

GENERAL NOTES

- BUILDING CODE:
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2021, NEW JERSEY EDITION
ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS CODE, ITS LATEST ADOPTED AMENDMENTS AND LOCAL REQUIREMENTS.
2. SUBMITTALS
- A. THE FOLLOWING ITEMS REQUIRE SUBMITTAL OF SHOP AND ERECTION DRAWINGS, FOR REVIEW AND APPROVAL:
- a. REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE
- b. CONCRETE CONSTRUCTION AND CONTRACTION JOINTS
- B. THE FOLLOWING ITEMS REQUIRE SUBMITTAL OF SHOP AND ERECTION DRAWINGS AND STRUCTURAL CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THIS PROJECT FOR REVIEW AND APPROVAL:
- c. EXCAVATION SUPPORT, SHEETING, OR BENCHING WHERE SOILS REQUIRE SUCH BY VIRTUE OF OSHA REQUIREMENTS (ALL EXCAVATIONS GREATER THAN 5' REQUIRE SPECIFIC TRENCHING CONSIDERATIONS) OR SOIL CONDITIONS
- d. CONCRETE MIX DESIGNS
- C. THE CONTRACTOR SHALL SUBMIT TO THE EOR A SUBMITTAL SCHEDULE A MINIMUM OF 15 BUSINESS DAYS PRIOR TO THE ISSUANCE OF THE FIRST SUBMITTAL PACKAGE FOR REVIEW AND APPROVAL.
- D. SUBMITTALS ISSUED TO THE DESIGN TEAM FOR REVIEW SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL, CERTIFYING THAT ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS, ETC. HAVE BEEN VERIFIED AND EACH SHEET HAS BEEN REVIEWED FOR COMPLETENESS, COORDINATION BETWEEN TRADES, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. FURTHER, STRUCTURAL SHOP DRAWINGS WILL ONLY BE REVIEWED ONCE ANY REQUIRED CALCULATION PACKAGES FOR THAT WORK HAS BEEN ISSUED ALONG WITH A SIGNED AND SEALED LETTER BY THE CONTRACTOR'S ENGINEER CERTIFYING THAT THE SHOP DRAWINGS HAVE PROPERLY INCORPORATED THEIR DESIGN, IN ACCORDANCE WITH THE 2010 ASCE CODE OF STANDARD PRACTICE-SECTION 3.1.2 (OPTION 3), OTHERWISE THE SUBMITTAL PACKAGE WILL BE REJECTED.
3. SPECIAL INSPECTIONS: AS PER IBC CHAPTER 17, THE FOLLOWING ITEMS ARE SUBJECT TO SPECIAL INSPECTION BY AN INDEPENDENT INSPECTION AND/OR TESTING AGENCY HIRED BY THE OWNER AND APPROVED BY THE ARCHITECT AND BUILDING OFFICIAL. OWNER/SPECIAL INSPECTOR SHALL PROVIDE SPECIAL INSPECTION REPORTS WITHIN 5 DAYS OF PERFORMING THE INSPECTION AND IMMEDIATELY NOTIFY THE ENGINEER.
- E. CONCRETE CONSTRUCTION (1705.3)
- F. MASONRY CONSTRUCTION (1705.4)
- G. SOILS (1705.6)
4. DESIGN LOADS:
- A. FOUNDATION LOADS HAVE BEEN PROVIDED BY ARCHITECT, SEE FIRST FLOOR FRAMING PLAN ON A-1.0 BY CHEN O'NEIL ARCHITECTS, PLLC DATED 03/13/2023
- B. SOIL LOADS:
- SOIL DENSITY 120 PCF
- ANGLE OF INTERNAL FRICTION 30 DEG
- SOIL VALUES USED IN DESIGN TO BE VERIFIED BY GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
5. ALL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, CIVIL, ELECTRICAL, AND MECHANICAL DRAWINGS. CONFLICTS IN DIMENSIONS AND INTERFERENCES SHALL BE DIRECTED TO OUR OFFICE PRIOR TO CONSTRUCTION OF WORK.
6. THE CONTRACTOR SHALL CHECK THE BUILDING LOCATION WITH REGARD TO PROPERTY LINE, AND VERIFY ALL EXISTING CONDITIONS BEFORE EXCAVATION AND SHOP DRAWING PREPARATION. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
7. THE DESIGN AT THE EXISTING PART OF THE BUILDING WHICH WILL REMAIN IS BASED ON INCOMPLETE INFORMATION ABOUT THE EXISTING STRUCTURE AND FOUNDATIONS. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FIELD INFORMATION ABOUT THE EXISTING FOUNDATION AND OTHER STRUCTURAL MEMBERS AND WILL FOLLOW ANY CHANGES IN DESIGN THAT WILL BE REQUIRED BY THE ENGINEER DUE TO UNANTICIPATED FIELD CONDITIONS.
8. IN CASE OF CONTRADICTION BETWEEN THE DRAWINGS, THE SPECIFICATIONS, AND THE CODES, OR IF ANY CHANGE IS REQUIRED, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY. NO CHANGE SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
9. THE STABILITY OF STRUCTURE, ADJACENT STRUCTURES IMPACTED BY THE WORK, AND SITE STABILITY ARE THE CONTRACTOR'S RESPONSIBILITY UNTIL CONSTRUCTION IS COMPLETE AND THE STRUCTURE HAS REACHED ITS FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY BRACING, ERECTION PIECES, CONSTRUCTION SUPPORTS, FALL PROTECTION, DEBRIS CATCHES, TEMPORARY SHORING, ETC. AS REQUIRED TO SAFEGUARD THE SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
10. THE CONTRACTOR SHALL VERIFY THAT ANY CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN CAPACITY OF THE STRUCTURE.

FOUNDATION NOTES

1. GENERAL
 - A. FOUNDATIONS HAVE BEEN DESIGNED TO AN ALLOWABLE SOIL BEARING PRESSURE OF 4000 PSF, BASED ON A SOILS REPORT ISSUED BY SESI CONSULTING ENGINEERS DATED 03/31/2023. THIS CAPACITY SHALL BE VERIFIED BY A REGISTERED SOILS ENGINEER. SHOULD CONDITIONS VARY FROM THOSE ASSUMED, THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED BEFORE CONTINUATION OF WORK.
 - B. ALL FOOTINGS SHALL BE PLACED DIRECTLY ON COMPETENT NATURAL, GRANULAR SOILS OR ENGINEERED CERTIFIED COMPACTION FILL OVER COMPETENT NATURAL SOILS.
 - C. ALL FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS (MAXIMUM) COMPACTED WITH VIBRATORY ROLLERS. FILL MATERIAL SHALL BE TESTED BY MODIFIED PROCTOR DENSITY METHOD (ASTM D1557) AND MUST QUALIFY AS SELECT, WITH LESS THAN 10% PASSING THROUGH THE NO. 200 SIEVE. SOIL SHALL BE PLACED WITH MOISTURE CONTENT AND ENERGY TO PROVIDE 92% OF MAXIMUM DRY DENSITY BELOW SLABS ON GRADE, AND 90% BELOW FOOTINGS. IN PLACE DENSITY TESTS SHALL BE TAKEN FOR EACH 10,000 S.F. IN EACH LIFT. FOR ACCEPTANCE OF SOIL, AVERAGE OF DENSITY TESTS MUST EXCEED THE SPECIFIED COMPACTION. NO TESTS SHALL BE PERMITTED TO FALL BELOW 88% COMPACTION BELOW SLABS ON GRADE OR 90% COMPACTION BELOW FOOTINGS.
2. SHALLOW FOUNDATIONS
 - A. ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 3'-0" BELOW FINAL GRADE WHEN BEARING ON SOIL.
 - B. WHERE NECESSARY, FOOTING STEPS SHALL BE CONSTRUCTED AT MAXIMUM SLOPE OF 1 VERTICAL TO 2 HORIZONTAL.
 - C. WHERE ROCK OUTCROPPINGS ARE ENCOUNTERED IN A BUILDING FOUNDATION BEARING ON SOIL, SUCH OUTCROPPING OR INTERFERENCE SHALL BE REMOVED TO A DEPTH 12 INCHES BELOW BOTTOM OF FOOTING AND REPLACED WITH CLEAN GRANULAR MATERIAL CONTAINING LESS THAN 15% SILT, COMPACTED TO 95% MAXIMUM DENSITY PER MODIFIED PROCTOR METHOD. MAINTAIN A MINIMUM COVER OF 4'-0" TO

- D. WHERE SOLID UNFRACTIONED ROCK IS ENCOUNTERED FOR A WALL LENGTH OF AT LEAST 25 FEET, WALLS MAY BE PLACED WITHOUT FOOTINGS BY TRENCHING 6 INCHES INTO THE ROCK AND PINNING THE WALL TO ROCK WITH DOWELS TO MATCH VERTICAL REINFORCING, GROUTED INTO ROCK, EXTENDING 24 BAR DIAMETERS INTO ROCK. NO FROST PROVISIONS ARE REQUIRED FOR THIS DETAIL. PROVIDE CONTROL JOINT IN WALL AT ANY TRANSITION BETWEEN ROCK BEARING AND SOIL BEARING CONDITIONS.
- E. EXCAVATIONS SHALL BE DEWATERED TO ALLOW INSTALLATION OF FOOTINGS IN DRY ATMOSPHERE.
- F. DIFFERENTIAL BACKFILL AGAINST FOUNDATION WALLS SHALL NOT EXCEED FOUR FEET UNTIL TOP BRACING SLAB OR FRAMEWORK HAS BEEN IN PLACE FOR A MINIMUM OF THREE DAYS. CANTILEVERED RETAINING WALLS MAY BE BACKFILLED AFTER 14 DAYS FROM CONCRETE PLACEMENT, BUT IN NO CASE SHALL DIFFERENTIAL OF BACKFILL, ON OPPOSITE SIDES OF THE WALL, EXCEED THE FINAL DESIGN DIFFERENTIAL.
- G. ALL BOTTOM OF FOOTING ELEVATIONS ARE SUBJECT TO CHANGE UPON INSPECTION OF SOIL CONDITION. ELONGATION OF ADJACENT FOOTING BOTTOMS SHALL NOT EXCEED A MINIMUM SLOPE OF:
- 1.1.1. 1H:1V FOR COHESIVE SOILS WITH AN UNCONFINED COMPRESSIVE STRENGTH GREATER THAN 0.5 TSF
- 2.1.2. 1 1/2H:1V FOR COHESIVE SOILS WITH AN UNCONFINED COMPRESSIVE STRENGTH OF 0.5TSF OR LESS.
- H. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE BOTTOM OF FOOTING ELEVATION IS CHANGED AND OBTAIN REVISED DESIGN OF THE FOUNDATION AND RETAINING WALLS AS REQUIRED.

CAST-IN-PLACE CONCRETE

- GENERAL
- A. ALL CONCRETE WORK SHALL CONFORM TO REQUIREMENTS OF THE A.C.I. BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE (318-19 ULTIMATE STRENGTH DESIGN).
- B. 28 DAY MINIMUM COMPRESSIVE STRENGTH AND RELATED PROPERTIES FOR CONCRETE SHALL BE AS FOLLOWS:
- | | F ⁰ C | MAX W/C RATIO | MAX DENSITY |
|---------------|------------------|---------------|---------------|
| FOOTINGS | 4000PSI | 0.40 | NWC (145 PCF) |
| SLAB ON GRADE | 4000PSI | 0.40 | NWC (145 PCF) |
| WALLS | 4000PSI | 0.40 | NWC (145 PCF) |
- C. CONCRETE COVERING OF REINFORCING STEEL (INCLUDING TIES AND STIRRUPS) SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
- | | |
|--------|------------------------------------------------------------------------|
| 3/4" | SLABS AND WALLS WITH INTERIOR EXPOSURE |
| 1-1/2" | SLABS AND WALLS WITH EXTERIOR EXPOSURE FOR #5 OR SMALLER, 2" OTHERWISE |
| 1-1/2" | BEAMS AND COLUMNS WITH INTERIOR EXPOSURE |
| 2" | BEAMS AND COLUMNS WITH EXTERIOR EXPOSURE |
| 2" | FOUNDATION WALL, FOOTING & GRADE BEAM FACES NOT CAST AGAINST EARTH |
| 3" | CONCRETE CAST AGAINST EARTH |
- D. ALL CONCRETE, INCLUDING FOUNDATIONS, EXPOSED TO WEATHER AND/OR OUTSIDE THE BUILDING ENVELOPE SHALL BE AIR ENTRAINED, 6%±1.5% BY VOLUME FOR 3/4" COARSE AGGREGATE, AND 7.5%±1.5% BY VOLUME FOR 3/8" FINE WEIGHT AGGREGATE. AIR ENTRAINING ADMIXTURE TO COMPLY WITH ASTM C620.
- E. ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE II.
- F. ALL NORMAL WEIGHT AND LIGHT WEIGHT CONCRETE AGGREGATE SHALL CONFORM TO ASTM C33 AND ASTM C330 RESPECTIVELY.
- G. MAXIMUM CONCRETE SLUMP SHALL BE 4" FOR CONCRETE NOT RECEIVING HIGH-RANGE WATER REDUCING ADMIXTURES.
- H. ALL BARS MARKED CONTINUOUS SHALL BE LAPPED AT SPLICES AND CORNERS IN ACCORDANCE WITH THE SCHEDULE SHOWN ON THESE DRAWINGS, EXCEPT AS OTHERWISE SHOWN OR REQUIRED.
- I. WELDING OF REINFORCEMENT IS PROHIBITED U.O.N.
- J. ALL REINFORCING BARS SHALL BE OF NEW BILLET STEEL CONFORMING TO ASTM A615, WITH THE FOLLOWING GRADE.
- | | |
|-----------------|------------------------------------------|
| #3 THROUGH #10 | - GRADE 60 (F _y = 60,000 PSI) |
| #11 AND GREATER | - GRADE 75 (F _y = 75,000 PSI) |
- K. ALL VERTICAL CONSTRUCTION JOINTS USING APPROVED BULKHEADS MAY BE MADE WITHIN THE MIDDLE THIRD OF BEAM, WALL, OR SLAB SPANS WHERE STOP IN CONCRETE WORK IS NECESSARY. A PLAN SHOWING PROPOSED JOINTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY AS SHOWN ON DRAWINGS. CONSTRUCTION JOINTS SHALL CONFORM TO ACI 318, SECTION 6.4. ALL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH JOINTS U.O.N. FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE, PROVIDE WATERSTOPS.
- L. VERTICAL JOINTS SHALL NOT BE PLACED IN CONCRETE SHEAR WALLS UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER.
- M. ALL HORIZONTAL JOINTS IN CONCRETE POURS (WHERE SHOWN ON STRUCTURAL DRAWINGS OR EXPLICITLY APPROVED BY THE ENGINEER IN WRITING) SHALL BE RAKED TO 1/4" AMPLITUDE WHILE CONCRETE IS FRESH.
- N. ALL CONCRETE SHALL BE MIXED, TRANSPORTED AND PLACED IN ACCORDANCE WITH ACI STANDARDS 318 AND 304.
- O. ALL REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE TO ACI 315.
- P. ALL WELDED WIRE MESH SHALL CONFORM TO ASTM A1064.
- Q. SYNTHETIC FIBER REINFORCEMENT SHALL BE OF MACRO SYNTHETIC "COARSE" FIBERS MADE FROM VIRGIN POLYOLEFIN, BY STRUX 90/40 BY GCP APPLIED TECHNOLOGIES (OR APPROVED EQUIVALENT), AT A MINIMUM DOSAGE RATE AS SPECIFIED ON THE DRAWINGS.
- R. TEST CYLINDERS SHALL BE TAKEN FROM THE MIXER IN ACCORDANCE WITH ASTM C172 AND THE PROJECT SPECIFICATIONS.
- S. STONE AGGREGATE USED IN CONCRETE MIX SHALL BE FREE OF MATERIALS WITH HARMFUL REACTIVITY TO ALKALI IN CEMENT.
- T. THE MAXIMUM WATER SOLUBLE CHLORIDE ION (CL-) CONTENT IN CONCRETE SHALL BE LESS THAN 0.06% OF WEIGHT OF CEMENT, PER ASTM C1218.
- U. ALL VERTICAL SURFACES OF CONCRETE SHALL BE FORMED FOR WALLS, FOOTINGS, AND GRADE BEAMS.
- V. CONTRACTOR SHALL PROVIDE A MINIMUM AREA OF STEEL REINFORCEMENT EQUAL TO .0018 TIMES THE GROSS CONCRETE AREA IN CONCRETE SLABS AND FOOTINGS, EXCEPT WHERE CONCRETE IS PRESTRESSED. PROVIDE MINIMUM BONDED REINFORCEMENT FOR PRESTRESSED CONCRETE IN ACCORDANCE WITH ACI 318 - SECTION 18.9. FOR WALLS, PROVIDE MINIMUM REINFORCING IN ACCORDANCE WITH ACI 318 - SECTION 14.3.

CONCRETE MASONRY UNITS (CMU)

1. ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF TMS 402-16 BUILDING CODE AND SPECIFICATION FOR MASONRY STRUCTURES.
2. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO ASTM C90, GRADE N-TYPE I WITH MINIMUM COMPRESSIVE STRENGTH OF UNITS = 2000 PSI ON NET AREA, WITH ASSUMED DESIGN COMPRESSIVE STRENGTH, F_m=2000 PSI. UNITS MAY BE FABRICATED EITHER WITH NORMAL WEIGHT AGGREGATE (C33) OR LIGHTWEIGHT AGGREGATE (C331).
3. ALL UNITS SHALL BE PLACED IN RUNNING BOND.
4. MORTAR SHALL BE TYPE M OR S. MORTAR SHALL MEET ASTM C270.
5. GROUT SHALL COMPLY WITH ASTM C476. SLUMP SHALL BE 8 TO 11

INCHES, STRENGTH SHALL BE EQUAL TO 3000 PSI.

6. STORE ALL UNITS OFF GROUND TO PREVENT CONTAMINATION. COVER MATERIALS TO PROTECT FROM THE ELEMENTS.
7. NO AIR-ENTRAINING ADMIXTURES OR ANTIFREEZE COMPOUNDS, SUCH AS CALCIUM CHLORIDE SHALL BE ADDED TO MORTAR.
8. ALL WALLS OR PILASTERS SUPPORTING COLUMNS OR BEAM AT BEARING PLATES SHALL BE GROUTED SOLID FOR FOUR COURSES IN DEPTH FOR A WIDTH OF 32".
9. DO NOT BACKFILL AGAINST FOUNDATION WALLS UNTIL MORTAR HAS ATTAINED MAXIMUM STRENGTH. WHERE BACKFILL IS PLACED AGAINST FOUNDATION WALLS BEFORE FLOOR CONSTRUCTION IS IN PLACE, PROVIDE TEMPORARY BRACING.
10. THE FIRST BLOCK COURSE ON FOOTING SHALL BE FILLED SOLID WITH CONCRETE, UNLESS OTHERWISE NOTED ON DRAWINGS.
11. VERTICAL CONTROL JOINTS SHALL BE PLACED SUCH THAT THE RATIO OF JOINT SPACING (S) DIVIDED BY WALL HEIGHT (H) DOES NOT EXCEED 1.5 IN NO CASE SHALL SPACING EXCEED 25 FT. CONTROL JOINTS SHALL BE CONSTRUCTED USING SASH BLOCKS AND DUR-O-WAL PREFORMED REGULAR RAPID CONTROL JOINT (OR EQUAL OF EXTRUDED RUBBER.) VERTICAL JOINTS SHALL BE LOCATED AS FOLLOWS:
 - A. CHANGES IN WALL HEIGHT OR THICKNESS.
 - B. AT CONSTRUCTION JOINTS IN FOUNDATION, IN ROOF, AND IN FLOORS.
 - C. AT CHASES AND RECESSES FOR PIPING, COLUMNS, FIXTURES, ETC.
 - D. AT ABUTMENT OF WALL AND COLUMNS.
 - E. WITHIN 5/2 IF CORNERS OF WALLS OR INTERSECTIONS.
 - F. NO CLOSER THAN 2'-0" TO EDGE OF ANY OPENING IN WALL.
12. CMU WALLS SHALL BE REINFORCED WITH 3/8" DIA. TRUSS TYPE LADDER REINFORCING ASTM A82 WIRE, HOT DIPPED GALVANIZED, AT 16" ON CENTER (VERTICALLY), AND AT THE FIRST AND SECOND BED JOINTS ABOVE AND BELOW WALL OPENINGS.
13. ALL MASONRY WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION TO RESIST WIND LOADS OF 25 PSF. NOTE THAT FLOOR AND ROOF DIAPHRAGMS WILL PROVIDE ULTIMATE STABILITY FOR WALLS. MASONRY WALLS SHALL NOT BE BUILT HIGHER THAN 10 TIMES THEIR THICKNESS WITHOUT BRACING.
14. ALL CMU CORES WITH VERTICAL REINFORCEMENT MUST BE FULLY GROUTED.
15. LINTELS (UNLESS OTHERWISE NOTED ON THE PLANS)
 - A. STEEL LINTELS ALONG EXTERIOR FACE OF BUILDING SHALL BE HOT DIPPED GALVANIZED.
 - B. STEEL LINTELS SHALL BE REQUIRED AT OPENINGS IN MASONRY WALLS. SEE TYPICAL MASONRY DETAILS FOR FURTHER INFORMATION.

MODULAR RETAINING WALL NOTES

- A. WALL UNITS SHALL HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (20.7 MPA) IN ACCORDANCE WITH ASTM C1372. THE JOINTS BETWEEN UNITS SHALL HAVE ADEQUATE FREEZE-THAW PROTECTION WITH AN AVERAGE ABSORPTION RATE IN ACCORDANCE WITH ASTM C1372 OR AN AVERAGE ABSORPTION RATE OF 7.5 LB/FT³ (120 KG/M³) FOR NORTHERN CLIMATES AND 10 LB/FT³ (160 KG/M³) FOR SOUTHERN CLIMATES.
- B. WALL ROCK MATERIAL MUST BE WELL-GRADED COMPACTABLE AGGREGATE, 0.25 IN. TO 1.5 IN., (6 MM – 38 MM) WITH NO MORE THAN 10% PASSING THE #200 SIEVE (ASTM D422)
- C. GEOGRID SHALL BE STRATA SG 200 OR APPROVED EQUAL WITH A MINIMUM LONG TERM DESIGN STRENGTH, LTDs, OF 1919 PLF.
- D. LL FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS (MAXIMUM) COMPACTED WITH VIBRATORY ROLLERS. FILL MATERIAL SHALL BE TESTED BY MODIFIED PROCTOR DENSITY METHOD (ASTM D1557) AND MUST QUALIFY AS SELECT, WITH LESS THAN 10% PASSING THROUGH THE NO. 200 SIEVE. SOIL SHALL BE PLACED WITH MOISTURE CONTENT AND ENERGY TO PROVIDE 95% OF MAXIMUM DRY DENSITY. IN PLACE DENSITY TESTS SHALL BE TAKEN FOR EACH 10,000 S.F. IN EACH LIFT FOR ACCEPTANCE OF SOIL. AVERAGE OF DENSITY TESTS MUST EXCEED THE SPECIFIED COMPACTION. NO TESTS SHALL BE PERMITTED TO FALL BELOW 95% COMPACTION.
- E. FOLLOW THE INSTALLATION INSTRUCTIONS SUPPLIED WITH THE RETAINING WALL SYSTEM. INCLUDING FOUNDATION PREPARATION, BLOCK ALIGNMENT, CORE FILLING, DRAINAGE ROCK PLACEMENT, BACKFILL PLACEMENT, AND COMPACTION.
- F. BACKFILL MUST BE COMPACTED AND LEVEL WITH THE TOP OF THE RETAINING BLOCK COURSE PRIOR TO INSTALLATION OF GEOGRIDS. THE GEOGRID SHOULD START NEAR THE FACE OF THE BLOCK AND REMAIN IN ONE CONTINUOUS PIECE TO THE BACK OF THE REINFORCED SOIL MASS (NO SPLICING) BUTT TOGETHER AT EDGES – DO NOT OVERLAP GEOGRID.
- G. PLACE THE NEXT COURSE OF BLOCK ON TOP OF THE GEOGRID.
- H. ELIMINATE ANY FOLDS OR LOOSENESS IN THE GEOGRID BY PULLING TIGHT AND STAKING AT THE BACK.
- I. BACKFILL AND COMPACT THE SOIL TO 95% STANDARD PROCTOR. ALWAYS BACKFILL AND COMPACT ONE COURSE OF BLOCK AT A TIME. KEEP AN ADEQUATE CUSHION OF SOIL BETWEEN THE GEOGRID AND EQUIPMENT.

[illegible]

BNJ Engineering P.C.
Innovative Consulting Engineers

20 FRANCISAN WAY,
FAIR LAWN, NJ 07410

201-796-0003

PROJECT

101 N 3RD ST

PATERSON, NEW JERSEY

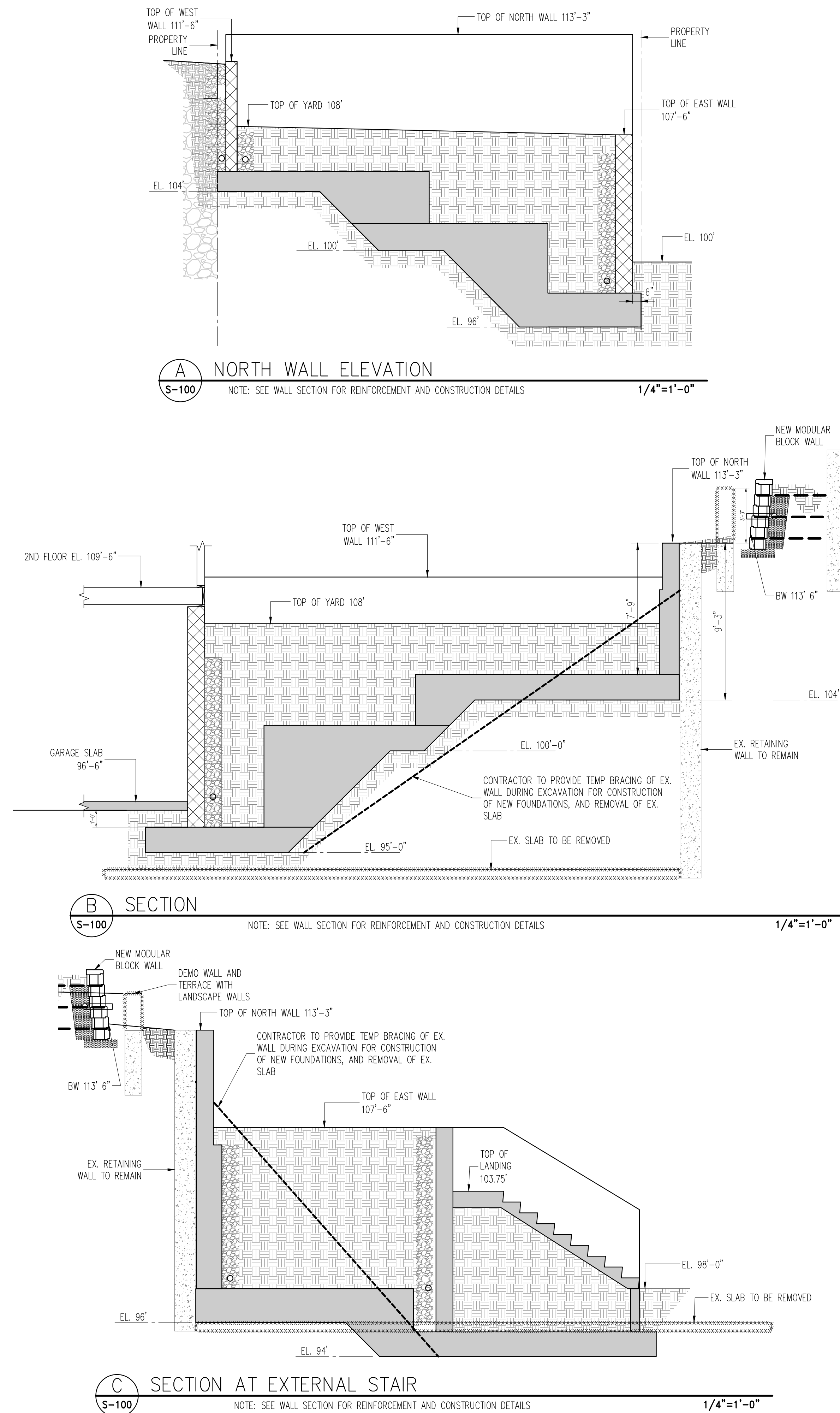
An empty coordinate grid with x and y axes ranging from -10 to 10. The grid lines are spaced at 1-unit intervals. The x-axis is labeled from -10 to 10, and the y-axis is labeled from -10 to 10. The origin (0,0) is at the center of the grid.

GENERAL NOTES

PROJECT NO.	220112
SCALE	AS NOTED
DATE	2023/05/31
CHECKED BY	JB
DRAWING NO.	S-001
<u>1</u> OF <u>6</u> SHTS	

FOUNDATION PLAN

SCALE: 3/16"=1'-0"



SECTION AT EXTERNAL STAIR

NOTE: SEE WALL SECTION FOR REINFORCEMENT AND CONSTRUCTION DETAILS

$$1/4'' = 1' - 0''$$
[illegible]

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Innovative Consulting Engineers
20 FRANCISCAN WAY,
FAIR LAWN, NJ 07410
201-796-0003

PROJECT

101 N 3RD ST

NEW JERSEY

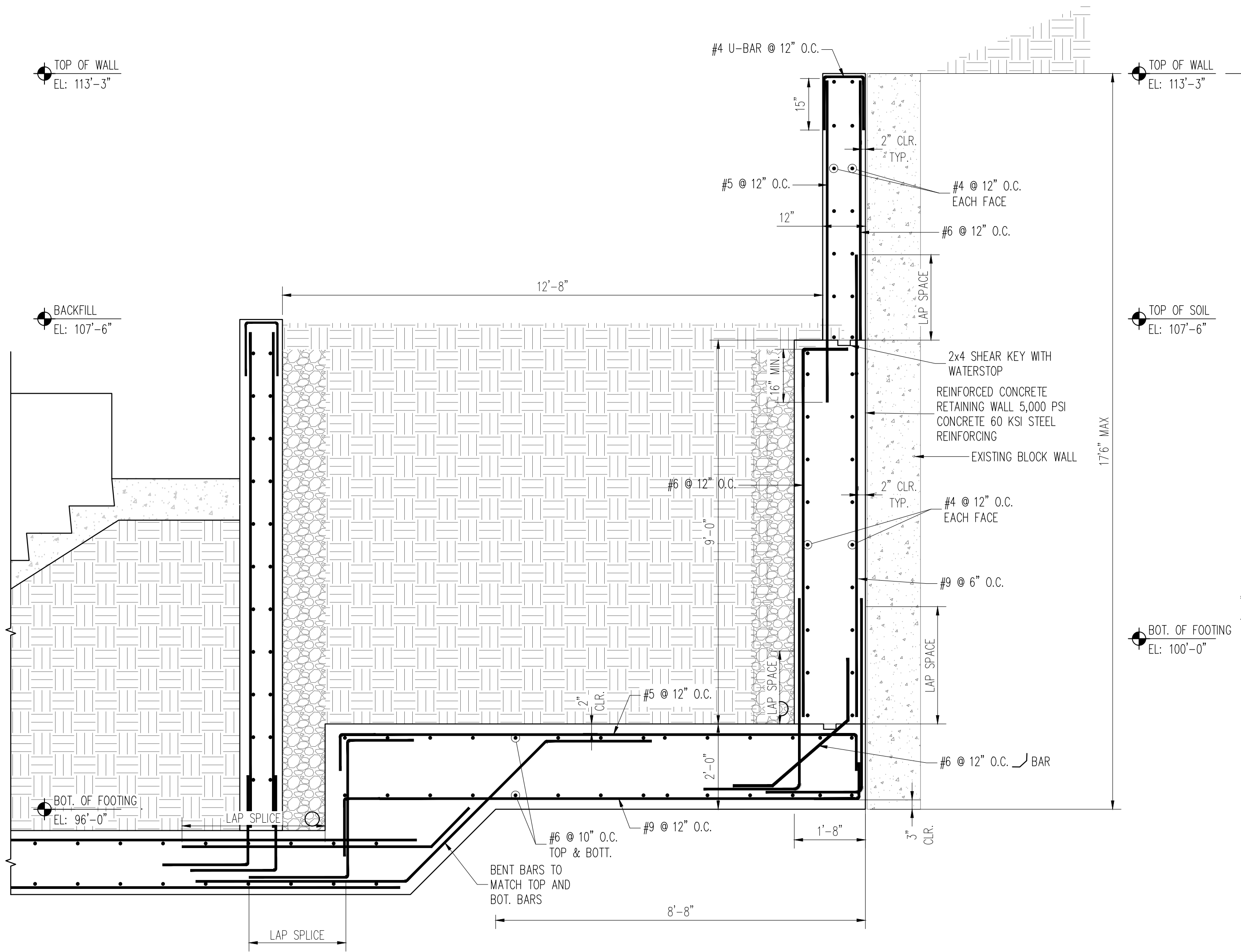
PATERSON,

FOUNDATION PLAN AND SECTION

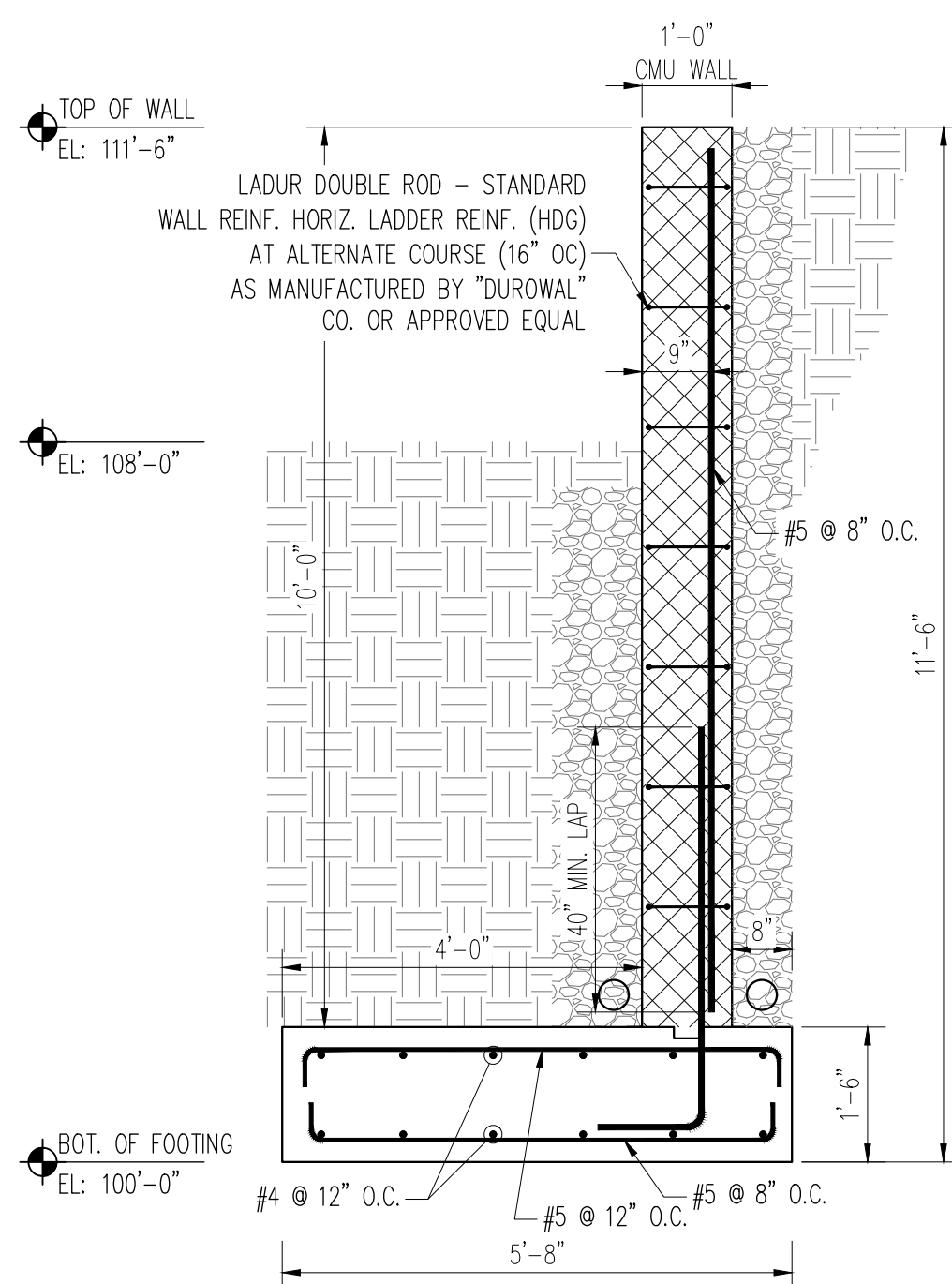
PROJECT NO.	220112
SCALE	AS NOTED
DATE	2023/05/31
CHECKED BY	JB

S-100

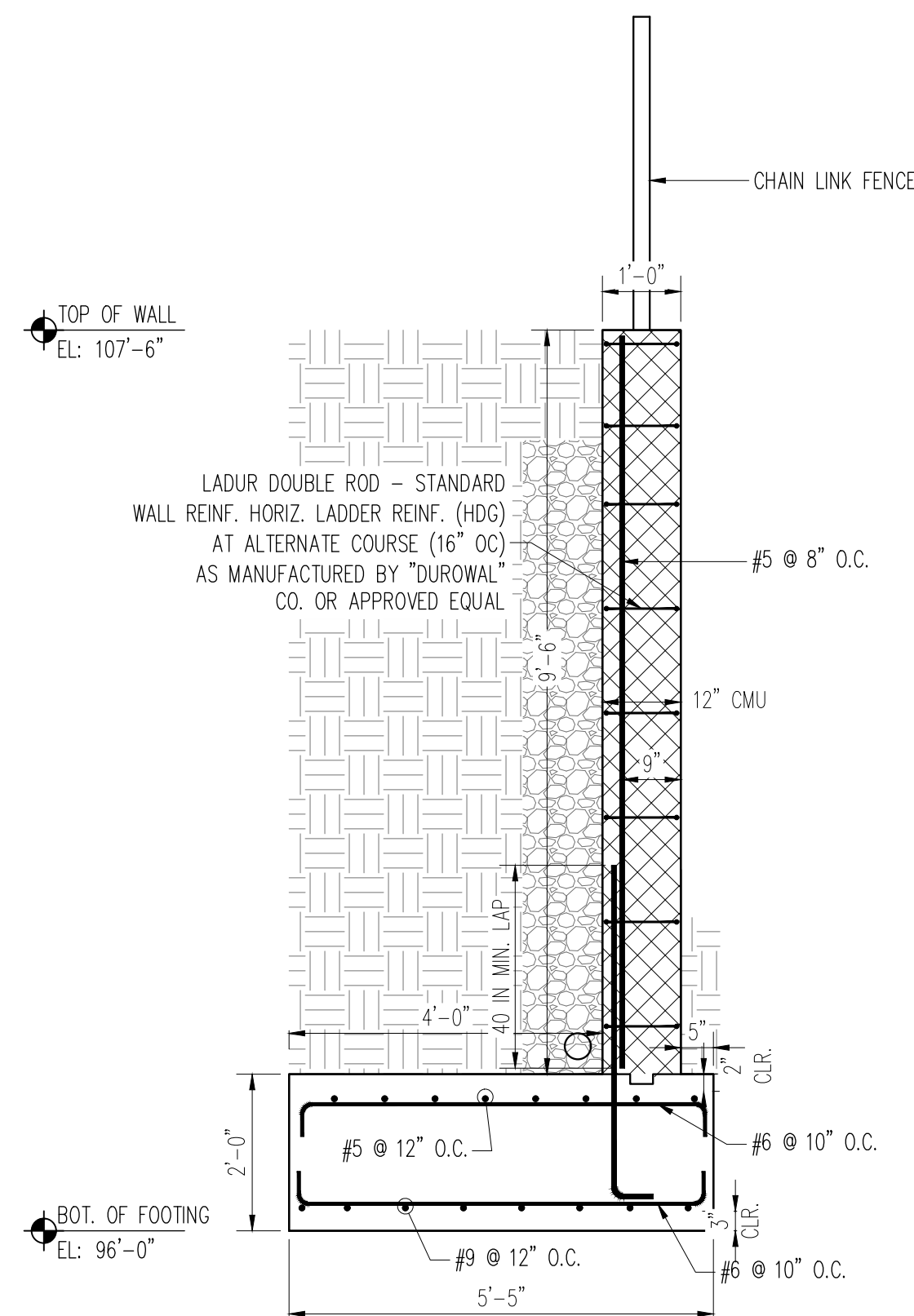
OF 6 SHTS



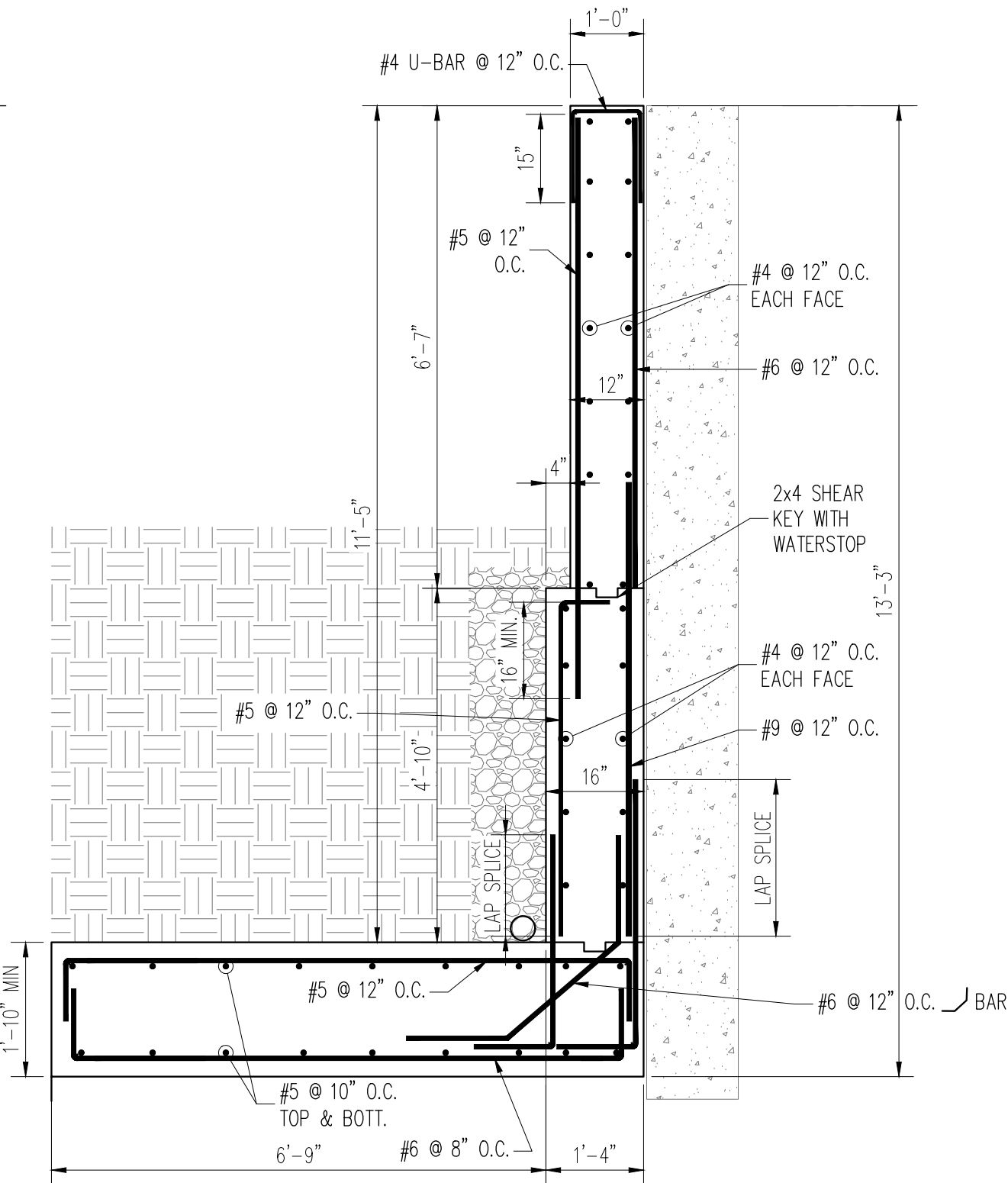
R1 CONCRETE RETAINING WALL AT NORTH
S-201 1/2"=1'-0"



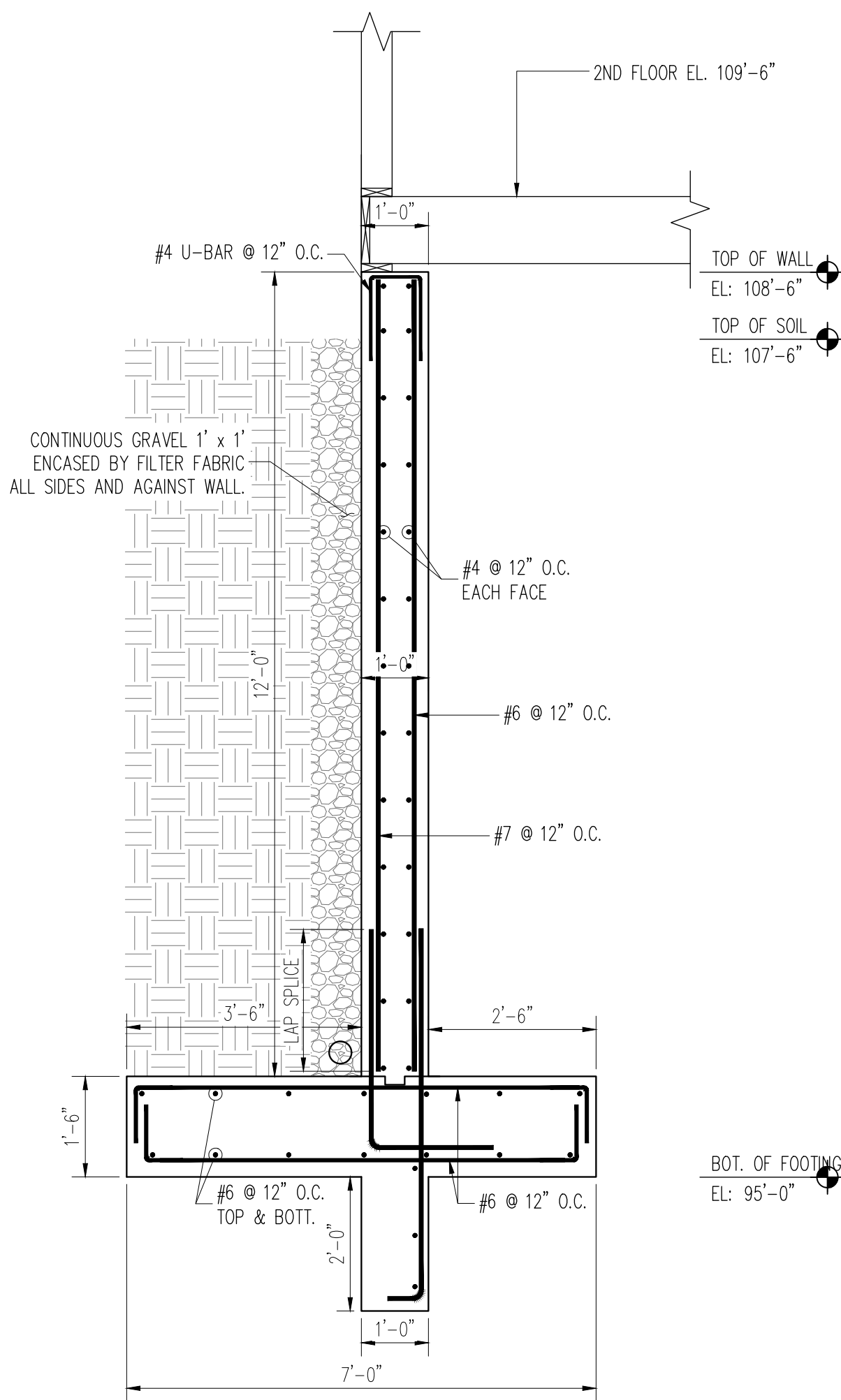
R5 RETAINING WALL SECTION
S-201 1/2"=1'-0"



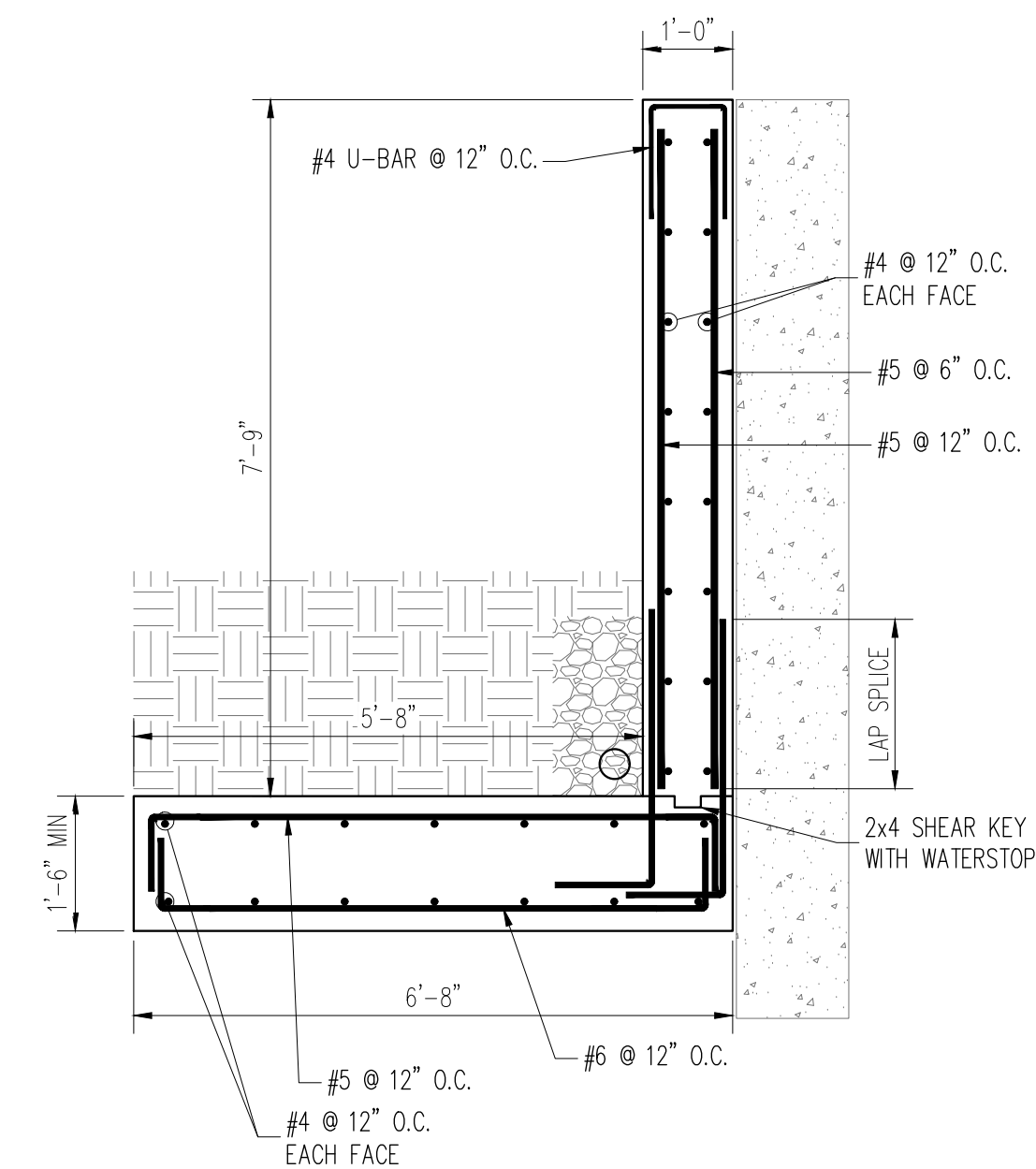
R8 RETAINING WALL SECTION
S-201 1/2"=1'-0"



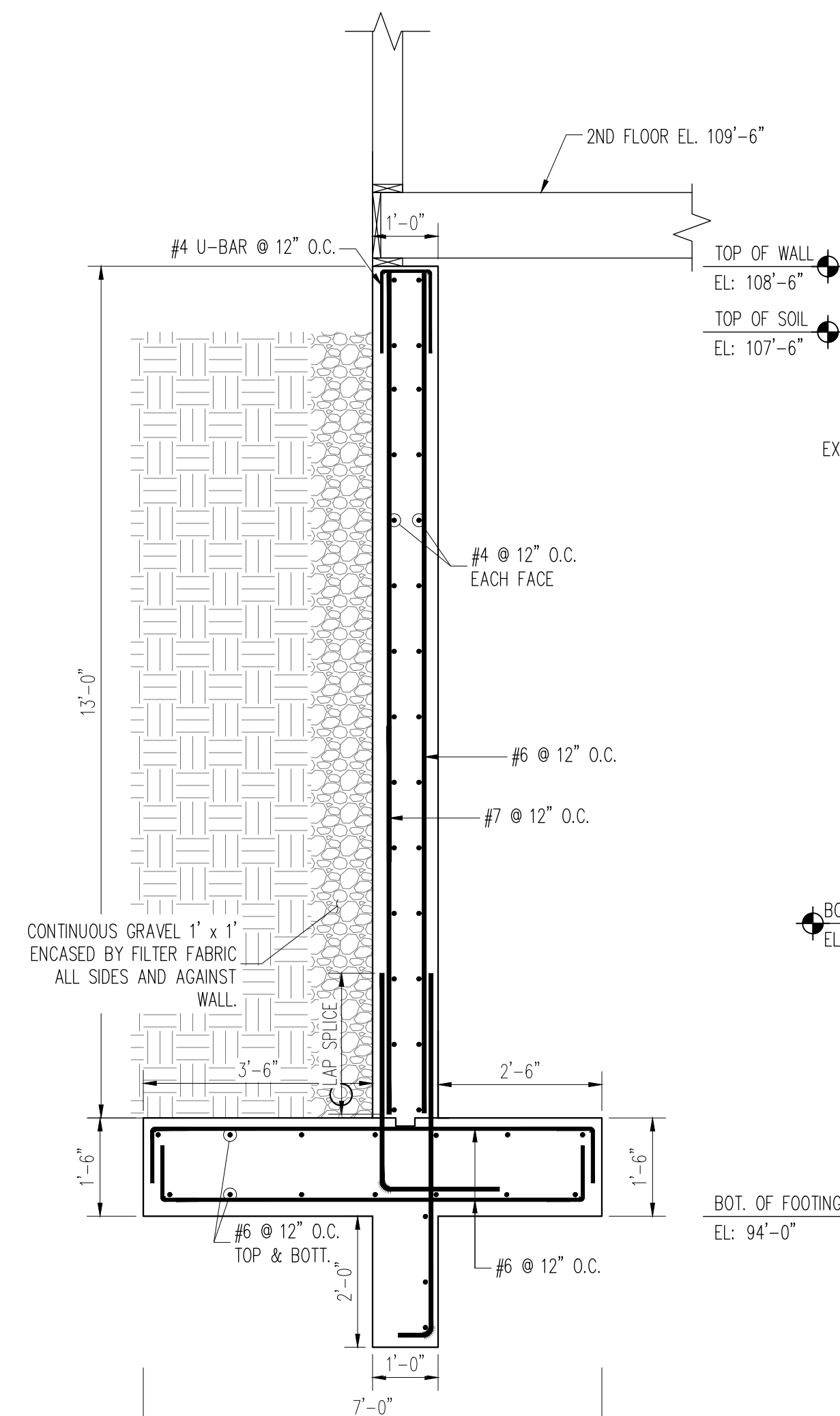
R2 RETAINING WALL AT NORTH
S-201 1/2"=1'-0"



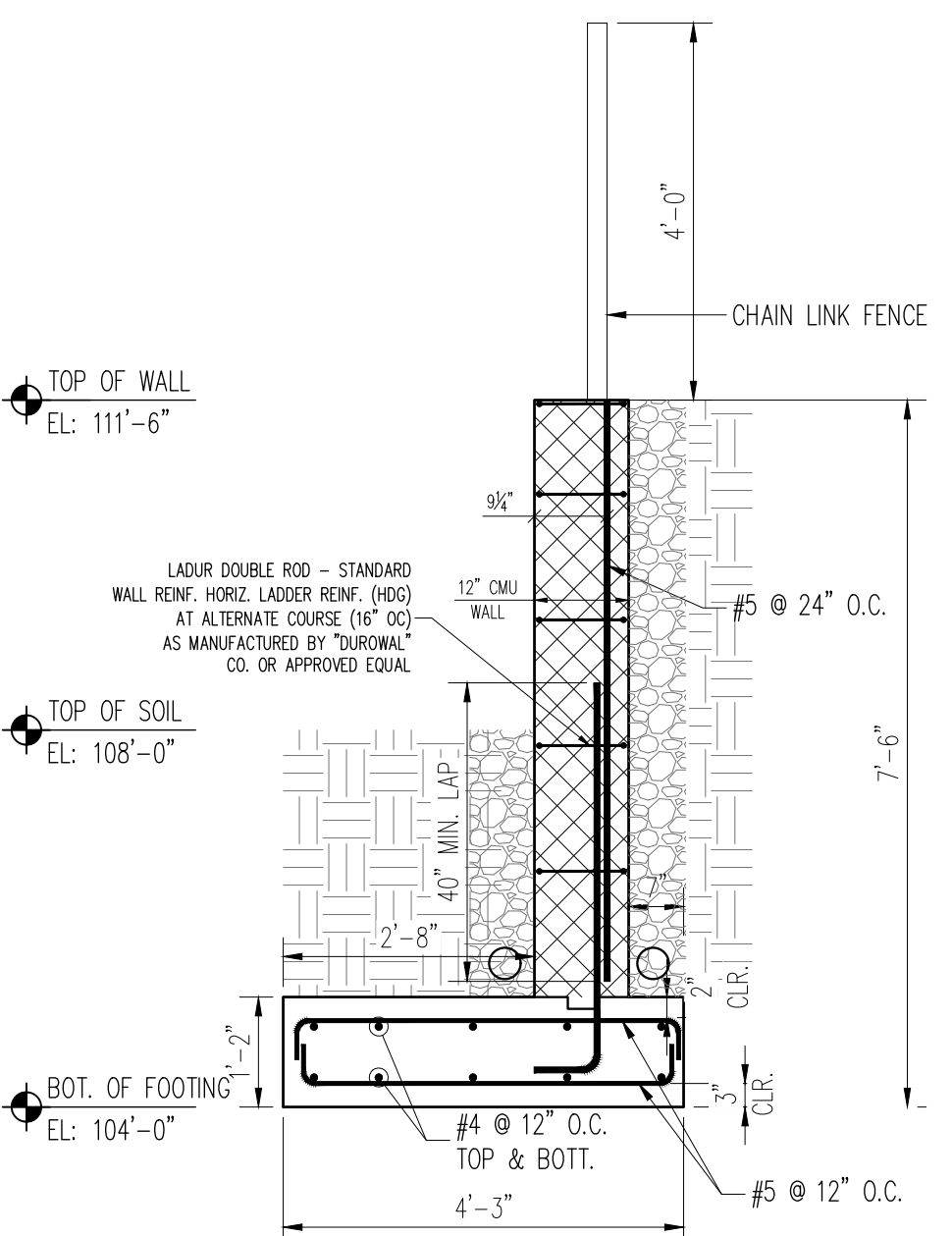
R6 RETAINING WALL SECTION AT BUILDING NORTH
S-201 1/2"=1'-0"



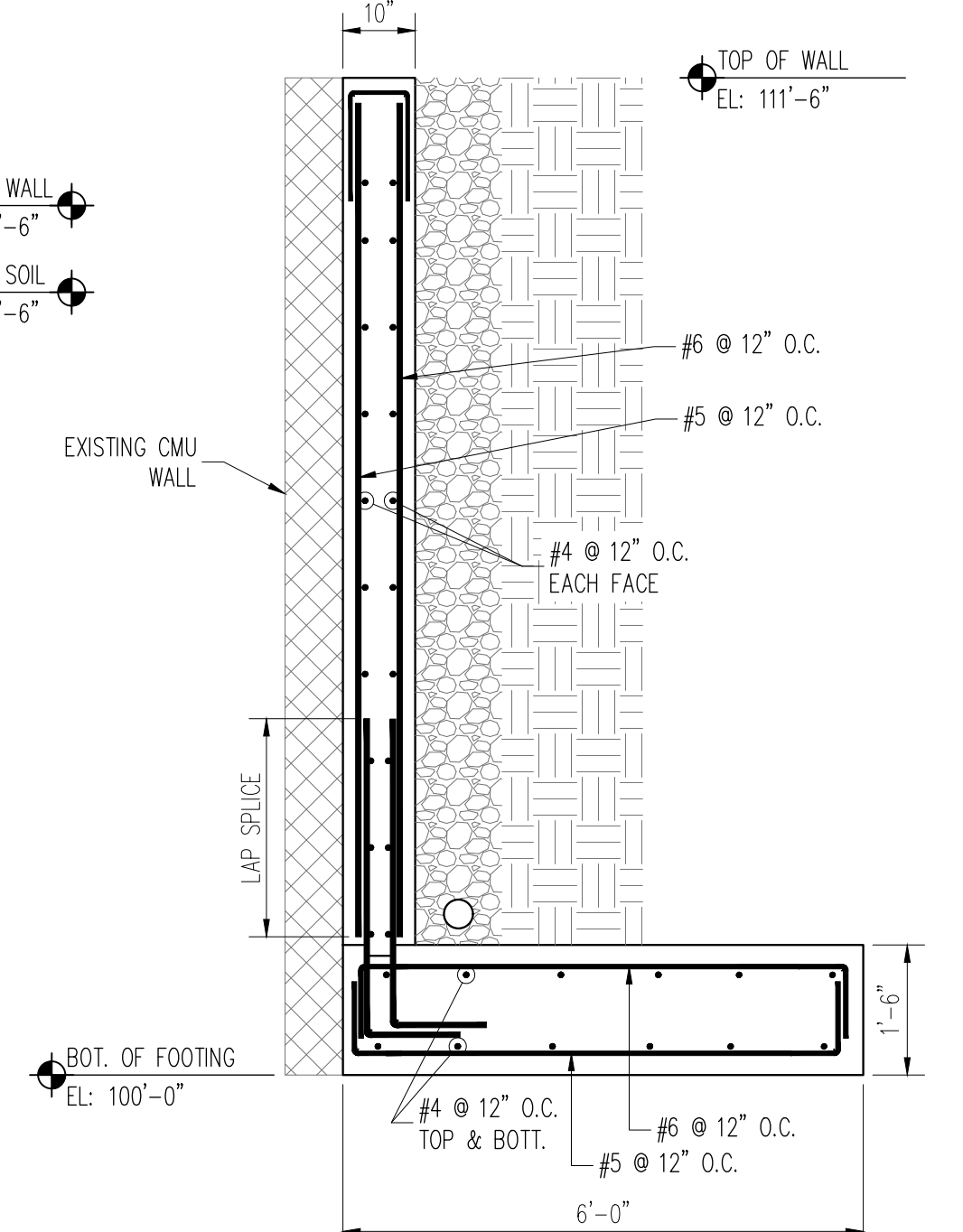
R3 RETAINING WALL AT NORTH
S-201 1/2"=1'-0"



R7 RETAINING WALL SECTION AT BUILDING NORTH
S-201 1/2"=1'-0"



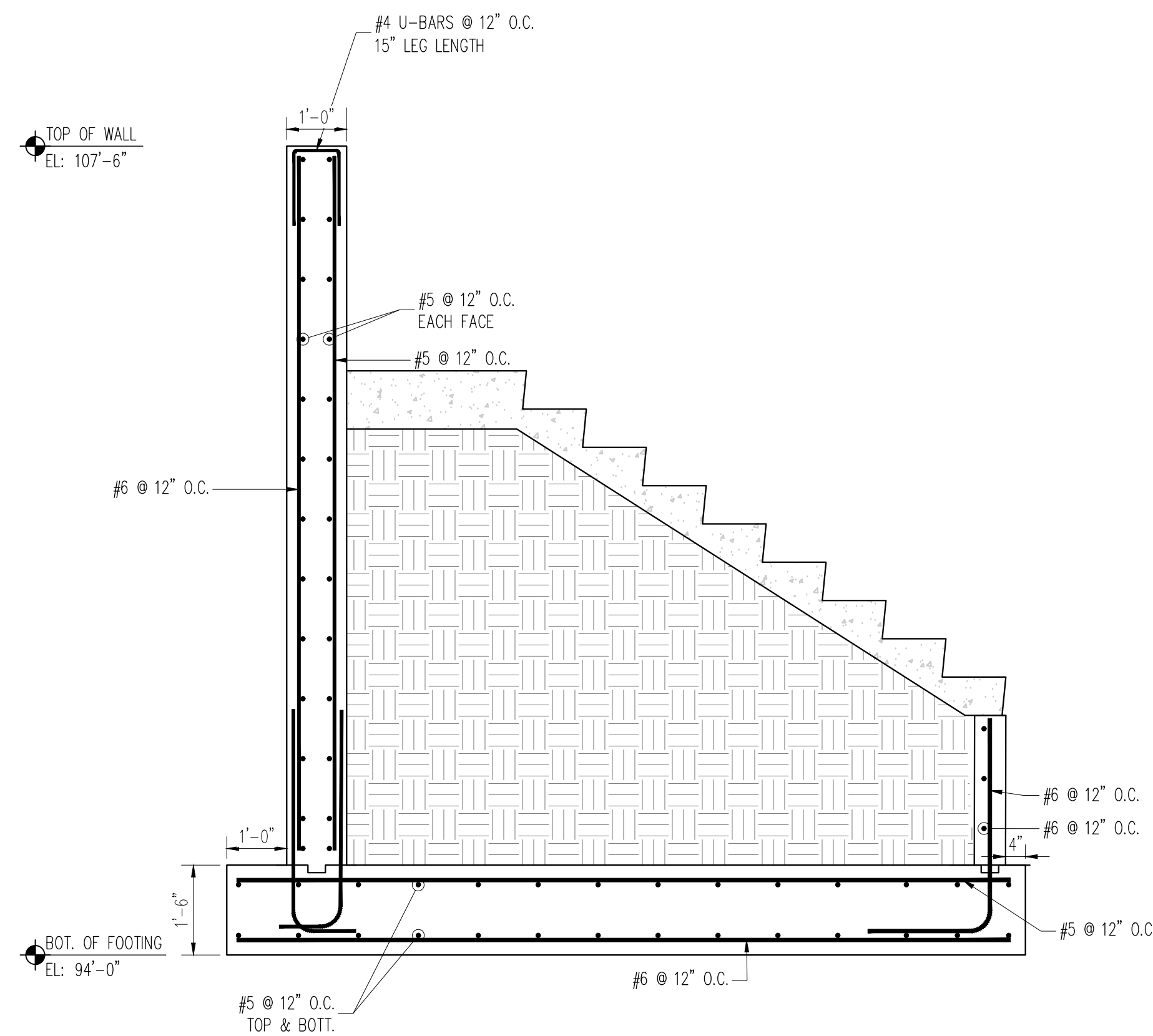
R4 RETAINING WALL SECTION
S-201 1/2"=1'-0"



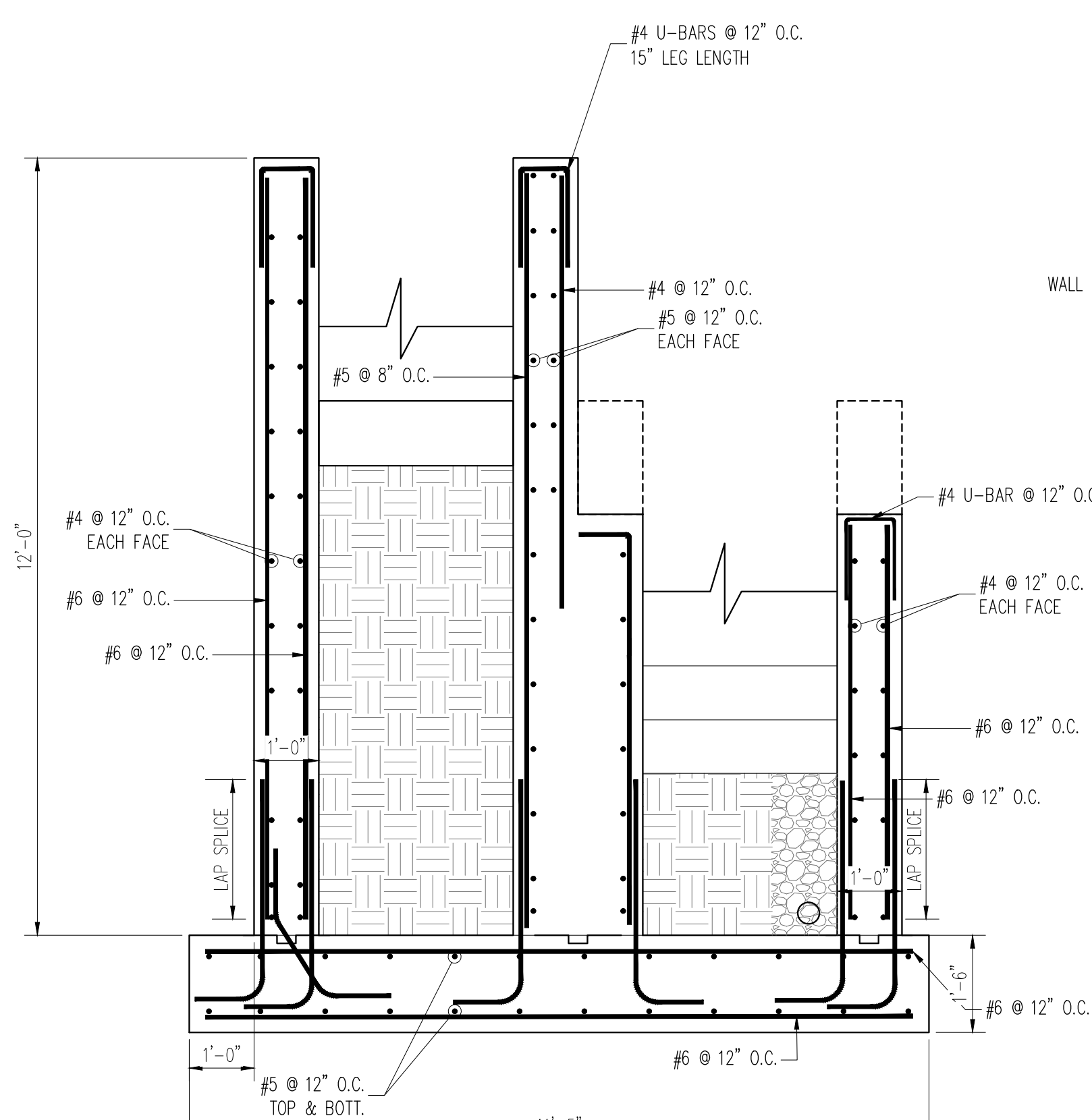
R14 RETAINING WALL SECTION AT ADJACENT PLOT
S-201 1/2"=1'-0"

PROJECT		101 N 3RD ST NEW JERSEY	
SHEET TITLE		RETAINING WALL DETAILS	
PROJECT NO.	220112	DATE	2023/05/31
SCALE	AS NOTED	CHECKED BY	JB
DRAWING NO.	S-201	NO.	201-796-0003
REVISION		DATE	

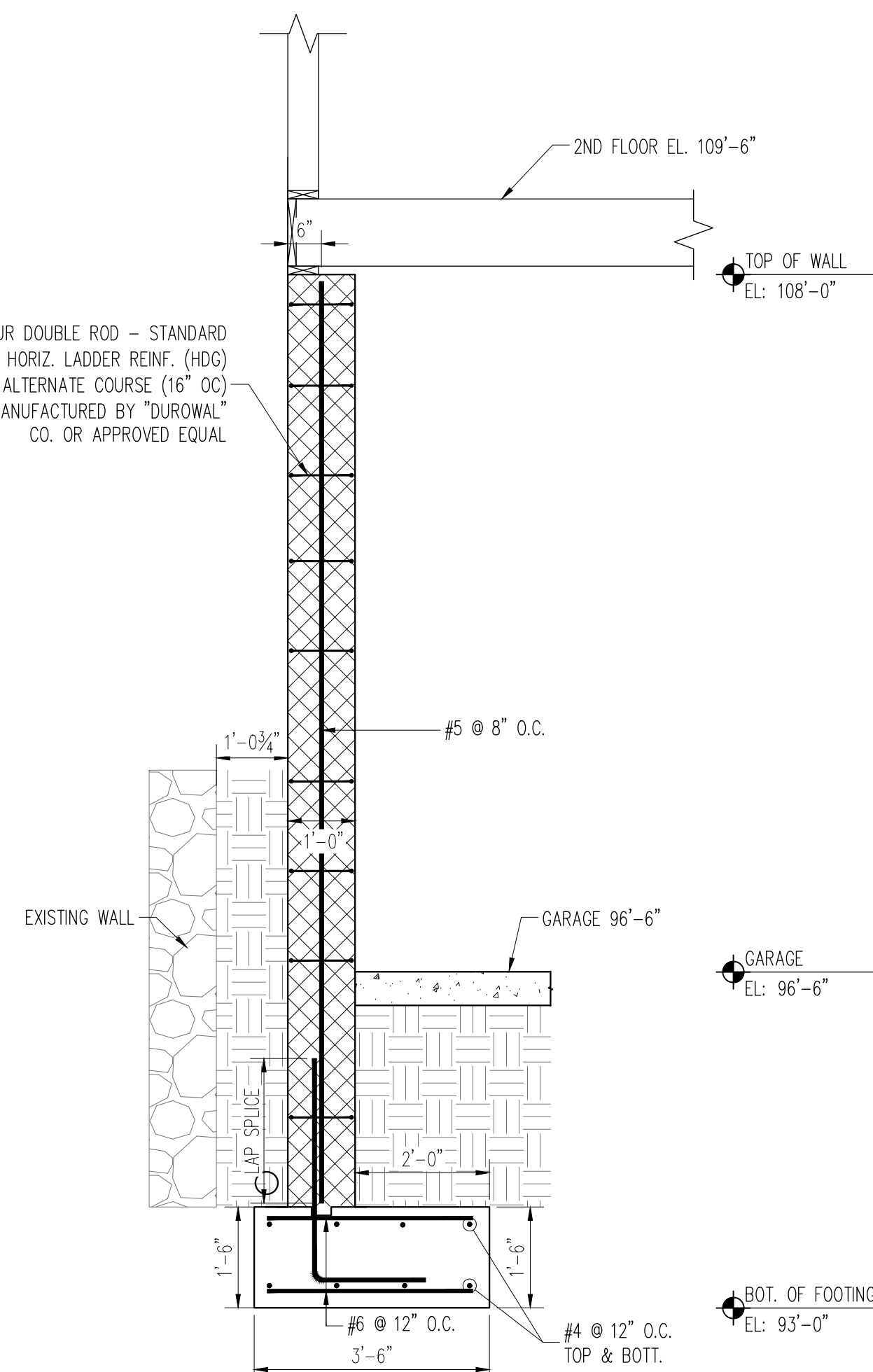
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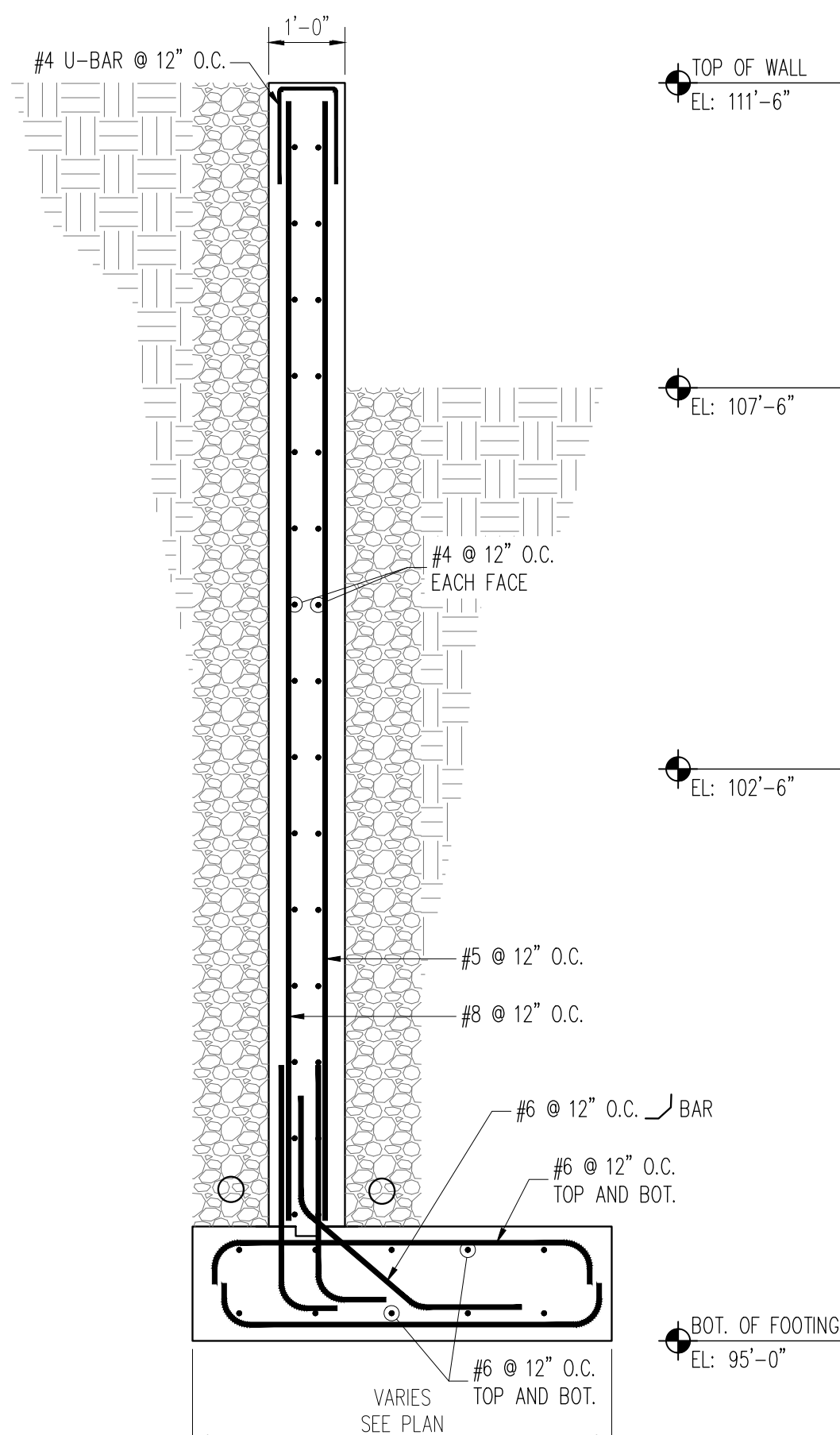
R9 SECTION
S-202 1/2"=1'-0"



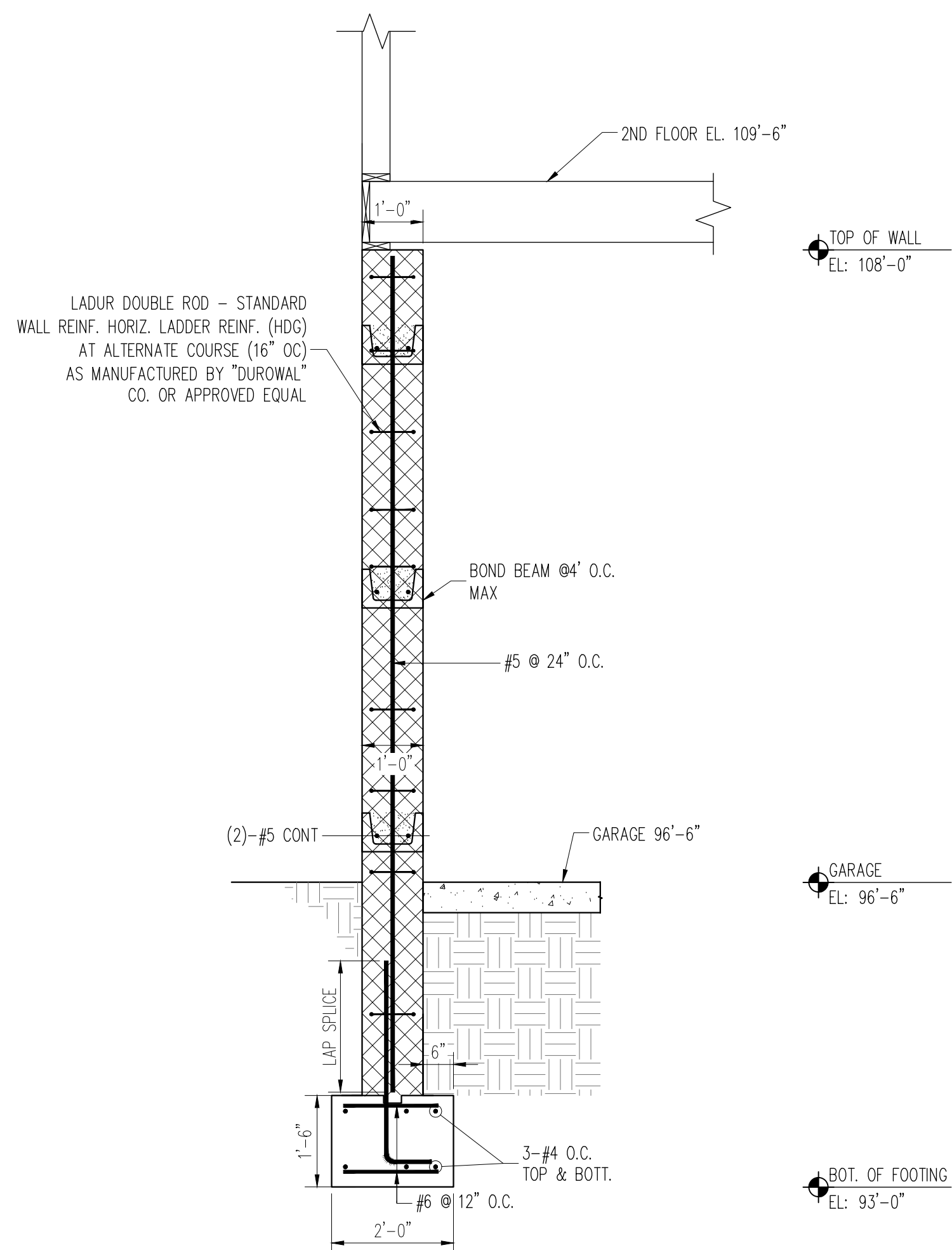
R10 SECTION
S-202 1/2"=1'-0"



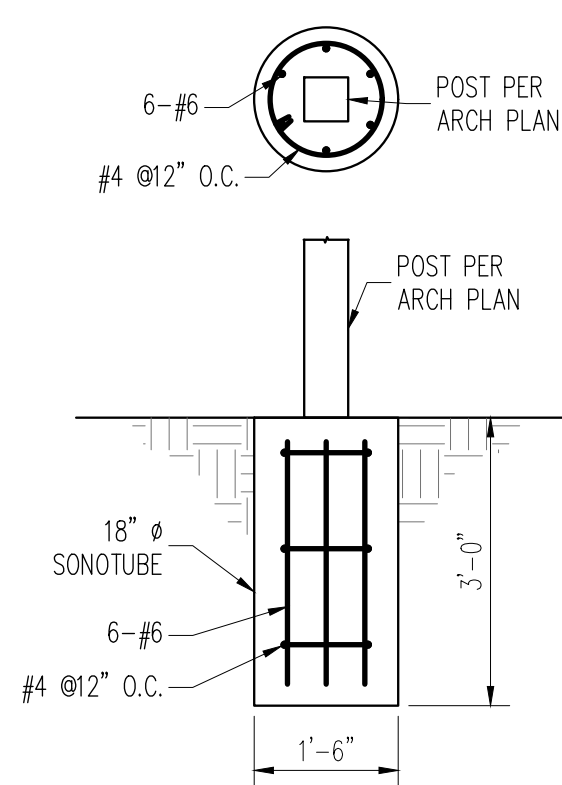
R11 RETAINING WALL SECTION AT BUILDING WEST
S-202 1/2"=1'-0"



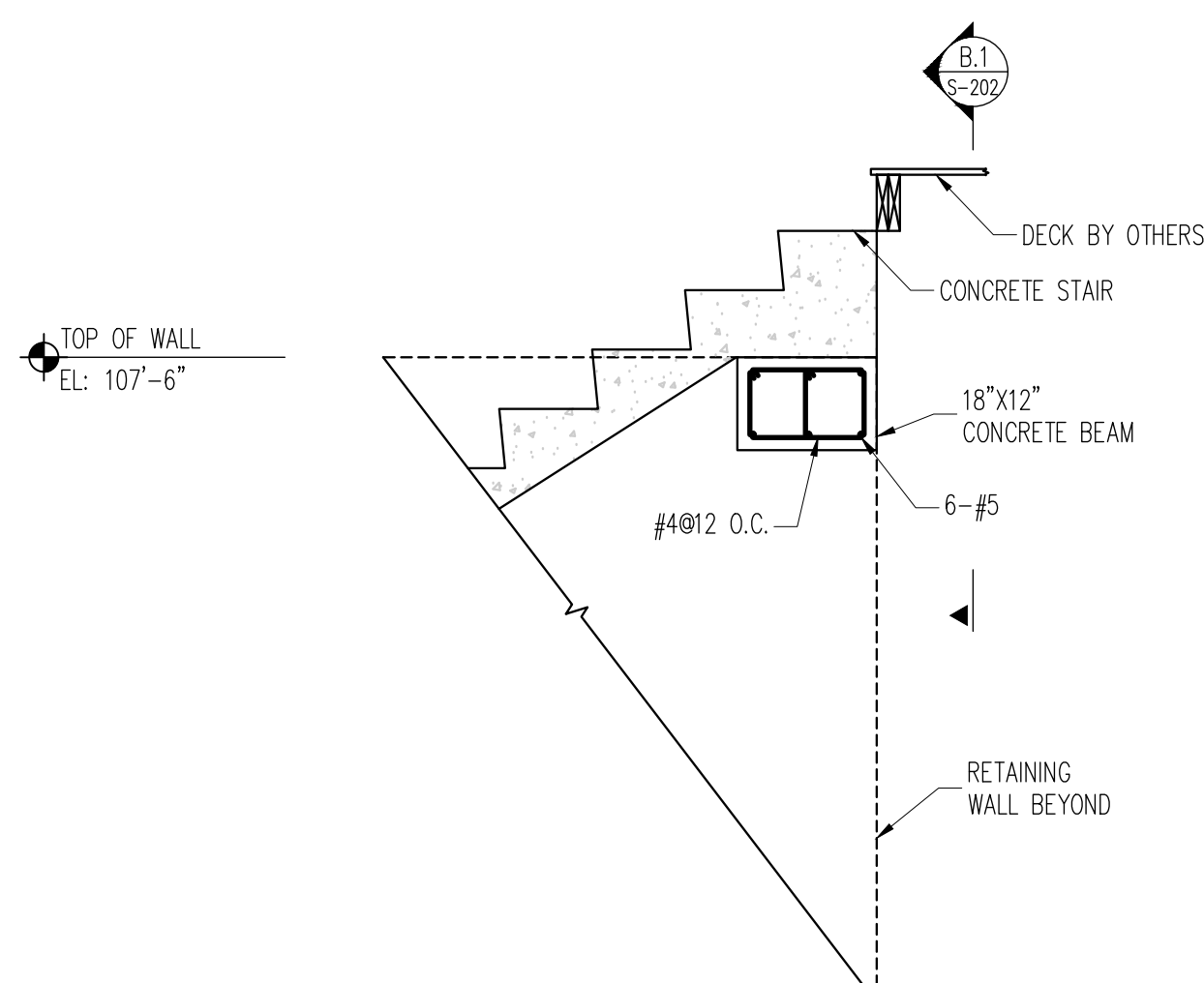
R13 SECTION
S-202 1/2"=1'-0"



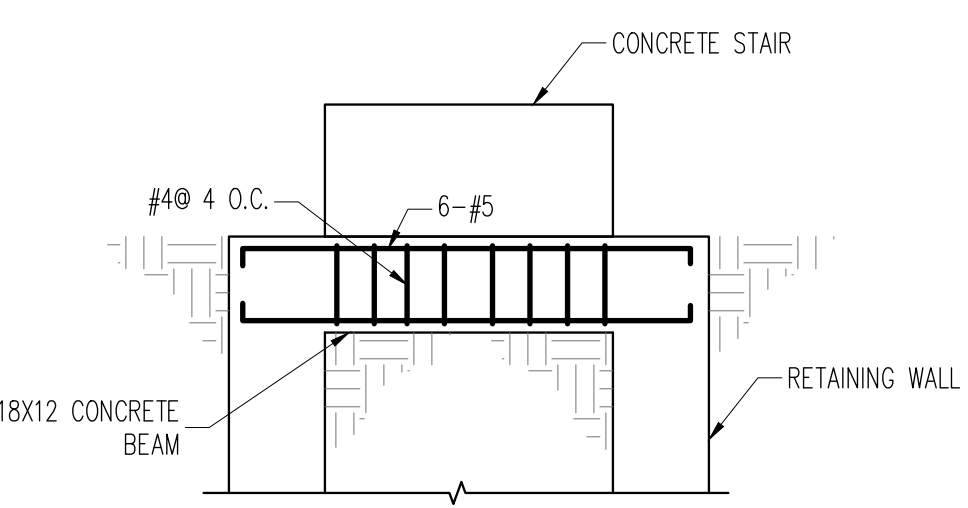
R12 LOAD BEARING WALL SECTION
S-202 1/2"=1'-0"



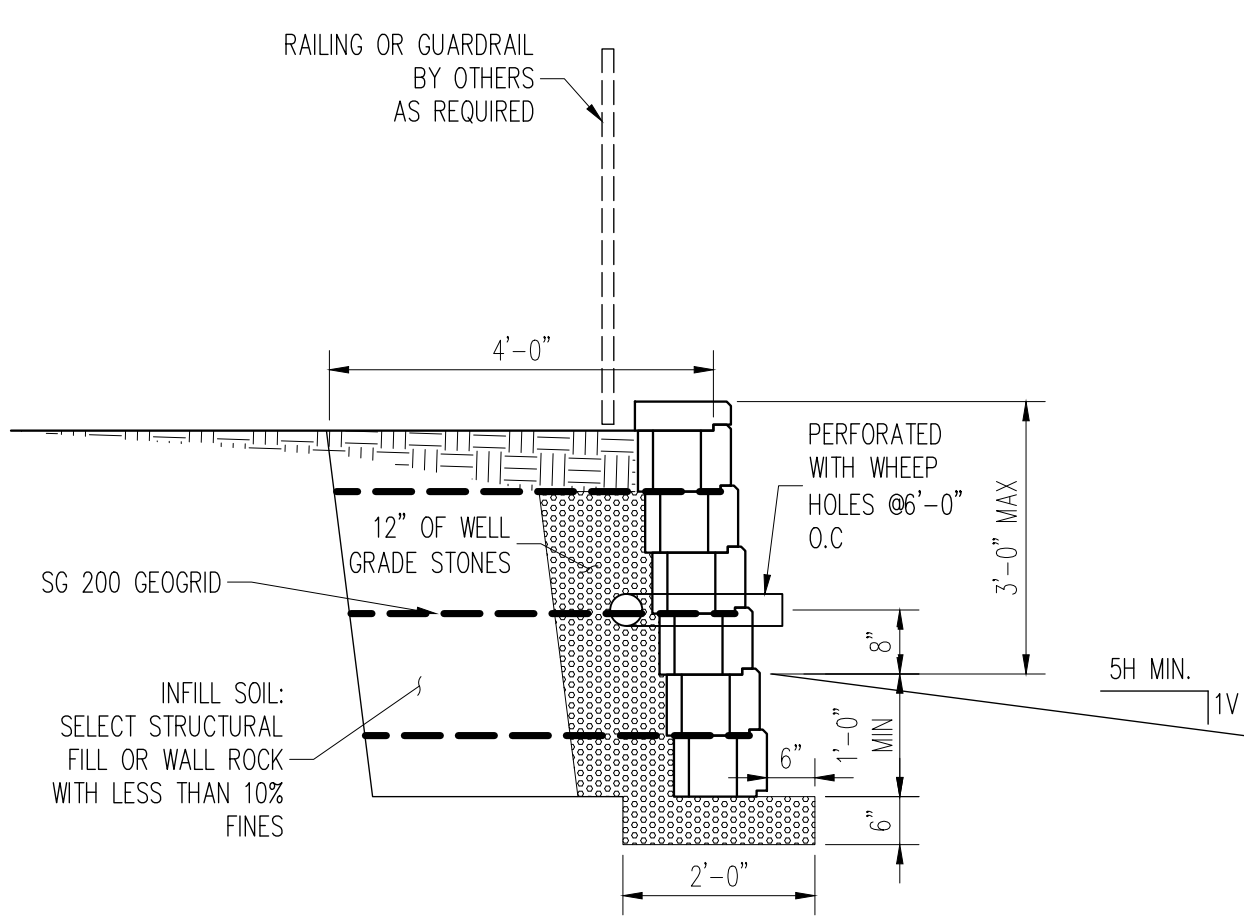
A TYP. SONOTUBE DETAIL
S-202 1/2"=1'-0"



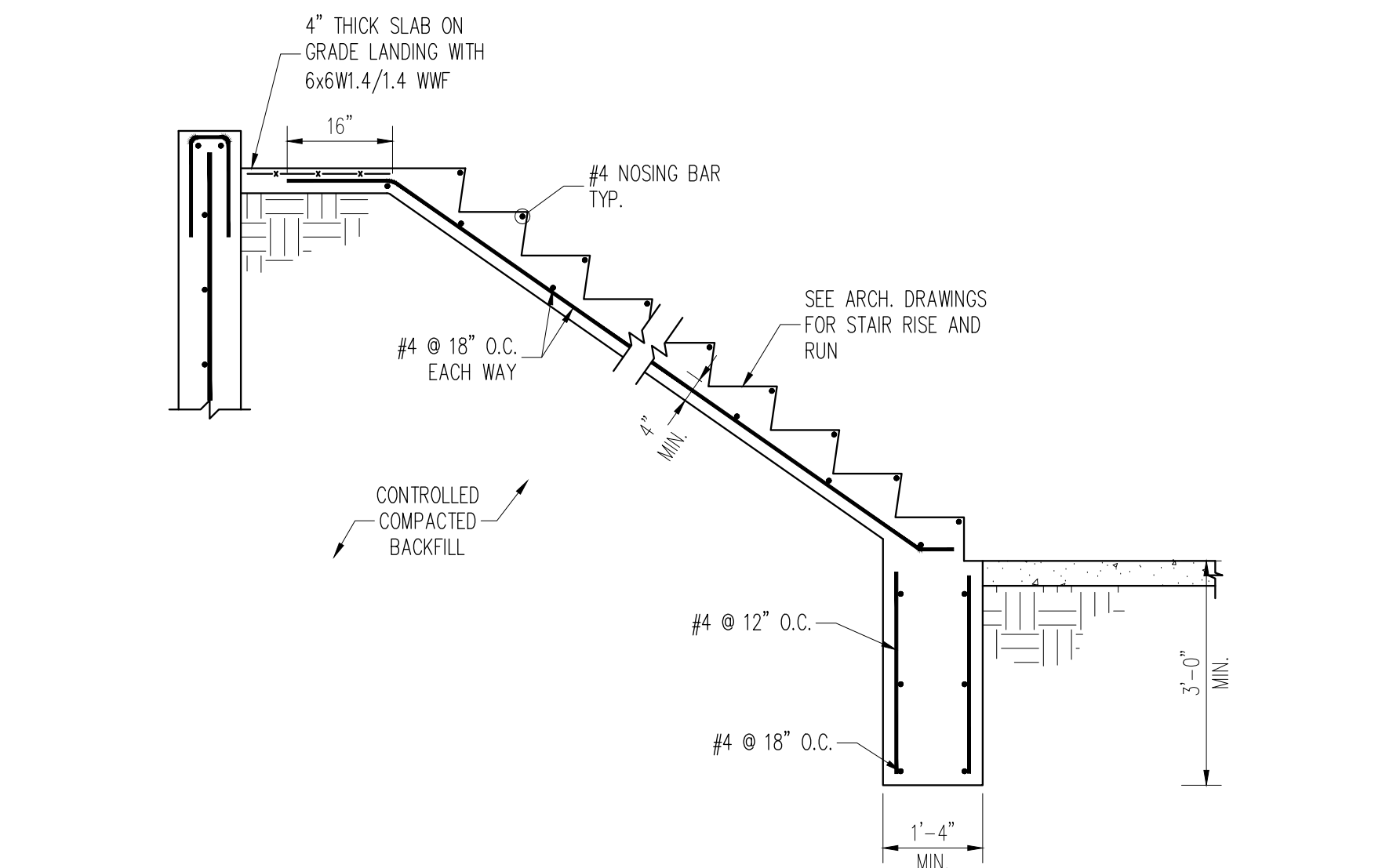
B STAIR BEAM DETAIL
S-202 1/2"=1'-0"



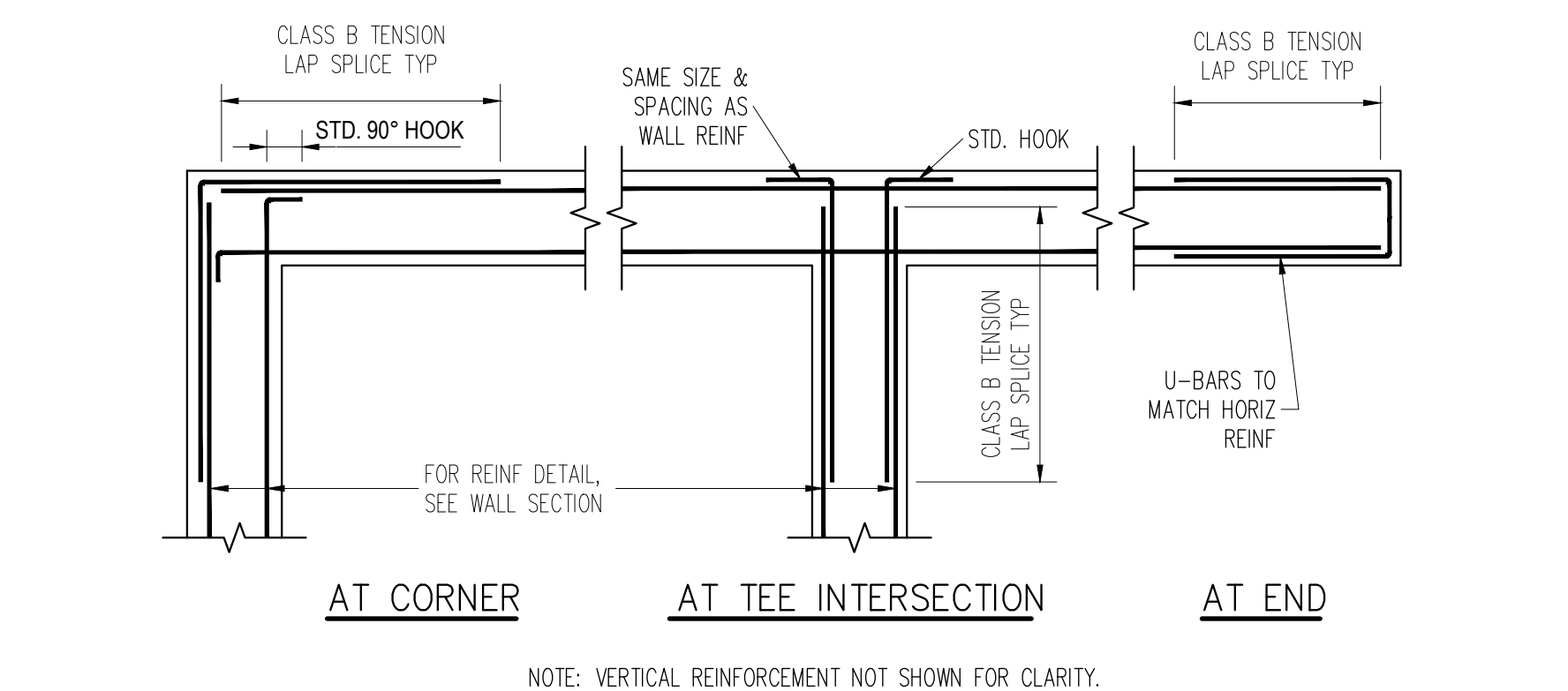
B.1 STAIR BEAM DETAIL
S-202 1/2"=1'-0"



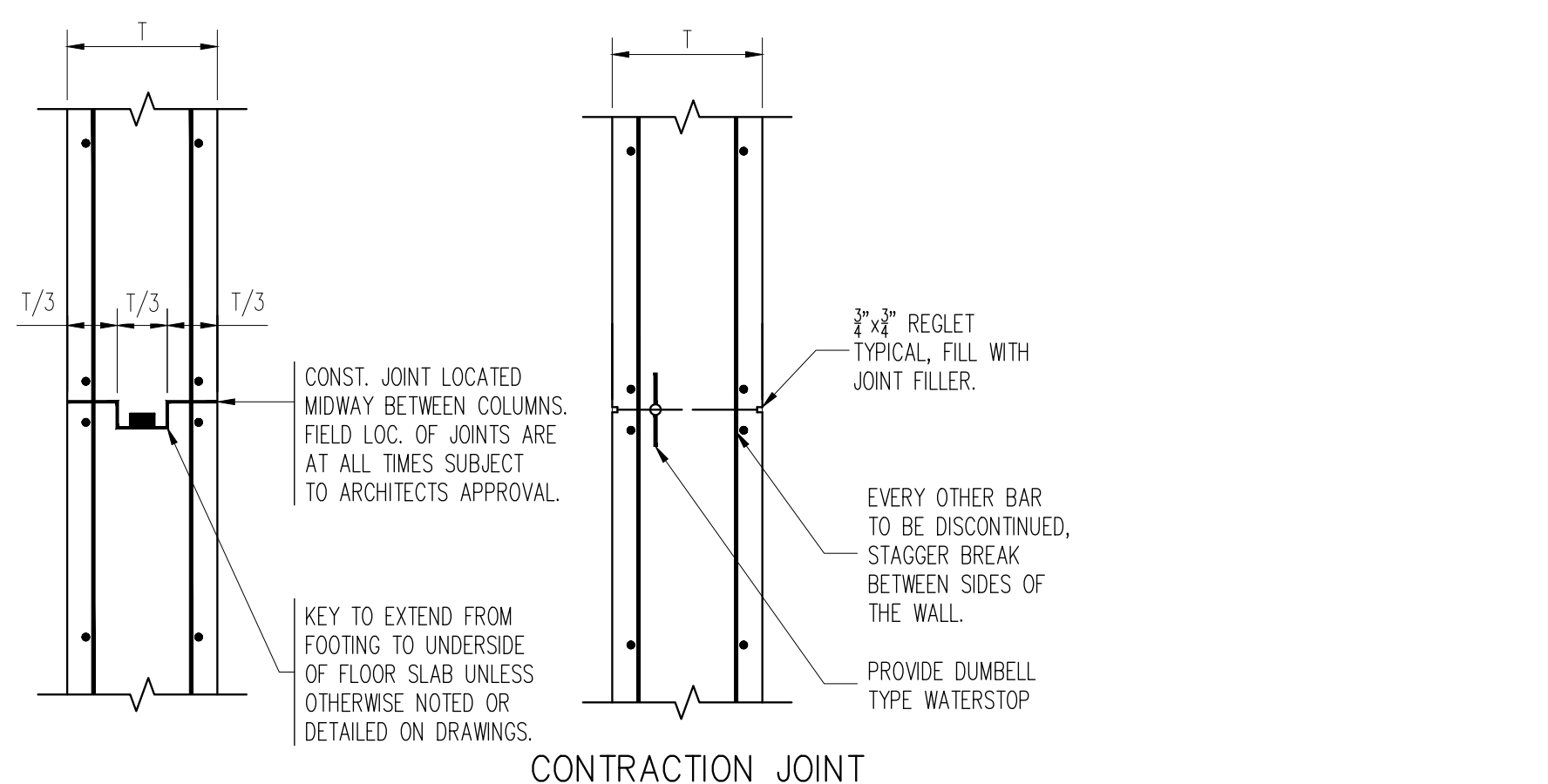
D MODULAR WALL DETAIL
S-202 1/2"=1'-0"



A TYPICAL CONCRETE STAIR ON GRADE
S-300 1/2" = 1'-0"



E CONCRETE WALL INTERSECTIONS
S-300 3/4" = 1'-0"

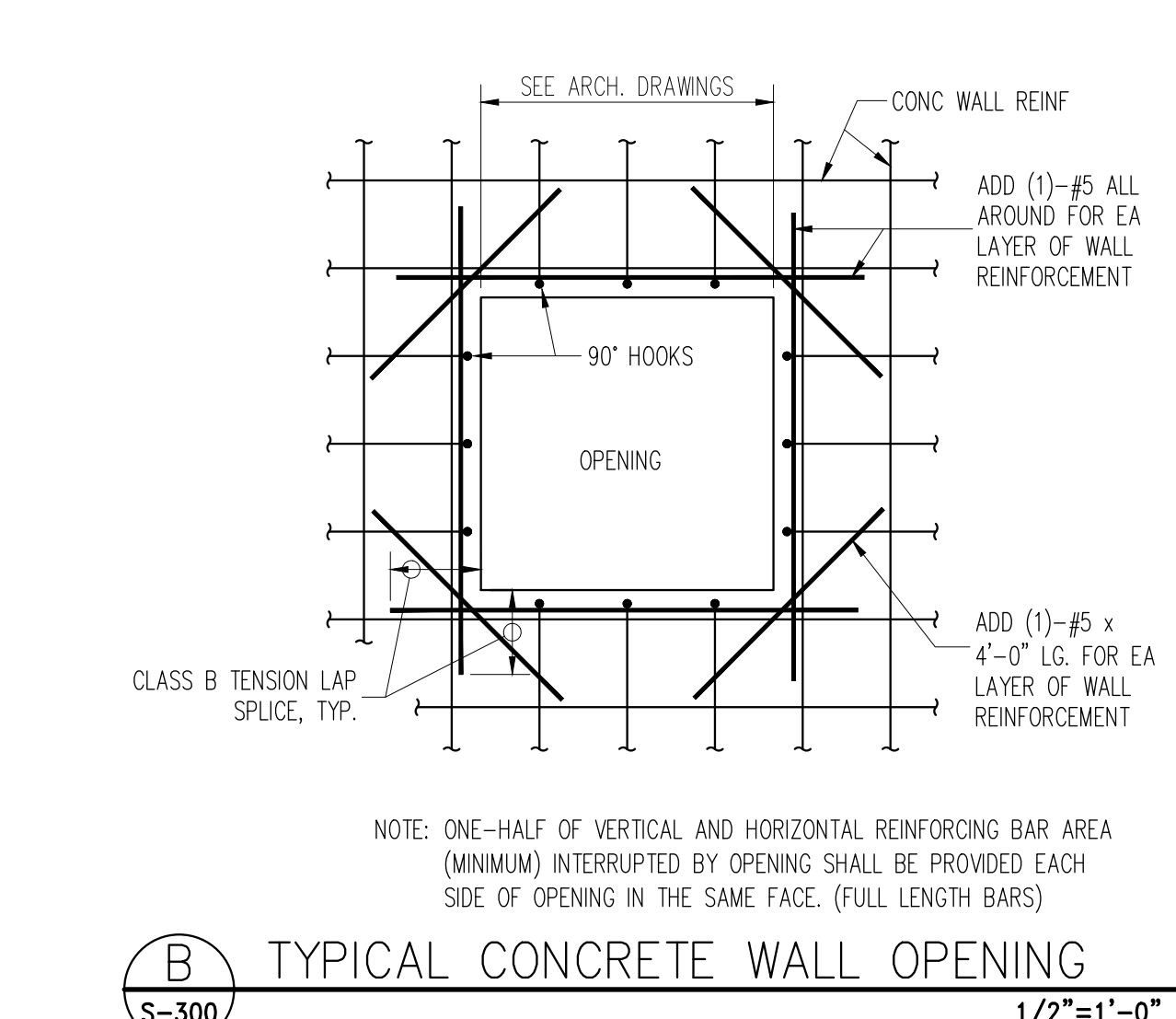


H TYPICAL WALL JOINT DETAILS
S-300 NTS

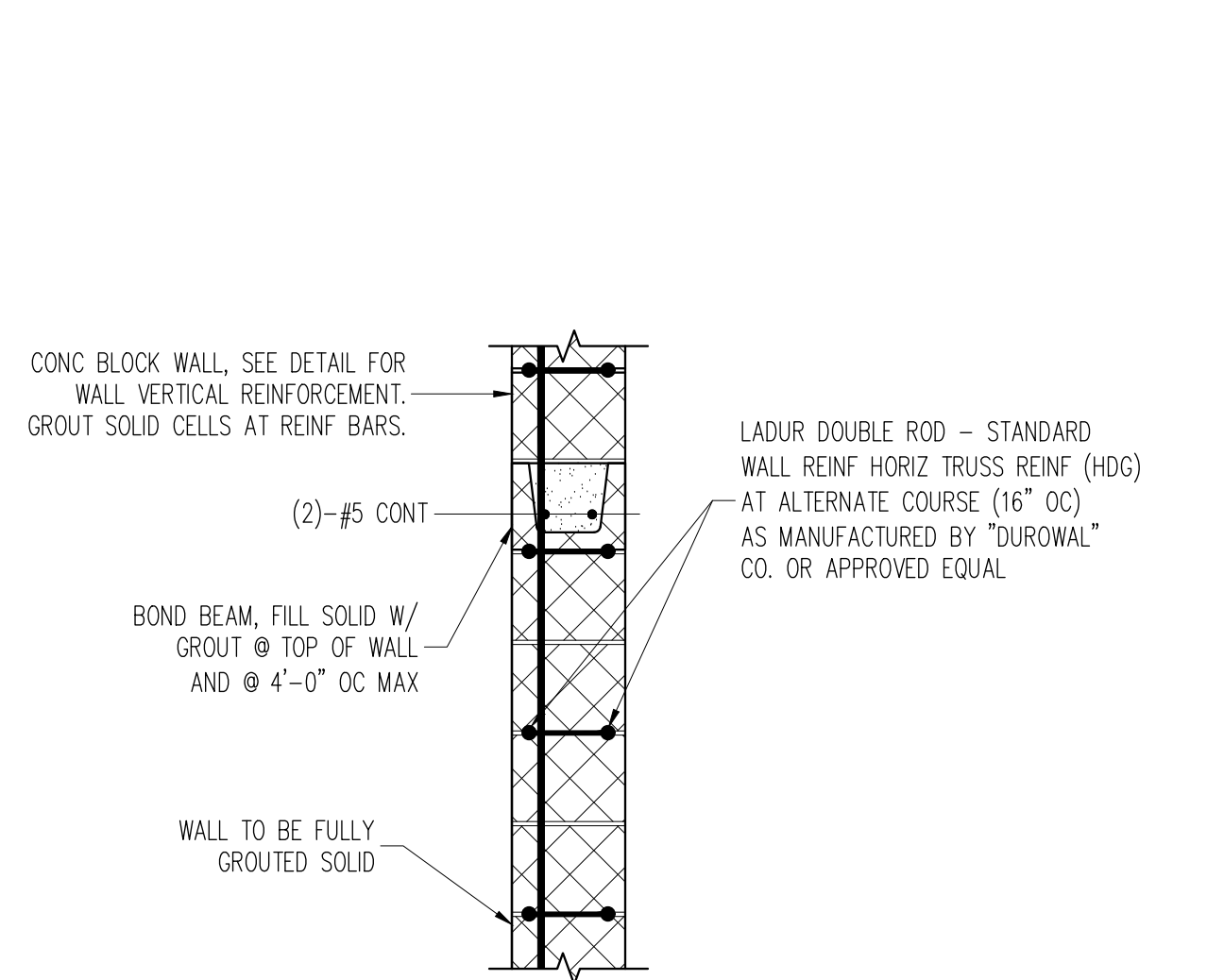


J TYP CMU WALL JOINT DETAIL
S-300 NTS

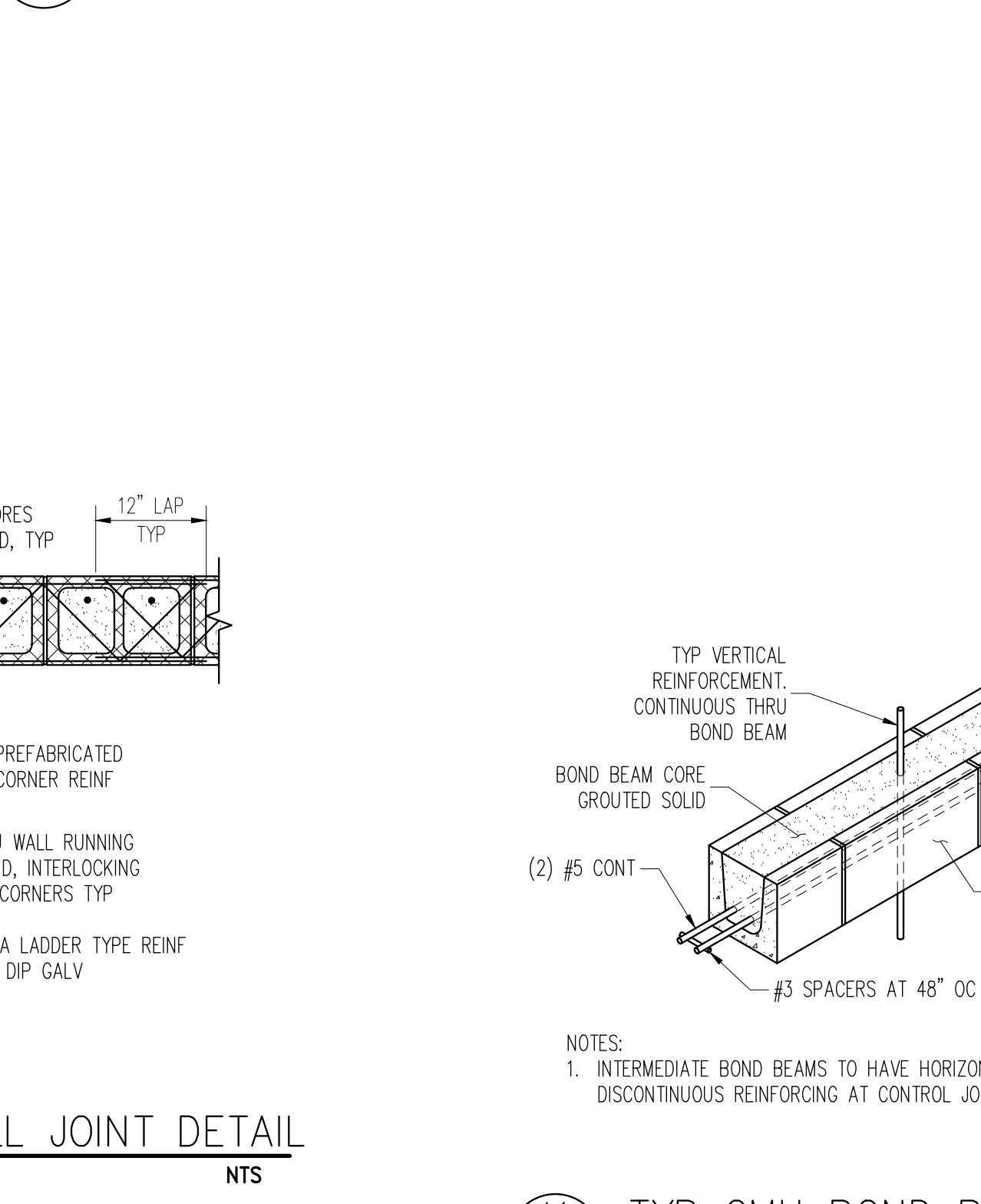
K TYP CMU BOND BEAM DETAIL
S-300 NTS



B TYPICAL CONCRETE WALL OPENING
S-300 1/2" = 1'-0"

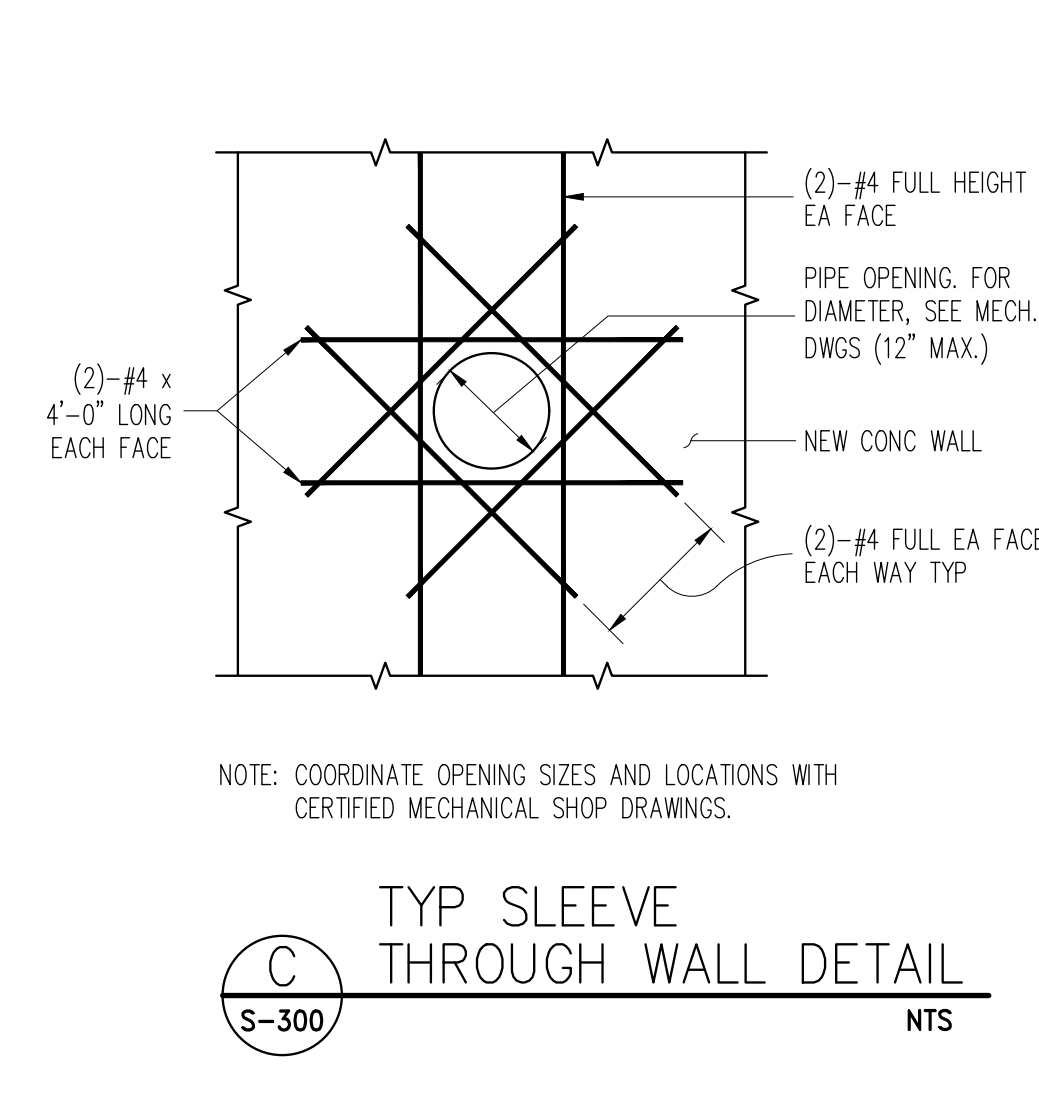


F TYP CMU WALL REINFORCING DETAIL
S-300 NTS



L TYP CMU WALL CONTROL JOINT DETAIL
S-300 NTS

M TYP INTERMEDIATE BOND BEAM CMU WALL CONTROL JOINT DETAIL
S-300 NTS



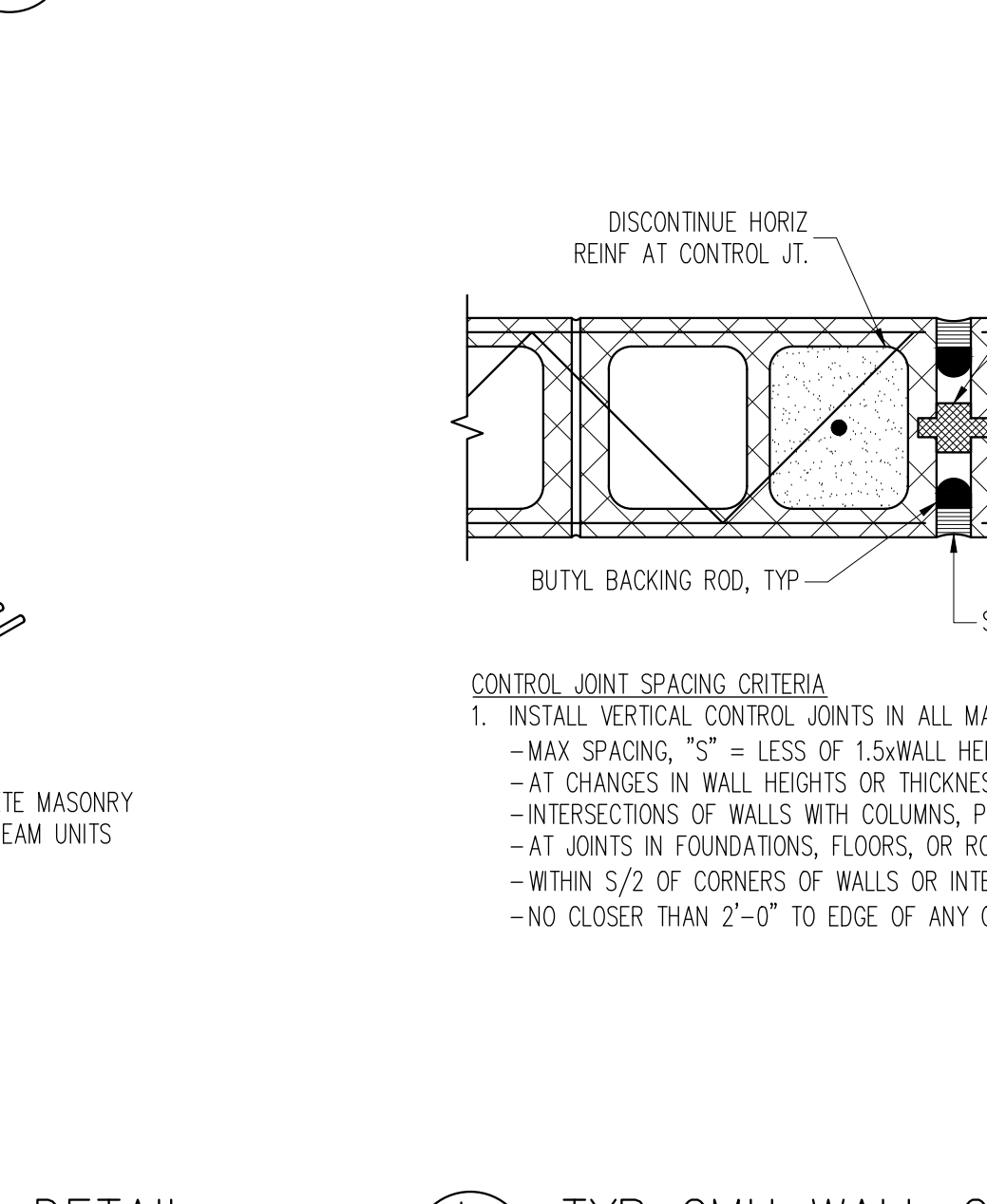
C TYP SLEEVE THROUGH WALL DETAIL
S-300 NTS

TABLE 1.1
TENSION LAP SPlice LENGTHS (CLASS B MINIMUM)
3/4" COVER (IN)

BAR	#3	#4	#5	#6	#7	#8	#9	#10	#11
3,000	13	22	32	43	60	60	66	125	183
4,000	12	19	28	37	54	54	58	108	158
5,000	12	17	25	34	49	49	52	97	142
6,000	12	16	23	31	46	46	48	88	129
7,000	12	15	21	28	43	43	44	82	120
8,000	12	15	20	27	40	40	41	77	112
9,000	12	15	19	25	38	38	39	72	106
≥10,000	12	15	19	24	38	38	37	69	100

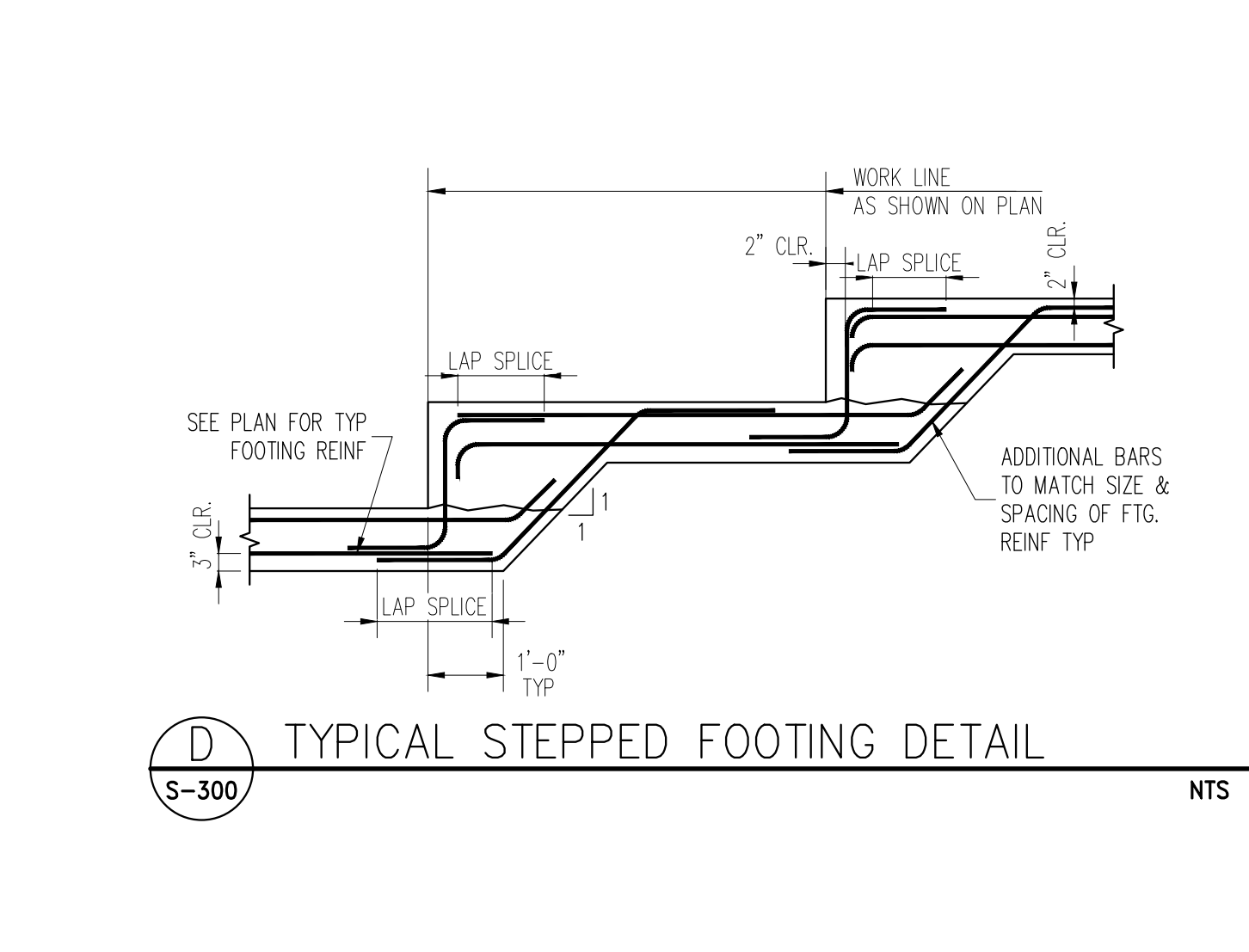
- TABLE 1.1-1.2 NOTES:
- TABLES 1.1-1.2 CONFORM TO ACI 318. TABULATED VALUES ASSUME UNCOATED REINFORCEMENT AND NORMAL WEIGHT CONCRETE (144-150PCF).
 - LENGTHS TABULATED MUST BE MULTIPLIED BY THE FOLLOWING MODIFICATION FACTORS:
 - TOP BARS 1.3
("TOP" IS DEFINED BY ACI 318 AS HORIZONTAL BARS HAVING MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BAR).
 - LIGHTWEIGHT CONCRETE 1.3
 - EPOXY-COATED BARS:
 - BARS WITH COVER < 3db, OR WITH CLEAR SPACING < 6db 1.5 FOR BOTTOM & VERTICAL BARS. 1.3 FOR "TOP" BARS.*
 - ALL OTHER CONDITIONS 1.2
 - LAP SPLICES ARE NOT PERMITTED FOR #14 AND #18. USE MECHANICAL CONNECTIONS OR WELDED SPLICES. LAP SPLICES OF #14 AND #18 BARS TO #11 AND SMALLER BARS ARE PERMITTED.

G CONCRETE REINFORCING DETAILS
S-300 NTS



L TYP CMU WALL CONTROL JOINT DETAIL
S-300 NTS

M TYP INTERMEDIATE BOND BEAM CMU WALL CONTROL JOINT DETAIL
S-300 NTS

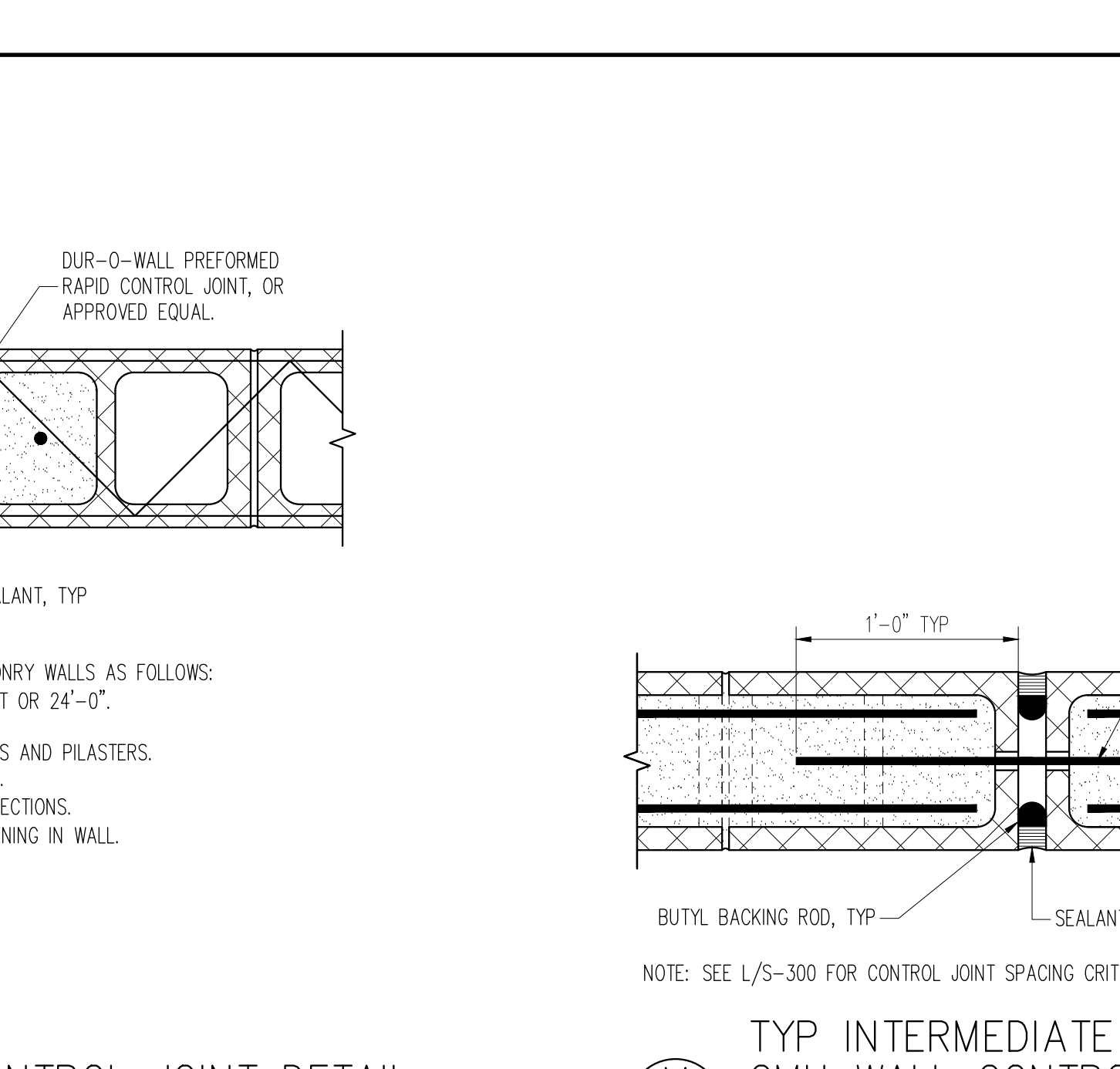


D TYPICAL STEPPED FOOTING DETAIL
S-300 NTS

TABLE 1.2
TENSION LAP SPlice LENGTHS (CLASS B MINIMUM)
1 1/2" COVER (IN)

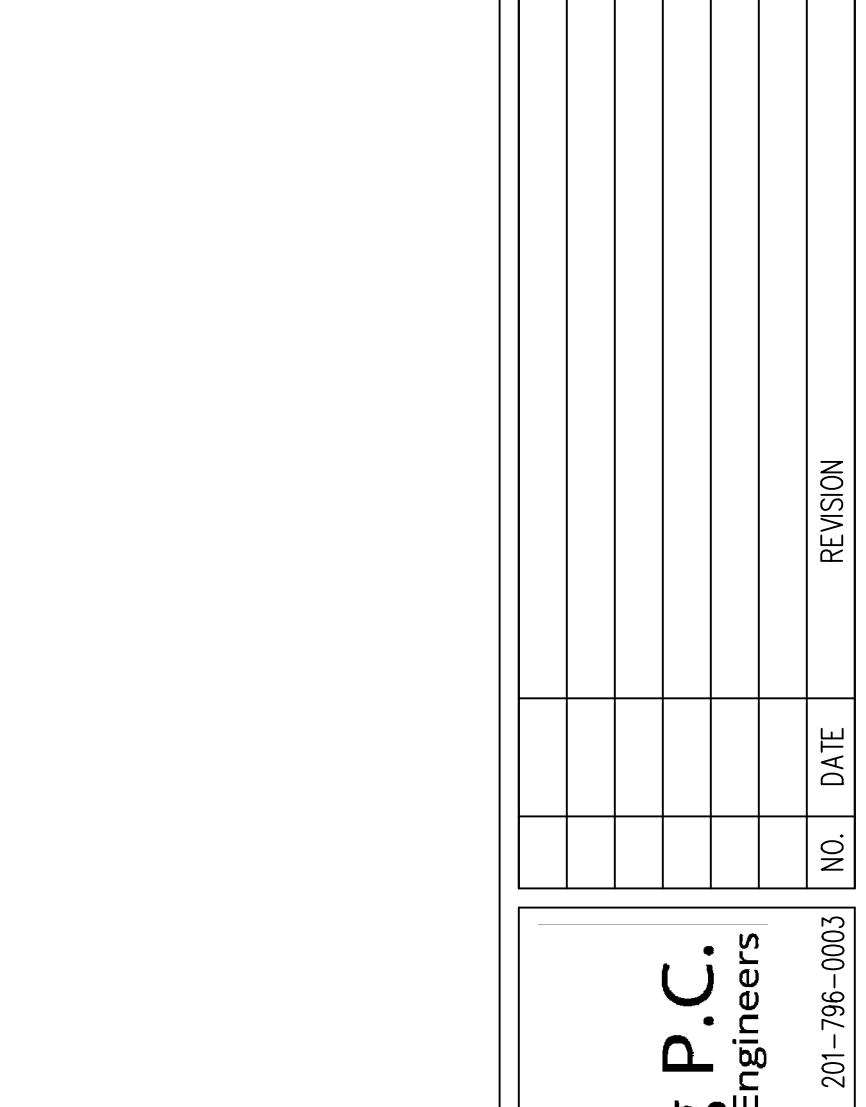
BAR	#3	#4	#5	#6	#7	#8	#9	#10	#11
3,000	13	18	22	26	43	54	66	81	121
4,000	12	15	19	23	37	47	58	70	105
5,000	12	15	19	23	33	42	52	63	94
6,000	12	15	19	23	30	38	47	58	86
7,000	12	15	19	23	28	35	44	53	79
8,000	12	15	19	23	27	33	41	50	74
9,000	12	15	19	23	27	31	39	47	70
≥10,000	12	15	19	23	27	30	37	45	66

- TABLE 1.1-1.2 NOTES:
- TABLES 1.1-1.2 CONFORM TO ACI 318. TABULATED VALUES ASSUME UNCOATED REINFORCEMENT AND NORMAL WEIGHT CONCRETE (144-150PCF).
 - LENGTHS TABULATED MUST BE MULTIPLIED BY THE FOLLOWING MODIFICATION FACTORS:
 - TOP BARS 1.3
("TOP" IS DEFINED BY ACI 318 AS HORIZONTAL BARS HAVING MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BAR).
 - LIGHTWEIGHT CONCRETE 1.3
 - EPOXY-COATED BARS:
 - BARS WITH COVER < 3db, OR WITH CLEAR SPACING < 6db 1.5 FOR BOTTOM & VERTICAL BARS. 1.3 FOR "TOP" BARS.*
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 - LAP SPLICES ARE NOT PERMITTED FOR #14 AND #18. USE MECHANICAL CONNECTIONS OR WELDED SPLICES. LAP SPLICES OF #14 AND #18 BARS TO #11 AND SMALLER BARS ARE PERMITTED.



L TYP CMU WALL CONTROL JOINT DETAIL
S-300 NTS

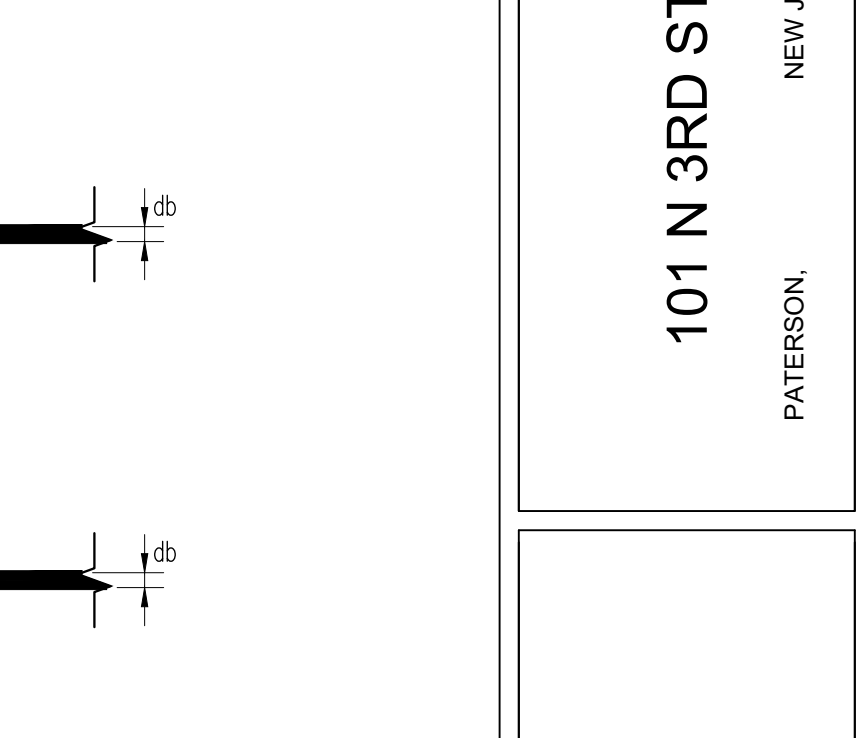
M TYP INTERMEDIATE BOND BEAM CMU WALL CONTROL JOINT DETAIL
S-300 NTS



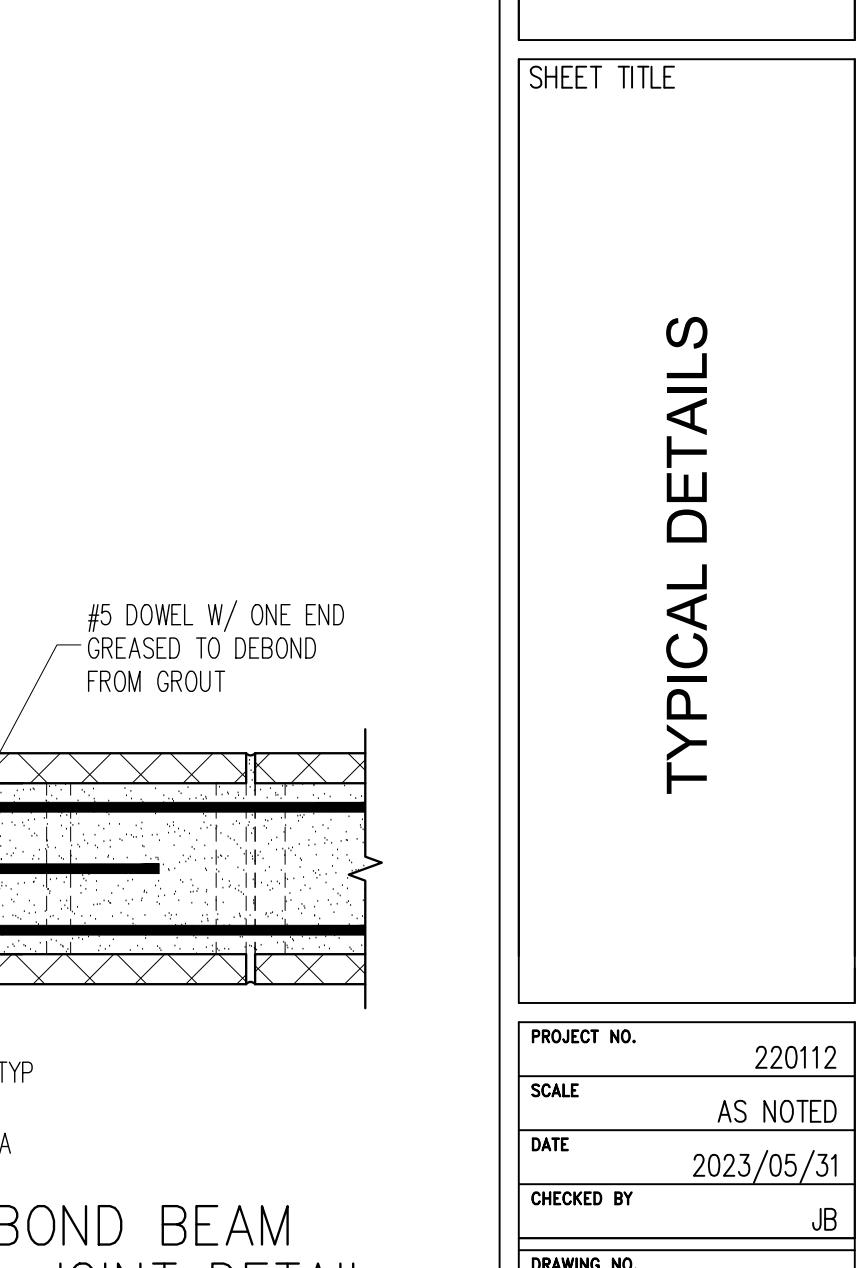
D TYPICAL STEPPED FOOTING DETAIL
S-300 NTS

TABLE 3
END HOOK LENGTHS (IN)

BAR	D	A or G	J	A or G
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/2	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 1/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	30 1/2	41



L TYP CMU WALL CONTROL JOINT DETAIL
S-300 NTS



L TYP CMU WALL CONTROL JOINT DETAIL
S-300 NTS

M TYP INTERMEDIATE BOND BEAM CMU WALL CONTROL JOINT DETAIL
S-300 NTS

