

**GENERAL NOTES**

**DESIGN CRITERIA:**

- BUILDING CODE = 2012 INTERNATIONAL BUILDING CODE (IBC 2012)  
OCCUPANCY CATEGORY = II
- GRAVITY LOADS:  
DEAD:  
SELF WEIGHT OF ALL COMPONENTS  
LIVE:  
ROOF (REDUCIBLE) = 20 psf  
FLOOR = 250 psf  
SNOW:  
GROUND SNOW,  $p_g$  = 20 psf  
EXPOSURE FACTOR = 1.0  
THERMAL FACTOR = 1.0  
IMPORTANCE FACTOR = 1.0
- CRANE LOADS:  
CRANE CAPACITY =20T  
CRANE CLASSIFICATION =C  
NUMBER OF WHEELS =4  
HOIST WEIGHT =2,780 LBS.  
BRIDGE WEIGHT =14,175 LBS.  
MAXIMUM WHEEL LOAD =22,500 LBS.
- WIND LOADS:  
BASIC WIND SPEED = 115 MPH  
EXPOSURE = C  
STRUCTURE CLASSIFICATION = ENCLOSED  
WIND IMPORTANCE FACTOR,  $I_w$  = 1.0
- SEISMIC:  
 $S_s$  = 0.099 g  
 $S_1$  = 0.057 g  
 $S_{ps}$  = 0.106 g  
 $S_{p1}$  = 0.091 g  
IMPORTANCE FACTOR = 1.0  
SITE CLASS = D  
SEISMIC DESIGN CATEGORY = B  
REDUNDANCY FACTOR = 1.0
- DATUM: ??'-0" = 100'-0"

**GENERAL:**

- ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE 2012 INTERNATIONAL BUILDING CODE AND ALL APPLICABLE LOCAL ORDINANCES.
- REFERENCE TO 'CONTRACTOR' IN THESE DOCUMENTS SHALL MEAN THE OVERALL SUPERVISING GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
- ALL CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE FOLLOWING CODES, STANDARDS AND SPECIFICATIONS (LATEST EDITIONS, UNO.), EXCEPT WHERE NOTED TO THE CONTRARY ON DRAWINGS OR WHERE MORE STRINGENT REQUIREMENTS ARE SPECIFIED OR SHOWN:  
ACI 117 "STANDARD SPECIFICATIONS FOR TOLERANCE OF CONCRETE CONSTRUCTION AND MATERIALS"  
ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS"  
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"  
ACI 530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"  
AIS1 "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"  
SJI "SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS"  
AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (INCLUDING COMMENTARIES)"  
AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES"  
AISC "STEEL DESIGN GUIDE 3 - SERVICEABILITY DESIGN CONSIDERATIONS FOR STEEL BUILDINGS"  
SDI "STEEL DECK MANUAL FOR FLOOR DECKS AND ROOF DECKS"  
AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"  
AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL"
- STRUCTURAL MEMBERS WILL REQUIRE INTERACTION WITH OTHER ELEMENTS FOR STABILITY AND RESISTANCE TO LATERAL FORCES. ALL FRAMING AND WALLS SHALL BE TEMPORARILY BRACED BY THE CONTRACTOR UNTIL PERMANENT BRACING, WALLS, FLOOR, AND ROOF DECKS HAVE BEEN INSTALLED AND CONNECTIONS BETWEEN THESE HAVE BEEN MADE. SEE MATERIAL SPECIFIC NOTES FOR STEEL AND CONCRETE FOR ADDITIONAL NOTES.
- NEEDHAM-DBS IS NOT ASSUMING ANY PROVISIONS OF SUPERVISION OF CONSTRUCTION MEANS, METHODS, OR PROCESSES.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
- FRAMING CONDITIONS NOT SPECIFICALLY SHOWN OR INDICATED SHALL BE FRAMED SIMILAR TO DETAILS SHOWN FOR THE RESPECTIVE MATERIAL OR CONDITIONS.
- THE SIZE AND LOCATIONS OF ALL EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL AND PLUMBING WORK SHALL BE VERIFIED BY THE CONTRACTOR. PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR OPENING LOCATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- SUBMITTALS FOR ITEMS WITH DELEGATED DESIGN RESPONSIBILITIES SUCH AS PREMANUFACTURED STAIRS, LIGHT GAGE METAL STUDS, STEEL JOISTS, AND JOIST GIRDERS MUST BE SUBMITTED AND APPROVED BEFORE INSTALLATION CAN BEGIN.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS DURING COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSON AND PROPERTY.
- LOADINGS FOR MECHANICAL EQUIPMENT ARE BASED ON THE UNITS SHOWN ON THE STRUCTURAL DRAWINGS. ANY CHANGES IN TYPE, SIZE, WEIGHT, OR NUMBER OF UNITS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION.

**SOIL/FOUNDATION CONDITIONS:**

- OWNER TO RETAIN QUALIFIED SOILS ENGINEER TO MONITOR FOUNDATION AND SUB-GRADE DURING SITE PREPARATION AND FOUNDATION CONSTRUCTION. EACH FOOTING EXCAVATION SHALL BE INSPECTED TO ENSURE THAT SATISFACTORY SOIL EXISTS BELOW THE BASE OF THE FOOTING. ALL EXCAVATION, FOUNDATION CONSTRUCTION, & SUBGRADE PREPARATION MUST BE IN STRICT COMPLIANCE WITH THE GEOTECHNICAL REPORT.
- STRUCTURAL DESIGN IS BASED UPON A NET ALLOWABLE SOIL PRESSURE OF 2500 PSF FOR BOTH SPREAD FOOTINGS AND WALL FOOTINGS. FOOTINGS SHALL BEAR ON EXISTING SUBGRADE OR ENGINEERED FILL AS DESCRIBED IN THE GEOTECHNICAL REPORT BY TERRACON CONSULTANTS, INC., LENEXA, KS LABELED 'ALTEC-DESIGN ASSURANCE ADDITIONS', TERRACON PROJECT NO. 02165258 DATED JANUARY 19, 2017.
- MINIMUM FOUNDATION EMBEDMENT DEPTH IS 36 INCHES BELOW GRADE. ALL EXTERIOR FOOTINGS SHALL BEAR BELOW MINIMUM DEPTH.
- ALL FOOTING EXCAVATIONS SHALL BE FREE FROM LOOSE OR SOFT SOILS, WATER, ICE AND OTHER UNSUITABLE MATERIALS BEFORE FOUNDATION PLACEMENT CAN CONTINUE.
- THE FLOOR SLAB SHALL BE SUPPORTED ON A 6 INCH LAYER OF CLEAN GRANULAR MATERIAL SUCH AS SAND AND GRAVEL, OR CRUSHED STONE. A SUBGRADE MODULUS OF 100 pci IS USED FOR THE SLAB ON GRADE. SEE FOUNDATION DRAWINGS FOR ADDITIONAL INFORMATION.
- FLOOR SLAB POURS SHALL BE SEPARATED BY A CONSTRUCTION JOINT. CONTROL JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ARCHITECT OR ENGINEER.

**(03 30 00) CONCRETE:**

- THE EXTENT OF THE CONCRETE WORK IS SHOWN ON THE DRAWINGS.
- SUBMITTALS ARE REQUIRED FOR REINFORCEMENT, CONCRETE MIXES, ADMIXTURES, CURING COMPOUNDS AND ANY OTHER ITEM AS REQUESTED BY THE CONSTRUCTION MANAGER.
- ALL DESIGN SHALL BE PER THE LATEST EDITION OF THE ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY."
- CONCRETE TESTING SHALL BE PERFORMED PER ACI REQUIREMENTS. SAMPLES SHALL BE TAKEN PER ASTM C172 WITH FREQUENCY AS FOLLOWS:  
A) A MINIMUM OF ONE SAMPLE A DAY WITH NO LESS THAN 5 SAMPLES FOR A GIVEN CLASS OF CONCRETE, TAKEN FROM 5 RANDOMLY SELECTED BATCHES, OR FROM EACH BATCH IF LESS THAN 5 BATCHES ARE USED.  
B) A MINIMUM OF ONE SAMPLE PER 150 CUBIC YARDS.  
C) A MINIMUM OF ONE SAMPLE FOR EACH 5,000 SQUARE FEET OF SLAB OR WALL.  
D) IF LESS THAN 50 CUBIC YARDS OF A GIVEN CLASS OF CONCRETE IS NEEDED, THE NEED FOR STRENGTH TESTS MAY BE WAIVED WITH THE APPROVAL OF THE ENGINEER.

SAMPLES SHALL BE MOLDED AND CURED PER ASTM C31 SAMPLES SHALL BE TESTED PER ASTM C39 USING 4x8 OR 6x12 SAMPLES.

- CONCRETE MEMBERS SHALL BE ASSIGNED DURABILITY REQUIREMENTS PER CHAPTER 4 OF ACI 318 AS SHOWN.

	FREEZE/THAW	SULFATE	PERMEABILITY	CORROSION
ALL CONCRETE UNO:	FO	SO	PO	CO
FOOTINGS, PIERS & GRADE BEAMS:	FO	SO	PO	CO
SLAB ON GRADE:	FO	SO	PO	CO
CONCRETE FILL:	FO	SO	PO	CO
RETAINING WALLS:	FO	SO	PO	CO

- MATERIALS SHALL COMPLY WITH LATEST EDITION OF ACI 318 AND AS NOTED BELOW.

PORTLAND CEMENT:	ASTM C150 TYPE I
FLY ASH (SEE NOTE 7):	ASTM C618
NORMAL WEIGHT AGGREGATE:	ASTM C33
LIGHT WEIGHT AGGREGATE:	ASTM C330
WATER:	ASTM C1602
NON WELDABLE REBAR:	ASTM A615, GRADE 60
WELDABLE REBAR:	ASTM A706
WELDED WIRE FABRIC:	ASTM A1064
AIR ENTRAINMENT (SEE NOTE 8):	ASTM C260

- FLY ASH (CLASS C) CONTENT IN MIX DESIGN SHALL NOT EXCEED 20% OF TOTAL CEMENTIOUS MATERIAL CONTENT.
- NORMAL WEIGHT AND LIGHT WEIGHT CONCRETE SUBJECT TO EXPOSURE CLASSES F1, F2, OR F3 SHALL BE AIR ENTRAINMENT WITH AIR CONTENT AS INDICATED. CONCRETE SUBJECT TO EXPOSURE CLASS F0 DOES NOT REQUIRE AIR ENTRAINMENT.

NOMINAL AGGREGATE SIZE	AIR CONTENT, %	
	F1	F2, F3
3/8"	6	7.5
1/2"	5.5	7
3/4"	5	6
1"	4.5	6
1 1/2"	4.5	5.5
2"	4	5
3"	3.5	4.5

- COMPRESSIVE STRENGTH OF CONCRETE (28 DAY STRENGTH) AS FOLLOWS:

ALL CONCRETE U.N.O.:	4,000 PSI
FOOTINGS, PIERS, & GRADE BEAMS:	3,000 PSI
SLAB-ON-GRADE:	4,000 PSI
RETAINING WALLS:	4,000 PSI
CONCRETE FILL:	2,500 PSI

- PROPORTION ALL MIX DESIGNS TO HAVE A MAXIMUM SLUMP OF 4 INCHES UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. MIX DESIGNS CONTAINING HIGH-RANGE WATER REDUCING ADMIXTURES SHALL HAVE A MAXIMUM SLUMP OF 8 INCHES AFTER ADMIXTURE IS ADDED TO THE CONCRETE.
- THE MAXIMUM WATER/CEMENTIOUS MATERIAL SHALL BE LIMITED TO THE FOLLOWING UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.  
ALL CONCRETE U.N.O.: 0.45  
FOOTINGS, PIERS, & GRADE BEAMS: 0.55  
SLAB-ON-GRADE: 0.45  
CONCRETE FILL: 0.60  
RETAINING WALLS: 0.45

- FOR CONCRETE SUBJECT TO EXPOSURE CLASS C0, THE MAXIMUM WATER SOLUBLE CHLORIDE ION CONTENT IN CONCRETE AS DETERMINED BY ASTM C1218 SHALL BE 1.0% OF WEIGHT OF CEMENT.
- ANCHOR RODS SHALL BE ASTM F1554-36 MATERIAL AND SHALL HAVE A MINIMUM EMBEDMENT OF 12 INCHES INTO THE CONCRETE UNLESS CALLED FOR OTHERWISE ON THE DRAWINGS. ALL THREADS SHALL BE CUT AND NOT ROLLED. THE EMBEDDED END SHALL CONSIST OF A HEAVY HEX NUT OR OTHER MECHANICAL ANCHOR. HOOK BOLTS ARE NOT ACCEPTABLE. ALL ANCHOR RODS MUST BE CLEANED OF OIL, RUST AND OTHER DELETERIOUS COATINGS PRIOR TO PLACEMENT. SET ALL EMBEDMENTS BY MEANS OF A TEMPLATE WHERE POSSIBLE.
- DETAILING: ALL REINFORCING SHALL BE DETAILED, BOLSTERED AND SUPPORTED PER ACI STANDARDS #315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES." NO MORE THAN 1/2 OF BARS MAY BE SPLICED AT ONE LOCATION.
- CURING AND SEALING COMPOUNDS SHALL COMPLY WITH ASTM C309 OR ASTM C1315.
- REINFORCEMENT SHALL BE SPLICED W/ A MECHANICAL, WELDED, OR LAP SPLICE THAT MEETS ACI 318. WELDED SPLICES SHALL CONFORM TO AWS & SHALL DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR. WELDED REINFORCEMENT SHALL CONFORM TO ASTM A706. MECHANICAL SPLICES SHALL DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR & SHALL BE APPROVED BY THE ENGINEER. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLES FOR CLASS A&B SPICES. WHERE SPLICE CLASS IS NOT CALLED OUT ON DRAWINGS, A CLASS B SPLICE SHALL BE USED.

BAR SIZE	TENSION SPLICES (INCHES)				COMPRESSION SPLICES (INCHES) ALL BARS
	TOP BARS		OTHER BARS		
	"A"	"B"	"A"	"B"	
#3	13	17	12	13	12
#4	21	28	16	21	15
#5	31	41	24	31	19
#6	43	56	33	43	23
#7	69	90	53	69	26
#8	85	111	66	85	30
#9	103	134	79	103	34
#10	121	158	93	121	38
#11	140	183	108	140	42

THE TABLE IS BASED ON THE FOLLOWING ASSUMPTIONS:  $f_c=3000$  psi. CONCRETE IS NORMAL WEIGHT, BARS ARE NOT EPOXY COATED, CLEAR SPACING OF BARS IS EQUAL TO OR GREATER THAN TWO BAR DIAMETERS, AND CLEAR COVER IS 3/4". FOR LARGER CONCRETE STRENGTHS OR GREATER CONCRETE COVER, THE LAP SPLICE LENGTH MAY BE REDUCED THRU AN APPROVED SUBMITTAL TO THE ENGINEER. LAP SPLICES IN LIGHTWEIGHT CONCRETE ARE LARGER THAN SHOWN. CONTRACTOR TO SUBMIT LAP SPLICE LENGTHS IN LIGHTWEIGHT CONCRETE FOR APPROVAL BY THE ENGINEER. NOTE THAT "TOP" BARS INDICATE HORIZONTAL REINFORCEMENT THAT IS PLACED W/ 12" OR MORE OF FRESH CONCRETE BELOW THE SPLICE.

- WELDED WIRE FABRIC SHALL BE LAPPED ONE SPACING OF CROSS WIRES PLUS 2 INCHES.
- COMPRESSION DOWEL EMBEDMENT SHALL BE 22 BAR DIAMETERS.
- PROVIDE CORNER REINFORCING TO MATCH CONTINUOUS REINFORCEMENT SIZE AND QUANTITY AT INTERSECTIONS AND CORNERS OF WALLS AND FOOTINGS.
- WALL, PIER, AND COLUMN DOWELS SHALL BE THE SAME SIZE, SPACING, AND MATERIAL AS WALL, PIER AND COLUMN REINFORCING, UNLESS NOTED OTHERWISE.
- ALL CONCRETE IS REINFORCED UNLESS SPECIFICALLY NOTED "UNREINFORCED", REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH THE THE SAME REINFORCEMENT AS SIMILAR SECTIONS.

**EXECUTION:**

- ALL CONCRETE SHALL BE MIXED PER ASTM C94.
- THE CONCRETE FOUNDATIONS AND SLAB-ON-GRADE MUST BE PLACED ON A SOUND BASE AS DESCRIBED IN THE SOILS REPORT & THE SOILS / FOUNDATION CONDITIONS NOTES.
- PLACEMENT OF CONCRETE SHALL BE PER LATEST EDITION OF ACI 318. CONCRETE SHALL BE DEPOSITED AS NEAR TO ITS FINAL POSITION AS POSSIBLE. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED AROUND REINFORCEMENT AND EMBEDDED ITEMS. ALL REINFORCING STEEL MUST BE FREE FROM DIRT, RUST AND OTHER DELETERIOUS MATERIAL PRIOR TO PLACEMENT. DOWELS, ANCHOR BOLTS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING OF CONCRETE OR GROUT.
- SPECIFIED CONCRETE CLEAR COVERS ARE AS FOLLOWS:  
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"  
CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER:  
NO. 5 BAR OR SMALLER: 1 1/2"  
NO. 6 BAR OR LARGER: 2"  
SLABS NOT EXPOSED TO EARTH OR WEATHER (TO #11 BARS): 3/4"  
BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER: 1 1/2"
- PROVIDE CONTINUOUS 2" X 4" KEY-WAY IN ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS. OTHERWISE, ROUGHEN AND CLEAN ALL CONSTRUCTION JOINTS.
- NO PIPES, DUCTS OR CONDUIT SHALL BE PLACED IN CONCRETE UNLESS SPECIFICALLY DETAILED OR NOTED.
- NO ADMIXTURES OTHER THAN AIR ENTRAINMENT MAY BE ADDED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER. NO CALCIUM CHLORIDE SHALL BE USED AT ANY TIME. WATER REDUCTION AGENTS SHALL MEET ASTM C494. WORKABILITY AGENTS SHALL CONFORM TO ASTM C1017.
- CONCRETE SHALL BE MAINTAINED ABOVE 50°F AND IN A MOIST CONDITION FOR AT LEAST 7 DAYS AFTER PLACEMENT UNLESS AN ACCELERATED CURING METHOD IS USED. THIS ACCELERATED METHOD SHALL BE APPROVED BY THE ENGINEER.
- CAST IN PLACE WALL CONTROL JOINTS SHALL BE PROVIDED AT A MAXIMUM OF 25'-0" O.C. COORDINATE W/ ARCHITECTURAL DRAWINGS.
- PROVIDE CURING AND SEALING COMPOUND TO ALL EXPOSED INTERIOR SLABS AND TO ALL EXTERIOR SLABS, WALKS AND CURBS AS SOON AS FINAL FINISHING IS COMPLETE.
- CONCRETE PLACED IN COLD WEATHER SHALL BE IN COMPLIANCE WITH ACI 306. DO NOT PLACE CONCRETE ON FROZEN SUB-GRADE OR ON GRADES CONTAINING FROZEN MATERIALS.
- CONCRETE PLACED IN HOT WEATHER SHALL BE IN COMPLIANCE WITH ACI 305.

NO.	REVISION	ISSUE DATE
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#A-2008008319

Project Number -

MAY ??, 2017

**GENERAL NOTES**

**S100**



(05 12 00) STRUCTURAL STEEL:

1. THE EXTENT OF THE STRUCTURAL STEEL AND METAL FABRICATION IS AS SHOWN ON THE DRAWINGS.
2. FOR STEEL AND METAL ITEMS NOT SPECIFICALLY DETAILED ON THE DRAWINGS, THE FABRICATOR SHALL DESIGN AND SUPPLY APPROPRIATE PRODUCTS.
3. ALL METAL ITEMS MUST BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS MUST SHOW ALL MATERIAL SIZES, WELDS (USE STANDARD AWS SYMBOLS), DETAILS AND ERECTION INFORMATION.
4. ALL DESIGN SHALL BE PER THE FOURTEENTH EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL" AND THE 2010 EDITION OF THE AISC "CODE OF STANDARD PRACTICE".
5. STEEL FABRICATOR SHALL BE AISC CERTIFIED FACILITY.
6. ALL WELDING SHALL CONFORM TO LATEST VERSION OF AWS D1.1. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

PRODUCTS:

7. ALL STRUCTURAL STEEL, EMBEDDED ITEMS AND OTHER PLATES SHALL BE A36 MATERIAL OR AS NOTED BELOW:

STEEL WIDE FLANGE SHAPES:	ASTM A992
MISC. ANGLES, CHANNELS, & PLATES:	ASTM A36 U.N.O.
HIGH STRENGTH BOLTS:	ASTM A325
ORDINARY BOLTS:	ASTM A307
NUTS, HEAVY HEX:	ASTM A563, GRADE C
HARDENED WASHERS:	ASTM F436
BRACING RODS:	ASTM A572, GRADE 50
PIPE SECTIONS:	ASTM A53, GRADE B
HOLLOW STRUCTURAL SECTIONS (HSS):	ASTM A500, GRADE B
BUILT-UP SECTIONS:	ASTM A572, GRADE 50
ANCHOR RODS:	ASTM F1554-36
HEADED STUDS:	ASTM A108

8. ALL BOLTED CONNECTIONS IN STRUCTURAL STEEL SHALL UTILIZE ASTM A325 BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL HIGH-STRENGTH BOLTS IN CONNECTIONS SUBJECT TO MOMENT, TENSILE FORCES, STRESS REVERSAL OR FATIGUE SHALL BE FULLY TENSIONED.
9. ALL STEEL ITEMS, EXCEPT THOSE EMBEDDED IN CONCRETE SHALL HAVE A MINIMUM OF ONE MIL RUST INHIBITIVE PRIMER PER THE FABRICATORS STANDARDS.

EXECUTION:

10. STEEL COLUMNS SHALL BE SET DIRECTLY ON THE CONCRETE FOUNDATION AND SHALL BE ERECTED IN A PLUMB CONDITION PER AISC TOLERANCES.
11. THE STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY SHORING AS REQUIRED TO STABILIZE THE BUILDING DURING CONSTRUCTION.
12. ALL FIELD WELDING SHALL BE BY CERTIFIED AWS WELDERS PER AWS D1.1. ALL WELDING SHALL BE DONE WITH E70 ELECTRODES U.N.O.
13. ALL FIELD WELDING AND GAS CUT AREAS SHALL BE TOUCHED UP WITH PRIMER BY THE STEEL ERECTOR.
14. ALL STEEL SHALL BE CLEANED TO BE FREE FROM DIRT, MUD AND CORROSION AFTER ERECTION. THE ERECTOR SHALL TOUCH UP PAINT AS REQUIRED.
15. NON-SHRINK GROUT SHALL BE INSTALLED IMMEDIATELY AFTER COLUMN IS PLUMBED. CONTRACTOR SHALL NOT LOAD COLUMN ANCHOR BOLTS BEFORE PLACEMENT OF NON-SHRINK GROUT WITHOUT TAKING MEASURES TO PREVENT BUCKLING OF ANCHOR RODS UNDER CONSTRUCTION LOAD.
16. ALL STEEL NOTED AS AESS (ARCHITECTURAL EXPOSED STRUCTURAL STEEL) SHALL MEET THE REQUIREMENTS LISTED FOR AESS IN DIVISION 5 OF THE SPECIFICATIONS.

(05 40 00) COLD FORMED METAL FRAMING

1. ALL LIGHT GAGE STEEL FRAMING SHALL BE DESIGNED AND FABRICATED PER THE LATEST EDITION OF AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS." THE LIGHT GAGE SUPPLIER SHALL PROVIDE COMPLETE SHOP DRAWINGS SHOWING THE LOCATION AND TYPE OF ALL LIGHT GAGE STEEL FRAMING, AND OTHER PERTINENT INFORMATION. PROVIDE CALCULATIONS OF ALL LIGHT GAGE, SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF JURISDICTION.
2. ALL STUDS, TRACKS, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A525, G60.
3. LATERAL DEFLECTION REQUIREMENTS SHALL MEET THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) SPECIFIED CRITERIA BASED ON THE SUPPORTED FINISHES UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED IN THE DESIGN DOCUMENTS.
4. LIGHT GAGE FRAMING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS PRINTED INSTRUCTIONS AND RECOMMENDATIONS, UNLESS OTHERWISE NOTED. MANUFACTURERS WILL PROVIDE ALL NECESSARY ACCESSORIES.
5. ALL STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO TOP AND BOTTOM TRACKS BY EITHER WELDING OR SCREW FASTENING AT BOTH INSIDE AND OUTSIDE FLANGES. STUDS SHALL HAVE FULL BEARING AGAINST TRACK WEB. PRIOR TO STUD AND TRACK ATTACHMENT. SPLICES IN STUDS WILL NOT BE PERMITTED. PROVIDE SLIP CONNECTIONS TO STRUCTURE WHERE INDICATED.
6. STUD U-TRACK GAGE SHALL MATCH STUD GAGE. USE DEEP FLANGE TRACK. ALL TRACK BUTT JOINTS AND ABUTTING PIECES OF TRACK SHALL BE BUTT WELDED OR SPLICED TOGETHER.
7. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL NOTE THAT WITHOUT LATERAL SUPPORT FROM BRIDGING AND/OR SHEATHING EACH FACE THE STUDS HAVE REDUCED CAPACITY AND WILL NOT SUPPORT THE FULL DESIGN LOADS.
8. SCREWING, POWER-ACTUATED FASTENERS, WELDING OR A COMBINATION OF METHODS, SHALL ACCOMPLISH FASTENING OF THE COLD-FORMED METAL FRAMING SYSTEM. THE TYPE, SIZE AND SPACING OF THE FASTENERS SHALL BE AS REQUIRED BY THE MANUFACTURER OR APPROVED CONNECTION DETAILS. ALL CONNECTIONS SHALL BE DESIGNED FOR THE APPROPRIATED LOADS AS PROVIDED IN THE "DESIGN CRITERIA" SECTION OF THESE GENERAL NOTES. AS A MINIMUM, PROVIDE FASTENING PATTERNS IN ACCORDANCE WITH THE TYPICAL DETAILS DEPICTED IN THESE DRAWINGS.

9. WELDING SHALL BE DONE WITH E70 ELECTRODES. MINIMUM SIZE OF WELDS SHALL EQUAL THICKNESS OF THINNER MEMBER BEING CONNECTED. ALL WELDERS SHALL BE AWS D1.1 & D1.3 CERTIFIED WELDERS. WELDS SHALL BE TOUCHED UP WITH ZINC RICH PAINT.
10. INSTALL SUPPLEMENTARY FRAMING, BLOCKING AND BRACING IN STUD FRAMING TO SUPPORT FIXTURES, SERVICES, HEAVY TRIM, SHELVING, FURNISHINGS, AND SIMILAR WORKS REQUIRING ATTACHMENT TO FRAMING. COMPLY WITH STUD MANUFACTURERS WRITTEN INSTRUCTIONS AND INDUSTRY STANDARDS.
11. INSTALL HEADERS AT ALL WALL OPENINGS. FRAME OPENINGS WITH A DOUBLE STUD AT EACH JAMB.
12. INTERIOR NON-LOAD-BEARING WALL STUDS AT 16 IN O.C.:
 

BASIC SIZE	MAX HEIGHT
362S162-33	10'-0"
362S162-43	15'-0"
362S200-68	20'-0"
600S162-33	10'-0"
600S162-43	15'-0"
600S162-54	20'-0"
13. INTERIOR LOAD-BEARING WALL STUDS AT 16 IN O.C.: MAX. LOAD IS FROM A 20 FOOT TRIBUTARY WIDTH OF CEILING WITH A WEIGHT OF 15 PSF TOTAL = 300PLF
 

BASIC SIZE	MAX HEIGHT
362S162-33	10'-0"
362S162-43	15'-0"
14. CEILING JOIST @ 16" O.C. WITH MAXIMUM SPAN OF 20 FEET AND 15 PSF LOAD
 

BASIC SIZE	600S200-43
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15. EXTERIOR NON-LOAD BEARING STUDS @ 16" O.C.
 

BASIC SIZE	EQUIV GA	MAX HEIGHT
600S162-33	20 GA	13'-6"
600S162-43	18 GA	16'-0"
600S162-54	16 GA	17'-6"
600S162-68	14 GA	19'-0"
600S162-97	12 GA	21'-0"
16. STUD SIZE LEGEND: EXAMPLE: 362 S 162 - 33
 

362	3	OR 4	DIGIT NUMERAL INDICATING WEB DEPTH IN 1/100 INCHES
S			TYPE OF PRODUCT S=C SHAPED STUD, T=TRACK
162	3	DIGIT NUMERAL INDICATING FLANGE WIDTH IN 1/100 INCH	
33	2	OR 3	DIGIT NUMERAL INDICATING BASE METAL THICKNESS IN 1/1000 INCH (MILS)

PRE-ENGINEERED METAL BUILDING:

1. THE PRE-ENGINEERING METAL BUILDING (PEMB) SHALL BE DESIGNED FOR THE LOADS SHOWN ON THESE DRAWINGS INCLUDING ALL CODE REQUIRED UNBALANCED LOADS.
2. SUBMIT DRAWINGS AND CALCULATIONS WITH LETTER OF CERTIFICATION TO THE ARCHITECT/ENGINEER FOR APPROVAL. DRAWINGS, CALCULATIONS AND LETTER OF CERTIFICATION MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF JURISDICTION.
3. THE PEMB SHALL BE SUPPLIED BY A MANUFACTURER WHO HAS BEEN REGULARLY ENGAGED IN THE METAL BUILDING INDUSTRY FOR A PERIOD OF NOT LESS THAN FIVE YEARS. THE MANUFACTURER MUST BE A MEMBER OF MBMA AND HOLD A CURRENT CLASS "MB" AISC CERTIFICATION.
4. ALL PEMB SECONDARY MEMBERS, WALL SHEETING, ROOF SHEETING AND RELATED CONNECTIONS SHALL BE DESIGNED FOR ALL "ELEMENTS AND COMPONENTS" WIND FORCES AS PRESCRIBED IN THE CODE. THIS SHALL BE SHOWN CLEARLY IN ALL RELATED APPROVAL DRAWINGS AND CALCULATIONS.
5. THE PEMB DESIGN SHALL INCORPORATE ALL APPLICABLE AISC DESIGN GUIDE 3 SERVICEABILITY CRITERIA. VERIFY PEMB DRIFT REQUIREMENTS WITH THE ARCHITECT, ENGINEER AND OWNER PRIOR TO SUBMITTAL OF APPROVAL DRAWINGS AND CALCULATIONS.
6. IF SSR IS USED, STANDING SEAM ROOF AND PURLIN DESIGN SHALL UTILIZE THE BASE TEST METHOD OF DETERMINING POSITIVE MOMENT CAPACITY. OTHERWISE, THE DESIGN MUST CONSIDER NO LATERAL SUPPORT FROM THE STANDING SEAM ROOF.

STANDARD ABBREVIATIONS	LLV	: LONG LEG VERTICAL
AESS : ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LLBB	: LONG LEG BACK-TO-BACK
A.F.F. : ABOVE FINISHED FLOOR	M.O.	: MASONRY OPENING
ALT. : ALTERNATE	NOM.	: NOMINAL
B.O.F. : BOTTOM OF FOOTING	N.S.	: NEAR SIDE
BLDG. : BUILDING	N.T.S.	: NOT TO SCALE
BOT. : BOTTOM	O/C	: ON CENTER
B.M. : BENCH MARK	PEMB	: PRE-ENGINEERED METAL BLDG.
c = : CAMBER =	PEMBS	: PRE-ENGINEERED METAL BLDG. SUPPLIER
C.O.A. : CENTER OF GRAVITY	PL.	: PLATE
C.L. : CENTER LINE	R.	: RADIUS
COL. : COLUMN	R.D.	: ROOF DRAIN
CONC. : CONCRETE	REINF.	: REINFORCING
CORR. : CORRUGATED	R.F.	: RIGID FRAME
CONST. : CONSTRUCTION	R.O.	: ROUGH OPENING
DET. : DETAIL	S.B.	: SOIL BORING
DIM. : DIMENSION	SCH.	: SCHEDULE
DWG. : DRAWING	S.F.	: SQUARE FEET
E.J. : EXPANSION JOINT	SHT.	: SHEET SIM. : SIMILAR
EL. : ELEVATION	S.L.	: STRUCTURAL LINE
ELEV. : ELEVATION	SLBB	: SHORT LEG BACK-TO-BACK
EQ. : EQUAL	SPEC.	: SPECIFICATIONS
E.W. : EACH WAY	STL.	: STEEL
EXP. : EXPANSION	T.O.B.	: TOP OF BEAM
EXT. : EXTERIOR	T.O.C.	: TOP OF CONCRETE
EXIST. : EXISTING	T.O.F.	: TOP OF FOOTING
F.B. : FLANGE BRACE	T.O.G.	: TOP OF GIRDER
FDN. : FOUNDATION	T.O.J.	: TOP OF JOIST
F.F. : FINISHED FLOOR	T.O.M.	: TOP OF MASONRY
F.S. : FAR SIDE	T.O.P.	: TOP OF PIER
FTG. : FOOTING	T.O.S.	: TOP OF STEEL
G.B. : GRADE BEAM	T.O.SLAB	: TOP OF SLAB
HT. : HEIGHT	TYP.	: TYPICAL
INSUL. : INSULATION	U.N.O.	: UNLESS NOTED OTHERWISE
INT. : INTERIOR	VERT.	: VERTICAL
JT. : JOINT	W.P.	: WORKING POINT
LG. : LONG	W.W.F.	: WELDED WIRE FABRIC
LLH. : LONG LEG HORIZONTAL		

INSPECTION

1. INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR EMPLOYED BY A TESTING LAB SHALL BE PROVIDED FOR THE ITEMS IN THE TABLE BELOW.
2. A CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE FIELD INSPECTION DIVISION.

DUTIES & RESPONSIBILITIES OF THE INSPECTOR ARE COVERED IN SECTION 1704.1 OF IBC.

ITEM		INSPECTION TYPE	REMARKS
CONCRETE	SLAB ON GRADE (f'c = 4000 PSI)	PERIODIC	PRIOR TO POURING OF CONCRETE & DURING THE TAKING OF TEST SPECIMENS
	WALL (f'c = 4000 PSI)	PERIODIC	PRIOR TO POURING OF CONCRETE & DURING THE TAKING OF TEST SPECIMENS
	GRADE BEAM AND FOUNDATION (f'c = 3000 PSI)	PERIODIC	PRIOR TO POURING OF CONCRETE & DURING THE TAKING OF TEST SPECIMENS & PLACING OF REINFORCED CONCRETE
	STRUCTURAL CONCRETE CONCRETE ON METAL DECK (f'c = 4000 PSI)	CONTINUOUS	PRIOR TO POURING OF CONCRETE DURING THE TAKING OF TEST SPECIMENS CHECK REINFORCEMENT LOCATION
BOLTS IN CONCRETE		PERIODIC	PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS
FIELD WELDING	STRUCTURAL STEEL (ELECTRODE = E70XX) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND SINGLE-PASS FILLET WELDS > 5/16"	CONTINUOUS	DURING THE WELDING
	STRUCTURAL STEEL (ELECTRODE = E70XX) SINGLE-PASS FILLET WELDS ≤ 5/16"	PERIODIC	DURING THE WELDING
	REINFORCING STEEL (ELECTRODE = E90XX)	CONTINUOUS	DURING THE WELDING
	METAL ROOF DECK WELDING	PERIODIC	DURING THE WELDING
METAL DECK		PERIODIC	INSPECT SIZE AND SPACING OF BOTH WELDS AND FASTENERS
STRUCTURAL WELDING (INCLUDING HSA WELDING)		CONTINUOUS	EXCEPT FOR WELDING PERFORMED IN THE SHOP OF AN APPROVED FABRICATOR
REINFORCING STEEL		PERIODIC	PRIOR TO COVER UP
HIGH STRENGTH BOLTS (A325 & A490)		PERIODIC	DURING INSTALLATION OF BOLTS & TIGHTENING
STRUCTURAL MASONRY (FM = 1500PSI)		CONTINUOUS	DURING PREPARATION AND TAKING OF PRISMS OR TEST SPECIMENS, PLACING OF MASONRY UNITS AND REINFORCING. INSPECTION OF GROUT SPACE AND CLEANOUTS DURING GROUTING OPERATIONS.
SPRAY APPLIED FIREPROOFING		PERIODIC	DURING THE SPRAYING
FOUNDATION	GRADING, EXCAVATION AND FILLING	CONTINUOUS	DURING EARTHWORK EXCAVATION, GRADING AND FILLING (SEE SOILS REPORT) VERIFY CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOILS REPORT. VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO DEPTH AND BEARING STRATA. PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY AND BEARING VALUES. PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATIONS AND ON-GRADE FLOOR SLAB DESIGN FOR EACH BUILDING SITE.
			WORK WHICH, IN THE OPINION OF THE BLDG OFFICIAL, INVOLVES UNUSUAL HAZARD OR CONDITIONS.
SPECIAL CASE		PERIODIC	

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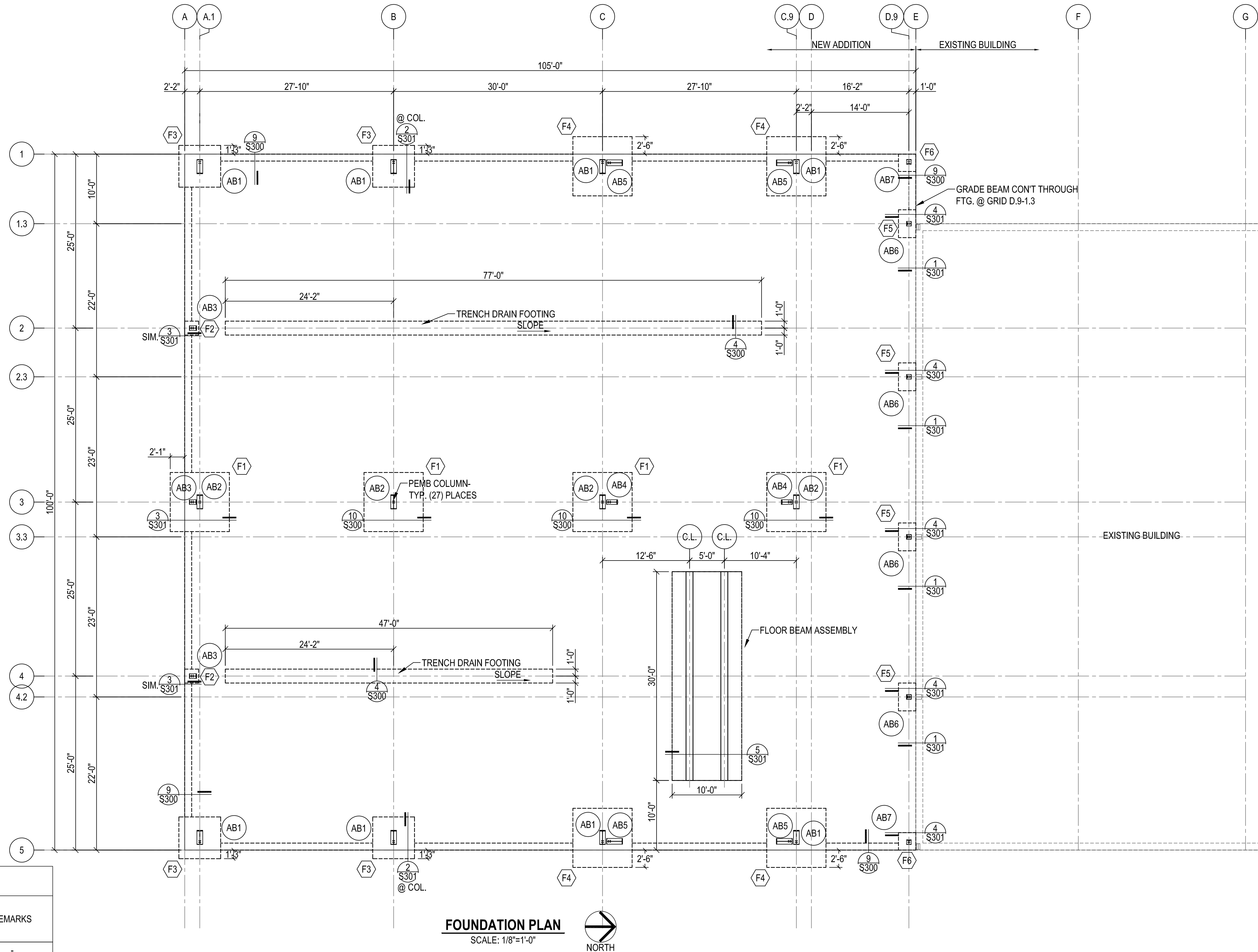
**GENERAL NOTES**

**S101**



FOUNDATION PLAN NOTES:

1. FOOTINGS BASED ON 2500 PSF ALLOWABLE BEARING PRESSURE FOR CONTINUOUS FOOTINGS AND SPREAD FOOTINGS AND LOADINGS PER THE DESIGN CRITERIA.
2. ALL FOOTING ELEVATIONS ARE RELATIVE TO FINISH FLOOR ELEVATION OF 100'-0" AT FLOOR SLAB ON GRADE.
3. (F) INDICATES FOUNDATION MARK. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT DETAILS.
4. (AB) INDICATES ANCHOR ROD DETAIL SHOWN ON DRAWING S301. SEE ALSO DETAIL 2/S300.
5. SEE TYPICAL DETAILS FOR RE-ENTRANT CORNER DETAIL.
6. CONSTRUCTION POURS SHALL BE SEPARATED BY A CONSTRUCTION JOINT. SEE TYPICAL DETAILS.
7. SLAB SHALL HAVE CONTROL JOINTS AS DIRECTED BY THE ARCHITECT OR ENGINEER PER TYPICAL DETAILS.
8. CONTRACTOR SHALL READ THE SOILS REPORT AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE SITE AND SUBGRADE INFORMATION GIVEN THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES FOR ESTIMATING AND CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR BOLLARD PLACEMENT. FINAL COORDINATION WITH ARCHITECTURAL AND CIVIL REQUIRED.
10. COORDINATE FLOOR SLOPES AND DRAINS WITH ARCHITECTURAL, PLUMBING AND CIVIL PLANS.
11. COLUMN FOOTING CENTERED ON COLUMN CENTERLINE LOCATIONS UNLESS NOTED OTHERWISE ON THE PLAN.



FOUNDATION SCHEDULE

MARK	FOOTING SIZE & REINFORCEMENT		ANCHOR BOLTS		REMARKS
	SIZE (L x W x T)	REINFORCEMENT AT BOTTOM OF FOOTING (UNO)	QUANTITY AND SIZE	EMBED LENGTH & PROJECTION	
F1	8'-6" x 8'-6" x 1'-6"	(11) #5s EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-
F2	2'-0" x 2'-0" x 2'-10"	(2) #4 EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-
F3	6'-0" x 6'-0" x 2'-10"	(8) #5 EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-
F4	8'-6" x 8'-6" x 2'-10"	(11) #5 EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-
F5	4'-0" x 2'-6" x 2'-10"	(5) #5s EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-
F6	2'-6" x 2'-6" x 2'-10"	(3) #5s EACH WAY T&B	SEE DETAIL	1'-0" / 11"	-

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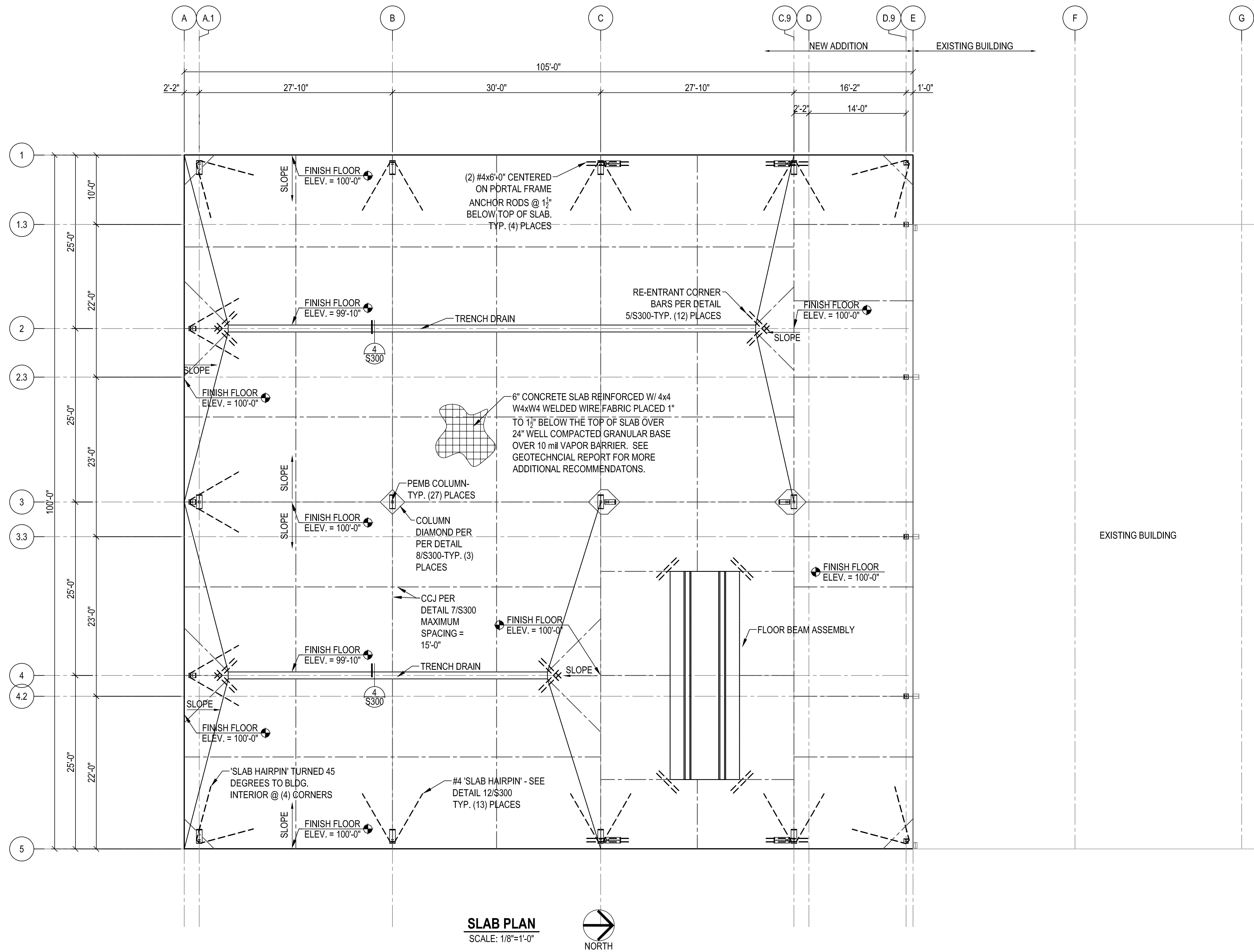
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**FOUNDATION PLAN**

**S200**

FOUNDATION PLAN NOTES:

1. FOOTINGS BASED ON 2500 PSF ALLOWABLE BEARING PRESSURE FOR CONTINUOUS FOOTINGS AND SPREAD FOOTINGS AND LOADINGS PER THE DESIGN CRITERIA.
2. ALL FOOTING ELEVATIONS ARE RELATIVE TO FINISH FLOOR ELEVATION OF 100'-0" AT FLOOR SLAB ON GRADE.
3. (F) INDICATES FOUNDATION MARK. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT DETAILS.
4. (AR) INDICATES ANCHOR ROD DETAIL SHOWN ON DRAWING S301. SEE ALSO DETAIL 2/S300.
5. SEE TYPICAL DETAILS FOR RE-ENTRANT CORNER DETAIL.
6. CONSTRUCTION POURS SHALL BE SEPARATED BY A CONSTRUCTION JOINT. SEE TYPICAL DETAILS.
7. SLAB SHALL HAVE CONTROL JOINTS AS DIRECTED BY THE ARCHITECT OR ENGINEER PER TYPICAL DETAILS.
8. CONTRACTOR SHALL READ THE SOILS REPORT AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE SITE AND SUBGRADE INFORMATION GIVEN THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES FOR ESTIMATING AND CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR BOLLARD PLACEMENT. FINAL COORDINATION WITH ARCHITECTURAL AND CIVIL REQUIRED.
10. COORDINATE FLOOR SLOPES AND DRAINS WITH ARCHITECTURAL, PLUMBING AND CIVIL PLANS.
11. COLUMN FOOTING CENTERED ON COLUMN CENTERLINE LOCATIONS UNLESS NOTED OTHERWISE ON THE PLAN.



SLAB PLAN  
SCALE: 1/8"=1'-0"



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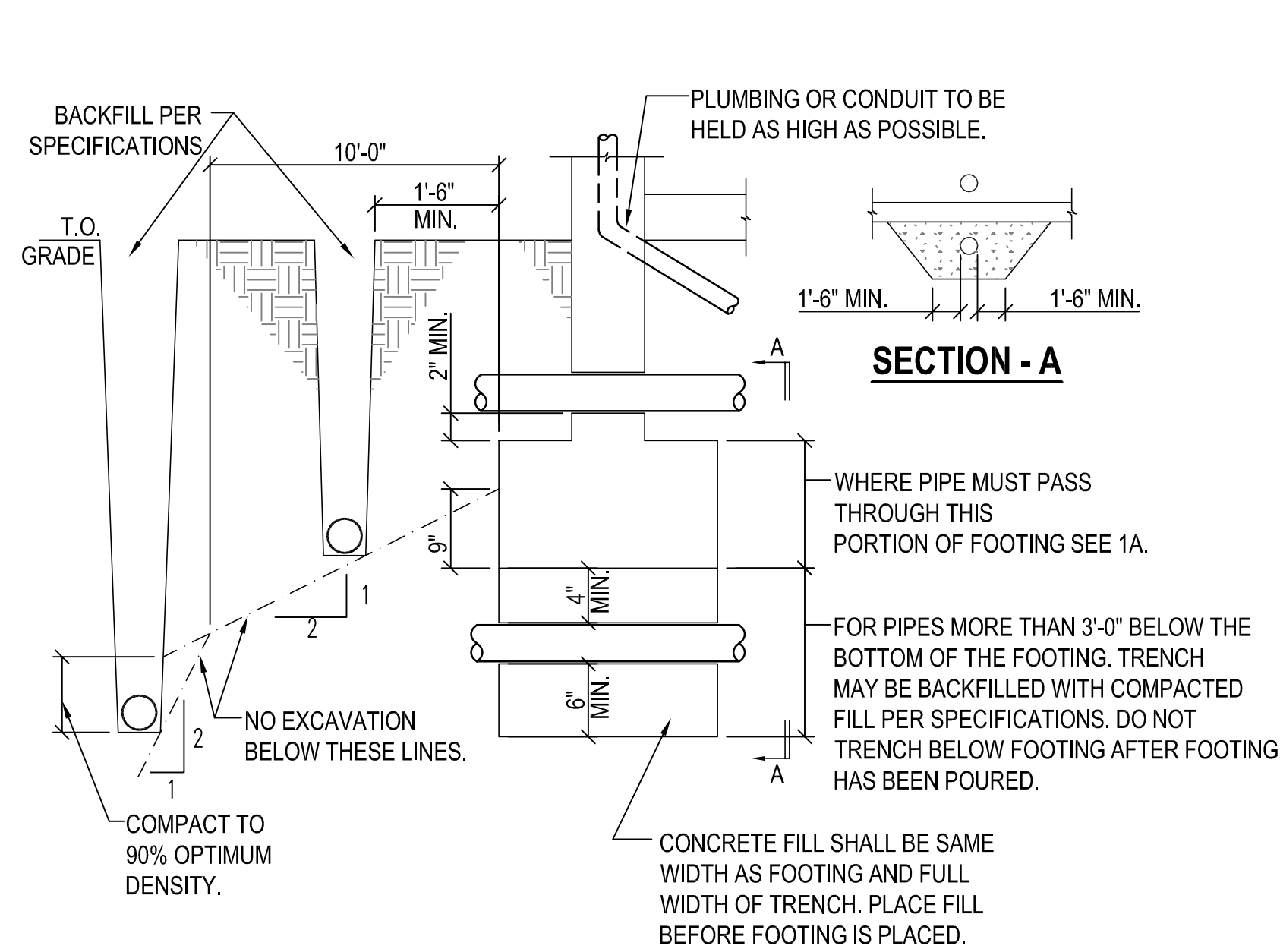
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SLAB  
PLAN

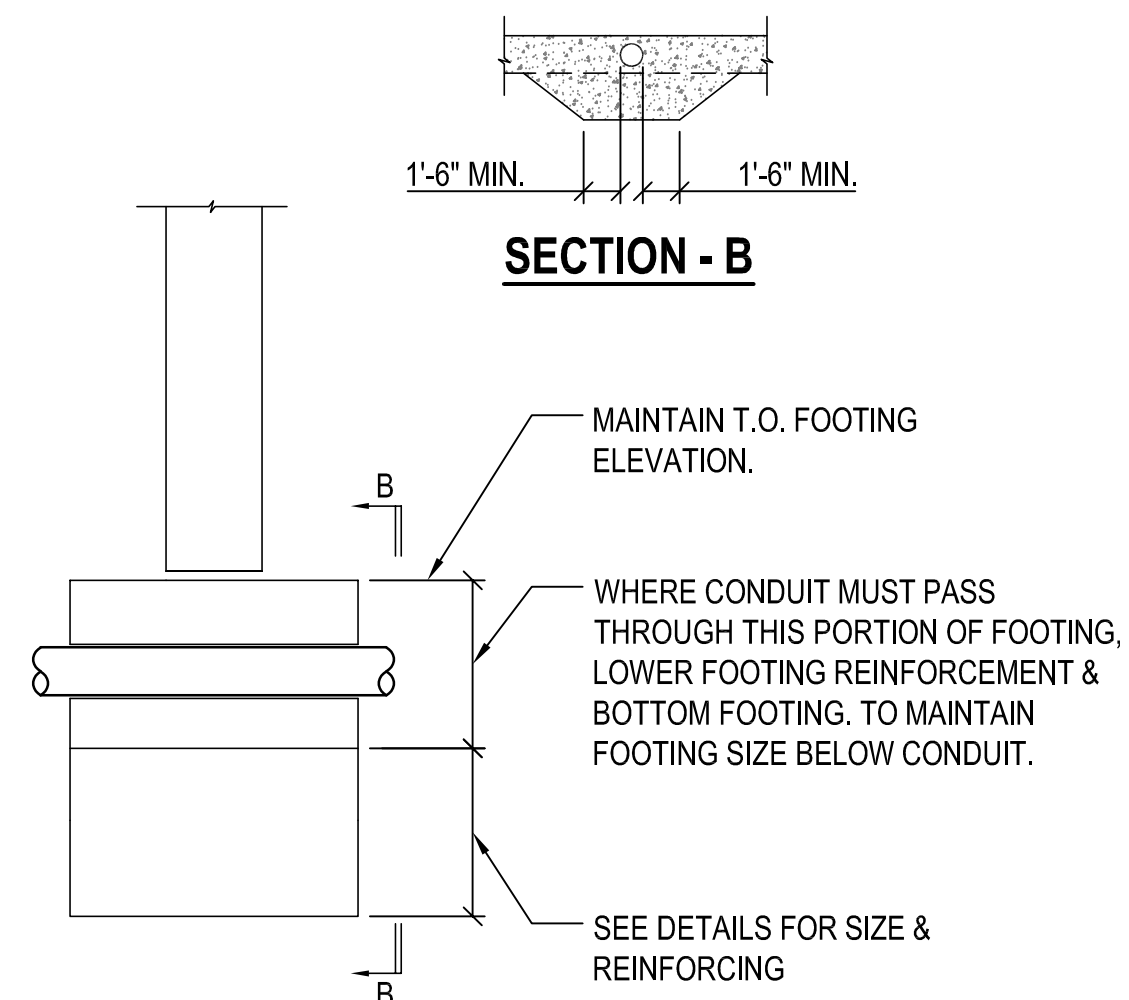
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S201

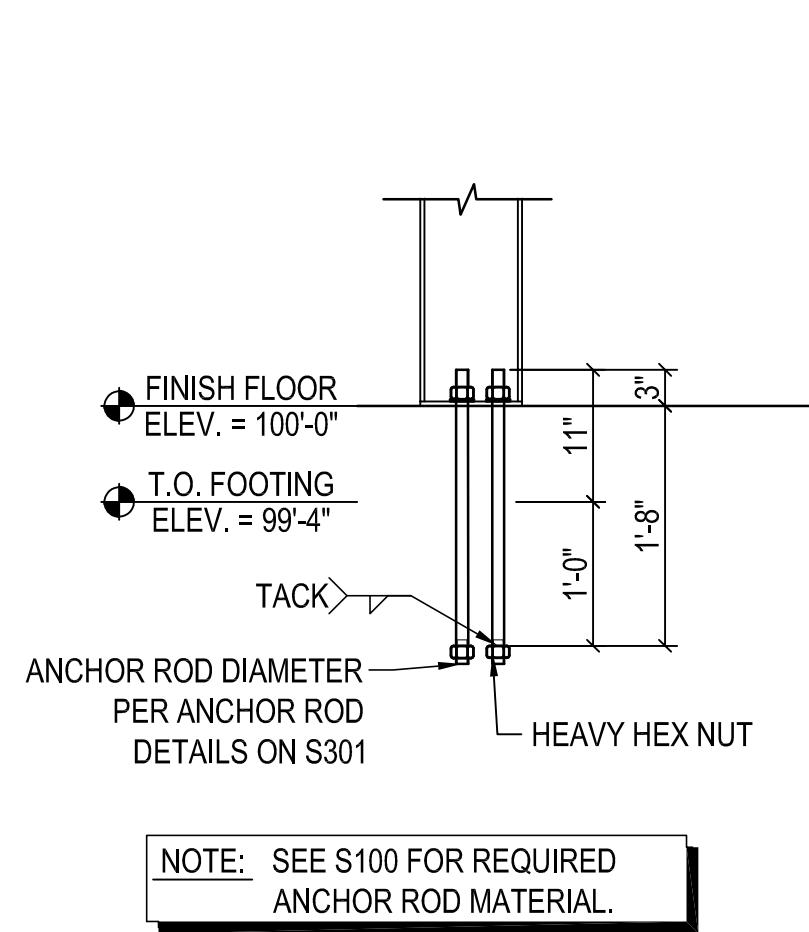




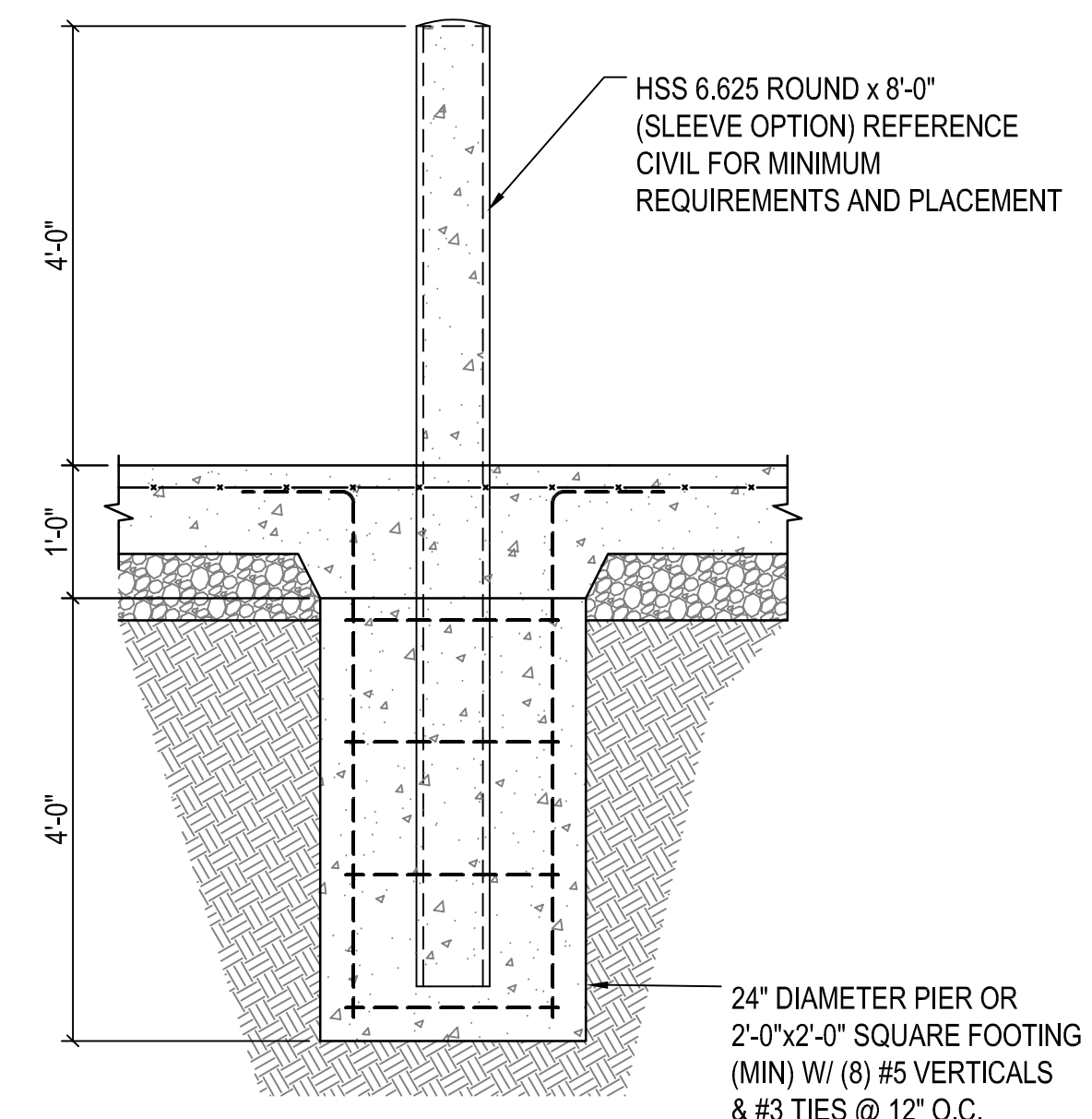
**TYPICAL PIPE & TRENCH DETAIL** 1  
N.T.S. S300



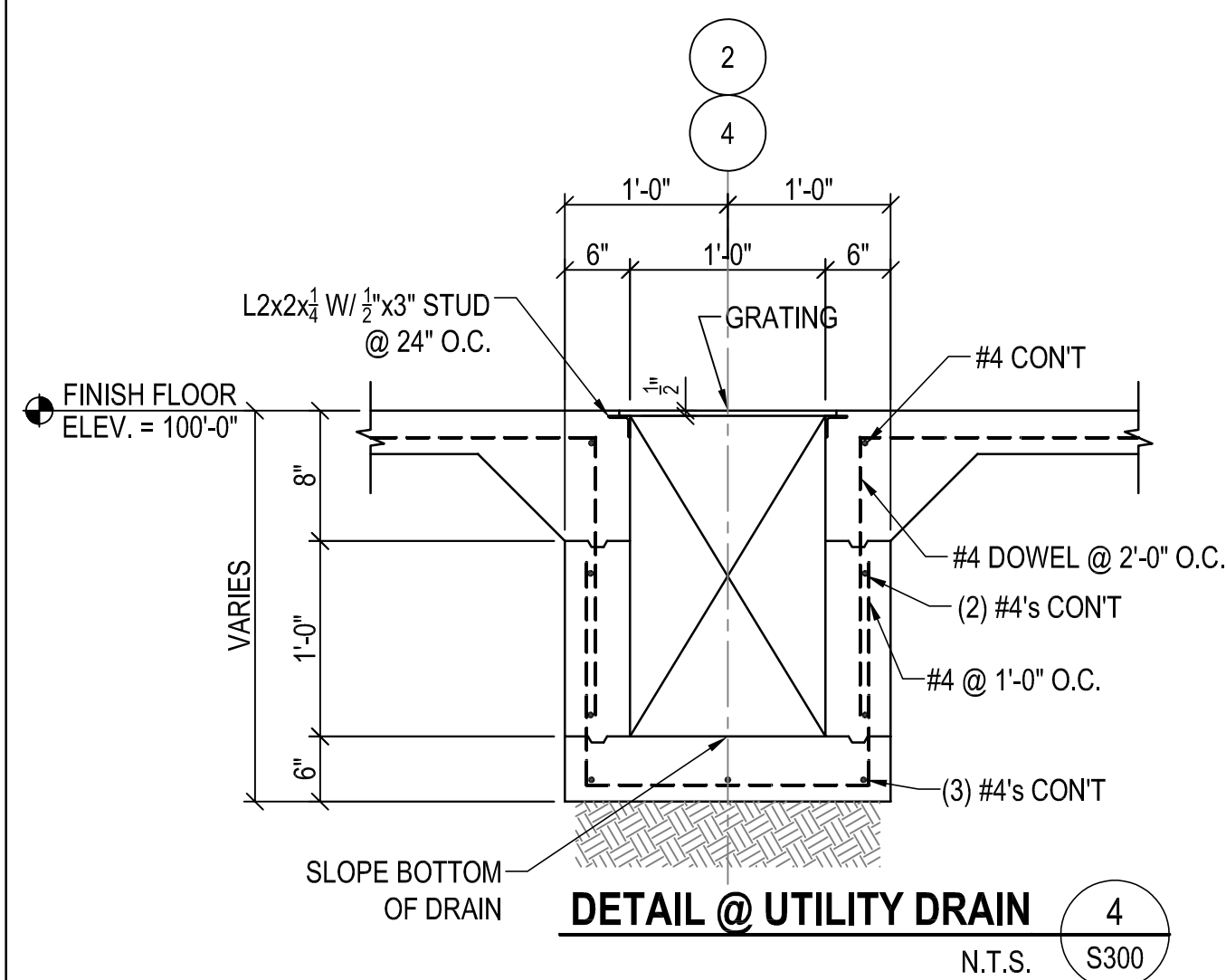
**TYPICAL PIPE & TRENCH DETAIL** 1A  
N.T.S. S300



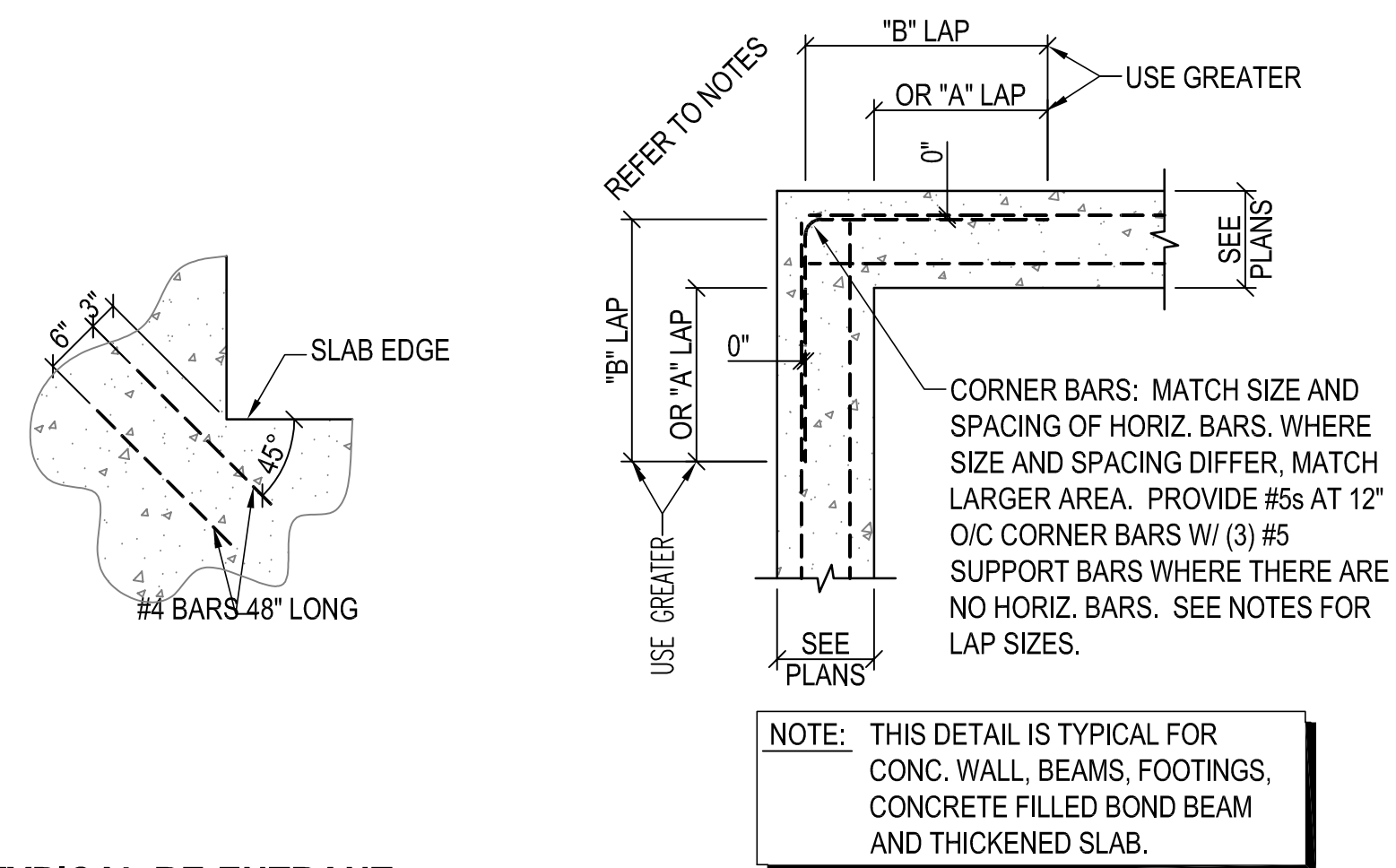
**COLUMN ANCHOR BOLT DETAIL** 2  
SCALE: N.T.S. S300



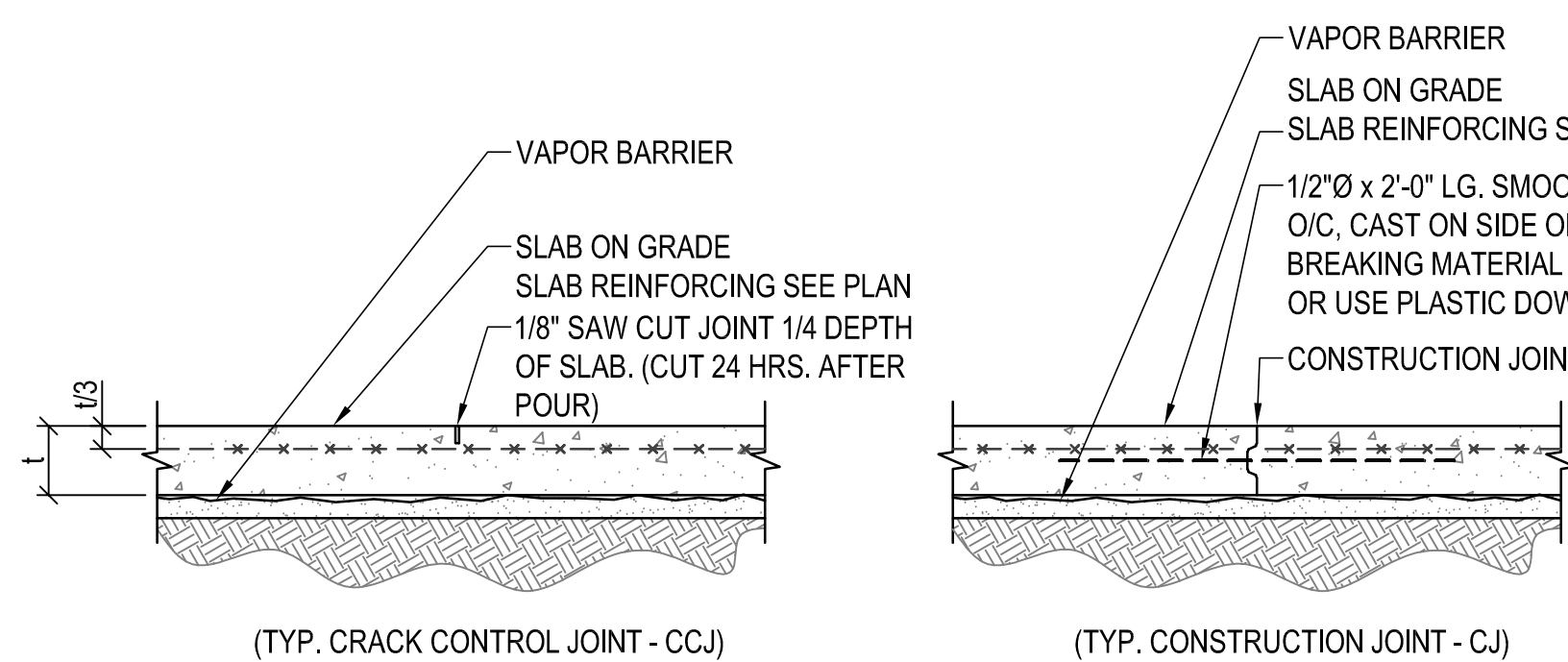
**TYPICAL BOLLARD DETAIL** 3  
SCALE: 3/4" = 1'-0" S300



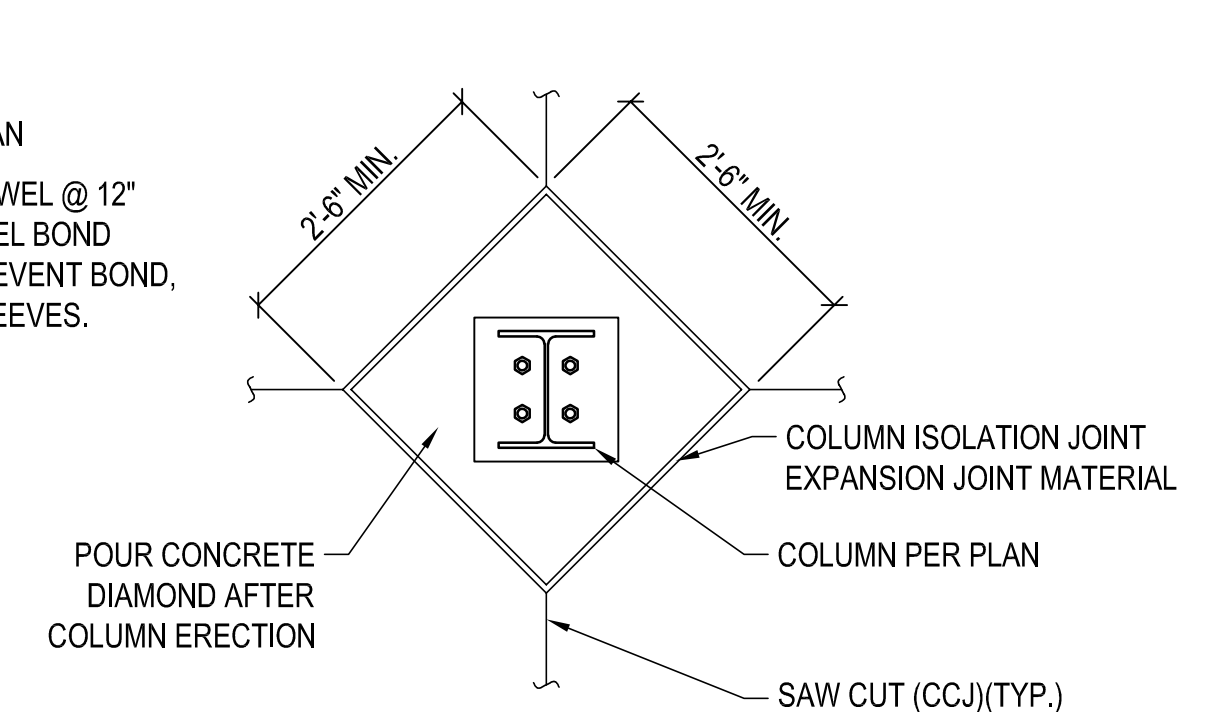
**TYPICAL RE-ENTRANT CORNER REINF.** 5  
SCALE: 3/4" = 1'-0" S300



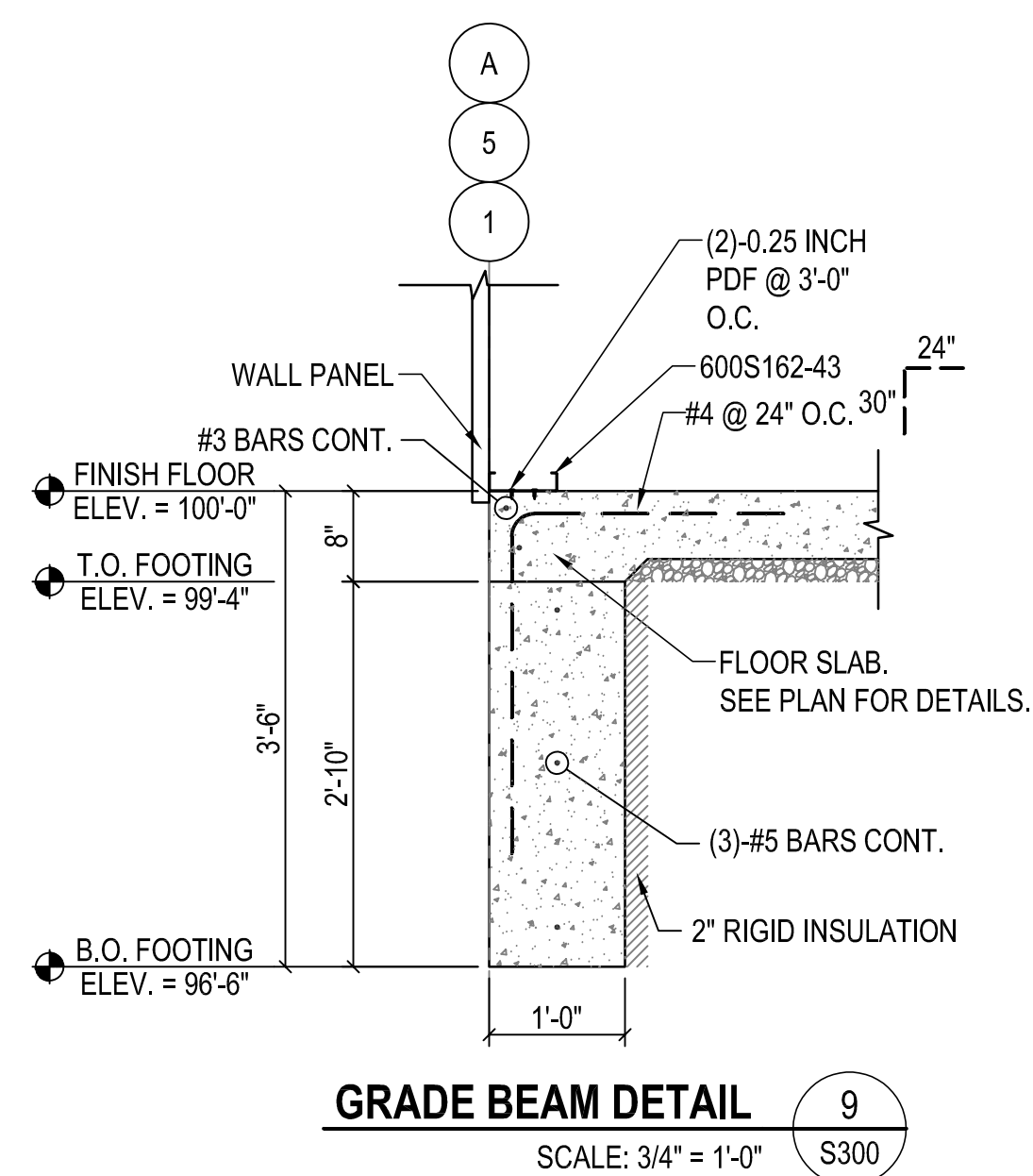
**TYPICAL CORNER BAR DETAIL** 6  
SCALE: N.T.S. S300



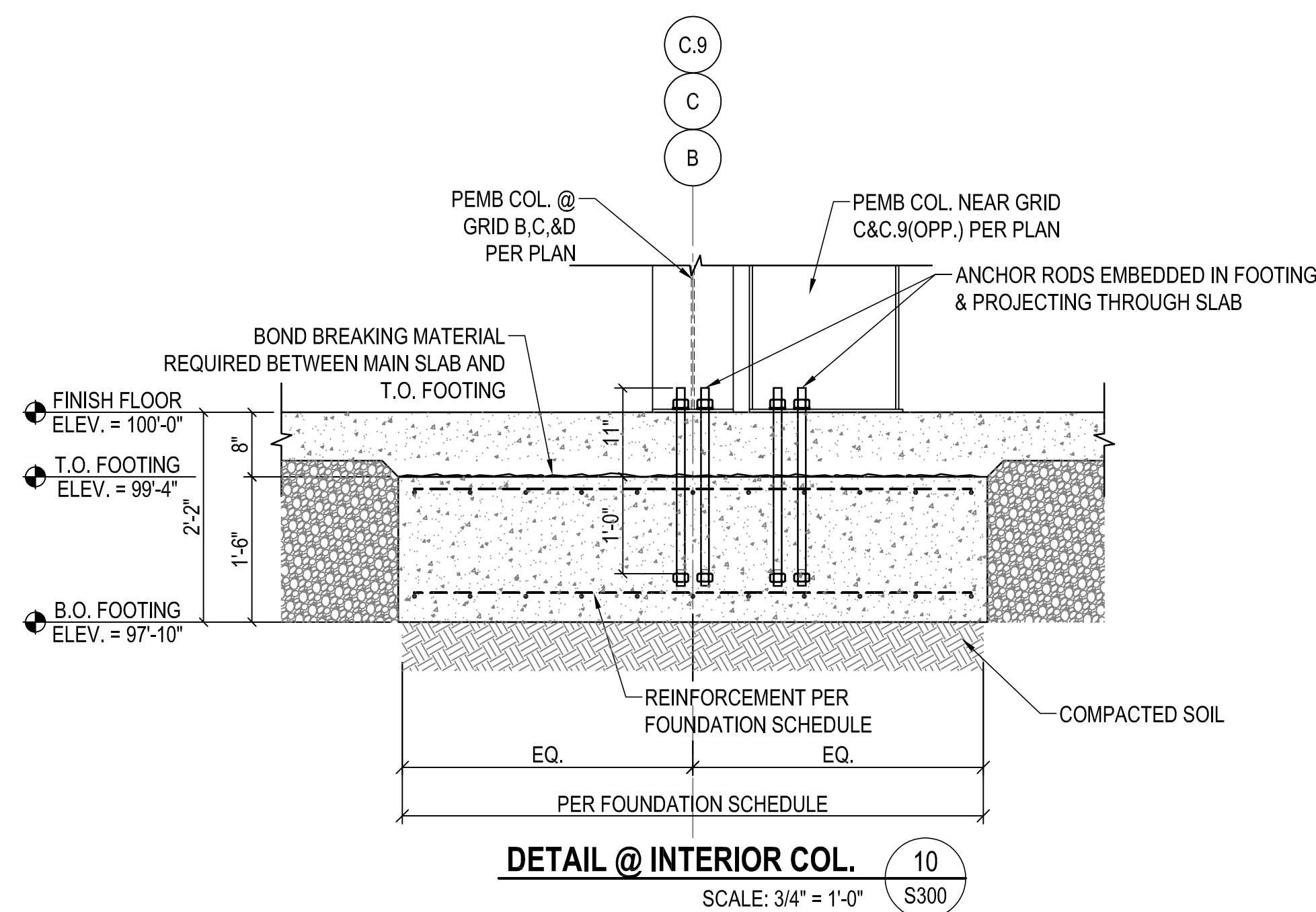
**TYPICAL SLAB ON GRADE JOINT DETAILS** 7  
SCALE: 3/4" = 1'-0" S300



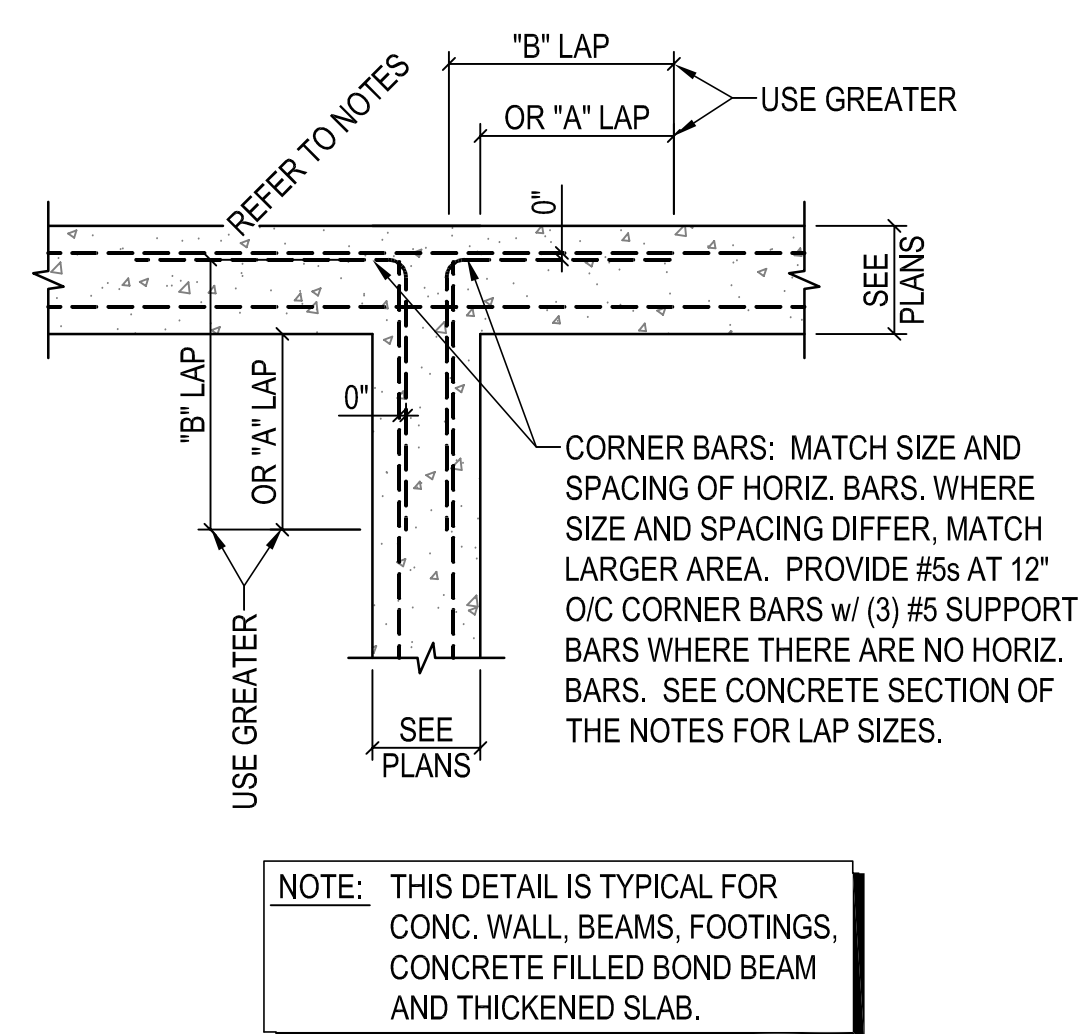
**TYPICAL COLUMN DIAMOND BLOCKOUT** 8  
SCALE: 3/4" = 1'-0" S300



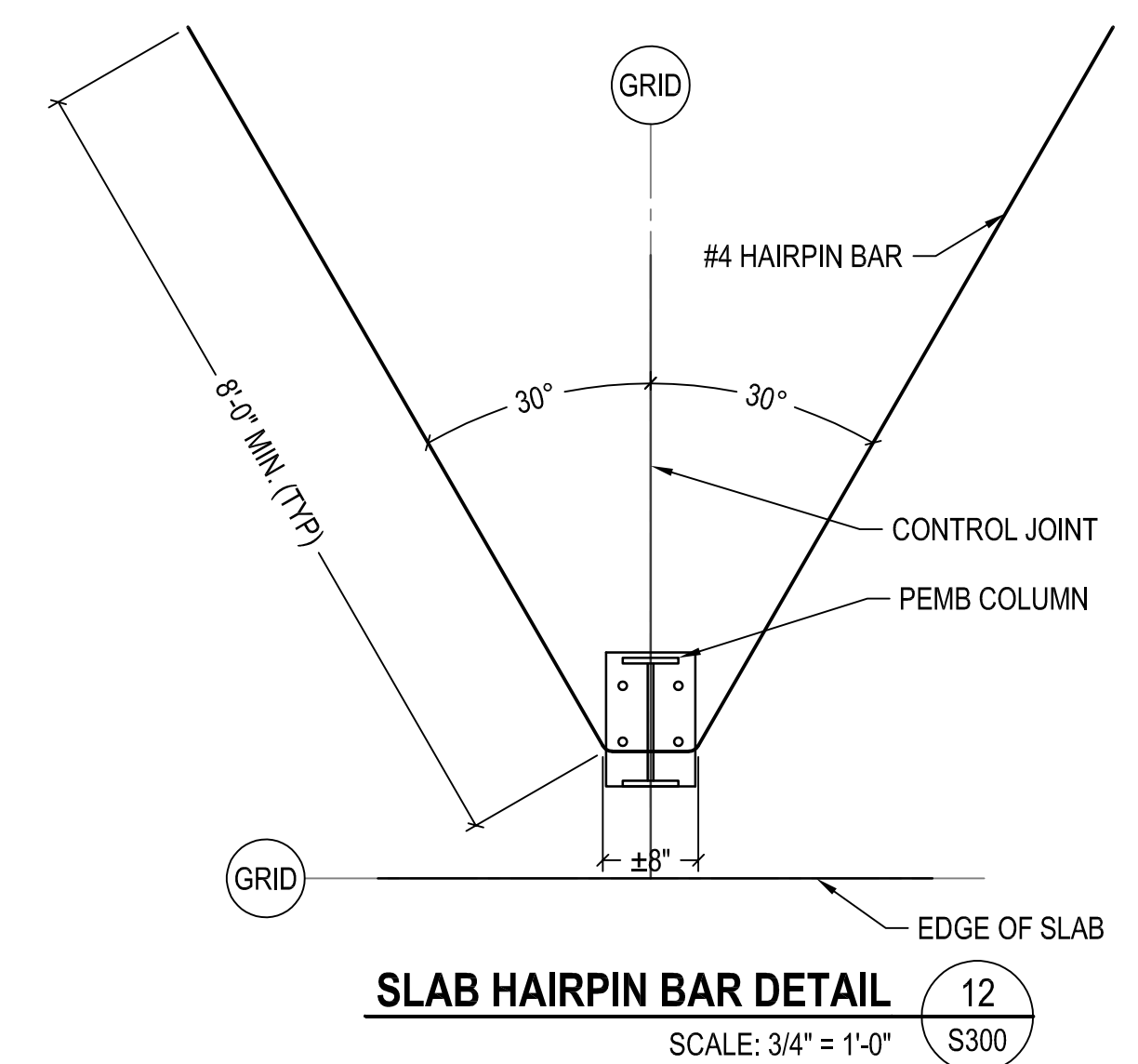
**GRADE BEAM DETAIL** 9  
SCALE: 3/4" = 1'-0" S300



**DETAIL @ INTERIOR COL.** 10  
SCALE: 3/4" = 1'-0" S300



**TYPICAL TEE CORNER BAR DETAIL** 11  
SCALE: N.T.S. S300



**SLAB HAIRPIN BAR DETAIL** 12  
SCALE: 3/4" = 1'-0" S300

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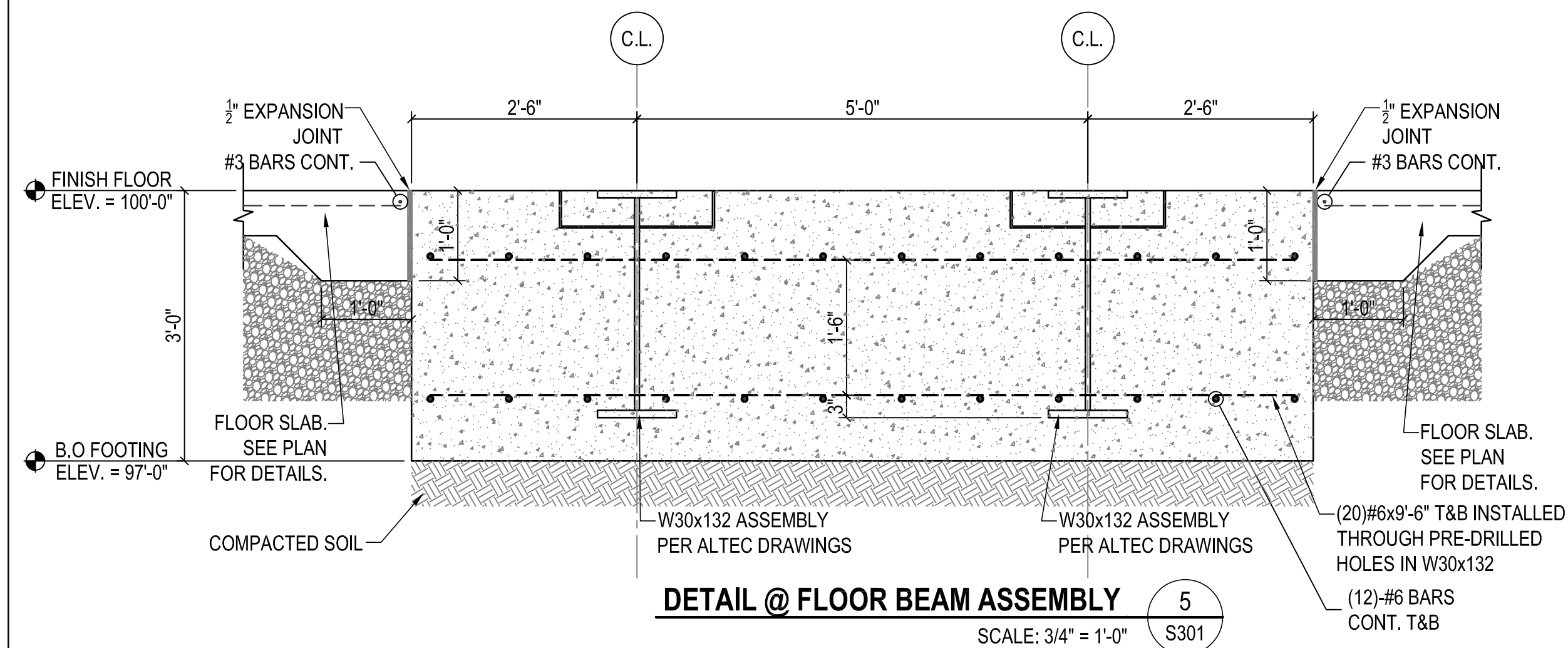
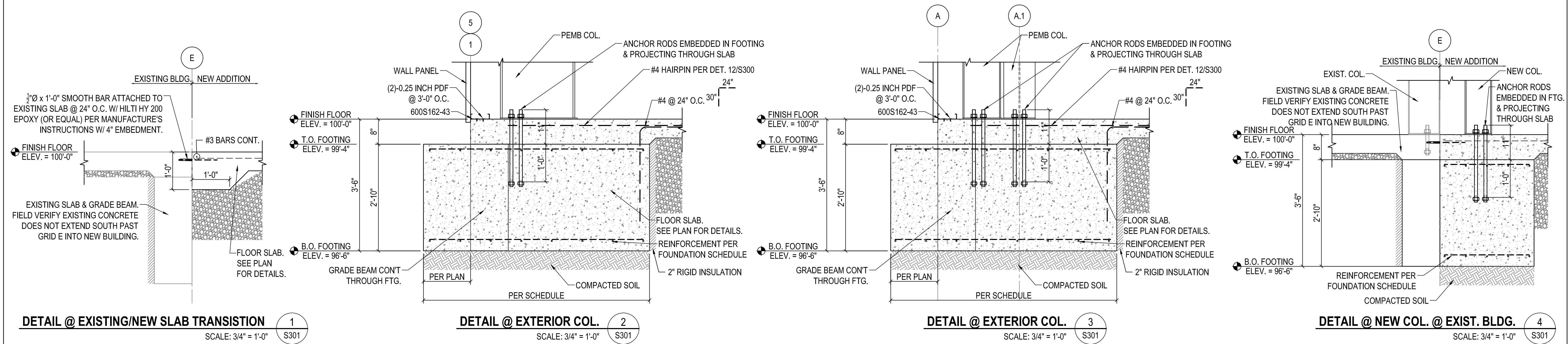
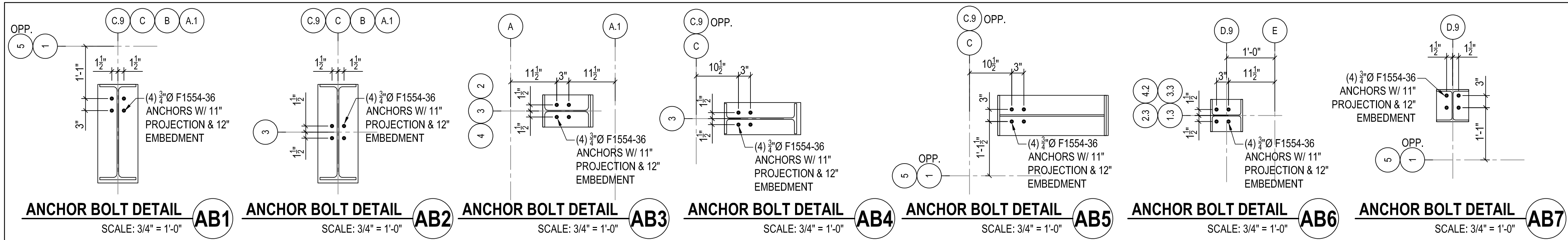
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**S301**