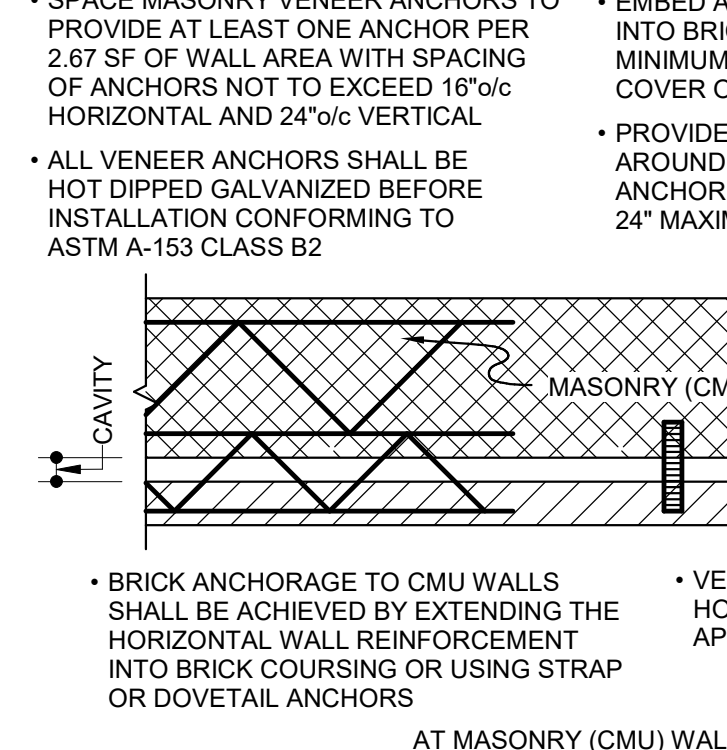
**5 TYPICAL INTERSECTION OF MASONRY WALLS**  
 3/4" = 1'-0"



**6 TYPICAL MASONRY JAMB DETAIL**  
 3/4" = 1'-0"



**7 TYPICAL BOND BEAM WALL INTERSECTIONS**  
 3/4" = 1'-0"



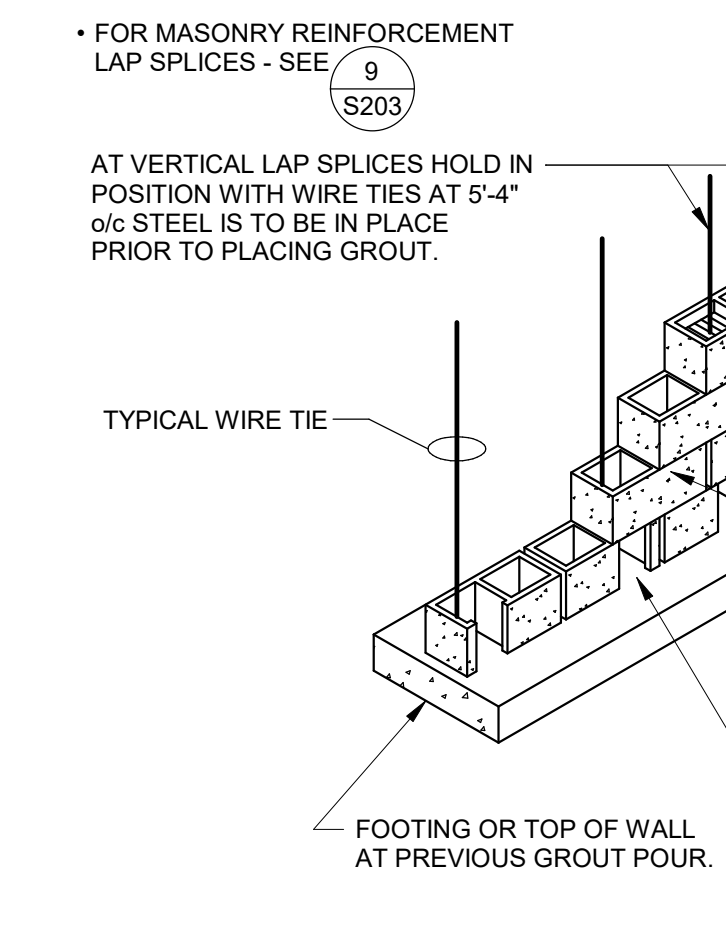
**8 MASONRY FACADE ANCHORS**  
 3/4" = 1'-0"

NORMAL BLOCK	"A"
8"	2 7/8"
10"	3"
12"	3"

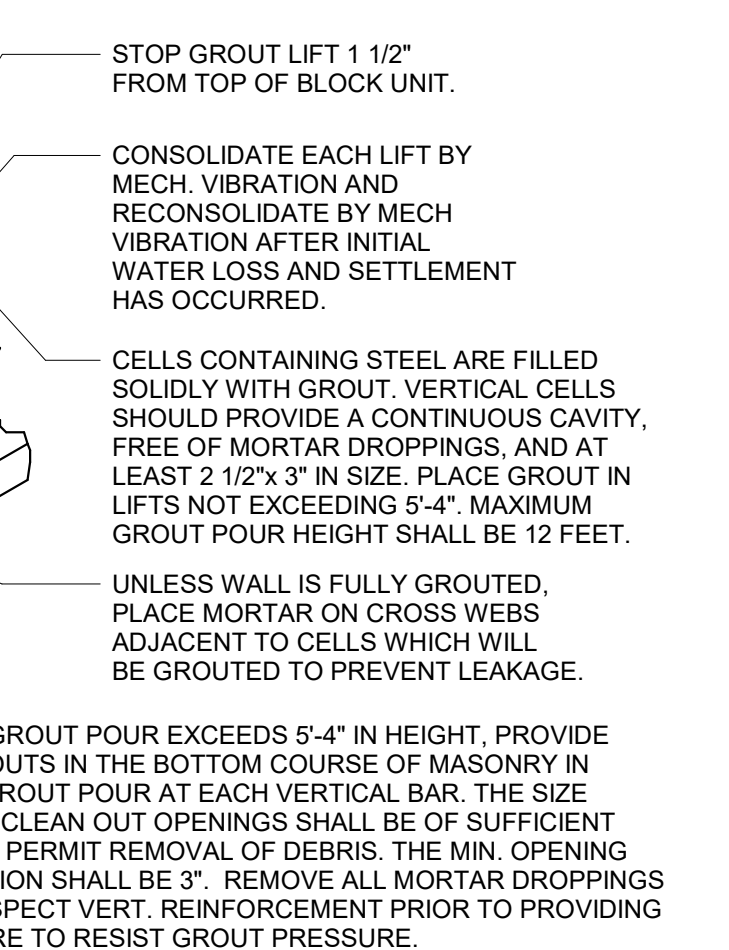
BLOCK SIZE	MASONRY REBAR LAP SPLICES			
	6"	8" OR 10"	12" OR LARGER	
BAR SIZE	1 BAR PER CELL	1 BAR PER CELL	2 BAR PER CELL	1 BAR PER CELL
#3	18"	18"	18"	18"
#4	24"	24"	24"	24"
#5	30"	30"	30"	30"
#6	53"	37"	57"	36"
#7	--	52"	--	42"
#8	--	--	--	50"
#9	--	--	--	64"

- NOTES:**
- REINFORCEMENT LAPS SHALL OCCUR ABOVE THE FLOOR LINE, WHERE LARGER BAR SIZE SHALL EXTEND FROM WALL BELOW.
  - TOLERANCES FOR PLACEMENT OF VERTICAL REINFORCING IS +/- 1/2 INCH.
  - FOLLOW TABLE FOR EDGE DISTANCES UNLESS NOTED OTHERWISE ON DETAILS.
  - SECURE REINFORCING IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACEMENT OF GROUT.
  - REBAR LAP SPLICES AS NOTED IN SCHEDULE.
  - FOR 6" BLOCK, JOINT MORTAR FINS SHALL BE REMOVED FROM CELLS FOR PLACEMENT OF #5 OR #6 BARS.
  - CONTRACTOR MAY ELECT TO PROVIDE MECHANICAL REINFORCEMENT SPLICES TO MINIMIZE CONGESTION OF VERTICAL BARS. MECHANICAL COUPLERS SHALL BE FABRICATED BY LENTON OR APPROVED EQUAL AND DEVELOP 125% OF REINFORCEMENT STRENGTH.
  - LAP LENGTH VALUES IN BOLD ARE CONTROLLED BY MINIMUM 48 BAR DIAMETERS PER THE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION". WALLS GROUT SHALL BE REQUIRED TO CURE FOR MINIMUM OF 24 HOURS.

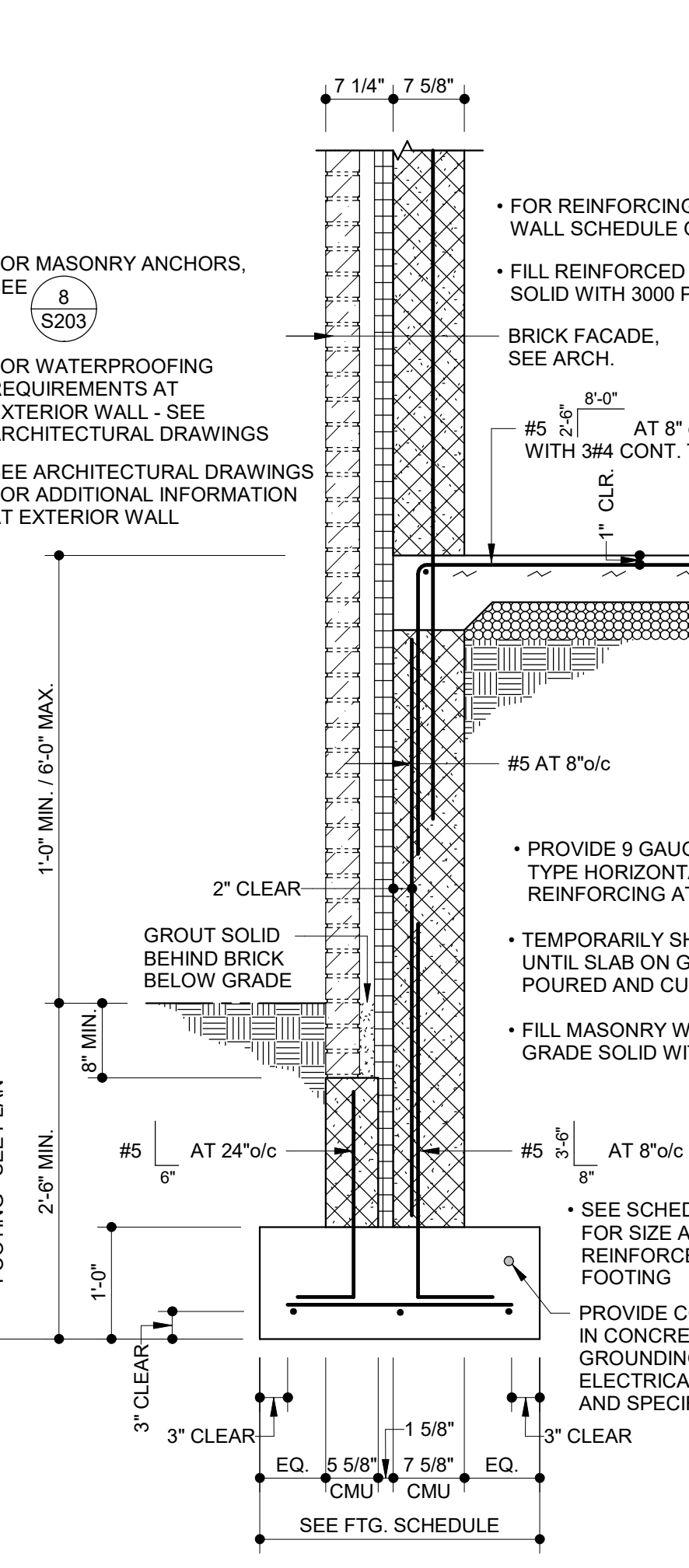
VALUES IN BOLD ARE CONTROLLED BY MINIMUM 48 BAR DIAMETERS PER THE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION"



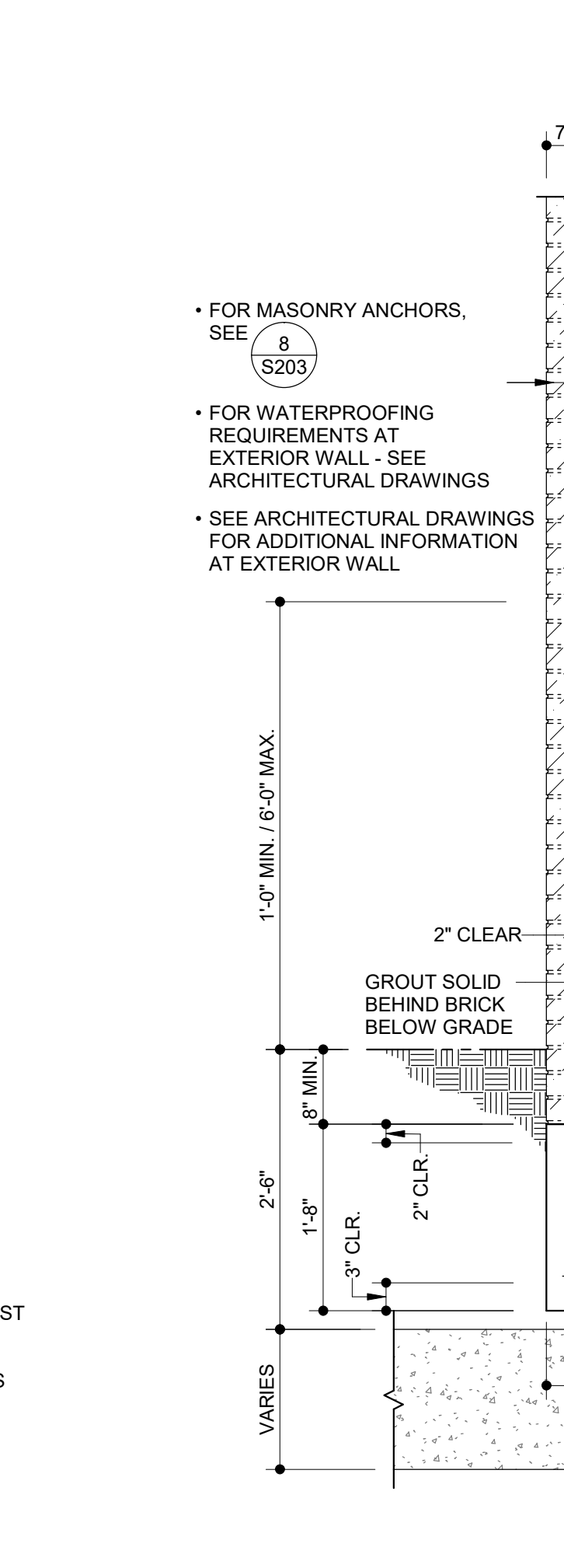
**9 TYPICAL REINFORCED MASONRY CONSTRUCTION - VERTICAL REINFORCING ONLY**  
 3/4" = 1'-0"



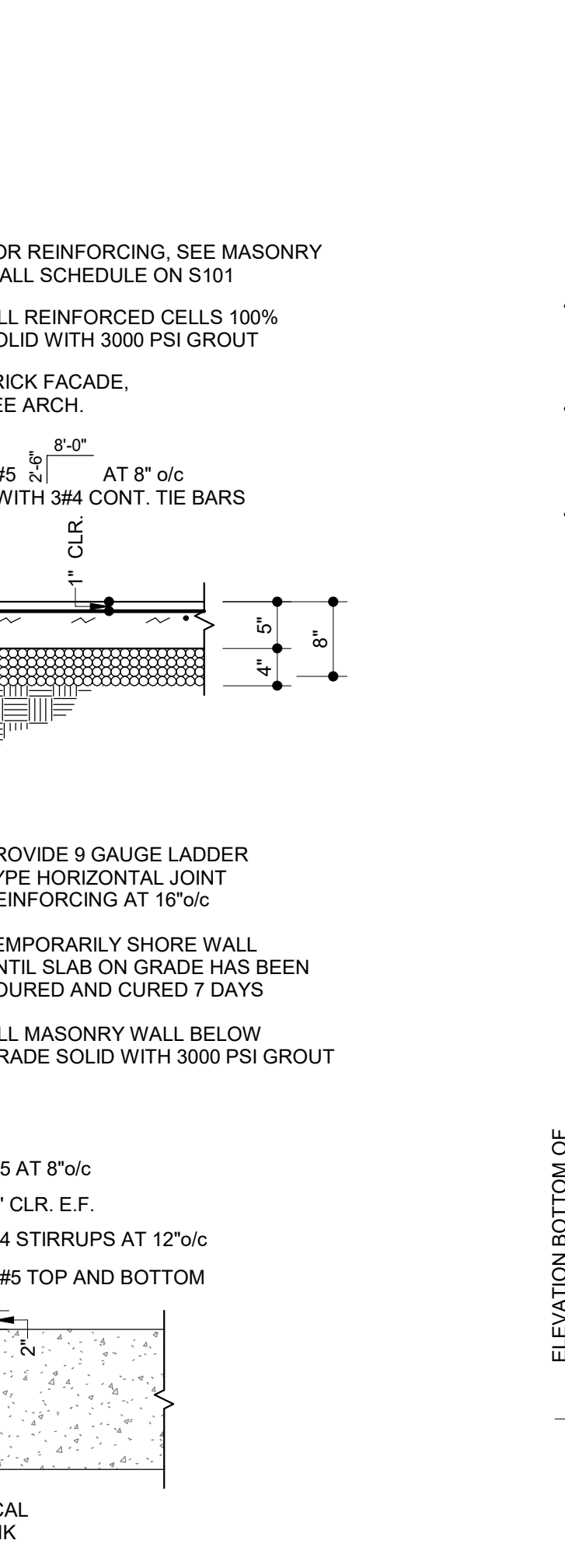
**10 PRECAST LINTEL BEARING**  
 3/4" = 1'-0"



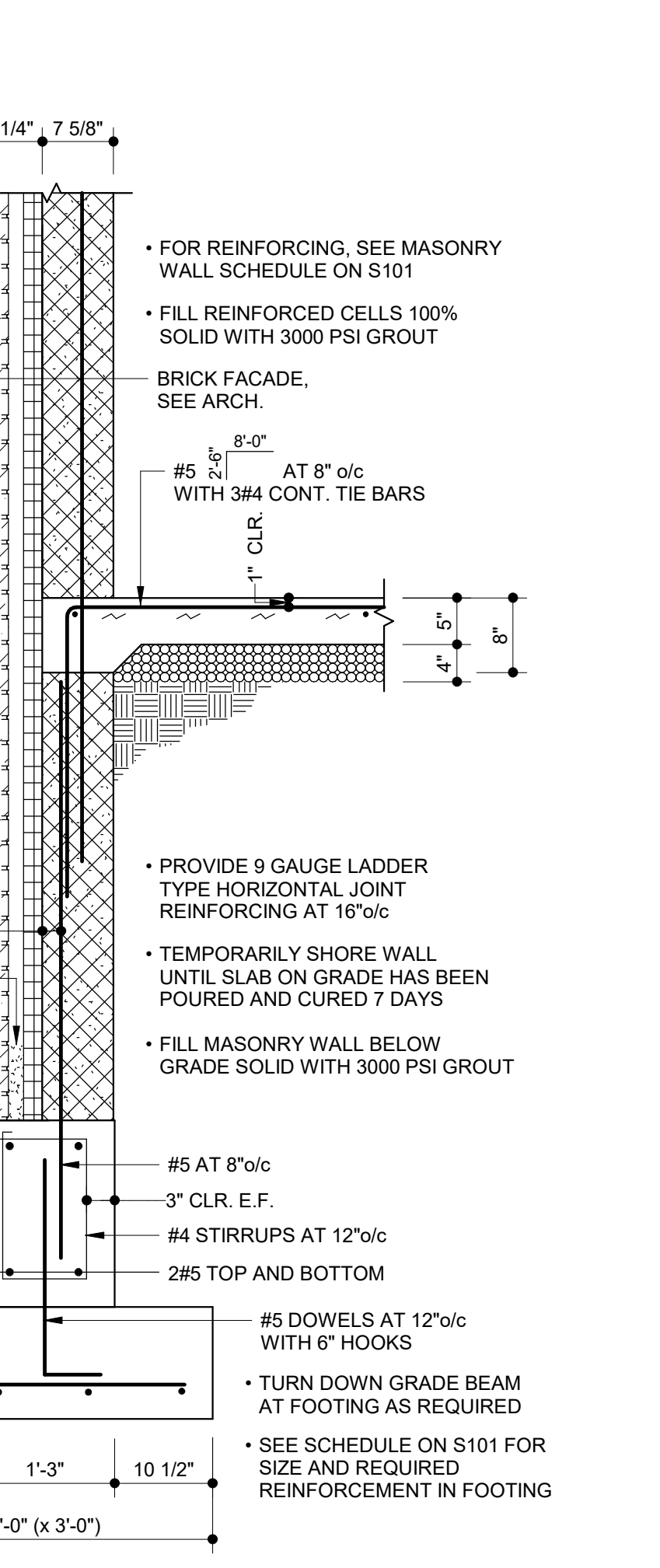
**11 EXTERIOR MASONRY WALL AT FOUNDATION AT LOW GRADES**  
 3/4" = 1'-0"



**12 GRADE BEAM AT DUCTBANK**  
 3/4" = 1'-0"



**13 GRADE BEAM SUPPORT AT DUCTBANK**  
 3/4" = 1'-0"



**14 TYPICAL MASONRY WALL REINFORCEMENT LAP SCHEDULE & PLACEMENT**  
 3/4" = 1'-0"

SEAL

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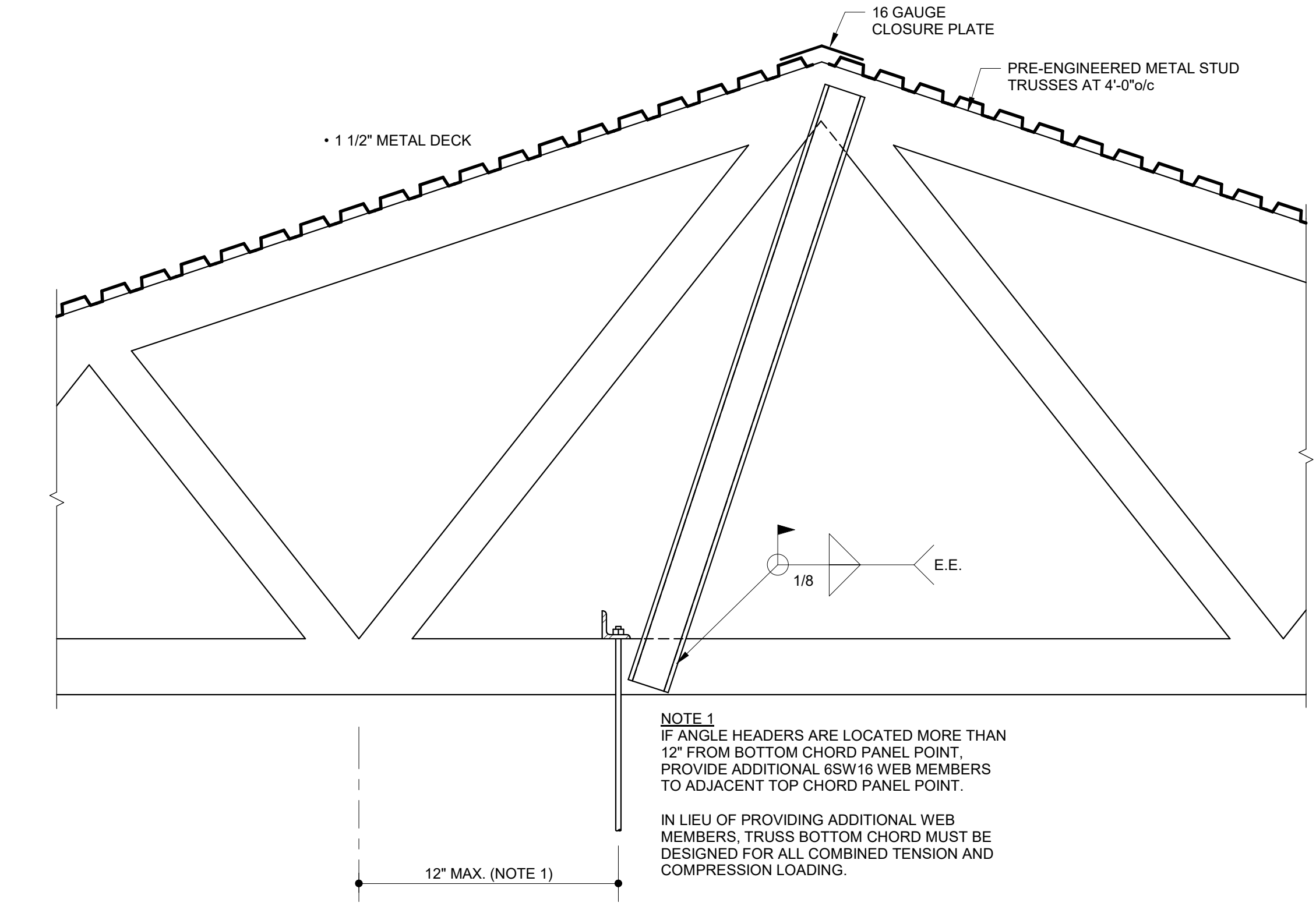
CLIENT: MedStar Union Memorial Hospital  
**MEDSTAR ST. MARY'S HOSPITAL**

PROJECT TITLE:  
**NORMAL POWER SERVICE UPGRADE**

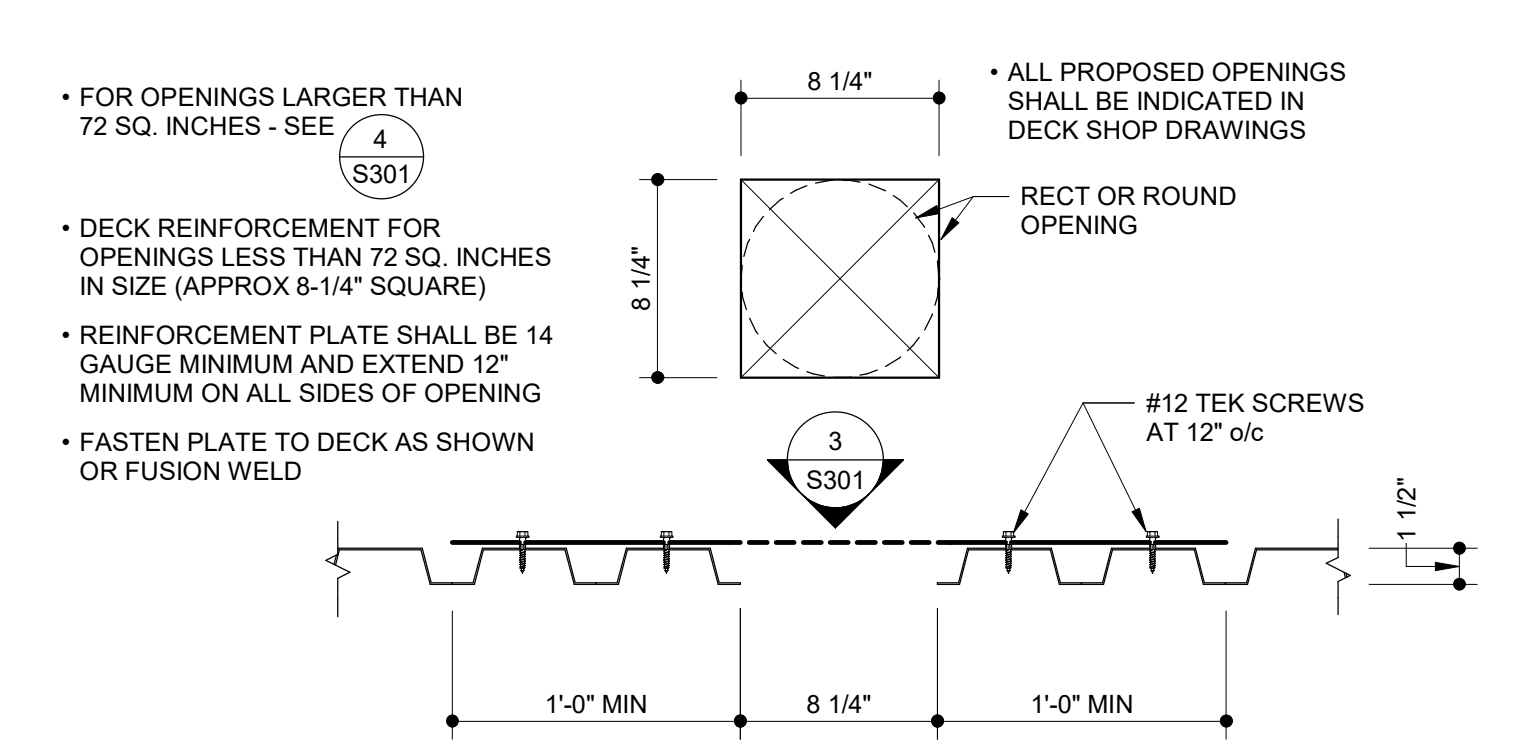
DATE:  
 CRGA PROJECT NUMBER: 21.099.B

DRAWING TITLE:  
**TYPICAL MASONRY & FOUNDATION DETAILS**

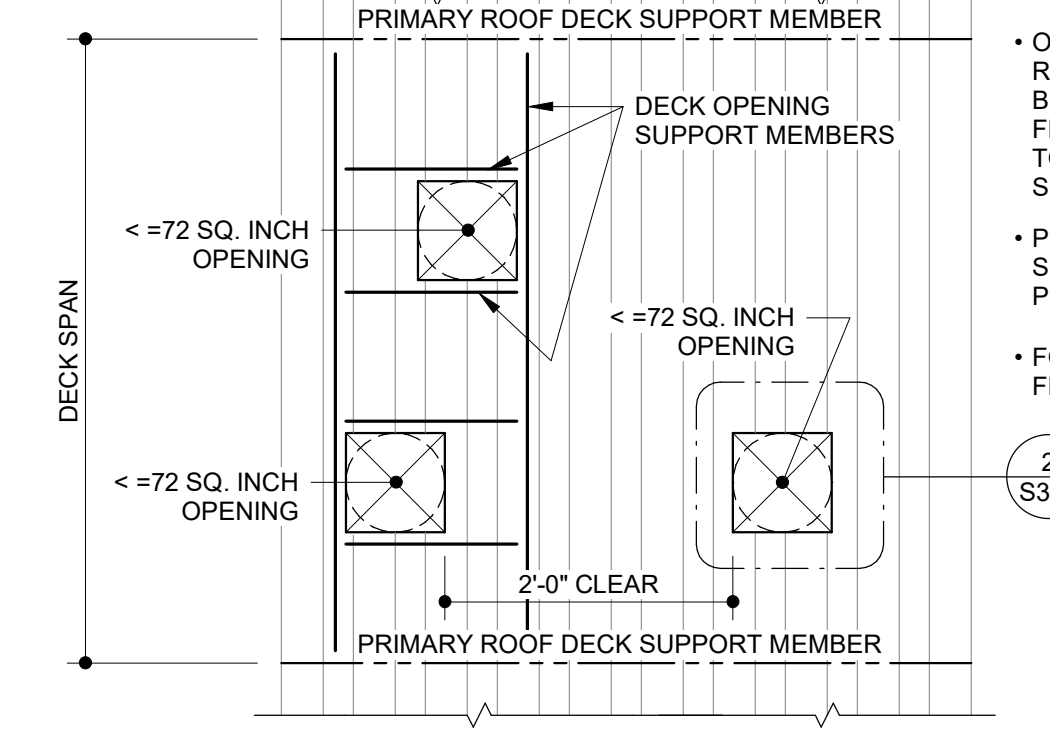
DRAWING NUMBER:  
**S203**



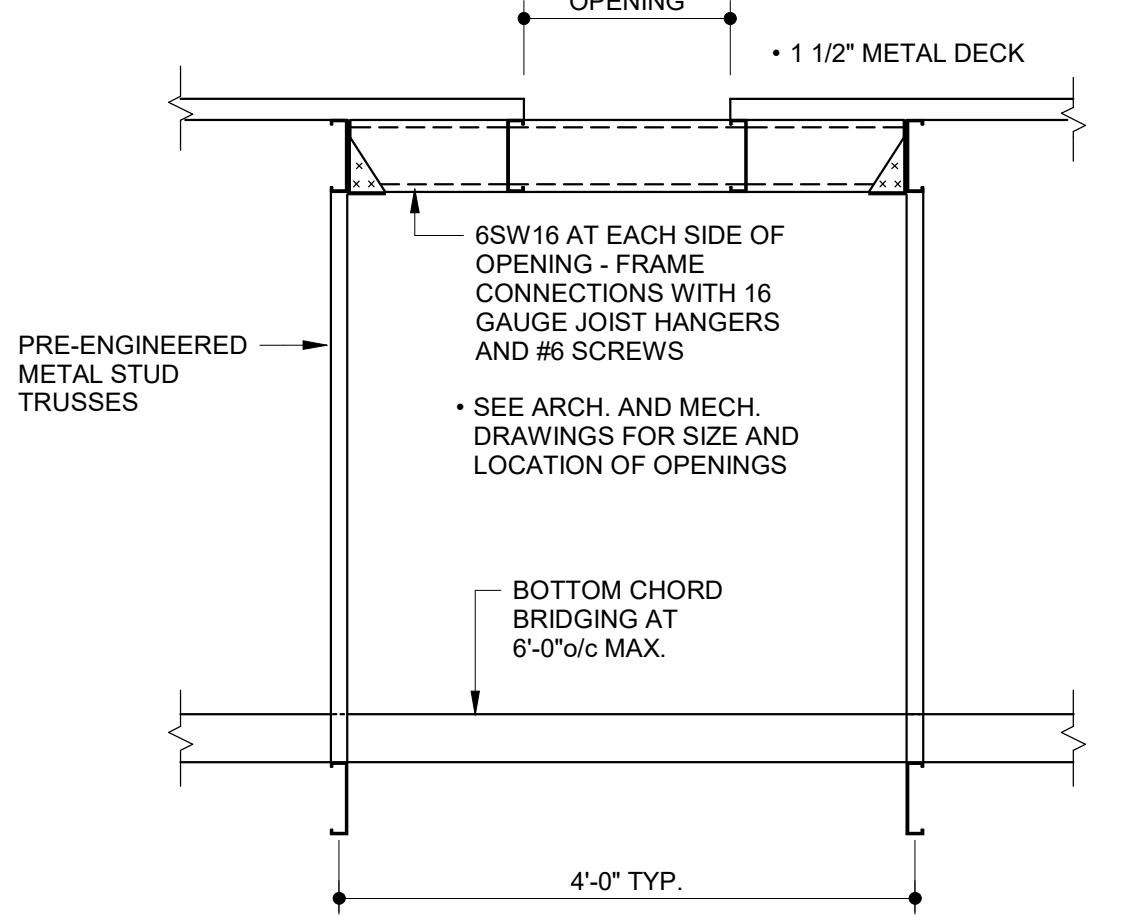
**1 ADDITIONAL WEB REINFORCING AT CONCENTRATED POINT LOADS AT BOTTOM CHORD OF TRUSS**  
 3/4" = 1'-0"



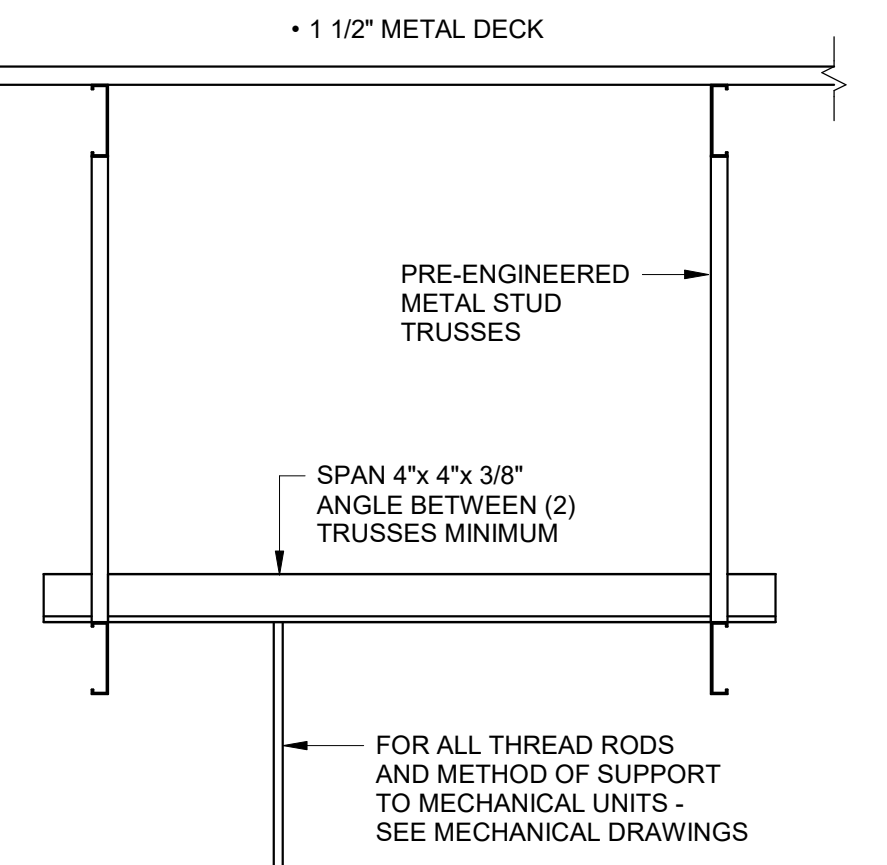
**2 ROOF DECK OPENINGS - SMALL**  
 1 1/2" = 1'-0"



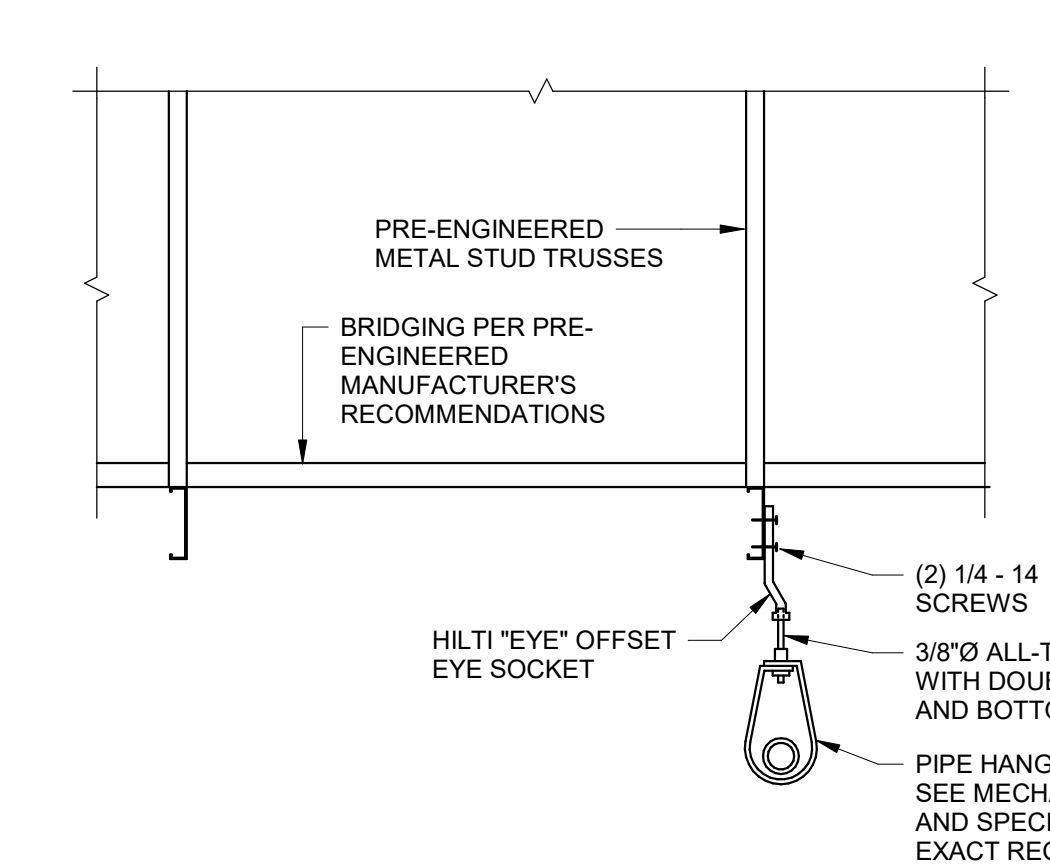
**3 ROOF DECK OPENINGS - SMALL OPENINGS IN GROUPS**  
 3/4" = 1'-0"



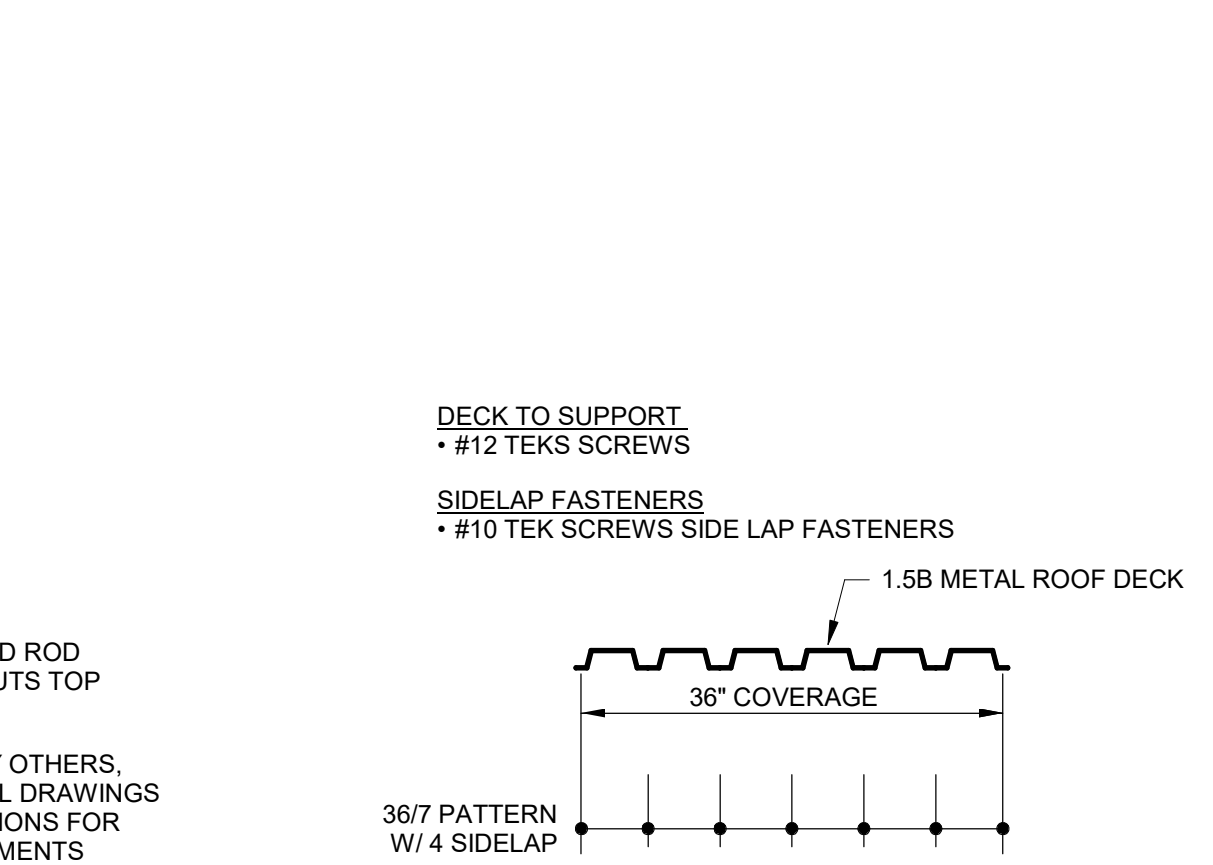
**4 ROOF OPENING DETAIL AT METAL STUD TRUSS**  
 3/4" = 1'-0"



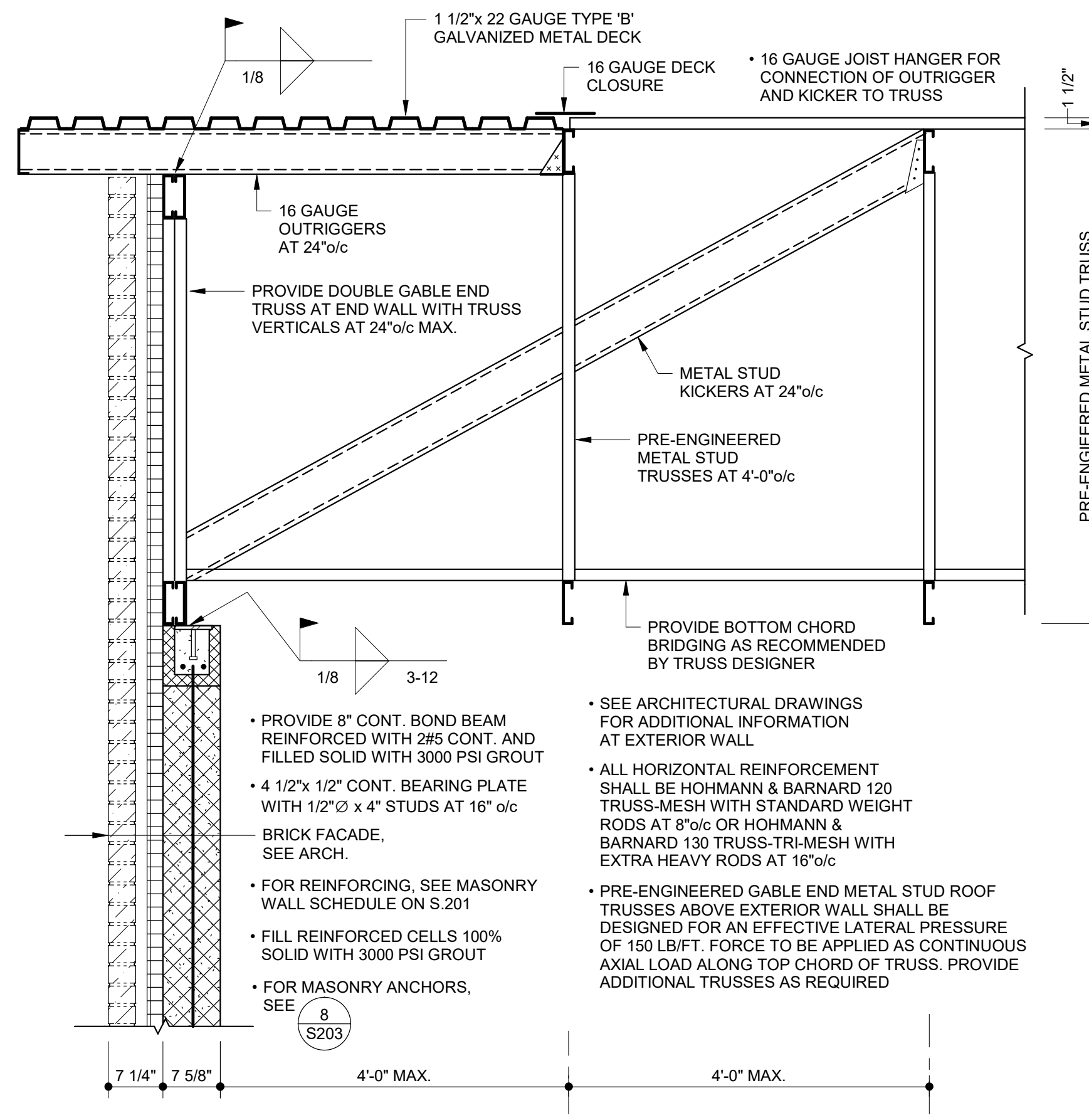
**5 TYPICAL SUSPENDED MECHANICAL UNIT**  
 3/4" = 1'-0"



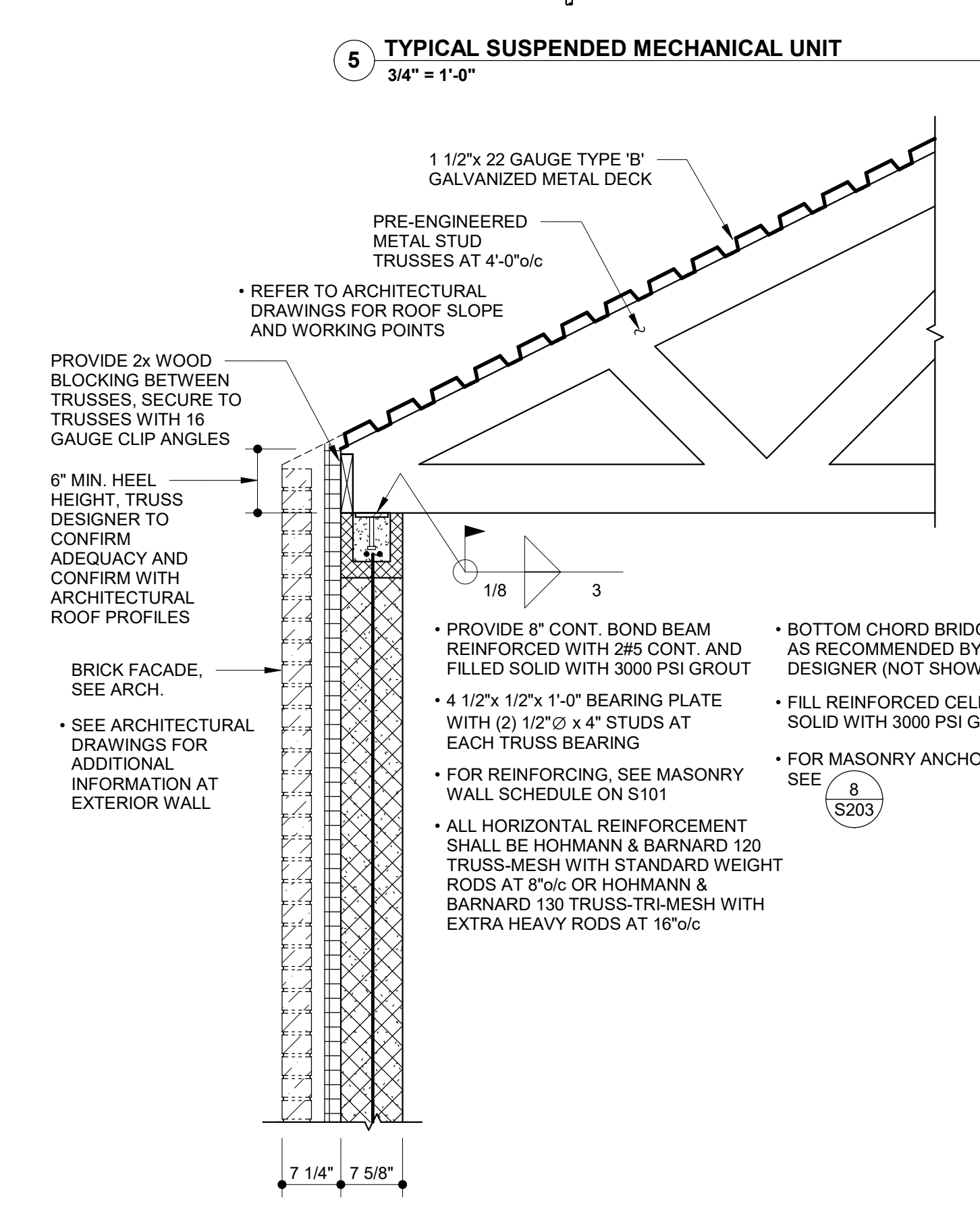
**6 PIPE SUPPORT AT ROOF TRUSSES**  
 3/4" = 1'-0"



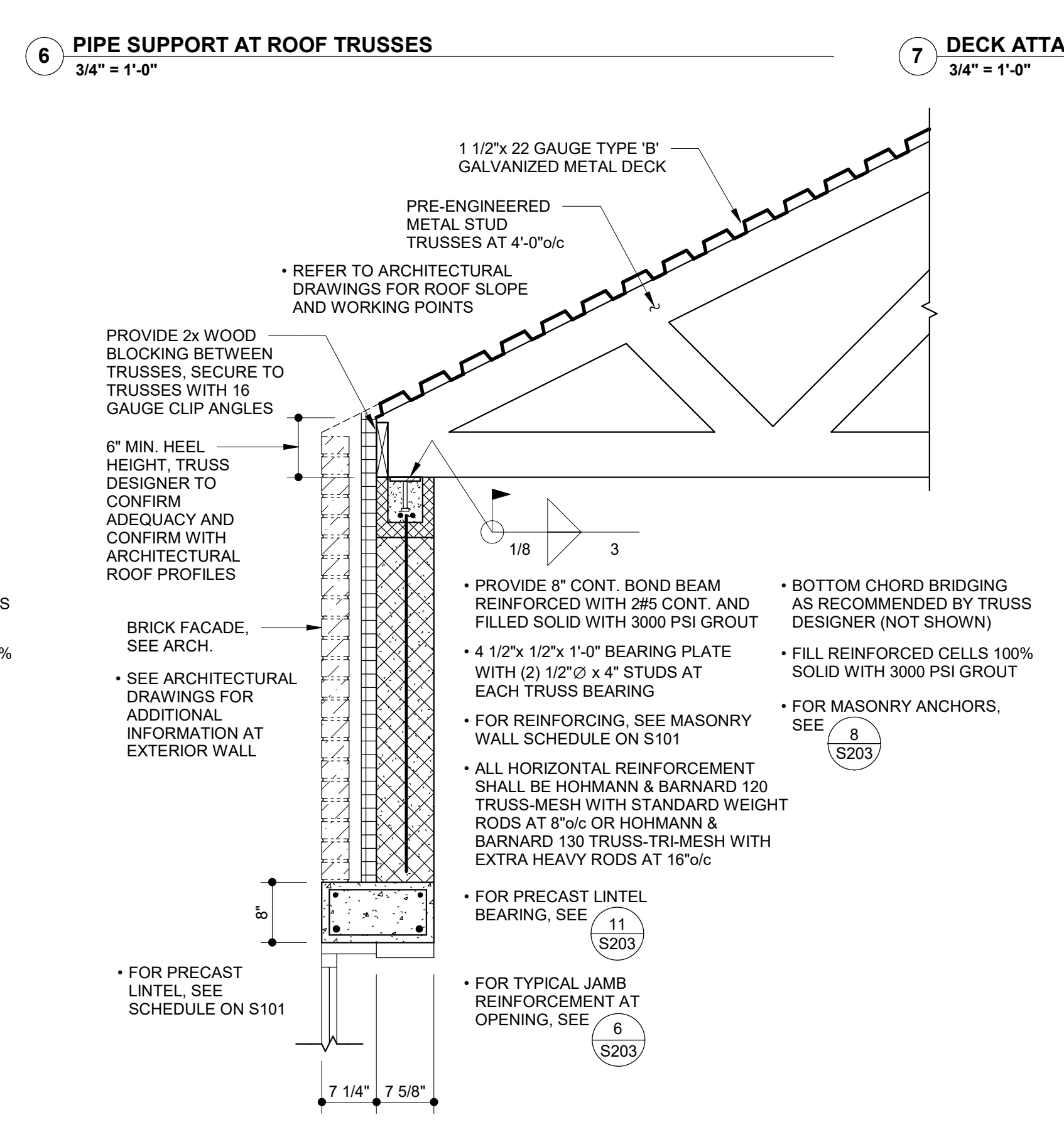
**7 DECK ATTACHMENT**  
 3/4" = 1'-0"



**8 METAL STUD GABLE END AT MASONRY WALL WITH BRICK FACADE**  
 3/4" = 1'-0"

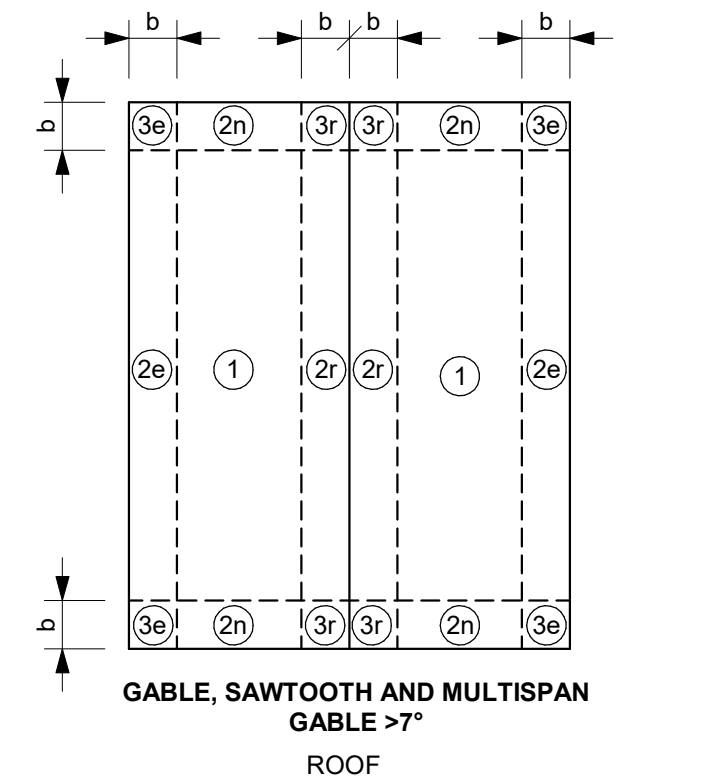


**9 ROOF TRUSS BEARING AT EXTERIOR MASONRY WALL WITH BRICK FACADE**  
 3/4" = 1'-0"

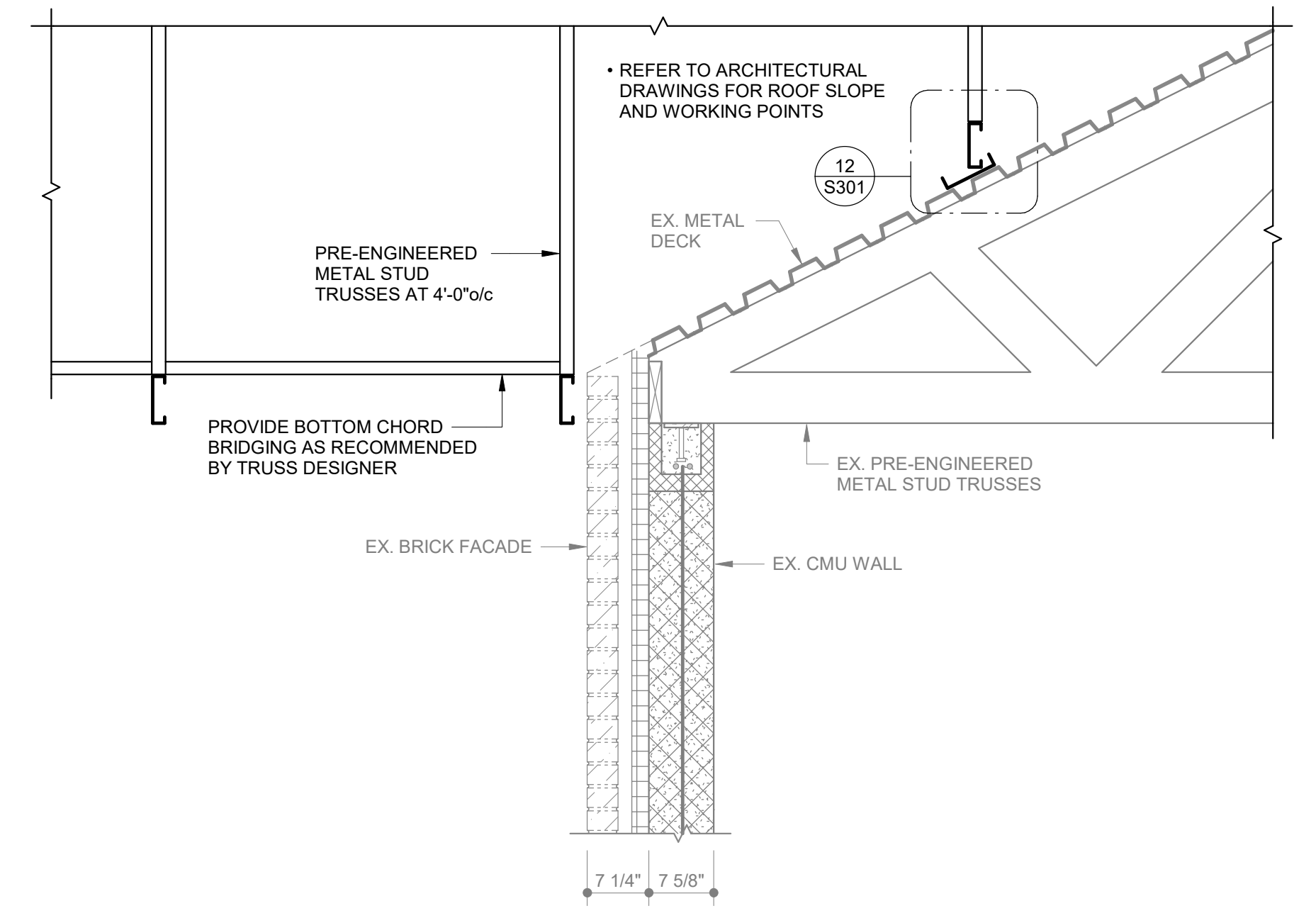


**10 ROOF TRUSS BEARING AT EXTERIOR MASONRY WALL OPENING WITH BRICK FACADE**  
 3/4" = 1'-0"

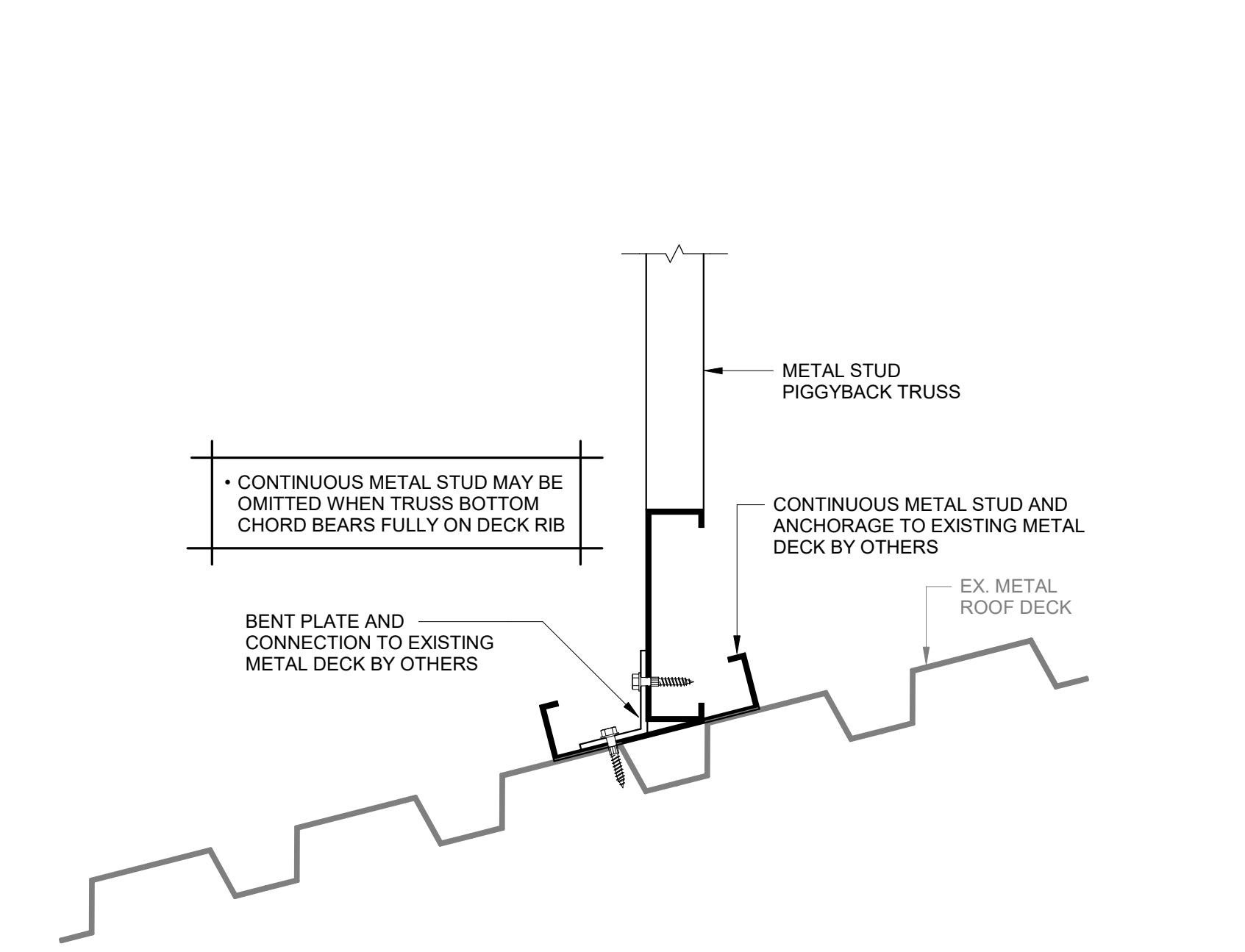
ULTIMATE COMPONENTS & CLADDING WIND PRESSURES (PSF)				
ROOF				
ROOF ZONES	EFFECTIVE TRIBUTARY AREA *			
	10 SF	20 SF	100 SF	>150 SF
ZONE 1	17 / -32	16 / -32	16 / -24	16 / -19
ZONE 2a	17 / -32	16 / -32	16 / -24	16 / -19
ZONE 2b	17 / -51	16 / -51	16 / -30	16 / -26
ZONE 2r	17 / -51	16 / -51	16 / -30	16 / -26
ZONE 3e	17 / -51	16 / -51	16 / -30	16 / -26
ZONE 3r	17 / -72	16 / -59	16 / -38	16 / -38
WALLS				
WALL ZONES	EFFECTIVE TRIBUTARY AREA *			
	10 SF	50 SF	200 SF	>500 SF
ZONE 4	23 / -25	20 / -22	18 / -20	17 / -19
ZONE 5	23 / -30	20 / -26	18 / -22	17 / -19



NOTES:  
 1. EDGE DISTANCE 'a' = 3'-0"  
 EDGE DISTANCE 'b' = 3'-0"  
 2. \*EFFECTIVE TRIBUTARY AREA: SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN 1/3 THE SPAN LENGTH.  
 3. NEGATIVE VALUE DENOTES PRESSURE ACTING AWAY FROM THE SURFACE.  
 4. NOMINAL (UNFACTORED) PRESSURES MAY BE OBTAINED BY MULTIPLYING THE VALUES IN THE CHART BY 0.60.



**11 NEW ROOF TRUSS TRANSITION TO PIGGYBACK TRUSSES ON EXISTING ROOF FRAMING**  
 3/4" = 1'-0"



**12 PIGGYBACK TRUSS BEARING AT ROOF DECK**  
 3" = 1'-0"