

STRUCTURAL NOTES

1.0 GENERAL

THESE STRUCTURAL NOTES SUPPLEMENT THE SPECIFICATIONS, ANY DISCREPANCY FOUND AMONG THE DRAWINGS, SPECIFICATIONS, THESE NOTES, AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION.

1.1 CODES

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2021 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED AND ADOPTED BY THE STATE OF WASHINGTON AND THE CITY OF PUYYALLUP, A.C.I. 318-14; A.I.S.C. 13TH EDITION; AWS D1.1-06; A.I.T.C. 2ND EDITION; NDS 2005 AND A.I.S.I. 2001 EDITION.

1.2 DESIGN CRITERIA

A. VERTICAL LOADS

1. LIVE LOADS

- 1.1 54,000 LBS FIRE TRUCK AXEL LOAD
23,000 LBS OUTRIGGER POINT LOAD

- 1.2 UNIFORM LIVE LOAD = 100 PSF

2. DEAD LOADS

SEE SHEET S1.1 FOR SOIL HEIGHT & LOAD LIMITS ABOVE THE PRECAST PLANKS BASED ON SPECIFIED GRADING AND LID ELEVATIONS PER THE CIVIL PLANS. GRADING DEPTHS VARY PER CIVIL DWGS. THE DEPTH OF MATERIAL ABOVE THE TOP OF THE PLANKS SHALL BE A MINIMUM OF 2'-6", BUT SHALL NOT EXCEED 11'-0".

B. LATERAL LOADS (SOIL) SEE SECTION 2.1

1.3 SHOP DRAWINGS

SUBMIT SUFFICIENT COPIES OF SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR THE FOLLOWING:

- 1. REINFORCING STEEL
- 2. PRECAST CONCRETE PLANKS

DO NOT FABRICATE PRIOR TO ARCHITECT'S/ENGINEER'S APPROVAL. ALL SHOP DRAWINGS SUBMITTED TO THE ENGINEER SHALL BEAR THE STAMPED APPROVAL OF THE CONTRACTOR. SHOP DRAWING APPROVAL BY BEYLER CONSULTING ENGINEERS SHALL NOT IMPLY THAT THE PROJECT MAY BE BUILT FROM THE SHOP DRAWINGS. RATHER, THE PROJECT PLANS SHALL BE USED FOR CONSTRUCTION. ALL PERMANENT BRACING FOR TRUSSES SHALL BE DETAILED AND DESIGNED BY THE TRUSS SUPPLIER. CONTRACTOR SHALL REVIEW SHOP DRAWINGS AND STAMP INDICATING THIS PRIOR TO REVIEW BY ENGINEER OF RECORD.

2.0 SITE WORK

2.1 SOIL (GEOTECHNICAL REPORT BY GEORESOURCES, LLC DATED FEBRUARY 10, 2022 & EMAIL ADJUSTMENTS DATED SEPTEMBER 19, 2024)

ALLOWABLE SOIL BEARING = 5,500 PSF (MIN 20 FEET BELOW FINISHED GRADE)

AT REST EQUIVALENT FLUID PRESSURE = 55 PCF ABOVE GROUNDWATER
= 90 PCF BELOW GROUNDWATER

PASSIVE EQUIVALENT FLUID PRESSURE = 300 PCF
FRICTION = 0.35

2.2 EXCAVATION - (PER GEOTECHNICAL ENGINEER)

EXCAVATE FOR FOOTINGS DOWN TO DEPTH SHOWN ON DRAWINGS OR TO FIRM UNDISTURBED MATERIAL. AREAS OVER-EXCAVATED SHALL BE BACKFILLED WITH LEAN CONCRETE ($f_c = 2,000$ PSI), OR BE STRUCTURALLY FILLED PER SECTION 2.3 AND SHALL BE AT THE CONTRACTOR'S EXPENSE.

2.3 BACKFILL AND COMPACTION - (PER GEOTECHNICAL ENGINEER)

BACKFILL SHALL NOT BE PLACED UNTIL AFTER THE REMOVAL OF ALL FORMS, SCREEDS, OTHER WOOD DEBRIS AND MATERIAL SUBJECT TO ROT OR CORROSION. USE ONLY MATERIALS APPROVED FOR BACKFILL. IN AREAS UNDER SLABS OR FOOTINGS, MATERIAL SHOULD BE GRANULAR IN NATURE, PLACED IN 12-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO COMPACTION TEST, PROCEDURE T-180. THE FILL SHOULD BE LIMITED TO CLEAN, GRANULAR MATERIAL.

3.0 CONCRETE

3.1 GENERAL

NORMAL WEIGHT CONCRETE MEETING THE REQUIREMENTS OF ACI 301 ESTABLISH PROPORTIONS OF CEMENT, COARSE AND FINE AGGREGATES, WATER, AND ADMIXTURES TO PRODUCE THE PROPERTIES SPECIFIED FOR EACH CONCRETE MIX TYPE PER ACI-301 ON THE BASIS OF PREVIOUS FIELD EXPERIENCE OR TRIAL BATCHES. USE ADMIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. USE AMOUNTS OF WATER-REDUCING ADMIXTURE THAT WILL PERMIT PLACING WITHOUT SEGREGATION, HONEYCOMBING OR ROCK POCKETS. THE SLUMPS SPECIFIED ARE THE SLUMPS REQUIRED AT THE POINT OF PLACEMENT INTO THE STRUCTURE. USE INTERIOR MECHANICAL VIBRATORS WITH 7000 RPM MINIMUM FREQUENCY. DO NOT OVER-VIBRATE. DO NOT MOVE THE CONCRETE HORIZONTALLY USING THE VIBRATOR. CONCRETE SHALL BE Poured MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE HOT OR COLD TEMPERATURES FOR SEVEN DAYS AFTER POURING. PROVIDE ENGINEER WITH PROPOSED CONSTRUCTION OR CONTROL JOINT LOCATIONS FOR HIS APPROVAL, OR USE JOINTS AS SHOWN ON THE DRAWINGS. ALL REINFORCEMENT TIE WIRES AND FORM ANCHORS SHALL BE CUT OFF FLUSH WITH THE SURFACE; SURFACES WHERE EXPOSED SHALL BE SMOOTH AND FREE FROM IRREGULARITIES.

3.2 STRENGTH

DESIGN MIXES TO PROVIDE NORMAL WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES:

APPLICATION	STRENGTH f_c (PSI)	MAX W/C RATIO
FOOTINGS / SLABS ON GRADE	3,000	0.48
DETENTION VAULT WALLS	4,000	0.45

ANY OF THE ABOVE MIXES CAN BE USED FLOWABLE (8" TO 11" SLUMP) IF THE PROPER ADDITION OF ADMIXTURES IS INCLUDED AND THE W/C RATIO IS NOT INCREASED.

3.3 MATERIAL - CEMENT, WATER & AGGREGATES PER ACI 301

- A. CEMENT MUST CONFORM TO ASTM C-150, TYPE I OR TYPE II. ENGINEER'S APPROVAL IS REQUIRED FOR USE OF TYPE III CEMENT.
- B. WATER TO BE CLEAN AND POTABLE.
- C. COARSE AND FINE AGGREGATES TO CONFORM TO ASTM-C33.

3.4 MATERIALS

- A. WATER REDUCING ADMIXTURES: CONCRETE USING POZZOLITH ADMIXTURES TO PRODUCE FLOWABLE CONCRETE MAY BE USED WITH THE ENGINEER'S APPROVAL AND MUST CONFORM TO ASTM-C494; POZZOLITH POLYHEED, POZZOLITH 100XR, OR POZZOTECH 20. POZZOLITH SHALL BE INCORPORATED INTO ALL CONCRETE IN EXACT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADMIXTURES AND DOSAGES WILL VARY DEPENDING ON CLIMATIC CONDITIONS AND THE CONTRACTOR'S JOBSITE REQUIREMENTS. MAXIMUM SLUMP FOR SUCH CONCRETE SHALL NOT EXCEED 8" WITH A MINIMUM OF 10 OUNCES OF POLYHEED PER 100 OUNCES OF CEMENT. USE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- B. AIR ENTRAINMENT: CONFORM TO ASTM-C260 AND ASTM-C494, MBVR OR MICRO-AIR BY MASTER BUILDER. NO AIR ENTRAINMENT IN COLUMNS WITHOUT PRIOR WRITTEN PERMISSION BY ENGINEER OF RECORD. ENTRAIN 5% +/- 1% AIR BY VOLUME IN ALL EXPOSED CONCRETE.
- C. OTHER ADMIXTURE: NO OTHER ADMIXTURES PERMITTED UNLESS PRIOR APPROVAL IS GIVEN BY THE ENGINEER. NO ADMIXTURES CONTAINING CHLORIDES ARE PERMITTED.

3.5 REINFORCING STEEL

DETAIL, FABRICATE AND PLACE PER ACI-315 AND ACI-318. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.

- A. STEEL REINFORCEMENT SHALL BE NEW, DEFORMED BILLET STEEL, MEETING ASTM STANDARD A-615, GRADE 60 FOR #3 AND LARGER BARS UNLESS NOTED OTHERWISE ON THE PLANS. SHOP DRAWINGS SHALL BE MARKED ACCORDINGLY AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. GRADE 60 REBARS SHALL NOT BE BENT IN FIELD AFTER CONCRETE PLACEMENT. ALL BENDS SHALL BE PER ACI.
- B. REINFORCEMENT IN ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS OR CORNER BARS PROVIDED, BOTH VERTICAL AND HORIZONTAL.
- C. LAPS: ALL TENSION SPLICES ARE ACCORDING TO ACI 318, (SEE DETAIL 3/S3.0) AND ALL COMPRESSION SPLICES ARE 30 DIAMETERS FOR f_c GREATER THAN 3000 PSI AND 40 DIAMETERS FOR f_c LESS THAN 3000 PSI. ALL OTHER LAPS SHALL BE 12" MIN.
- D. WELDING: TACK WELDING OF REBAR IS NOT PERMITTED UNLESS CALLED FOR AND APPROVED BY THE ENGINEER.
- E. MINIMUM REINFORCING: WHERE REINFORCEMENT IS NOT SHOWN ON THE DRAWINGS, THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) SHALL BE REFERRED TO FOR PROPER REINFORCEMENT.
- F. REBAR COVER: PROVIDE CONCRETE PROTECTION FOR REINFORCEMENT AS FOLLOWS:

COVER	CONDITION
3"	CONCRETE DEPOSITED AGAINST EARTH
2"	CONCRETE DEPOSITED AGAINST FORMS BUT EXPOSED TO EARTH OR WEATHER
1-1/2"	MAIN REINFORCING IN BEAMS
1-1/2"	FOR BARS IN SLABS ON GROUND
1-1/2"	FOR BARS IN SLABS ON FORMS

- G. WELDED WIRE FABRIC: ASTM-A185 AND ASTM-A82
- H. DEFORMED BAR ANCHORS: ASTM-A496

4.0 PRECAST CONCRETE PLANKS

PLANKS SHALL BE PROVIDED BY CONCRETE TECHNOLOGY CORPORATION OR APPROVED EQUAL. CONCRETE PLANK DESIGN INCLUDING STRENGTHS, PRESTRESSING, AGGREGATES, PLANK DIMENSIONS AND DETAILS, SHALL BE BY THE MANUFACTURER. REVIEW OF SUCH DESIGN AND SHOP DRAWINGS BY THE ENGINEER OF RECORD SHALL BE MADE DURING THE SHOP DRAWING REVIEW PROCESS PRIOR TO CONSTRUCTION. THE MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS FOR ALL PLANKS AND CONDITIONS SHOWN ON THE DRAWINGS. CALCULATIONS SHALL BE STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON. SEE SECTION 1.1 FOR DESIGN LOADING CONDITIONS.

5.0 HYDROSTATIC FORCES - DETENTION VAULT

SEASONAL HIGH WATER TABLES AND UPWARD NET BUOYANCY FORCES ARE EXPECTED. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING REQUIRED DURING CONSTRUCTION AND SHALL REMAIN IN EFFECT UNTIL AFTER THE FINAL GRADE MATERIALS ARE PLACED ABOVE THE PLANKS.

6.0 SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1702 AND 1704 OF THE 2018 IBC AND ARE REQUIRED DURING THE FOLLOWING:

- A. THE EXCAVATION OF FOOTINGS PRIOR TO CONCRETE PLACEMENT.
- B. THE PLACEMENT OF REINFORCING STEEL, OF ALL STRUCTURAL FOOTINGS, WALLS, SLABS AND APPENDAGES.
- C. THE TAKING OF CONCRETE TEST SPECIMENS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE A SCHEDULE OF REQUIRED INSPECTIONS AND SHALL SUBMIT THIS SCHEDULE TO THE ARCHITECT AND ENGINEER FOR APPROVAL.

7.0 MISCELLANEOUS

VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO PROCEEDING. PROVIDE ERECTION BRACING AS NECESSARY UNTIL PERMANENT SUPPORT AND STIFFNESS ARE INSTALLED. REFER TO ARCHITECTURAL PLANS FOR WALL OPENINGS, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR SIZE AND LOCATION OF ALL OPENINGS FOR DUCTS, PIPES, CONDUITS, ETC., NOT SHOWN.

Update code reference to 2021 Washington State Building Code

(Structural Plans, Sheet S1.0)

CONTRACTOR NOTE

All required special inspection reports shall be presented at time of inspection by the City of Puyallup

ABBREVIATIONS

AB.	ANCHOR BOLT	I.D.	INSIDE DIAMETER
AGGR.	AGGREGATE	INSUL.	INSULATION
ALT.	ALTERNATE	INT.	INTERIOR
APPROX.	APPROXIMATE	JNT.	JOINT
ARCH.	ARCHITECTURAL	JST.	JOIST
ASBP	ALLOWABLE SOIL BEARING PRESSURE	MAX.	MAXIMUM
		MFR.	MANUFACTURER
BD.	BOARD	MIN.	MINIMUM
BLDG.	BUILDING	MISC.	MISCELLANEOUS
BLK	BLOCK	M.O.	MASONRY OPENING
BLK'G.	BLOCKING	MTL.	METAL
BM.	BEAM	NO.	NUMBER
BOT.	BOTTOM	N.T.S.	NOT TO SCALE
BTWN.	BETWEEN		
C.J.	CONSTRUCTION JT		
CLR.	CLEAR	O.C.	ON CENTER
C.M.U.	CONCRETE MASONRY UNIT	O.D.	OUTSIDE DIAMETER
COL.	COLUMN	OH.	OVERHEAD
CONC.	CONCRETE	OPG.	OPENING
CONN.	CONNECTION	OPP.	OPPOSITE
CONSTR.	CONSTRUCTION	PCT.	PRE-CAST
CONT.	CONTINUOUS	P.L.	PROPERTY LINE
		PLYWD.	PLYWOOD
DEG.	DEGREE		
DET./DTL.	DETAIL	R.D.	ROOF DRAIN
DIAG.	DIAGONAL	RE.	REFER TO ...
DIA.	DIAMETER	REIN.	REINFORCED
DN.	DOWN	REQ'D.	REQUIRED
DWG.	DRAWING	RM	ROOM
(E)	EXISTING	R.O.	ROUGH OPENING
E.A.	EACH		
E.J.	EXPANSION JOINT	SCHED.	SCHEDULE
E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM	SECT.	SECTION
EL. ELEV.	ELEVATION	S.F.	SQUARE FOOT
ELEV.	ELEVATION	SHT.	SHEET
EQ.	EQUAL	SIM.	SIMILAR
EQUIP.	EQUIPMENT	SPEC.	SPECIFICATION
E.W.	EACH WAY	SQ. OR Φ	SQUARE
EXP.	EXPANSION	S.S.	STAINLESS STEEL
EXT.	EXTERIOR	STAGG.	STAGGERED
		STD.	STANDARD
F.D.	FLOOR DRAIN	STIFF	STIFFENER
FDN.	FOUNDATION	STL.	STEEL
F.F.	FINISH FLOOR	STRUC.	STRUCTURAL
FIN.	FINISH		
FLR.	FLOOR	TR	TREAD
FND.	FOUNDATION	T & B	TOP AND BOTTOM
F.O.B.	FACE OF BRICK	T & G	TONQUE & GROOVE
F.O.C.	FACE OF CONCRETE	THK.	THICK
F.S.	FULL SIZE		
FT.	FOOT OR FEET	TOS	TOP OF SLAB
FTG.	FOOTING	TOW	TOP OF WALL
FURR.	FURRING	T/	TOP OF
		TYP.	TYPICAL
GA.	GAUGE		
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GR.	GRADE		
GYP.	GYP SUM	VER	VERIFY
GYP. BD.	GYP SUM BOARD	VERT.	VERTICAL
HT.	HEIGHT	W/	WITH
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	W/O	WITHOUT
		\square	CENTERLINE
		\square	PLATE

Sheet Index

Sheet	Sheet Contents	Revision *
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S2.2	Foundation & Plank Layout Plan - Vault 4	
S3.0	Typical Concrete Details	
S3.1	Typical Plank Details	
S3.2	Typical Vault Access Details	
TOTAL NUMBER OF SHEETS		8
* LATEST INDIVIDUAL SHEET REVISION ISSUED		

PROJECT NO. : 23-007
DESIGNED BY : MRO
DRAWN BY : RSO
ISSUE DATE : 8-16-24
LATEST REV. OF DWG. SET :

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION
THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.

S1.0

Bradley Heights Apartments
Detention Vaults 2, 3, & 4
202 27th Ave SE
Puyallup, Washington

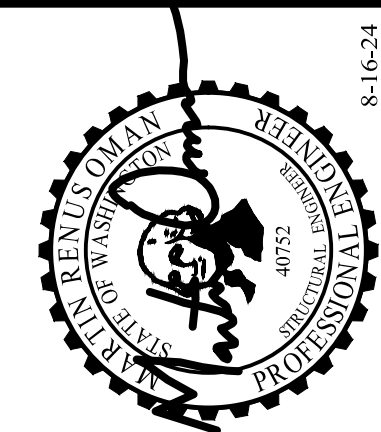
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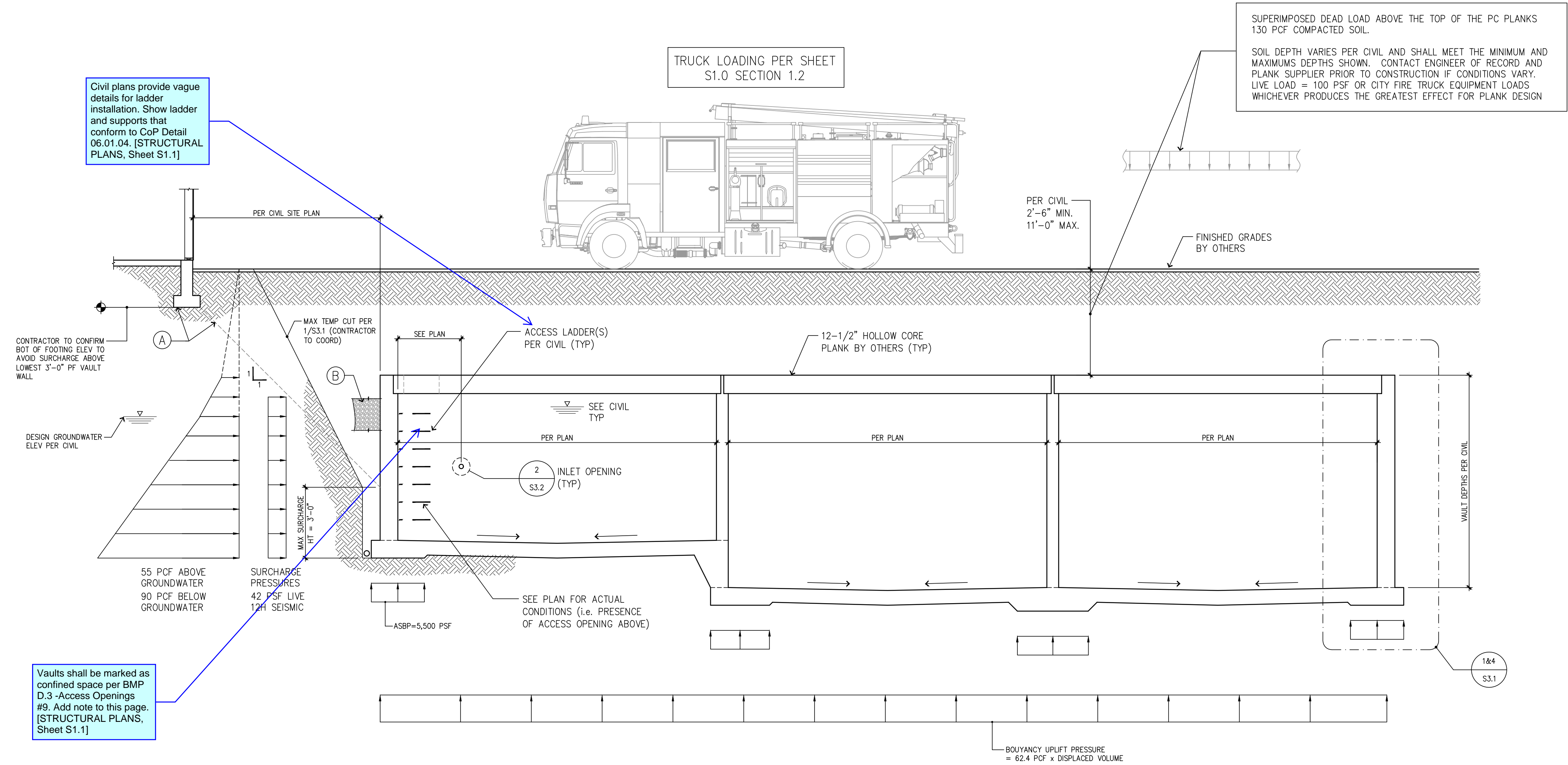
Revisions to this sheet:



THOMAS L. CHASE, PE
MARTIN R. OMAN, PE, SE
OLEG G. KONDRATYUK, PE

8-16-24

- (A) TEMPORARY SLOPES PER SOILS ENGINEER. SEE DETAIL 10/S3.1 FOR EXCAVATION NOTES AND MINIMUM BUILDING OFFSETS.
- (B) COMPLETION OF BACKFILL SHALL NOT BEGIN UNTIL AFTER PLANKS ARE PLACED AND GROUTED PER SECTION 1/S3.1 METHODS AND MATERIALS SHALL BE COORDINATED BETWEEN THE SOILS ENGINEER AND THE CONTRACTOR AND SHALL NOT RESULT IN OUT OF PLANE PRESSURES EXCEEDING THE LIMITS NOTED.
- (C) DE-WATERING REQUIRED DURING CONSTRUCTION SHALL REMAIN UNTIL FINAL GRADE MATERIAL HAS BEEN PLACED ABOVE THE PLANKS.



Civil plans provide vague details for ladder installation. Show ladder and supports that conform to CoP Detail 06.01.04. [STRUCTURAL PLANS, Sheet S1.1]

Vaults shall be marked as confined space per BMP D.3 -Access Openings #9. Add note to this page. [STRUCTURAL PLANS, Sheet S1.1]

Vault Design Loading

Revisions to this sheet:

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THOMAS L. CHASE, PE
 MARTIN R. OMAN, PE, SE
 OLEG G. KONDRATYUK, PE
 8-16-24

Plank Framing Notes - Vault 2

1. TOW = TOP OF WALL ELEVATION (ALSO BOTTOM OF PLANKS) = 381.07'
2. TOF = VARIES SEE CIVIL
3. TOP OF VAULT FRAMING TYPICALLY CONSISTS OF SIMPLE SPAN 12-1/2" PRECAST PRE-STRESSED HOLLOW CORE PLANKS TO BE DESIGNED BY OTHERS TO CARRY ALL DESIGN LOADS AS SHOWN ON SHEET S1.1
4. FLOOR PLANK LOCATIONS ARE SCHEMATICALLY SHOWN ON THE PLANS. IT IS NOT THE INTENT OF THE STRUCTURAL PLANS TO GRAPHICALLY LOCATE ALL FRAMING MEMBERS. THE CONTRACTOR IS RESPONSIBLE FOR SPACING FRAMING MEMBERS AS NOTED ON THE PLANS AND GENERATING MEMBER LAYOUTS FOR SHOP DRAWINGS AND QUANTITY TAKEOFFS.
5. REFER TO SHEET S3.1 FOR TYPICAL PLANK CONNECTION DETAILS
6. CONTRACTOR SHALL VERIFY AND COORDINATE ALL OPENINGS THROUGH THE PLANK FRAMING ASSEMBLY. SEE SHEET S3.2 FOR RELATED DETAILS.
7. ALL BACKFILL SHALL NOT BEGIN UNTIL AFTER PLANKS ARE PLACED AND GROUTED. METHODS AND MATERIALS SHALL BE COORDINATED BETWEEN THE SOILS ENGINEER AND THE CONTRACTOR AND SHALL NOT RESULT IN OUT OF PLANE PRESSURES EXCEEDING THE LIMITS NOTED.
8. SEE THE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR ADDITIONAL INFORMATION.

CONTRACTOR NOTE

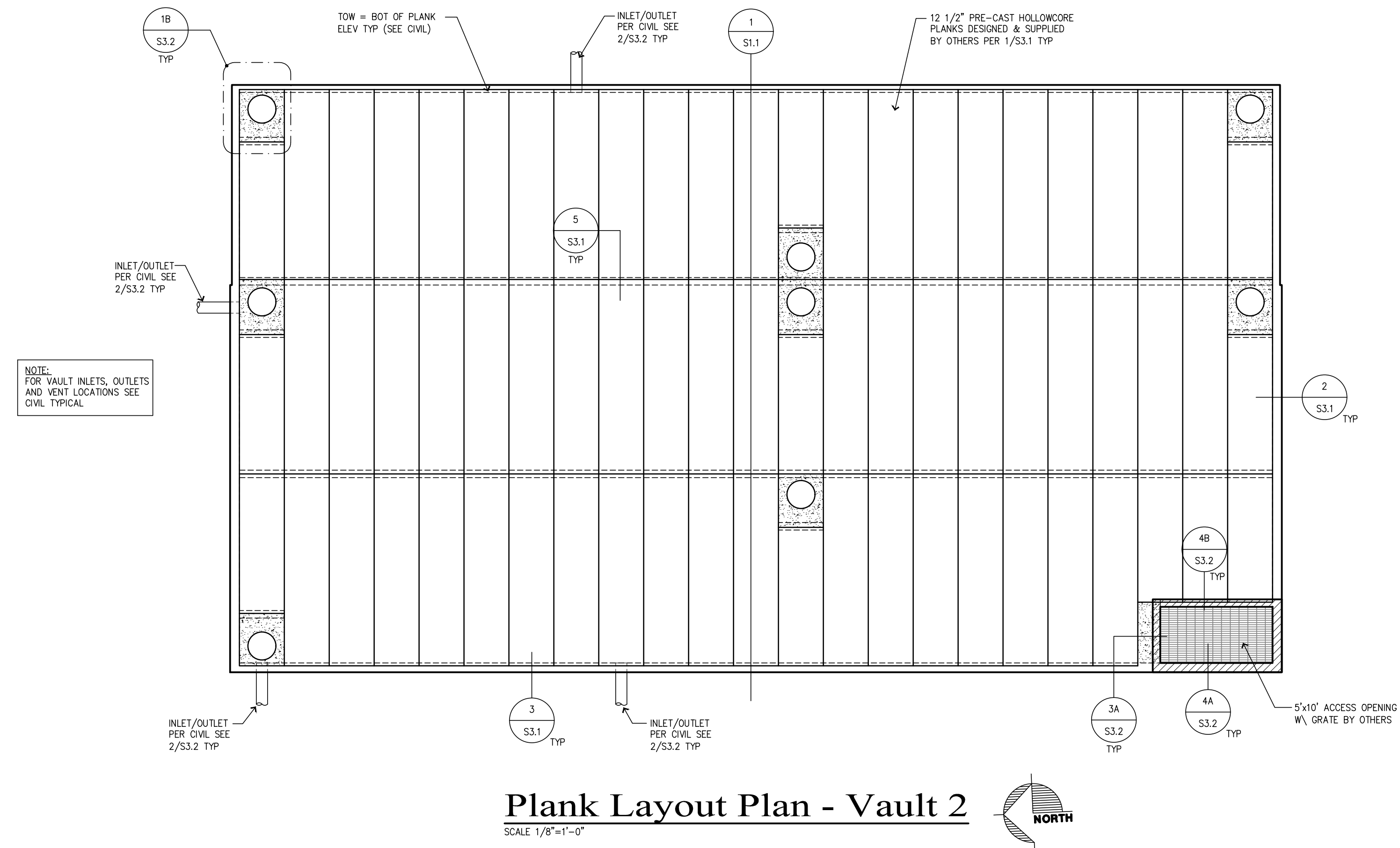
Engineer shall review and approve plank shop drawings prior to install. Engineer will provide a letter of approval of shop drawing prior to install. Engineer's letter will be present at time of inspection.

NOTE:

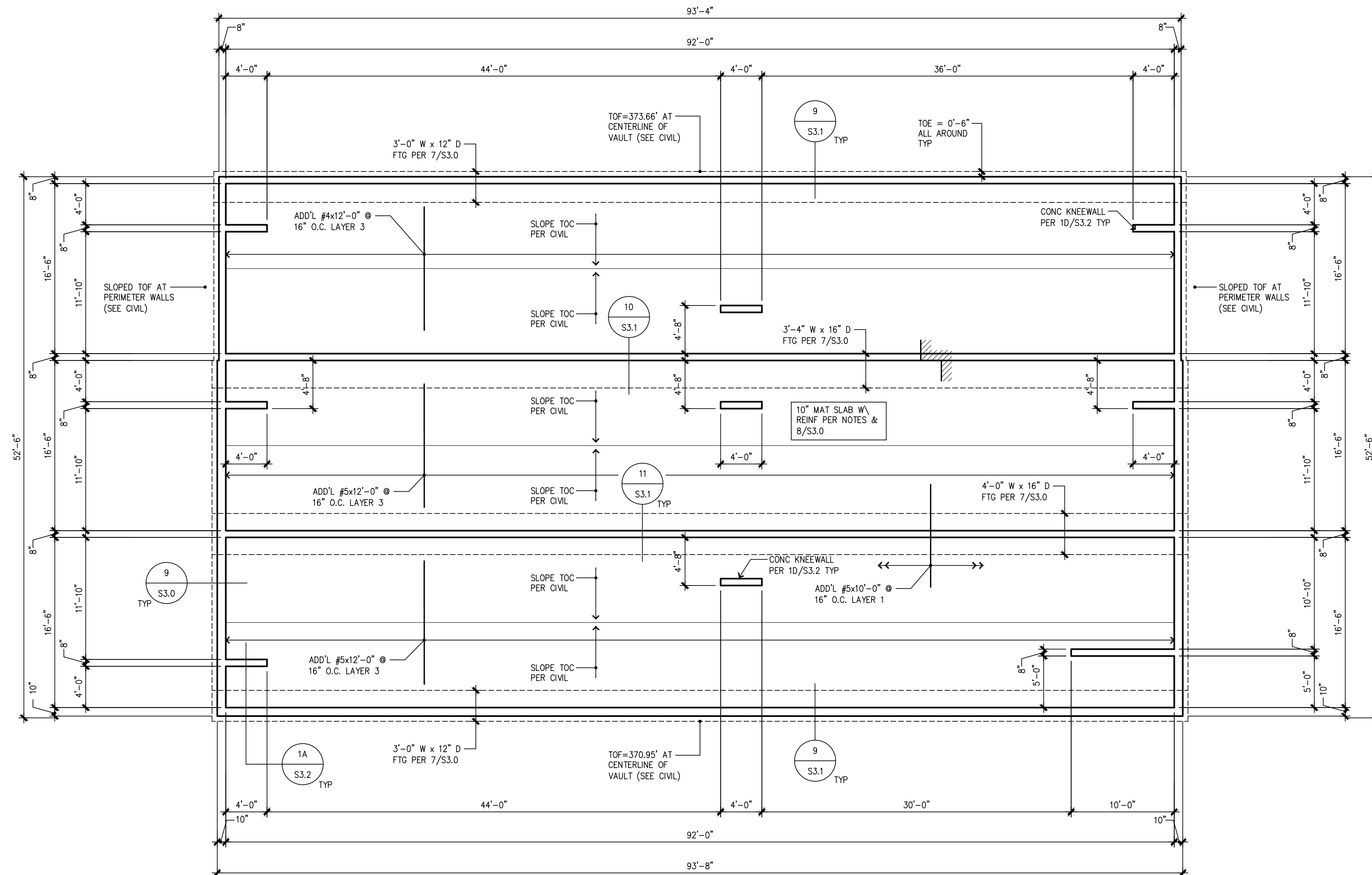
Review Geotechnical Engineering Report regarding Temporary Excavations prior to commencement of work.

Foundation Notes - Vault 2

1. TOF ELEVATIONS VARY (SEE PLAN)
2. TYPICAL DIMENSIONS ARE TO FACE OF WALL OR TO CENTERLINE OF COLUMN OR FOOTING. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT.
3. PROVIDE MAT FOOTING SUBSTRATE PREPARATION PER THE SOILS REPORT.
4. ALL FOOTING DOWELS = SAME SIZE AND SPACING AS VERT WALL REINF TYPICAL
5. 10" THICK MAT SLAB W/ #5 @ 16" O.C. EA WAY PER 8/S3.0 & ADD'L REINFORCEMENT PER PLAN TYP.
6. PROVIDE 36"x36" CORNER BARS AT ALL WALL/FOOTING INTERSECTIONS AND CORNERS TO MATCH ALL HORIZONTAL REINFORCEMENT.
7. DO NOT BACKFILL PERIMETER CONC WALLS UNTIL PLANK ASSEMBLY HAS BEEN PLACED AND GROUTED.
8. SEE THE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR ADDITIONAL INFORMATION.



Plank Layout Plan - Vault 2
SCALE 1/8"=1'-0"



Foundation Plan - Vault 2
SCALE 1/8"=1'-0"

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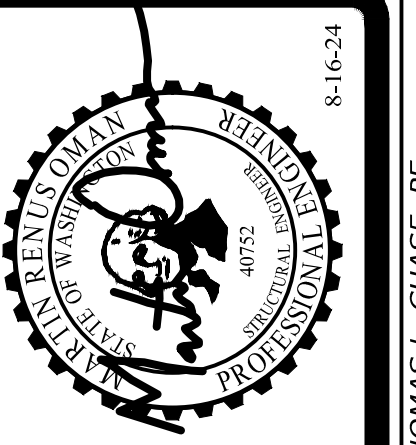
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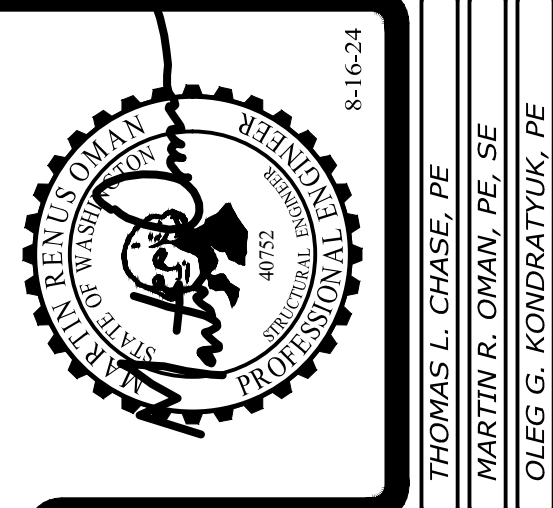
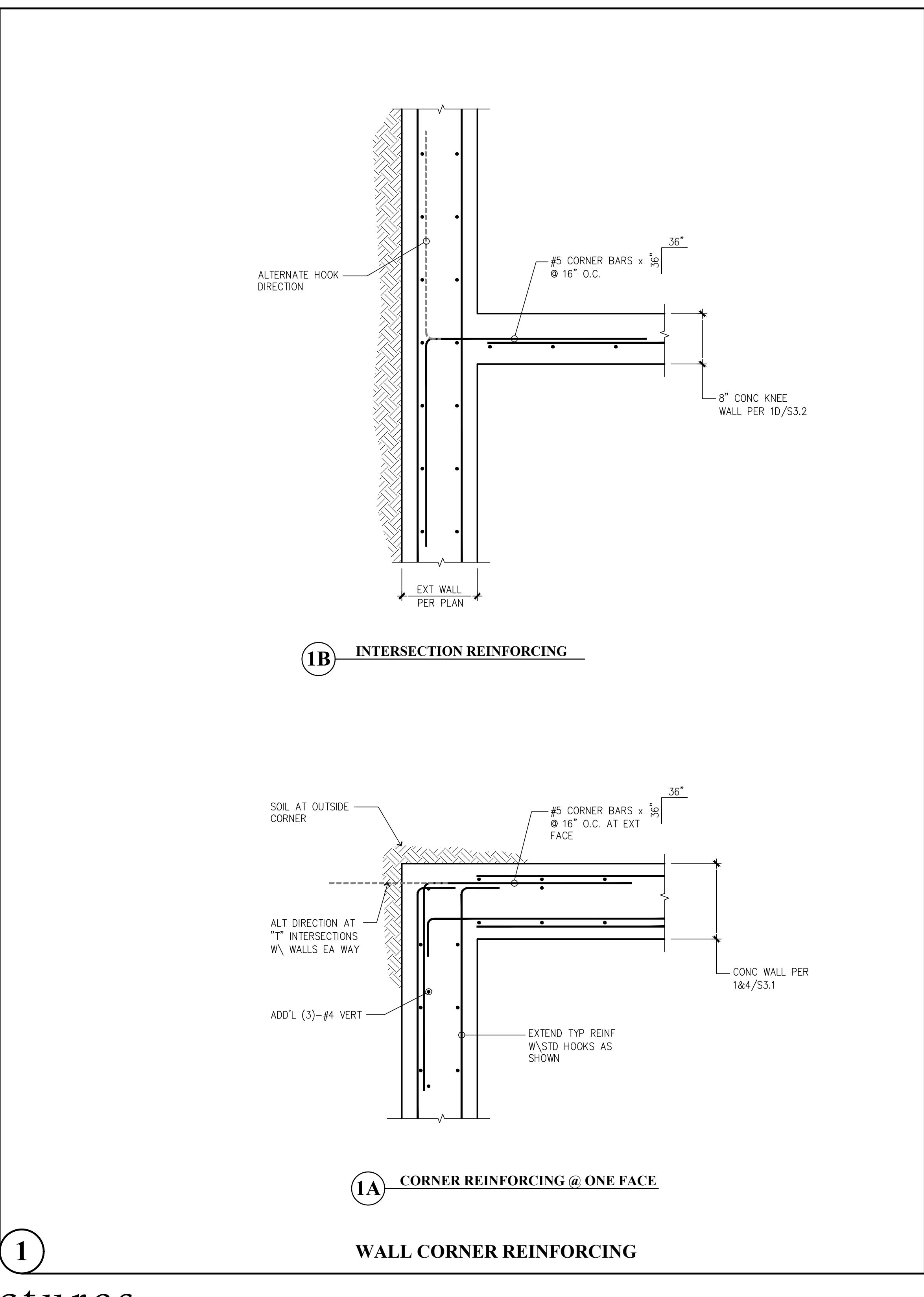
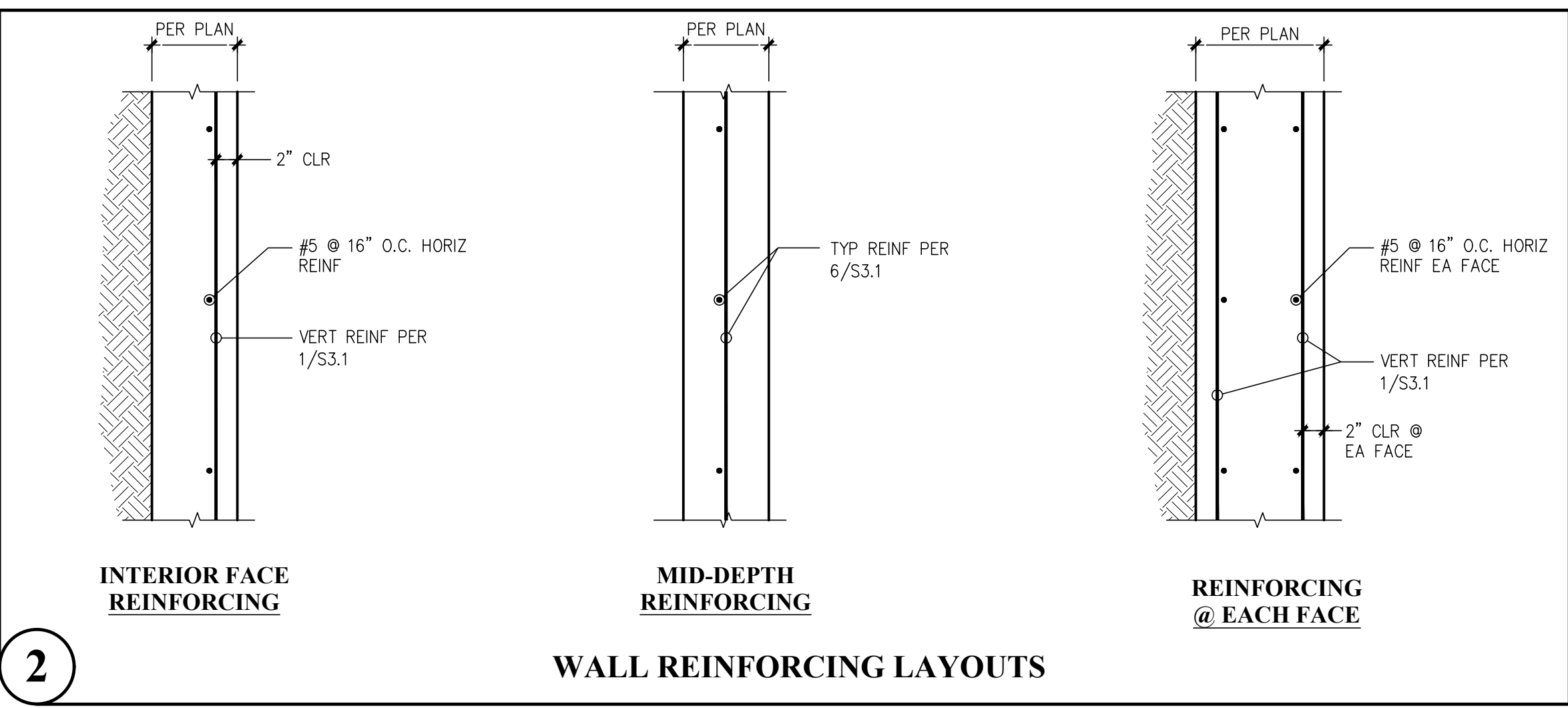
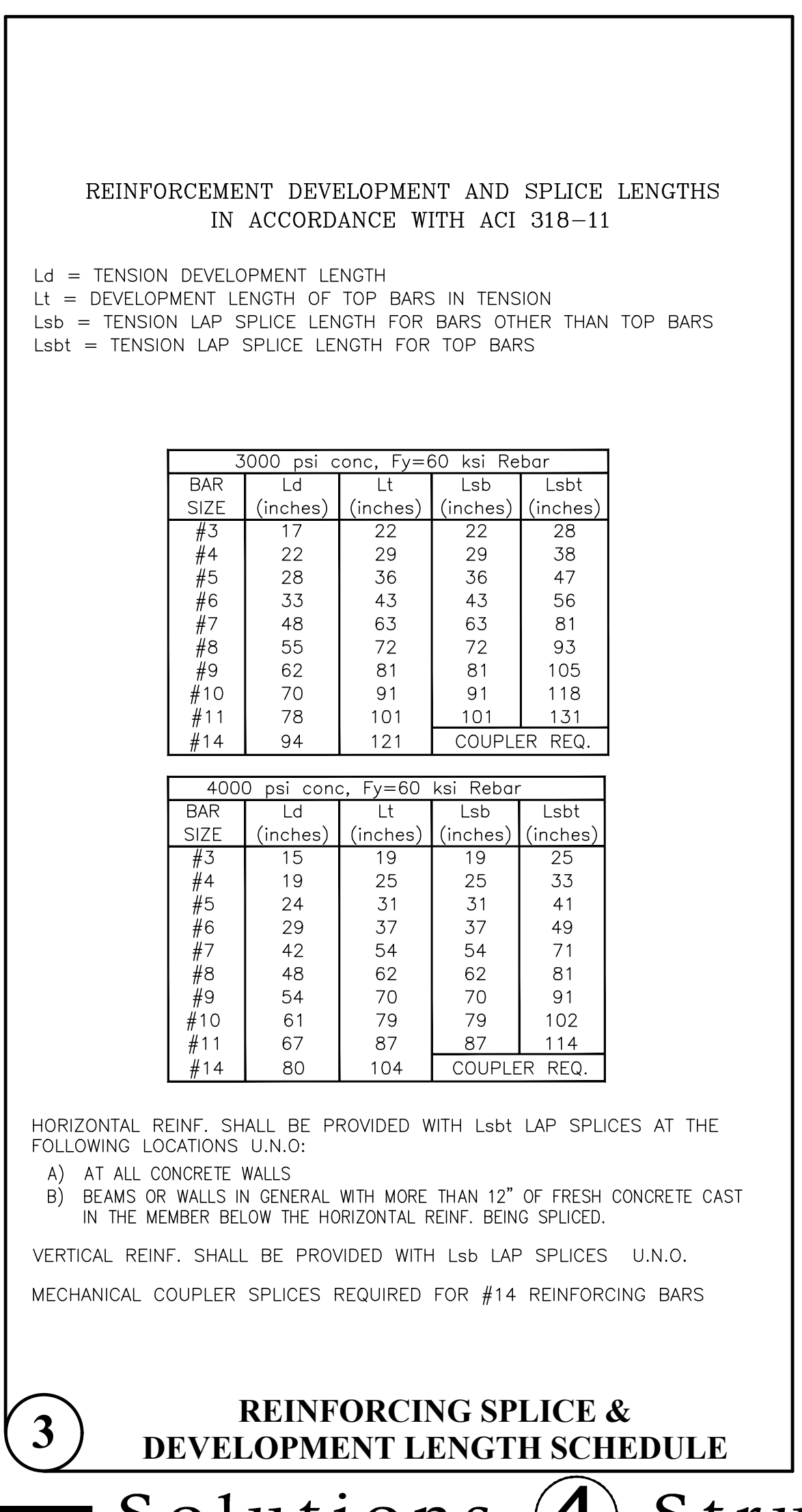
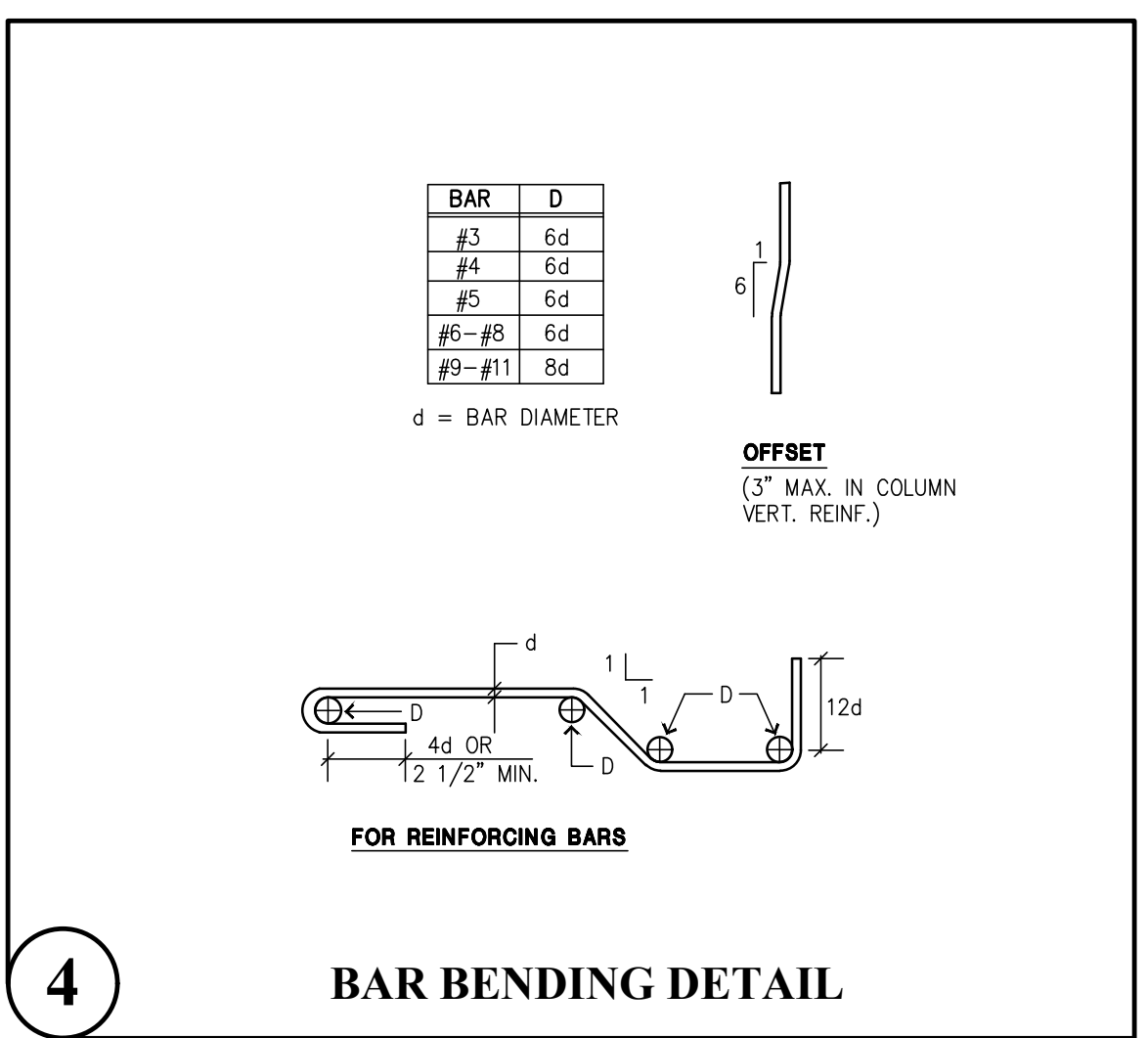
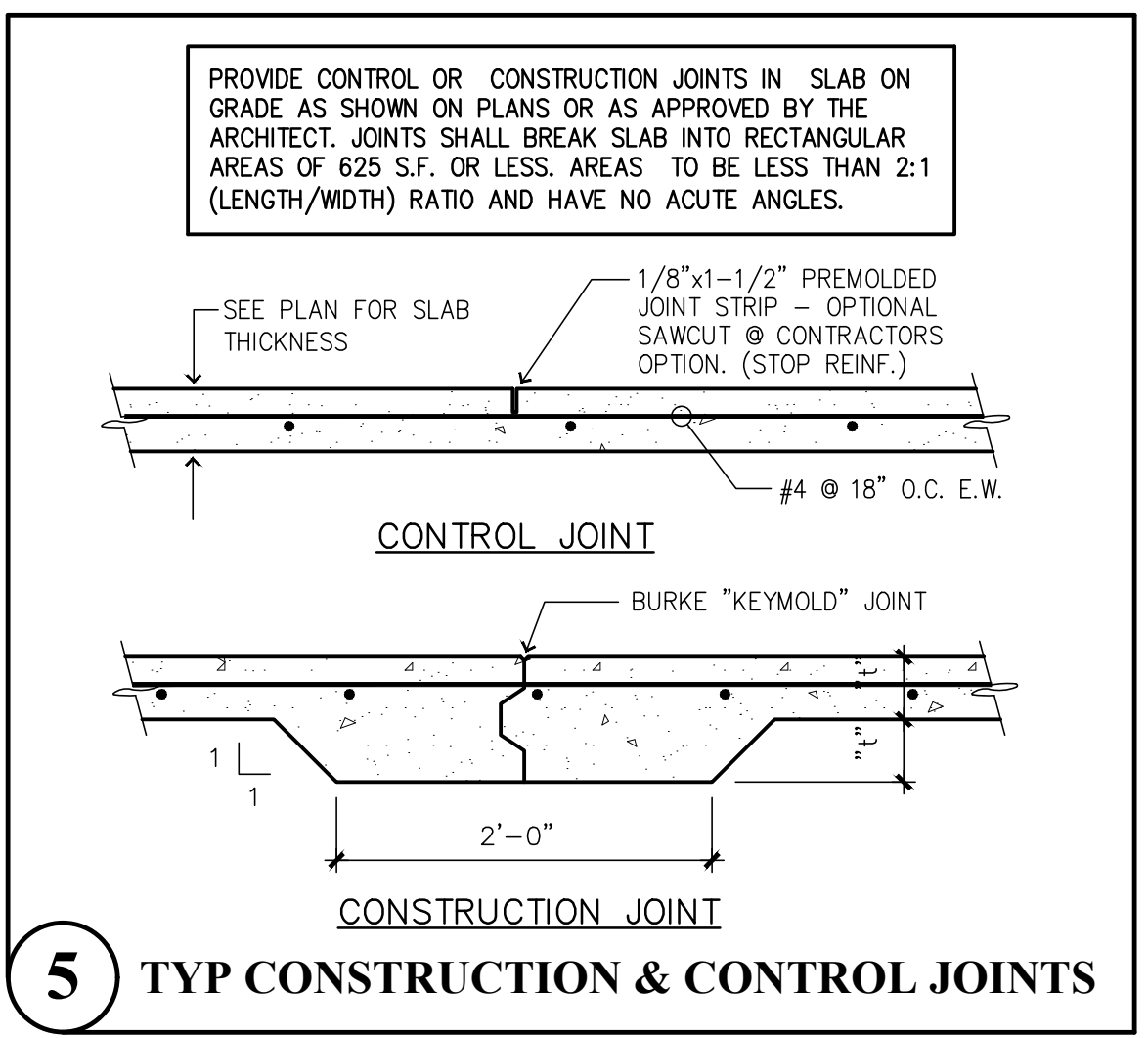
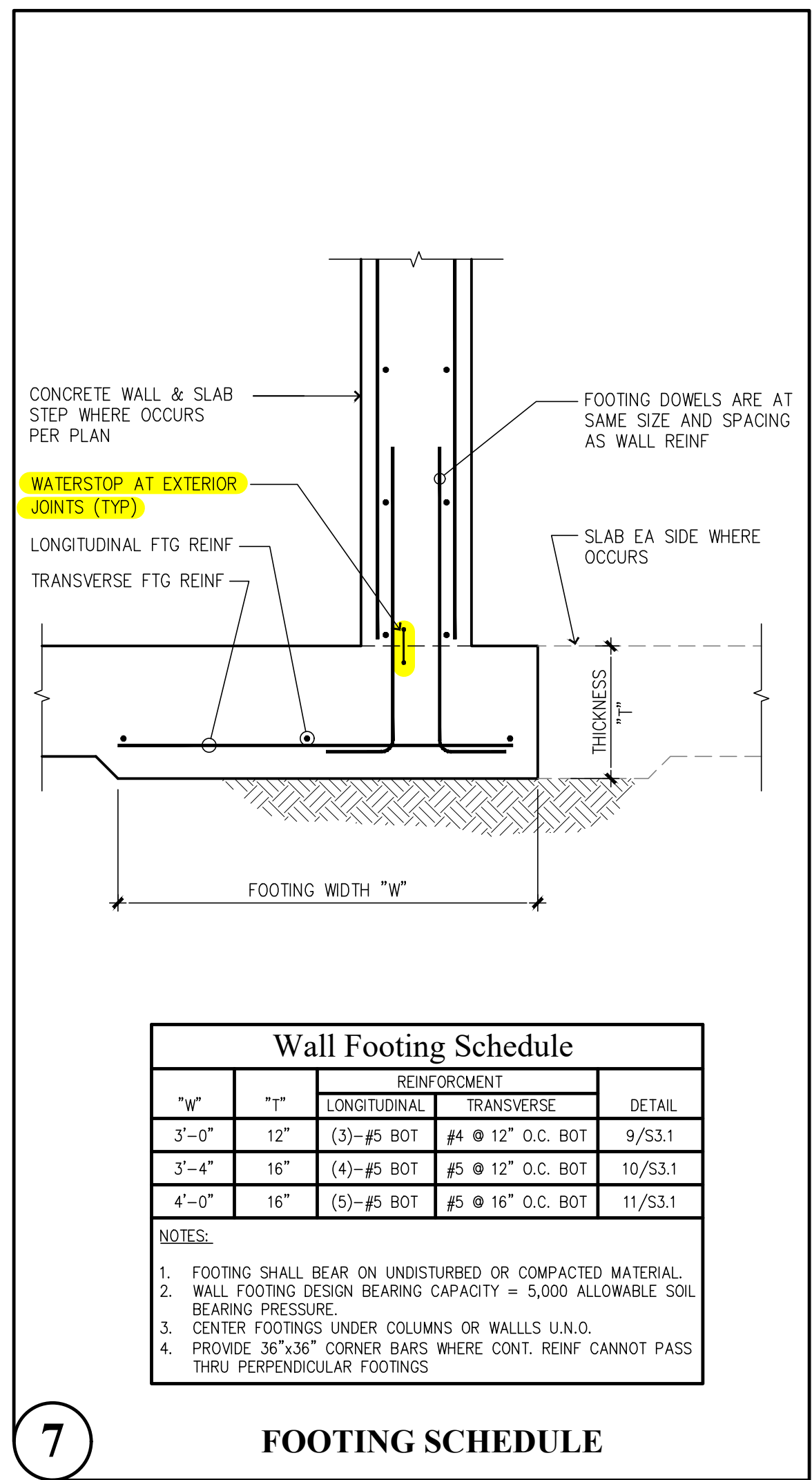
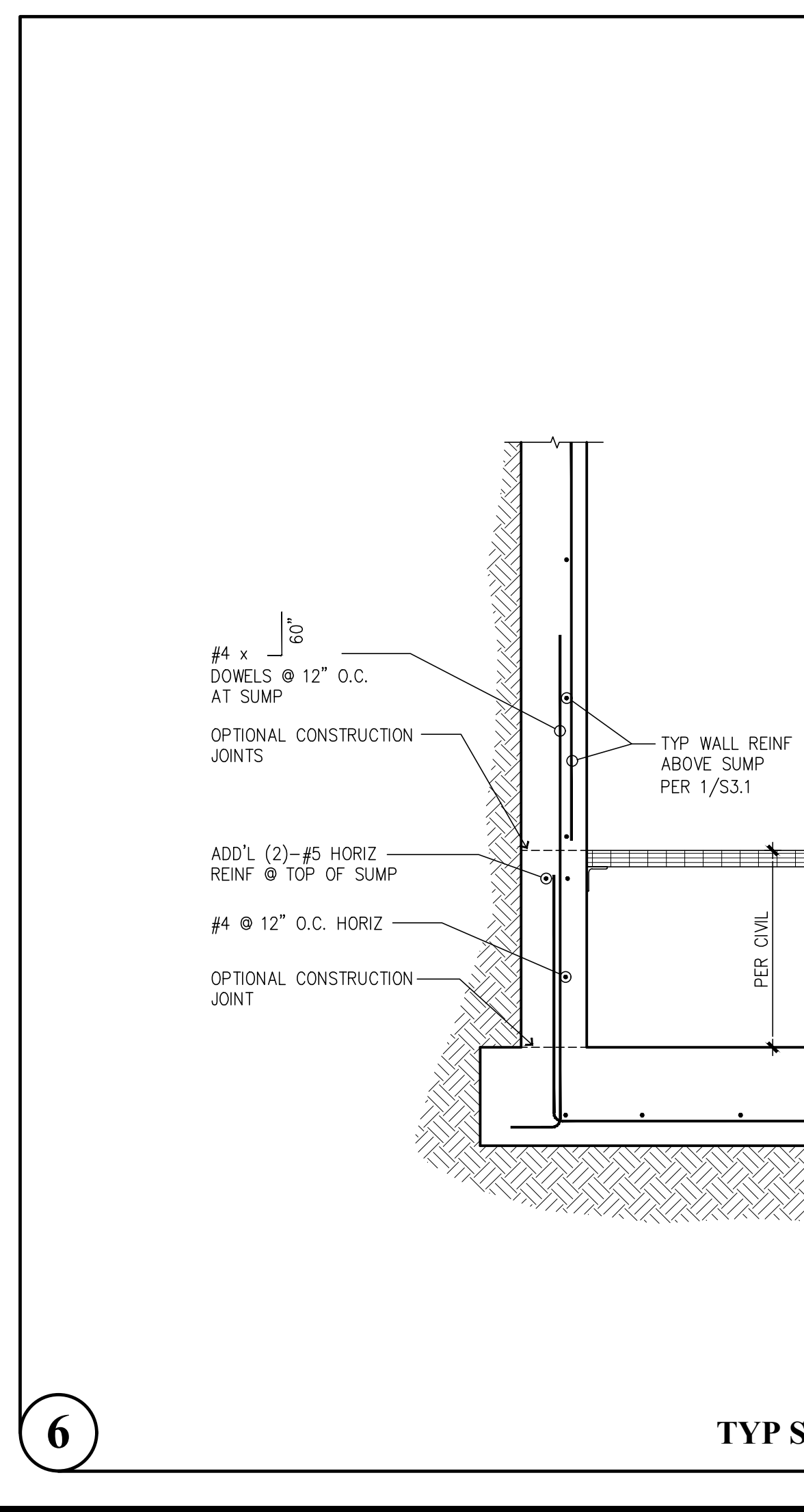
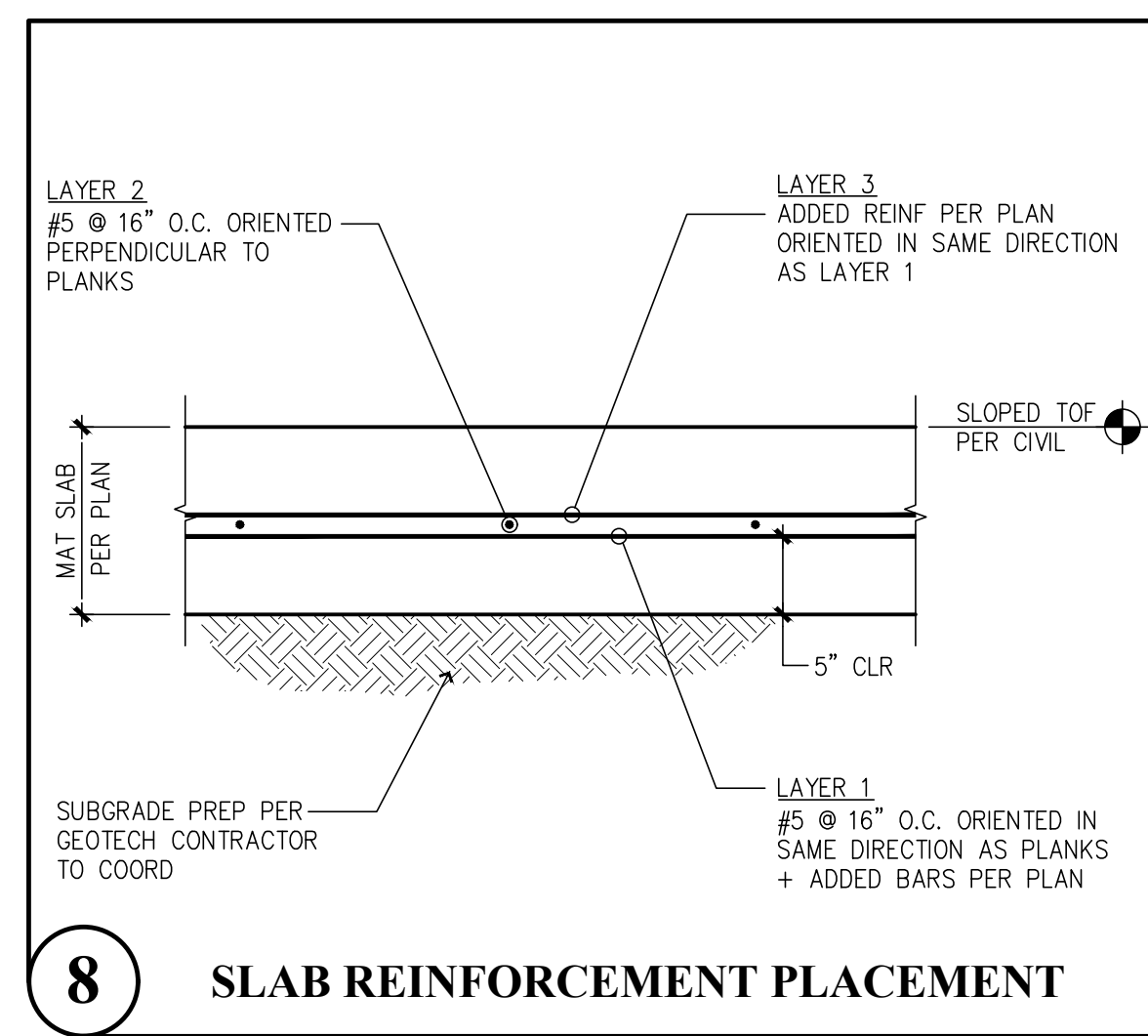
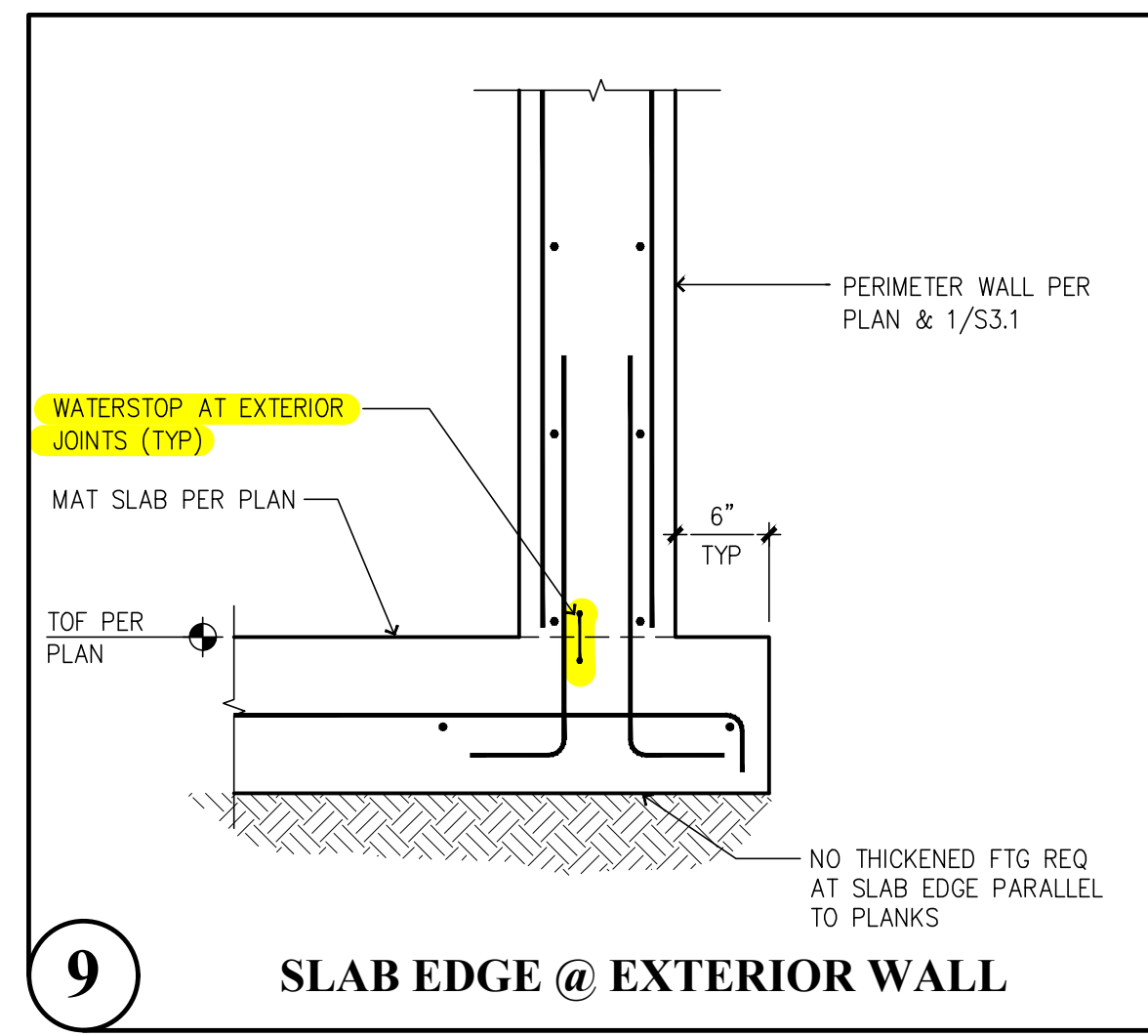
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S2.0



8-16-24
THOMAS L. CHASE, PE
MARTIN R. OMAN, PE, SE
OLEG G. KONDRATYUK, PE

CAD FILE: F:\Projects\2023 Projects\Bradley Heights\Drawings\Detention_Vault\S3.0.dwg PLOT DATE/TIME: 10/30/2024 - 3:55pm THANK YOU FOR USING SOLUTIONS 4 STRUCTURES



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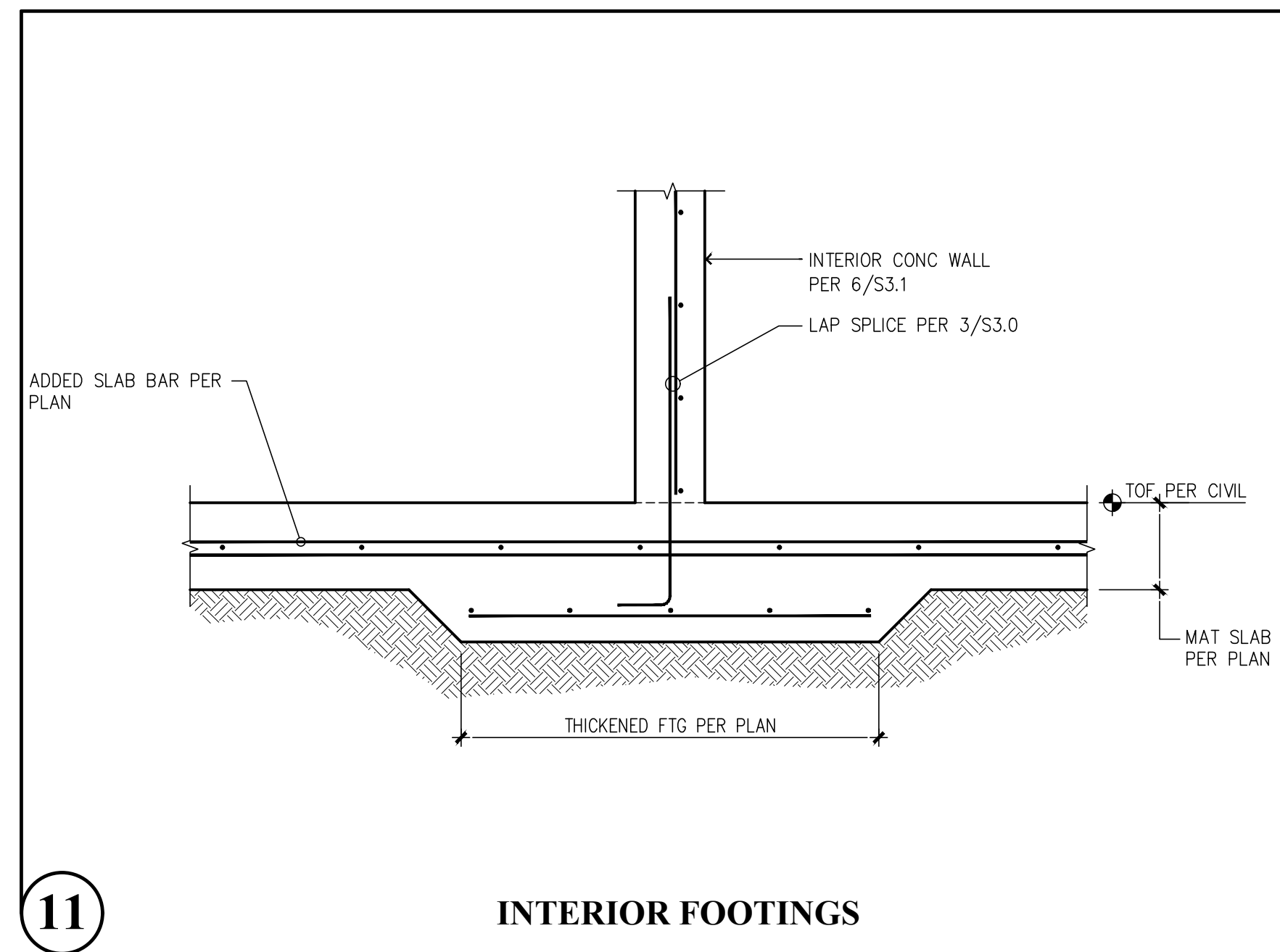
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 ISSUE DATE : 8-16-24
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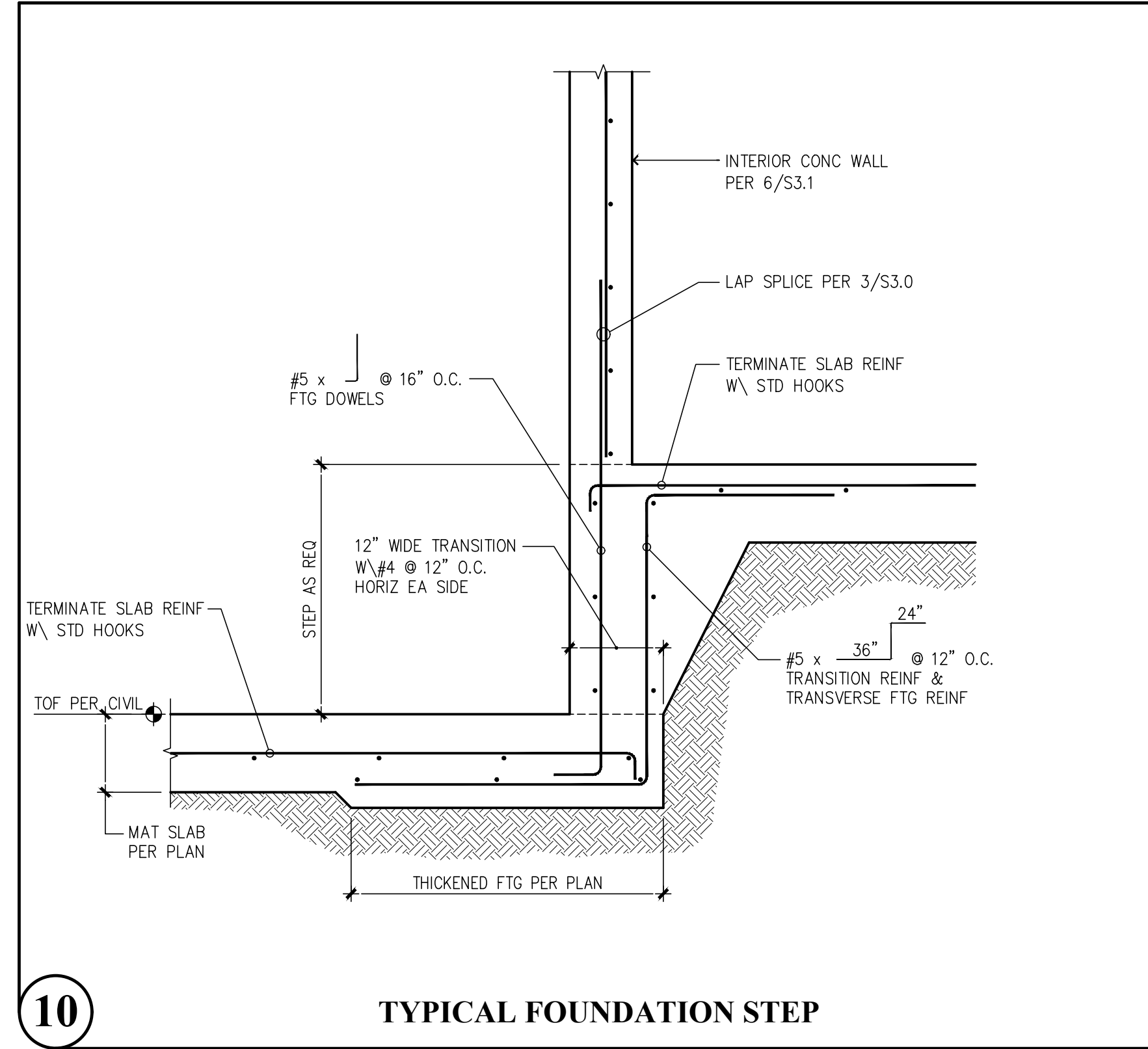
SUBMITTAL SET ONLY NOT FOR CONSTRUCTION
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PLOT DATE/TIME: 10/30/2024 10:23:46pm THANK YOU FOR USING SOLUTIONS 4 STRUCTURES

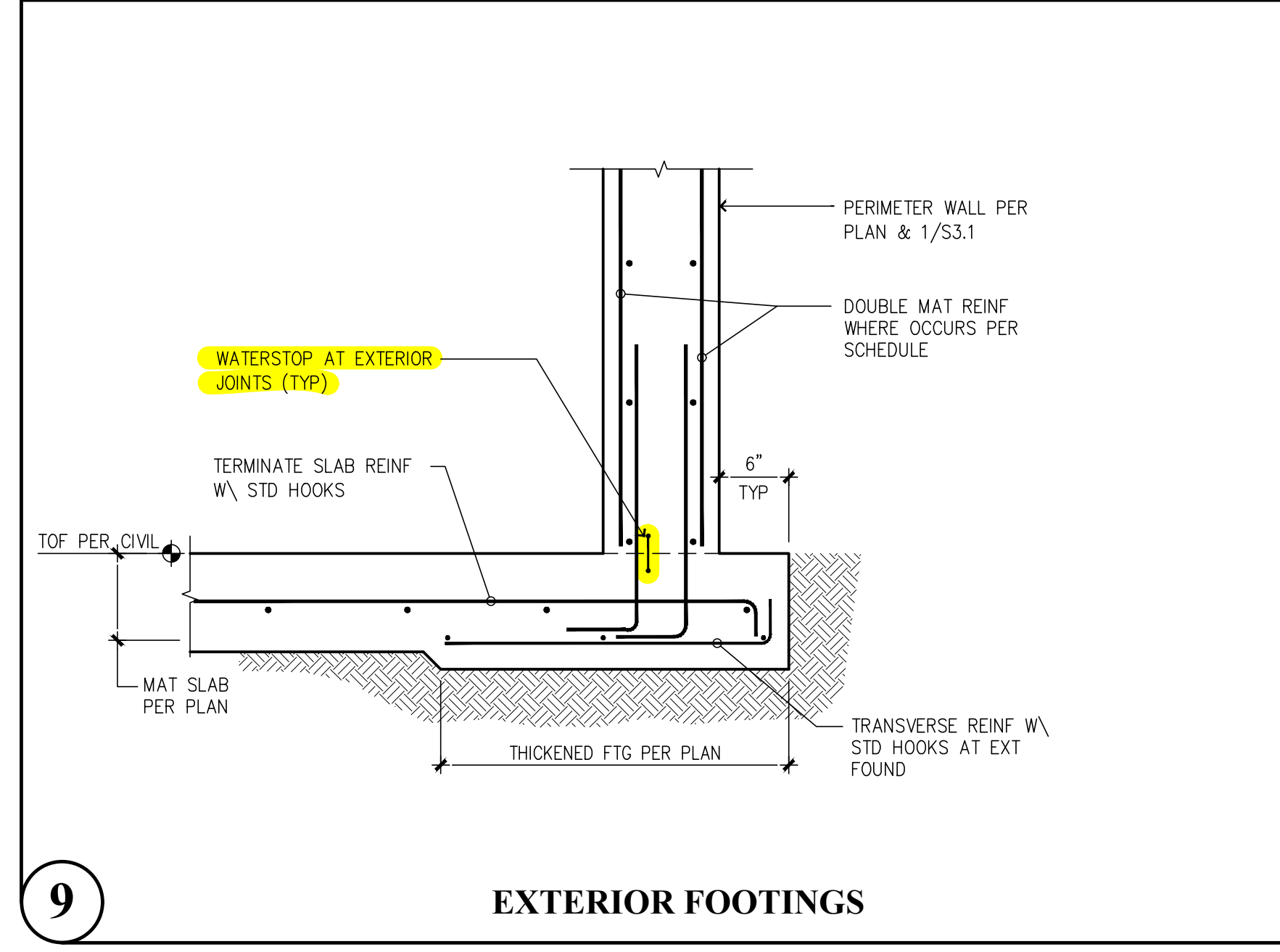
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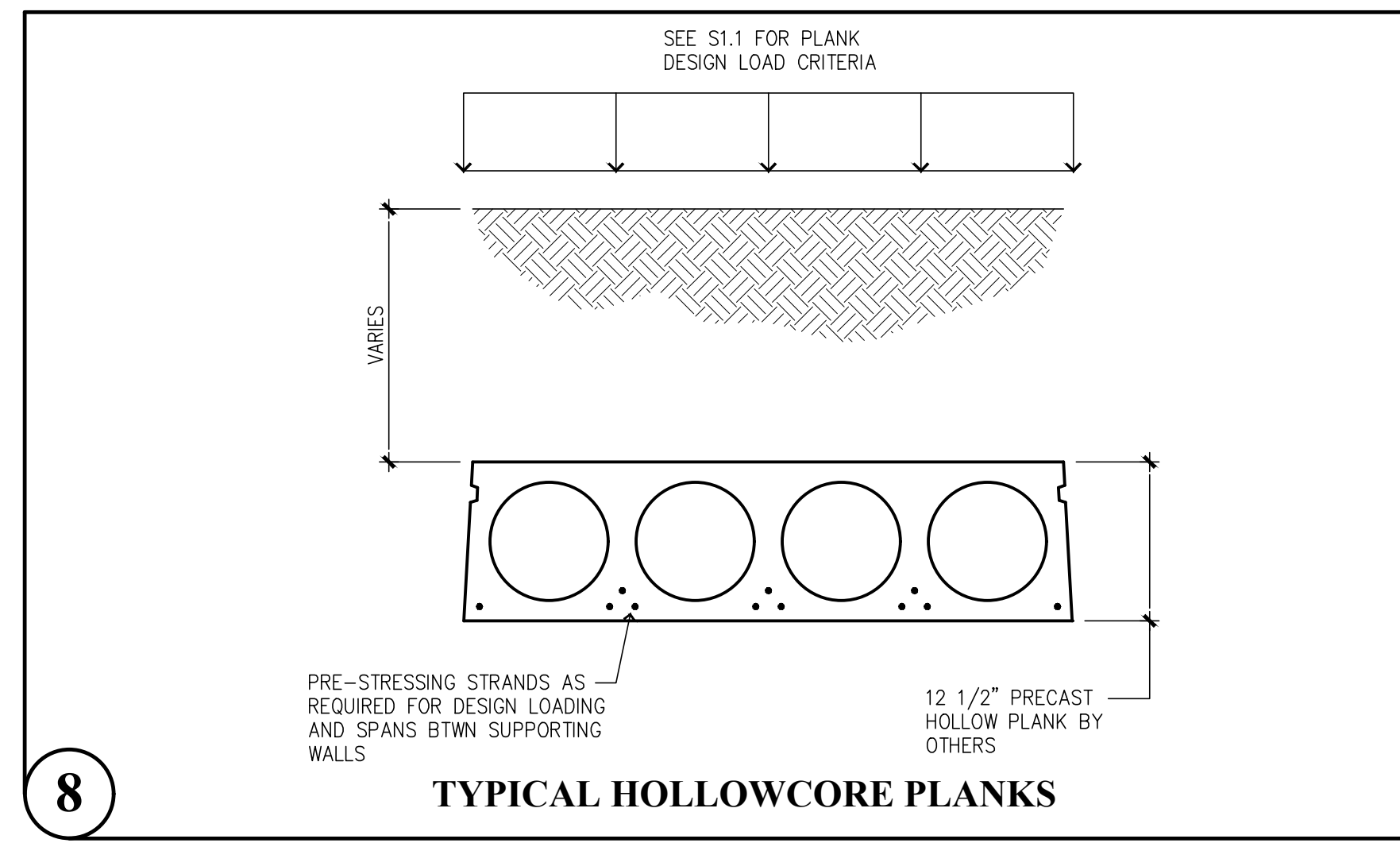
11 INTERIOR FOOTINGS



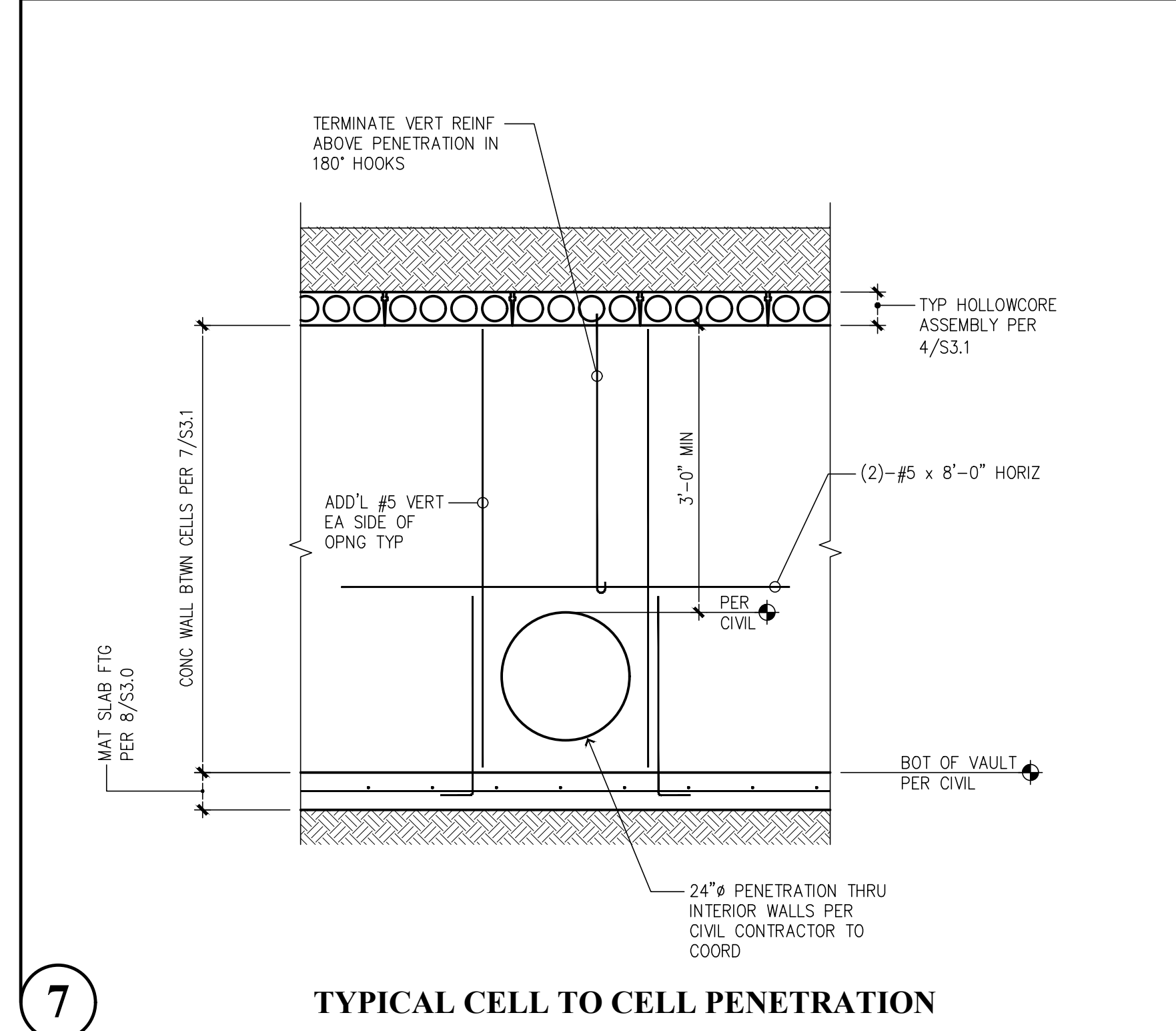
10 TYPICAL FOUNDATION STEP



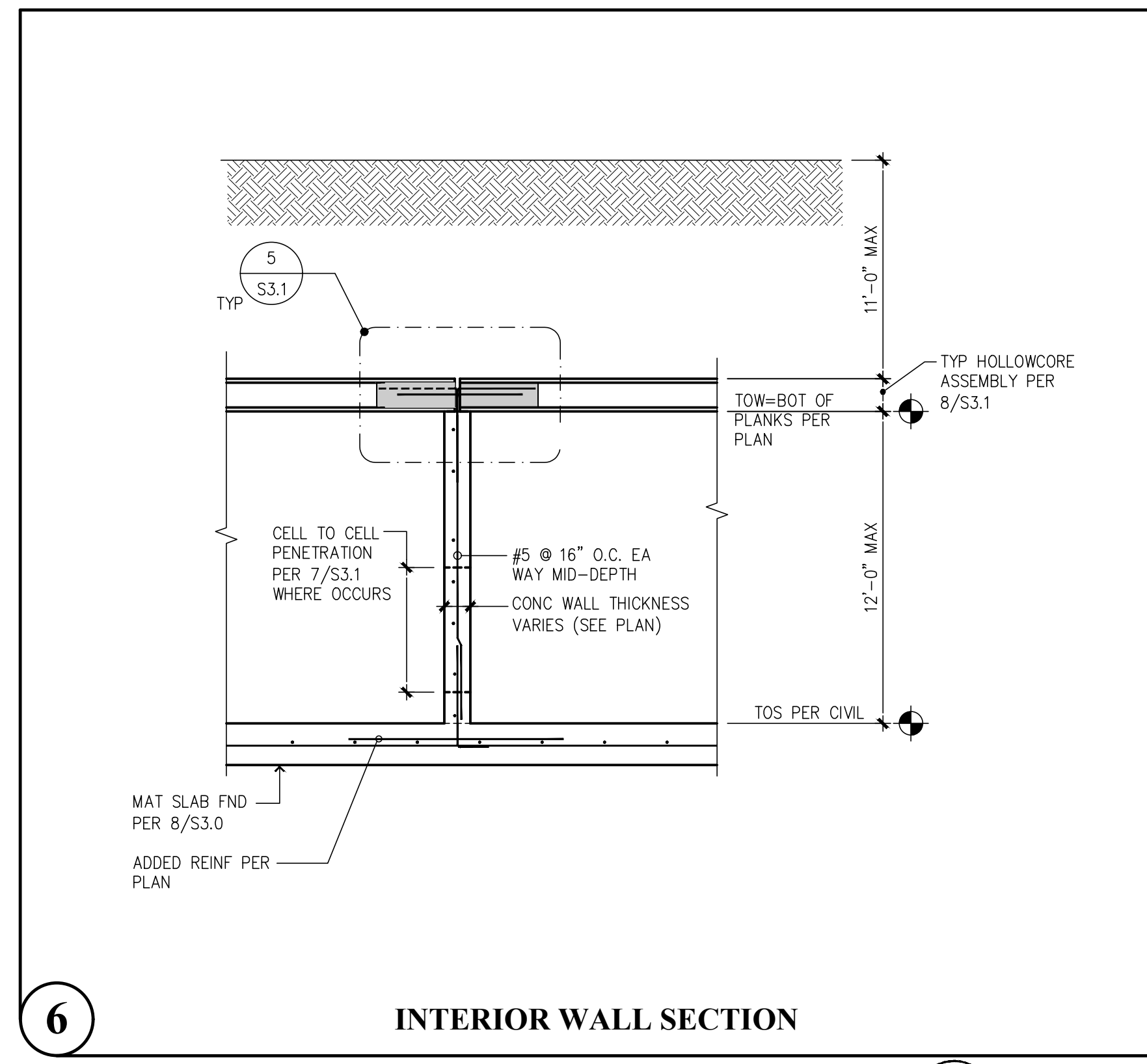
9 EXTERIOR FOOTINGS



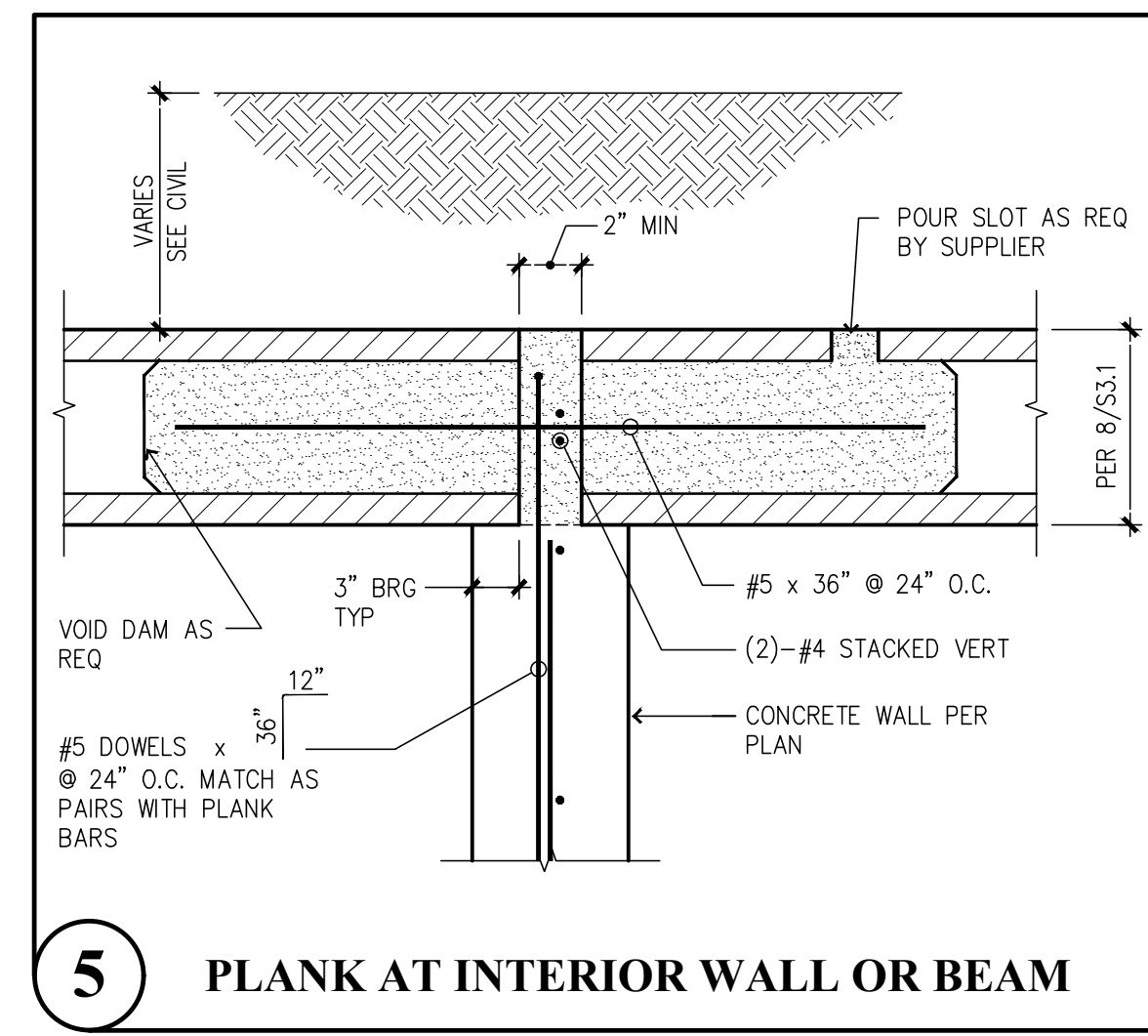
8 TYPICAL HOLLOWCORE PLANKS



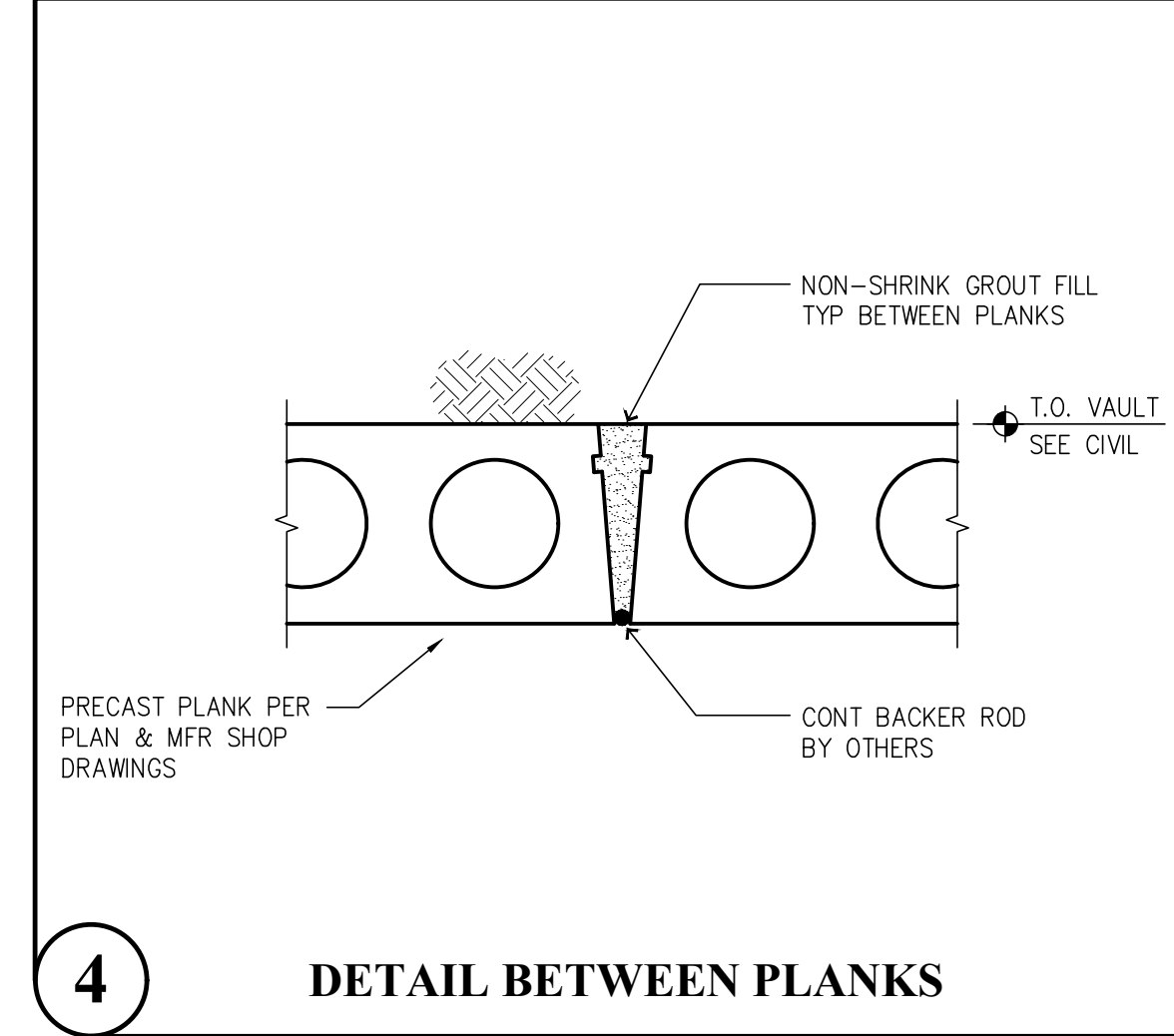
7 TYPICAL CELL TO CELL PENETRATION



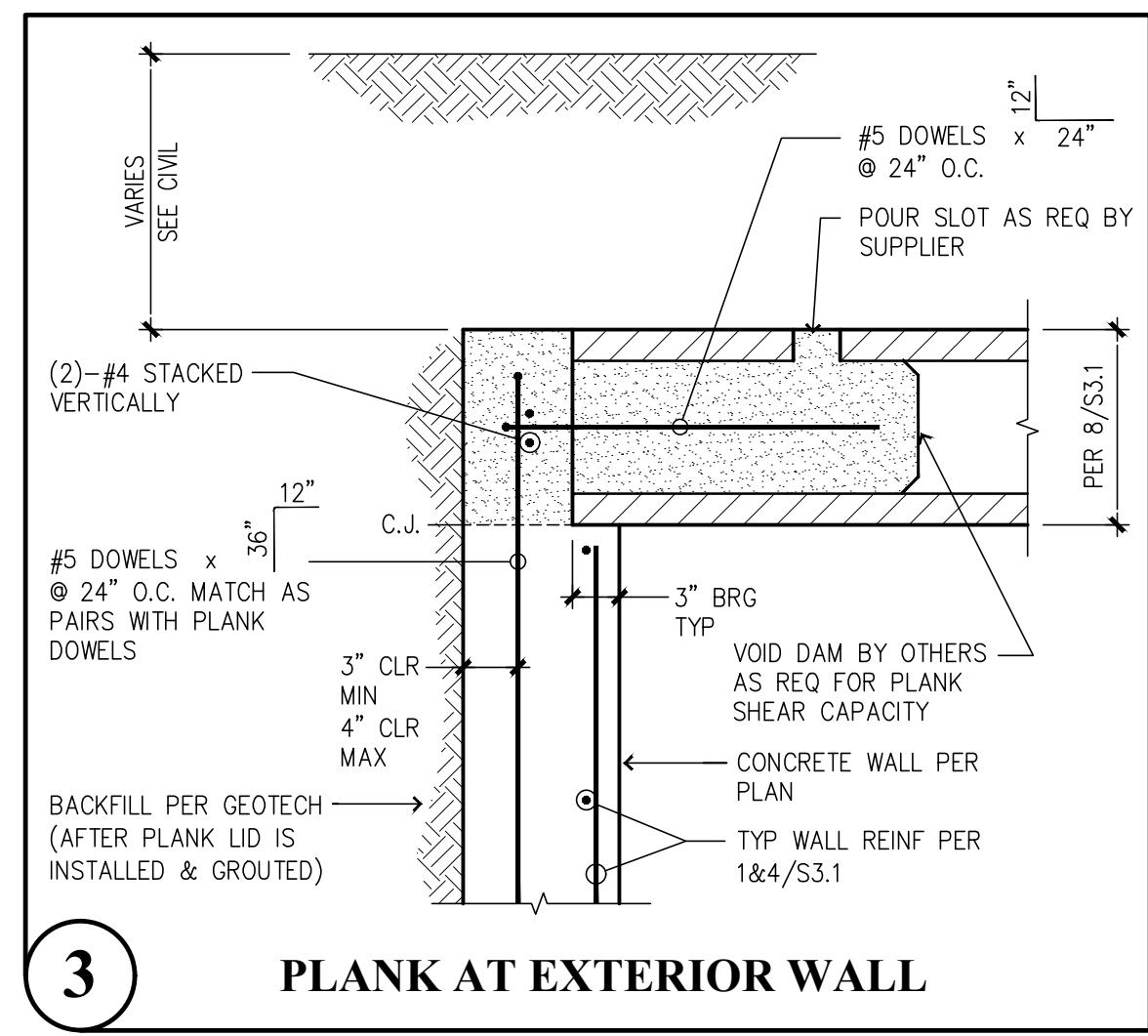
6 INTERIOR WALL SECTION



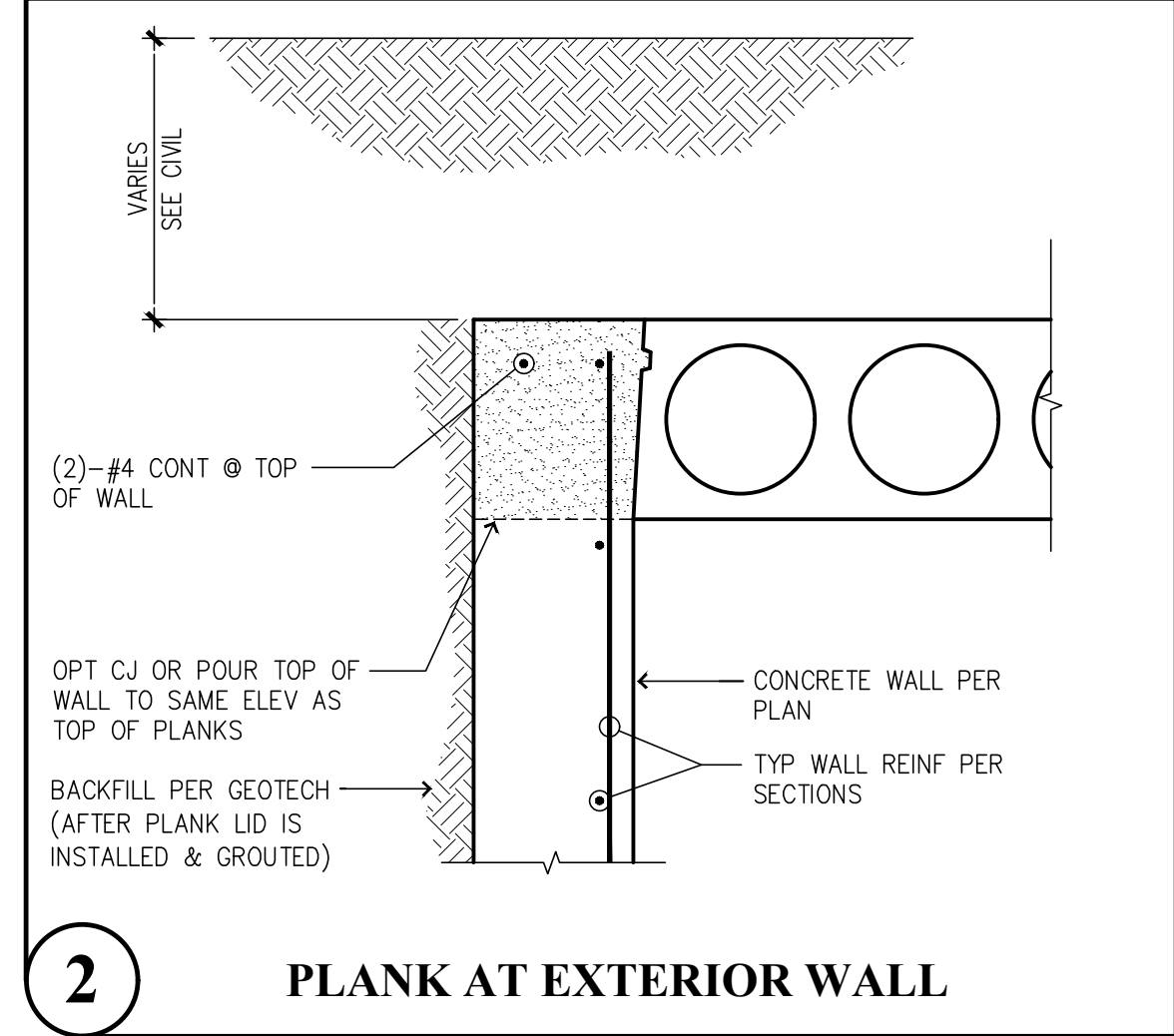
5 PLANK AT INTERIOR WALL OR BEAM



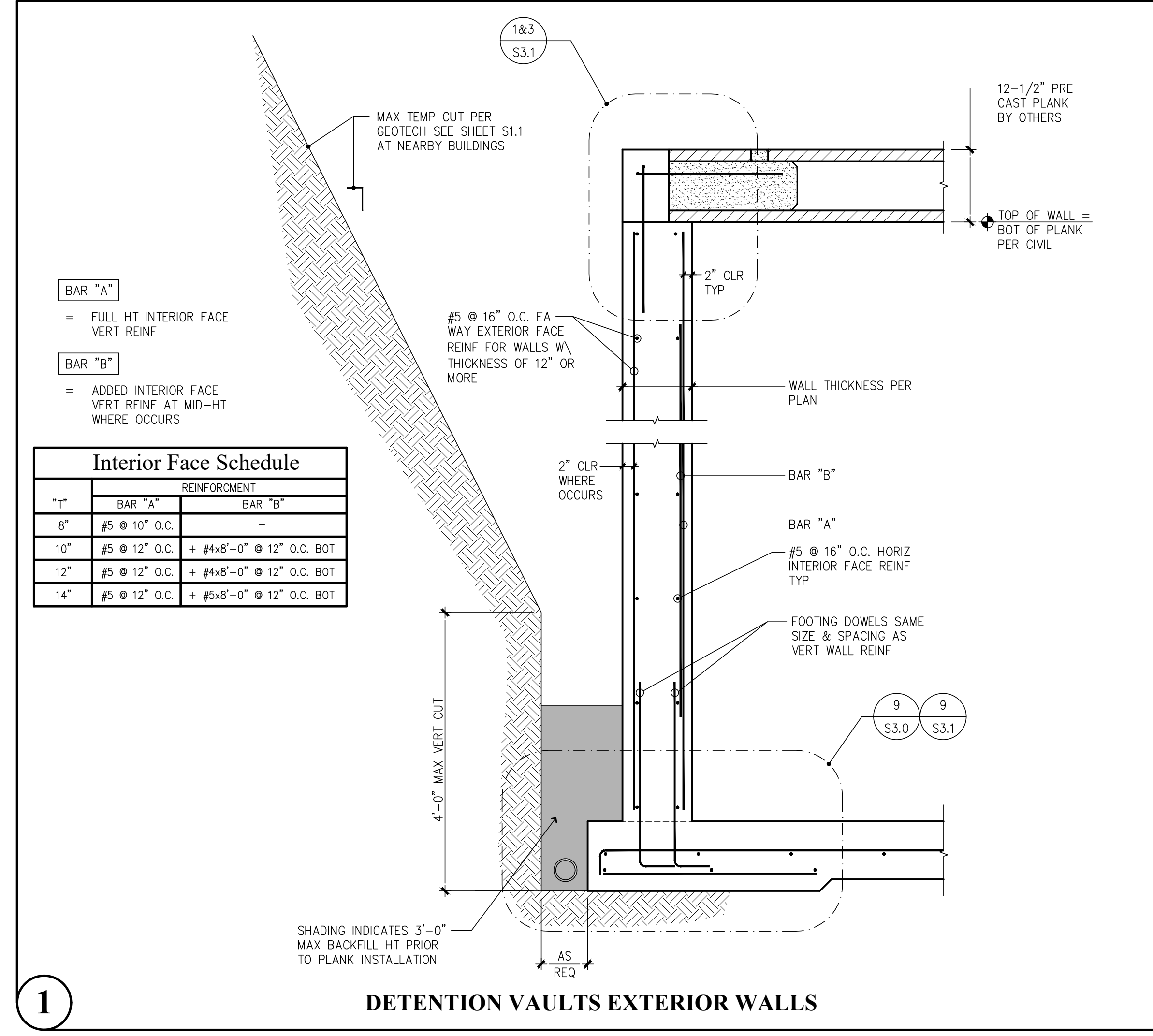
4 DETAIL BETWEEN PLANKS



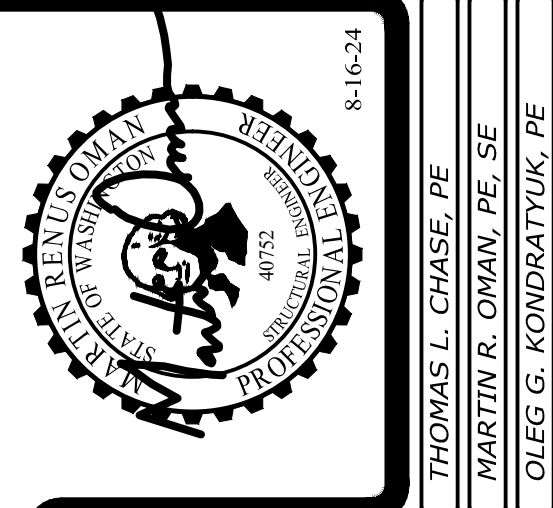
3 PLANK AT EXTERIOR WALL



2 PLANK AT EXTERIOR WALL



1 DETENTION VAULTS EXTERIOR WALLS



Revisions to this sheet:

Bradley Heights Apartments
 Detention Vaults 2, 3, & 4
 202 27th Ave SE
 Puyallup, Washington

PRRWF20250233

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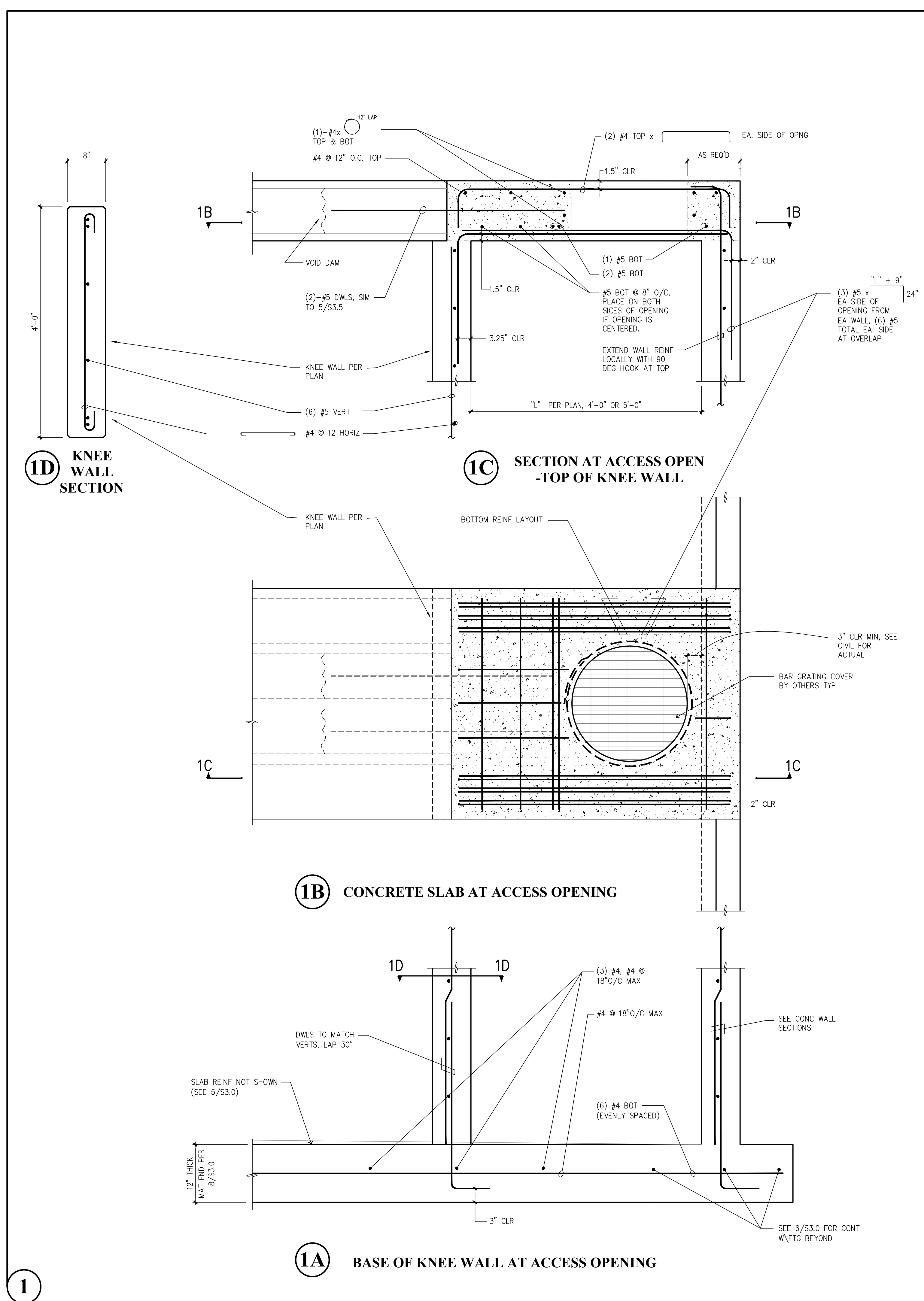
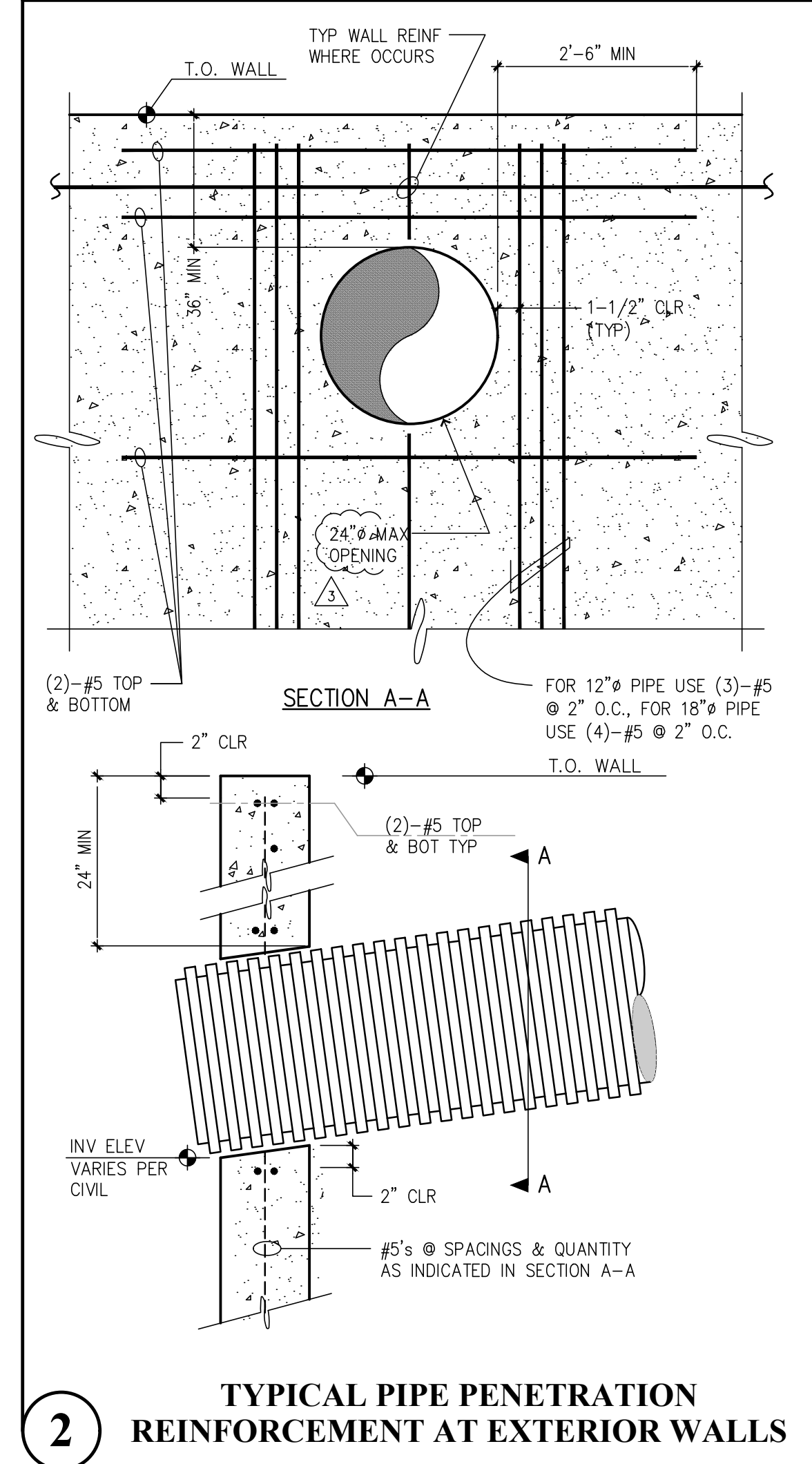
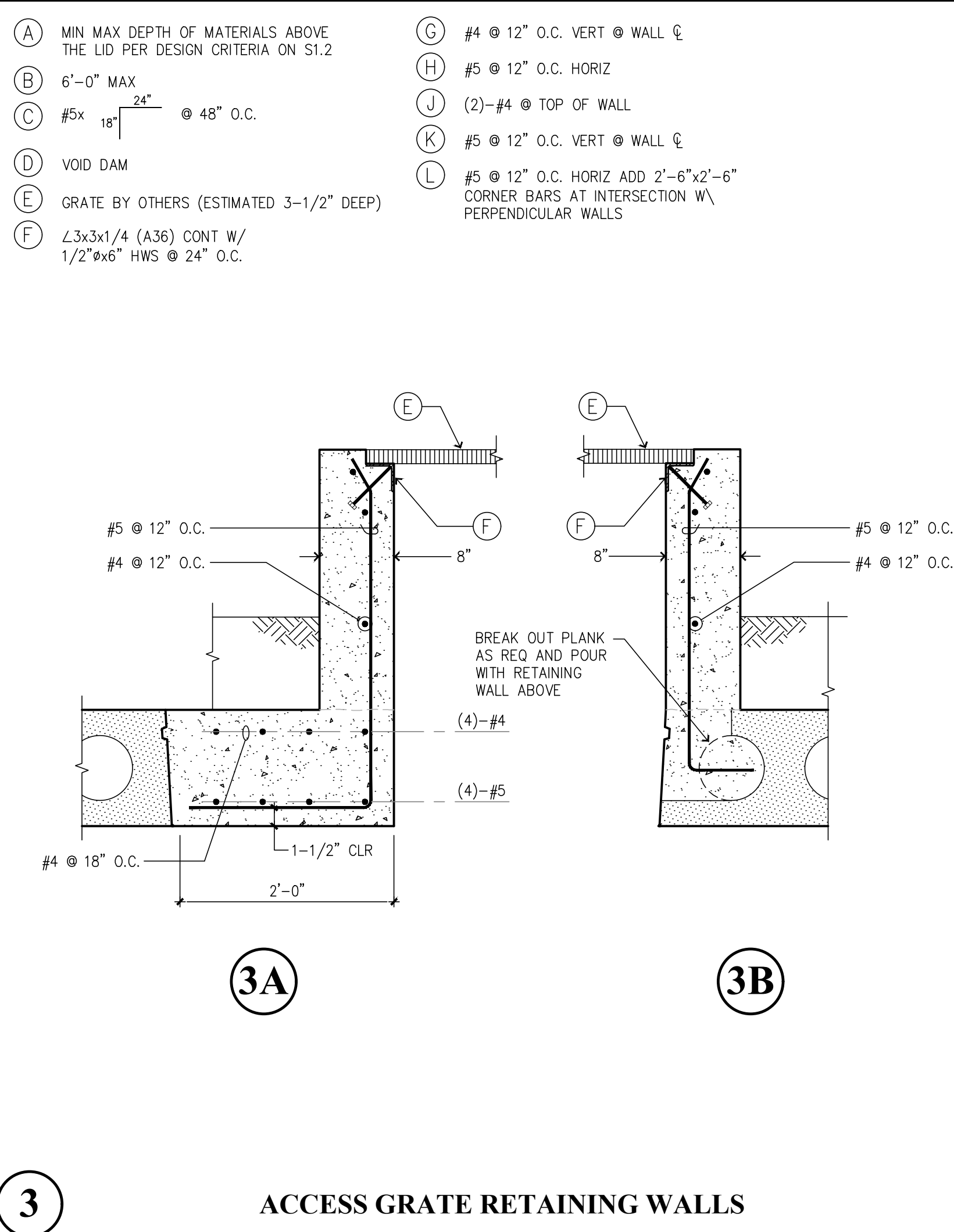
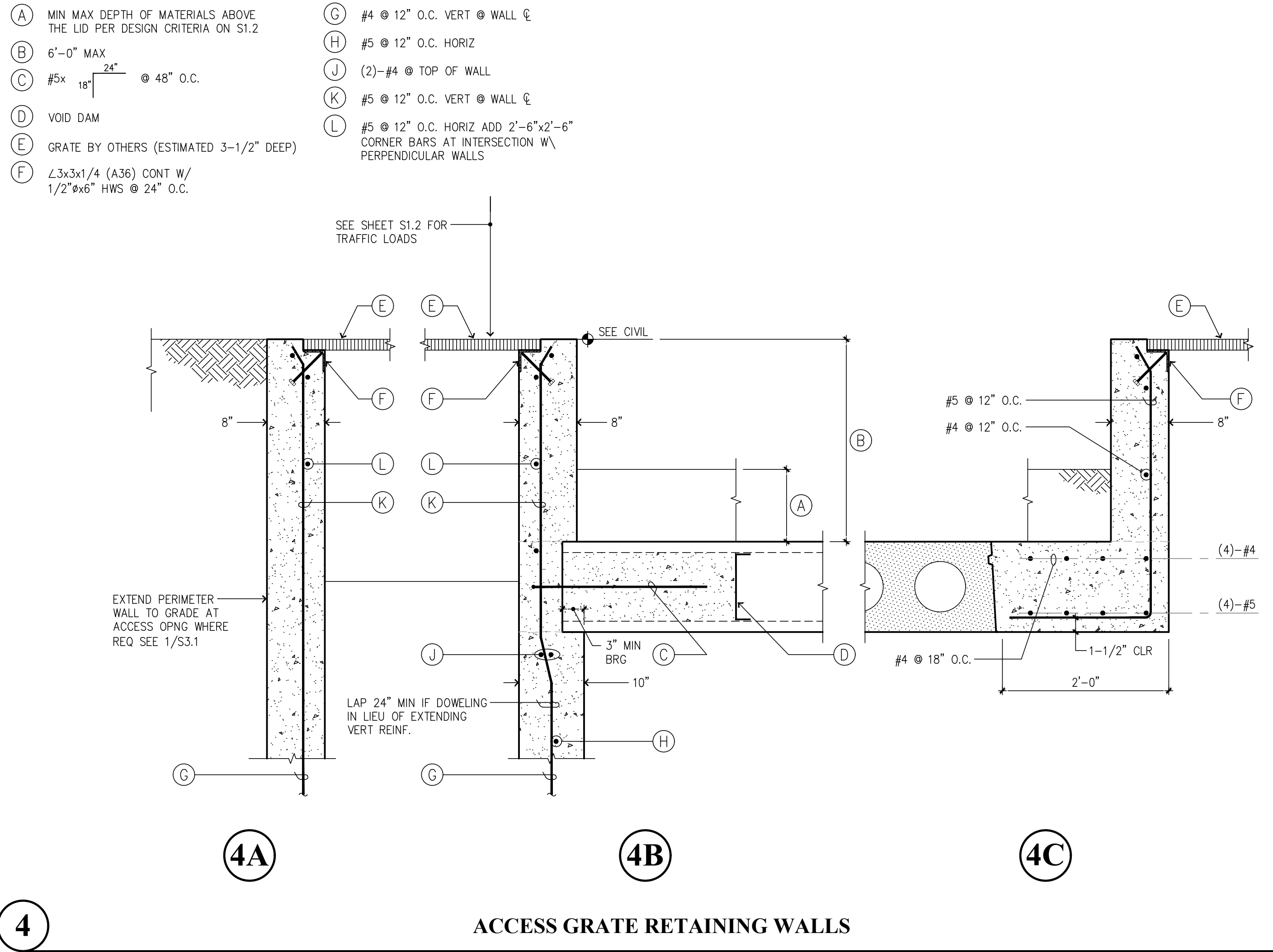
Puyallup, Washington 98374
 Ph 253-314-9822
 www.solutions4structures.com

PROJECT NO. : 23.007
 DESIGNED BY : MRO
 DRAWN BY : RSO
 ISSUE DATE : 8-16-24
 LATEST REV. OF DWG. SET :

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S3.1

CAD FILE: F:\Projects\2023 Projects\23.007 Bradley Heights\Drawings\Detention_Vault\S3.2.dwg PLOT DATE/TIME: 10/31/2024 - 8:35am THANK YOU FOR USING SOLUTIONS 4 STRUCTURES



THOMAS L. CHASE, PE
MARTIN R. OMAN, PE, SE
OLEG G. KONDRATYUK, PE

Revisions to this sheet:

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S3.2