

GENERAL	GEOTECHNICAL FOUNDATIONS	CONCRETE CONSTRUCTION	COLD FORMED METAL FRAMING	PRE-ENGINEERED METAL BUILDING SYSTEM	STATEMENT OF SPECIAL INSPECTIONS
<p>1. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE RESEARCH, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, CUTTING, TEMPORARY SUPPORTS, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>2. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS, SEQUENCES OF CONSTRUCTION, OR CONSTRUCTION TECHNIQUES USED TO PERFORM THE WORK. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS.</p> <p>3. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PROGRAM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTIONS AS TO SAFETY PRECAUTIONS AND PROGRAMS. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS.</p> <p>4. CONTRACTOR IS TO ESTABLISH AND VERIFY OPENINGS AND INSERTS FOR ITEMS TO BE INSTALLED BY OTHER TRADES PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND CONSTRUCTION.</p> <p>5. CONSTRUCTION MATERIAL AND EQUIPMENT LOADS PLACED ON THE STRUCTURE DURING THE CONSTRUCTION PROCESS SHALL NOT EXCEED THE DESIGN LIVE LOAD OF THE STRUCTURE NOTED IN THESE DRAWINGS. THE ENGINEER SHALL NOT BE RESPONSIBLE TO INVESTIGATE NOR APPROVE THE STRUCTURE FOR CONSTRUCTION MATERIAL OR EQUIPMENT LOADING. ERECTION OR CONSTRUCTION LOADS ARE NOT TO BE APPLIED UNTIL PROPER STRUCTURAL FRAMING CONNECTIONS ARE MADE, AND ALL TEMPORARY BRACING IS IN PLACE. THE CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY BRACING OF THE STRUCTURE WHERE NECESSARY FOR CONSTRUCTION LOADS.</p> <p>6. DETAILS THAT ARE NOTED AS "TYPICAL OR TYP" ON DETAIL TITLES ARE TO BE APPLIED TO THE PROJECT CONSTRUCTION AS GENERAL CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. THESE DETAILS ARE NOT CUT AT ALL LOCATIONS WHERE THEY OCCUR, AND THEY MAY NOT BE CUT AT ALL WHERE NO SPECIFIC DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR CONDITIONS ELSEWHERE ON THE PROJECT, SUBJECT TO APPROVAL OF THE ENGINEER.</p> <p>7. DO NOT SCALE DRAWINGS. CONTRACTOR IS TO VERIFY ALL DIMENSIONS RELATIVE TO ARCHITECTURAL OR OTHER DISCIPLINE DRAWINGS. VERIFY CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.</p> <p>8. WHERE DISCREPANCIES OCCUR BETWEEN GENERAL NOTES, PLANS, DETAILS, AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS APPROVED OTHERWISE BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.</p> <p>9. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND SPECIFICATIONS. THE CONTRACTOR SHALL ESTABLISH AND VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO VESSES, CHANGES, HANGERS, INSERT ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.</p> <p>10. IF THE ENGINEER'S SEAL AND SIGNATURE IS NOT AFFIXED TO THESE DRAWINGS, THESE DRAWINGS ARE INTENDED FOR PRELIMINARY PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.</p>	<p>1. FOUNDATION DESIGN IS BASED ON THE INFORMATION FROM THE GEOTECHNICAL INVESTIGATION PERFORMED BY TERRACON AND PUBLISHED ON SEPTEMBER 15, 2020 (PROJECT NO. 0425887).</p> <p style="text-align: center;">2'-0"</p> <p>ALLOWABLE NET SOIL BEARING PRESSURE 2,500 PSF (FOOTINGS BEARING ON NATIVE SOILS OR ENGINEERED FILL)</p> <p>COEFFICIENT OF FRICTION 0.31 PASSIVE PRESSURE 290 PCF</p> <p>2. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND PROJECT SPECIFICATIONS.</p> <p>3. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTIVE PROTECTION FOR FOUNDATIONS NOT CONSTRUCTED TO FROST DEPTH IF CONSTRUCTION IS TO TAKE PLACE IN WINTER MONTHS. CONTACT GEOTECHNICAL ENGINEER FOR GUIDANCE.</p> <p>4. IF DISCREPANCIES EXIST BETWEEN THE CONTRACT DOCUMENTS AND THE GEOTECHNICAL REPORT, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS DETERMINED OTHERWISE BY THE ENGINEER IN WRITING.</p> <p>5. ALL FOUNDATION EXCAVATIONS AND BEARING SURFACES SHALL BE OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER / TESTING AGENCY PRIOR TO PLACING FOUNDATION CONCRETE.</p> <p>6. NOTIFY ENGINEER OF ANY NECESSARY DEVIATIONS FROM THE FOOTING ELEVATIONS SHOWN ON THE DRAWINGS PRIOR TO CONSTRUCTING THE FOOTINGS.</p> <p>7. UNLESS NOTED OTHERWISE, COLUMN FOOTINGS SHALL BE CENTERED ON COLUMNS, AND WALL FOOTING SHALL BE CENTERED ON WALLS.</p> <p>8. BACKFILL FOUNDATION WALLS WITH FREE DRAINING FILL AND PROVIDE A SUBSURFACE DRAINAGE SYSTEM BASED ON THE GEOTECHNICAL REPORT RECOMMENDATIONS.</p> <p>9. ALL FOUNDATION WALLS WHERE GRADE IS NOT PRESENT ON BOTH SIDES ARE DESIGNED TO BE RESTRAINED IN THE COMPLETED STRUCTURE. CONNECTING CONSTRUCTION SHALL BE INSTALLED, INCLUDING INSTALLATION OF FLOOR, ROOF, DIAPHRAGM AND THEIR ATTACHMENTS, PRIOR TO BACKFILLING WALL. CONCRETE DIAPHRAGMS SHALL REACH 75% OF REQUIRED 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. ALTERNATIVELY, THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF TEMPORARY BRACING THAT PROTECTS THE WALL AGAINST OVERTRESS OR MOVEMENT UNTIL ALL SUPPORTING CONSTRUCTION IS COMPLETE AND CURED. THE CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY BRACING.</p> <p>10. BACKFILLING AGAINST FOUNDATION WALLS WHERE GRADE IS PRESENT ON BOTH SIDES SHALL BE PERFORMED 50 DIFFERENCE IN SOIL HEIGHT ON EACH SIDE OF THE WALL DOES NOT EXCEED 2-FT.</p> <p>11. NEW FOOTINGS LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS OR FOOTINGS FROM A PREVIOUS PLOT SHALL BE FOUND AT THE SAME ELEVATION AS THE EXISTING FOUNDATIONS, UNLESS THE EXISTING FOOTINGS SHALL NOT BE UNDERMINED BY NEW CONSTRUCTION, UNO.</p> <p>POST-INSTALLED ANCHORS</p> <p>1. UNO. THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE / EPOXY, SHOT-PIN, SCREW AND UNDERCUT.</p> <p>2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED.</p> <p>3. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING, DAMAGED OR MISPLACED CAST-IN-PLACE ANCHORS.</p> <p>4. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS.</p> <p>5. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONING (WHERE OCCURS), ETC. USE NON-DESTRUCTIVE TESTING TO LOCATE PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO THE EXISTING CONCRETE OR MASONRY. FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR VAWY METHODS.</p> <p>6. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE ICC-ES REPORTS, INCLUDING, BUT NOT LIMITED TO, ALL ANCHOR SPACINGS, EMBEDMENTS AND EDGE DISTANCES.</p> <p>7. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE AND INSTALLATION TEMPERATURES.</p> <p>8. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "H" OF ALL ANCHORS SHALL HAVE EMBEDMENT NOTED OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.</p> <p>9. IF THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE ENGINEER.</p> <p>10. ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST.</p> <p>11. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL, TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 308. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.</p> <p>12. EXPANSION BOLTS IN MASONRY SHALL BE ONE OF THE FOLLOWING: a. HILTI KWIK-BOLT 3 MASONRY ANCHORS (ICC ESR-3985) b. SIMPSON STRONG-TIE WEDGE-ALL (ICC ESR-1190) c. SIMPSON STRONG-TIE STRONG-BOLT-2 WEDGE ANCHOR (AMPO USR-ER-240)</p> <p>13. SCREW ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING: a. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3056) b. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-1056)</p> <p>14. ADHESIVE ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING: a. HILTI HY-270 FAST CURE ADHESIVE ANCHORS (ICC ESR-4144 FOR URM, ICC ESR-4143) b. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (AMPO USR-ER-256)</p> <p>15. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI KWIK-BOLT 122 CONCRETE ANCHORS (ICC ESR-4266) b. SIMPSON STRONG-TIE STRONG-BOLT-2 WEDGE ANCHORS (ICC ESR-3037)</p> <p>16. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI HUS-EZ SCREW ANCHOR (ICC ESR-3027) b. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-2713)</p> <p>17. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HILTI HY-200 SAFE SET SYSTEM ADHESIVE ANCHORS (ESR-3187) (FAST CURE APPLICATIONS) b. HILTI RE-500 V10 ADHESIVE ANCHORS (ESR-3811) c. HILTI RE-100 ADHESIVE ANCHORS (ICC ESR-3629) (STANDARD CURE APPLICATIONS) d. SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHORING SYSTEM (ESR-4057) e. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (AMPO USR-ER-2063) f. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ESR-2508) (STANDARD CURE APPLICATIONS)</p>	<p>1. THESE NOTES APPLY TO CONCRETE USED IN BUILDING CONSTRUCTION ONLY. SEE CIVIL/SITE WORK DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.</p> <p>2. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 AND ACI 318. ACI 318-2008 AND SHALL BE IN ACCORDANCE WITH THE ADDITIONAL PROVISIONS OF THE BUILDING CODE.</p> <p>3. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS.</p> <p>4. SLEEVES OR OPENINGS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN WALLS, JOISTS, BEAMS, GRIDDERS, OR IN SLABS ADJACENT TO A COLUMN (WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS) UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE ENGINEER'S APPROVAL BEFORE THE SLAB IS PLACED. ALL PENETRATIONS THROUGH SLABS SHALL BE SLEEVED PER WITH ACI 318.</p> <p>5. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318. SUBMIT DRAWINGS SHOWING PLACEMENT SEQUENCE FOR ENGINEERING REVIEW.</p> <p>6. ALL CONCRETE SHALL BE MECHANICALLY CONSOLIDATED IN ACCORDANCE WITH ACI 309.</p> <p>7. PROVIDE A FORMED CONSTRUCTION KEYWAY BETWEEN ALL HORIZ AND VERT PLACEMENT EDGES EXCEPT CONCRETE TOPPING SLABS. PROVIDE WATERSTOPS FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE AND WHERE INTERIOR SLAB ON GRADE IS BELOW EXTERIOR GRADE.</p> <p>8. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4", UNO.</p> <p>9. RIGID INSULATION USED TO FORM BUILT-UP SLABS SHALL BE CLOSED-CELL EXPANDED POLYSTYRENE CONFORMING TO ASTM D8617 WITH MINIMUM COMPRESSIVE RESISTANCE @ 1% DEFORMATION OF 12 PSI.</p> <p>CONCRETE REINFORCEMENT</p> <p>1. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.</p> <p>2. REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706, GRADE 60. NO WELDING OF REINFORCEMENT SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR REVIEWED AND APPROVED BY THE ENGINEER.</p> <p>3. DEFORMED BAR ANCHORS (DBA) SHALL BE PROVIDED IN ACCORDANCE WITH NELSON STUD WELDING, INC ICC ESR-2907. ANCHORS SHALL BE IN-PLACE WELDED TO STEEL USING A STUD WELDING QUALIFIED AND CERTIFIED BY THE CONTRACTOR.</p> <p>4. CONCRETE COVER REQUIREMENTS FOR CAST-IN-PLACE, NON-PRESTRESSED REINFORCEMENT UNLESS OTHERWISE NOTED ON DETAILS SHALL BE AS FOLLOWS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: 1" #5 BARS AND LARGER: 1 1/2" #3 BARS AND SMALLER: 1/2" CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: SLABS, WALLS, AND JOISTS: #4 AND #8 BARS: 1 1/2" #11 BARS AND SMALLER: 3/4" BEAMS, COLUMNS: 1 1/2" PRIMARY REINFORCEMENT: 1" TIES, STIRRUPS, SPIRALS: 1/2"</p> <p>5. REINFORCING BAR SPLICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 AND THE REINFORCING SPICE LENGTH SCHEDULE. PROVIDE CLASS 'B' LAP SPLICE, UNO.</p> <p>6. ALL HORIZONTAL WALL AND BEAM REINFORCING SHALL BEND AROUND ALL CORNERS, LAP WITH INTERSECTING REINFORCEMENT, AND LAP SHALL CONFORM TO LAP SPLICE AND ANCHORAGE SCHEDULE PROVIDED, UNO.</p> <p>7. ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ANCHORAGES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING CONCRETE PLACEMENT. NO WET SETTING OF REINFORCEMENT OR ACCESSORIES.</p> <p>8. PROVIDE CORROSION RESISTANT ACCESSORIES SUCH AS PLASTIC COATED (NOT PLASTIC TIPPED) OR STAINLESS-STEEL CHAIRS IN ALL EXPOSED CONCRETE CONSTRUCTION. PRECAST CONCRETE CHAIRS OR SAND PLATE CHAIRS SHALL BE USED FOR THE SUPPORT OF REINFORCING ON GRADE. CONCRETE BLOCK OR CLAY MASONRY BRICK ARE NOT PERMITTED.</p> <p>10. WELDED WIRE REINFORCING (WWR) SHALL COMPLY WITH ASTM A1064. USE ONLY FLAT SHEETS, LAP ALL WWR AT LEAST ONE FULL WIRE SPACING PLUS 2 INCHES. ALL WWR SHALL BE CHARGED TO ITS PROPER HEIGHT AND MAINTAINED AT THE PROPER LEVEL THROUGHOUT THE CONCRETE PLACEMENT. LIFTING OF WWR WITH A HOOK DURING CONCRETE PLACEMENT SHALL NOT BE PERMITTED.</p> <p>11. MECHANICAL COUPLERS SHALL BE TYPE 2 COUPLERS CAPABLE OF SUSTAINING 125% Fy.</p>	<p>1. DESIGN, FABRICATE, AND ERECT COLD-FORMED STEEL STRUCTURAL MEMBERS PER THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE, INCLUDING ALL APPLICABLE AMENDMENTS, WHERE REQUIRED, THE SEISMIC DESIGN OF COLD-FORMED STRUCTURAL MEMBERS, AISC 360-16, AND SHALL BE IN ACCORDANCE WITH THE ADDITIONAL PROVISIONS OF THE BUILDING CODE.</p> <p>2. COLD FORMED METAL FRAMING (CFMF) AND CONNECTIONS TO THE STRUCTURAL SYSTEM SHALL BE DESIGNED AND DETAILED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHICH THE PROJECT IS LOCATED.</p> <p>3. CFMF SHALL BE DESIGNED BY THE SUPPLIER TO RESIST LOADS INDICATED ON THE DRAWINGS. SEE LOADING PLANS AND ADDITIONAL LOADS NOTED.</p> <p>4. CONNECTIONS AND ATTACHMENT TO THE STRUCTURE SHALL BE INSTALLED AS DESIGNED AND DETAILED BY THE CFMF SUPPLIER TO RESIST ALL LOADS INDICATED.</p> <p>5. SUBMIT SIGNED AND SEALED CFMF SHOP DRAWINGS AND SPECIFICATIONS TO THE SEOR FOR REVIEW PRIOR TO FABRICATION.</p> <p>6. MINIMUM YIELD STRENGTH FOR 43 AND 33 MIL STUDS, JOISTS, STRAPS, BRIDGING, ETC. SHALL BE 33 KSI MINIMUM. YIELD STRENGTH FOR 97, 68, AND 54 MIL STUDS, JOISTS, STRAPS, BRIDGING, ETC. SHALL BE 50 KSI MINIMUM.</p> <p>7. PROVIDE CFMF MEMBERS WITH SECTION PROPERTIES REQUIRED TO RESIST APPLIED LOADING AND AS MANUFACTURED BY MEMBERS OF THE STEEL STEEL MANUFACTURERS ASSOCIATION (SSMA) COMPLYING WITH ICC ESR-304P AND THE BUILDING CODE.</p> <p>8. TEMPORARY BRACING SHALL BE INSTALLED AND LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE. STUD SUPPORT AND INSTALLER SHALL PROVIDE ALL CONNECTORS, FASTENERS, BRIDGING AND BRACING AS REQUIRED TO PROVIDE A COMPLETE STABLE INSTALLATION.</p> <p>STRUCTURAL STEEL</p> <p>1. FABRICATOR QUALIFICATION: FABRICATOR SHALL BE AISC CERTIFIED OR AN "APPROVED FABRICATOR" IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE AHJ. IN LIEU OF THE PREVIOUS, FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE INSPECTION/TESTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S PREMISES TO MEET BUILDING CODE REQUIREMENTS. AT THE COMPLETION OF WORK, FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE ARCHITECT AND AHJ STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.</p> <p>2. STRUCTURAL STEEL SHAPES AND CONNECTING COMPONENTS SHALL CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS UNO: FOLLOWING MATERIAL SPECIFICATIONS: WIDE FLANGE SHAPES: ASTM A992, Fy = 50 KSI HOLLOW STRUCTURAL SECTIONS (HSS): RECTANGULAR & SQUARE: ASTM A500, GRADE C, Fy = 50 KSI ROUND: ASTM A500, GRADE C, Fy = 46 KSI ASTM A513, GRADE B, Fy = 35 KSI STEEL PIPE: ASTM A500, GRADE C, Fy = 50 KSI OTHER STEEL SHAPES AND PLATES: ASTM F1325, GRADE A325N HIGH STRENGTH STRUCTURAL BOLTS: ASTM F1554, GRADE 5S WELDABLE (S1) COLUMN ANCHOR RODS: ASTM A307 MACHINE BOLTS: ASTM A307 THREADED RODS: E70XX WELDING ELECTRODES: ASTM A406, Fy = 70 KSI DEFORMED BAR ANCHORS (DBA): WELDED HEADED STUDS (WTS): ASTM A1018, Fy = 65 KSI WELDED THREADED STUDS (WTS)</p> <p>3. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. ELEMENTS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR TEMPORARY LOADING DURING CONSTRUCTION. INSPECTION OF THE STRUCTURAL ELEMENTS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STABILITY.</p> <p>4. COLUMNS AND BEAMS WITH BASE, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILED ENDS.</p> <p>5. NON-METALLIC, NON-SHRINK, CHLORIDE FREE GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PRE-MIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF ASTM C1107. THE 28-DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE TWICE THE FOUNDATION REQUIRED CONCRETE COMPRESSIVE STRENGTH, 5,000 PSI MINIMUM.</p> <p>6. UNO. ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING ALL BRICK SHELF ANGLES AND EXTERIOR LITELS, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT.</p> <p>7. COAT STEEL BELOW GRADE WITH COLD-APPLIED ASPHALT EMULSION PER ASTM D1187.</p> <p>8. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESSE) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10. REFER TO DRAWINGS FOR LOCATIONS OF AESSE.</p> <p>9. WHERE CONNECTIONS ARE NOTED TO BE SLIP CRITICAL, (EXAMPLE: A325-SC), BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC APPROVED METHODS. SLIP CRITICAL BOLTS SHALL HAVE CLASS 'F' FINISH SURFACES.</p> <p>10. ALL BOLTS (HIGH STRENGTH ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL NUTS AND WASHERS. NUTS AND WASHERS FOR HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A563 AND TO ASTM F436, RESPECTIVELY.</p> <p>11. WELDING PROCEDURES, ELECTRODES, AND WELDER QUALIFICATIONS SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE D1.1, A354, AND LOCAL CODE REQUIREMENTS.</p> <p>12. ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS, UNO, WHERE SHOWN, FIELD WELDING SHALL BE USED. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT THEIR DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE ALL WELDING USING AWS A2.4 SYMBOLS.</p> <p>13. WHERE CONTINUOUS ANGLES OR BENT PLATES ARE INDICATED, PROVIDE A CONTINUOUS BUTT WELD OR FULL PENETRATION WELD AT THE SPLICE POINTS, UNO. THE STEEL FABRICATOR MAY SUBMIT AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL.</p> <p>14. COORDINATE WITH ALL OTHER TRADES WHICH STEEL INTERACTS. THIS INCLUDES BUT IS NOT LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS.</p>	<p>1. FABRICATOR SHALL BE AN "APPROVED FABRICATOR" IN ACCORDANCE WITH THE BUILDING CODE. APPROPRIATE DEAD, LIVE, WIND AND SEISMIC LOADS IN ACCORDANCE WITH THE BUILDING CODE INCLUDE COLLATERAL ROOF LOAD, LISTED ABOVE, TO ACCOUNT FOR CEILING, MISCELLANEOUS MECHANICAL, AND ELECTRICAL LOADS, ETC. (ABOVE AND BEYOND WEIGHT OF BEAMS, PURLINS, AND ROOFING SYSTEMS). PEMB MANUFACTURER TO COORDINATE SUPPORT OF ALL EQUIPMENT SUPPORTED BY THE ROOF STRUCTURE.</p> <p>3. RIGID FRAME, X-BRACING AND PORTAL FRAME LOADS SHALL BE AS SHOWN ON THE DRAWINGS. MODIFICATIONS ARE NOT ACCEPTABLE UNLESS APPROVED BY THE ENGINEER.</p> <p>4. PRIOR TO FABRICATION OF FOUNDATION REINFORCING AND FOOTING EXCAVATION WORK, PEMB MANUFACTURER SHALL PROVIDE AND RECEIVE APPROVAL OF ALL COLUMN/BRACING REACTIONS AND ANCHOR ROD SHOP DRAWINGS.</p> <p>5. LATERAL DRIFT DUE TO SEISMIC LOADS SHALL NOT EXCEED REQUIREMENTS STATED IN THE BUILDING CODE FOR INELASTIC DEFLECTIONS. LATERAL DRIFT DUE TO AMPLIFIED SEISMIC SHALL NOT EXCEED W1/10.</p> <p>6. LATERAL DRIFT DUE TO WIND LOADS SHALL NOT EXCEED H/400 FOR THE LOAD COMBINATIONS: D + 0.75L (S) + 0.75W (S).</p> <p>7. PROVIDE CALCULATIONS AND DRAWINGS CLEARLY SHOWING MAXIMUM SERVICE LEVEL REACTIONS FOR EACH COLUMN. PROVIDE CALCULATIONS CLEARLY INDICATING THE CODE PRESERVED LOAD COMBINATIONS THAT RESULT IN THE HIGHEST MAGNITUDES FOR SHEAR, UPLIFT, AND COMPRESSION.</p> <p>8. ALL BASE PLATES SHALL SET ON AT LEAST 1-INCH OF NON-SHRINK GROUT, UNLESS OTHERWISE NOTED.</p> <p>9. DEFLECTIONS OF COMPONENTS SHALL NOT EXCEED THE MOST STRINGENT OF THE FOLLOWING LIMITS: a. WIND GIRTS: L/240 OR L/1' HORIZONTAL DEFLECTION) b. ROOF PURLINS: L/240 OR L/1' LIVE LOAD, SNOW LOAD, c. FRAME DEFLECTIONS: L/240 OR 2" (LL SL LOCATION WITH CEILING) d. COMBINED VERTICAL DEFLECTION OF PURLINS AND FRAME MEMBERS: L/240 OR 2" (LL SL LOCATION WITH CEILING)</p> <p>10. WHERE MASONRY CLADDING IS SUPPORTED, SPANNING MEMBERS SHALL BE DESIGNED FOR MAX DEFLECTION EQUAL TO SMALLER OF L/600 OR L/30-INCHES.</p> <p>11. THE PEMB SUPPLIER SHALL COORDINATE THE TOTAL DEFLECTIONS OF ALL SYSTEM COMPONENTS WITH THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE THESE DEFLECTIONS WITH ALL INTERIOR PARTITION WALLS, HANGING EQUIPMENT, CEILING GRIDS, ETC. AND SHALL PROVIDE HARDWARE AND CONNECTIONS CAPABLE OF ALLOWING TYPICAL VERTICAL DEFLECTIONS OF METAL BUILDING SYSTEM.</p> <p>12. LOCATE COLUMN / FRAME ANCHOR RODS A MINIMUM OF 6" FROM THE EDGE OF CONCRETE. UPLIFT LOADS ARE ASSUMED TO BE DISTRIBUTED EVENLY BETWEEN EACH ANCHOR ROD. ANCHOR GROUPS AND FOUNDATIONS SHALL NOT BE SUBJECT TO MOMENTS FROM COLUMN LOADS.</p> <p>13. WHERE ANCHOR RODS ARE DESIGNED TO RESIST SHEAR, WASHERS WITH STANDARD HOLES SHALL BE PROVIDED BY THE METAL BUILDING SUPPLIER AND WELDED TO THE BASE PLATE TO DISTRIBUTE SHEAR EQUALLY TO THE ANCHORS.</p> <p>14. PROVIDE CHANNEL TYPE PURLIN BRACING AT INTERVALS NOT TO EXCEED 14' SPAN. PROVIDE ANTIROLL CLIPS AT ALL PURLIN BEARING POINTS.</p> <p>15. PROVIDE BOTTOM FLANGE ANGLE BRACING FOR THE PRIMARY FRAMES ON TWO SIDES.</p> <p>16. USE STEEL RODS, NOT CABLES, FOR ALL WALL AND ROOF BRACING. PROVIDE BACK UP REBAR (MINIMUM #4 WIDE x 24" THICK) BEHIND ALL BRACE ROD CONNECTION TO FRAME WEBS, IF REQUIRED BY ANALYSIS. WELD PLATES TO FRAME FLANGES.</p> <p>17. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOADS AND LOCATIONS SHOWN ON ARCHITECTURAL AND MEP DRAWINGS TO BE SUPPORTED BY THE PEMB FRAMING.</p> <p>18. PEMB SUPPLIER SHALL PROVIDE ALL PRIMARY AND SECONDARY FRAMING NECESSARY TO LATERALLY SUPPORT PARTITION WALLS SHOWN ON THE ARCHITECTURAL DRAWINGS. UNIFORM LATERAL PARTITION WALL LOADS AT TOP CONNECTORS SHALL BE 5 PSF (MIN) TIMES HALF THE WALL HEIGHT OF THE PARTITION WALL.</p> <p>19. PEMB SUPPLIER TO PROVIDE ALL FRAMING NECESSARY TO SUPPORTS WEIGHTS OF CONCEALED MECHANICAL AND PLUMBING EQUIPMENT, COLLAR, LEAD, LANT, CEEILING, LIGHTS, DUCT WORK, PLUMBING PIPING, SPRINKLERS, CLADDING), AND OTHER ITEMS SHOWN WITH IN THE CONTRACT DOCUMENTS. REFER TO OTHER DISCIPLINES DRAWINGS FOR ADDITIONAL INFORMATION.</p> <p>20. PEMB SEISMIC DESIGN SHALL INCLUDE BUT BE NOT LIMITED TO THE TRIBUTARY WEIGHTS OF STRUCTURE, CLADDING, PARTITION WALLS, EQUIPMENT, AND COLLATERAL DEAD LOADS.</p> <p>21. PEMB SUPPLIER SHALL DESIGN AND PROVIDE TEMPORARY LATERAL BRACING DURING CONSTRUCTION UNTIL PERMANENT BRACING AND LATERAL SYSTEM IS IN PLACE.</p> <p>22. PEMB SHOP DRAWINGS TO INCLUDE BUT NOT LIMITED TO, ERECTION PLAN, FRAME ELEVATION, ANCHOR BOLT PLAN, WALL ELEVATIONS AND APPROPRIATE DETAILS. SUBMIT DETAILED STRUCTURAL CALCULATIONS BY THE MANUFACTURER'S ENGINEER SIGNED AND SEALED IN THE STATE WHERE THE PROJECT IS LOCATED.</p>	<p>1. IN ACCORDANCE WITH IBC, SECTION 1704, THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS AND/OR TESTING AGENCIES TO PERFORM STRUCTURAL TESTS AND SPECIAL INSPECTIONS ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS.</p> <p>2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS; FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE AHJ AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.</p> <p>3. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.</p> <p>4. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE OWNER'S REPRESENTATIVE, AHJ AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE AHJ.</p> <p>5. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.</p> <p>6. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE AHJ AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR AUTHORIZED AGENT FROM REQUESTING INSPECTIONS REQUIRED BY IBC SECTION 1704.</p> <p>7. CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AHJ AND THE OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL INSPECTIONS PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.</p> <p>8. CONCRETE: PER IBC SECTION 1705.3 AND TABLE 1705.3 WITH EXCEPTIONS, THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE EXCEPT SIDE WALKS AND PAVEMENT.</p> <p>9. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 308-16. PROVIDE INSPECTION PER IBC SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.1.</p> <p>10. WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BASIS FOR WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 308-16 TABLE NS-4.1 THROUGH TABLE NS-4.3.</p> <p>11. STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENERS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.</p> <p>12. HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. HIGH STRENGTH BOLTING: PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 308-16 TABLE NS-6.1 THROUGH TABLE NS-6.3.</p> <p>13. WOOD CONSTRUCTION: SPECIAL INSPECTION OF THE FABRICATION PROCESS OF WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH IBC SECTION 1704.2.5 AND 1705.</p> <p>14. GRADING, EXCAVATION AND FILLING: PER SECTION 1705.8 AND TABLE 1705.6.</p> <p>15. PILING, DRILLED PIERS AND CAISSONS: PER SECTION 1705.7.4, 1705.8 AND TABLES 1705.7.4, 1705.8.</p> <p>16. SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.</p> <p>17. MASTIC AND UNMETESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15.</p> <p>18. EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.</p> <p>19. FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.</p> <p>20. SMOKE CONTROL: PER SECTION 1705.18.</p> <p>21. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.</p>

CONCRETE MIX DESIGNS						
PLACEMENT LOCATION	28 DAY FC (psi)	MAX W/C RATIO	ENTRAINED AIR	MAX AGGREGATE SIZE	WEIGHT	
FOOTINGS AND FOUNDATION WALLS	4,500	0.45	6% ± 1.5%	1"	NWC	
INTERIOR SLAB ON GRADE	4,000	0.45	—	3/4"	NWC	
EXTERIOR CONCRETE	5,000	0.40	6% ± 1.5%	3/4"	NWC	

SLABS ON-GRADE

- VERIFY ALL TOP OF SLAB ELEVATIONS COMPLY WITH THE ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL FOR LOCATION AND EXTENT OF SPECIAL FINISHES OR TREATMENTS TO EXPOSED CONCRETE.
- ALL INTERIOR SLABS ON GRADE SHALL BE CAST ON A 15 MIL VAPOR BARRIER INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. PLACED OVER CRUSHED ROCK DRAINAGE MATERIAL TO FORM A CAPILARY BREAK OF THICKNESS NOTED ON DRAWINGS, BUT NOT LESS THAN THAT PRESCRIBED BY THE GEOTECHNICAL ENGINEER.
- CONTROL (CONTRACTION OR CONSTRUCTION) JOINTS SHALL BOUND ALL CONCRETE SLABS ON GRADE AS SHOWN ON THE DRAWINGS. WHERE NOT SHOWN ON THE DRAWINGS, CONTROL JOINTS SHALL BE LOCATED SUCH THAT THE ENCLOSED AREA IS RELATIVELY SQUARE WITH A MAXIMUM ASPECT RATIO OF 1.5:1 AND DOES NOT EXCEED 225 SQUARE FEET.
- GENERAL CONTRACTOR SHALL SUBMIT CONTROL JOINT SHOP DRAWINGS AND PLACING SEQUENCES FOR APPROVAL PRIOR TO CONCRETE PLACEMENT. KEVED JOINTS NEED ONLY OCCUR AT CONSTRUCTION JOINTS. ALL CONTRACTION JOINTS MAY BE SAUGHT.
- THE SLAB ON GRADE IS NOT DESIGNED TO SUPPORT TRAFFIC FROM CRANES OR OTHER HEAVY CONSTRUCTION VEHICLES. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED CONCRETE SLABS.
- ALL PIPING AND CONDUIT INSTALLED BELOW SLABS ON GRADE SHALL BE INSTALLED ENTIRELY BELOW THE BOTTOM OF THE SLAB, WITH NO ENCRoACHMENT INTO THE BOTTOM OF THE SLAB.

REVISIONS

NO.	DATE	DESCRIPTION
2026-04-03		ISSUE FOR CONSTRUCTION - HUB

DRAWN: Author
APPROVD: Approver**CYL-HUB**

PROJECT ADDRESS: CONFIDENTIAL

PROJ. NO. 10438332

GENERAL STRUCTURAL NOTES

SCALE: 12" = 1'-0"

SHEET NUMBER:

S0.01

PHASE: ISSUE FOR CONSTRUCTION - SPS

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2026-04-03**

ABBREVIATIONS

ABBREVIATIONS ARE AS SHOWN IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING EXCEPTIONS:

Table with 3 columns: Abbreviation, Description, and Unit/Notes. Includes items like REINFORCING BAR SIZE, SHEET METAL SCREW SIZE, DIAMETER, ANCHOR BOLT, etc.

STATEMENT OF SPECIAL INSPECTIONS

- 1. IN ACCORDANCE WITH IBC, SECTION 1704, THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS AND/OR TESTING AGENCIES TO PERFORM STRUCTURAL, TESTS AND SPECIAL INSPECTIONS ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS.
2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE A.H.J. AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
3. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
4. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE OWNER'S REPRESENTATIVE. A.H.J. AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE A.H.J.
5. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
6. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE A.H.J. AND SHALL NOT BE CONSIDERED TO RELIEVE THE OWNER OR AUTHORIZED AGENT FROM REQUESTING THE INSPECTIONS REQUIRED BY OSSC SECTION 110.
7. CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE A.H.J. AND THE OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL INSPECTIONS PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.
8. REQUIRE: PER IBC SECTION 1705.3 AND TABLE 1705.3 WITH EXCEPTIONS. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE, EXCEPT, SLAB-ON-GRADE, SIDE WALKS, AND PAVEMENT.
9. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16. PROVIDE INSPECTION PER IBC SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.1.
10. WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1, THE BASIS FOR WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1, PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.4-1 THROUGH TABLE N5.4-3.
11. STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
12. HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, HIGH STRENGTH BOLTING. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.6-1 THROUGH TABLE N5.6-3.
13. COLD-FORMED STEEL DECK: SPECIAL INSPECTION AND QUALIFICATION OF MATERIAL VERIFICATION, WELDING AND MECHANICAL FASTENERS FOR COLD FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) QA/QC STANDARD.
14. GRADING, EXCAVATION AND FILLING: PER SECTION 1705.6 AND TABLE 1705.6.
15. SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.
16. MASTIC AND INTUMESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15.
17. EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.
18. FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.
19. SMOKE CONTROL: PER SECTION 1705.18.
20. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.

Table titled 'REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION'. Columns: TYPE, CONTINUOUS, PERIODIC, REFERENCED STANDARD (a), IBC REFERENCE. Includes items like Reinforcing bar welding, Inspect anchors cast in concrete, etc.

Table titled 'REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS'. Columns: TYPE, CONTINUOUS, PERIODIC. Includes items like Verify materials below shallow foundations, Verify excavations, etc.

Table titled 'AISC 360 - TABLE N5.4-1 INSPECTION TASKS PRIOR TO WELDING'. Columns: TASK, QC, QA. Includes items like Welder qualification records, Welding procedure specifications, etc.

Table titled 'AISC 360 - TABLE N5.4-2 INSPECTION TASKS DURING WELDING'. Columns: TASK, QC, QA. Includes items like Control and handling of welding consumables, WPS followed, etc.

Table titled 'AISC 360 - TABLE N5.4-3 INSPECTION TASKS AFTER WELDING'. Columns: TASK, QC, QA. Includes items like Welds cleaned, Welds meet visual acceptance criteria, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.1 INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT'. Columns: TASK, QC, QA. Includes items like Verify compliance of materials, Document acceptance or rejection of deck and deck accessories, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.2 INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT'. Columns: TASK, QC, QA. Includes items like Verify compliance of deck and all deck accessories installation, Verify deck materials, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.3 INSPECTION OR EXECUTION TASKS PRIOR TO WELDING'. Columns: TASK, QC, QA. Includes items like Welding procedure specifications, Manufacturer certifications, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.4 INSPECTION OR EXECUTION TASKS DURING WELDING'. Columns: TASK, QC, QA. Includes items like Use of qualified welders, Control and handling of welding consumables, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.5 INSPECTION OR EXECUTION TASKS AFTER WELDING'. Columns: TASK, QC, QA. Includes items like Verify size and location of welds, Welds meet visual acceptance criteria, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.6 INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING'. Columns: TASK, QC, QA. Includes items like Manufacturer installation instructions, Proper tools available, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.7 INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING'. Columns: TASK, QC, QA. Includes items like Fasteners are positioned as required, Fasteners are installed, etc.

Table titled 'AISC 360 - TABLE N5.4-3 INSPECTION TASKS AFTER WELDING'. Columns: TASK, QC, QA. Includes items like Welds cleaned, Welds meet visual acceptance criteria, etc.

Table titled 'AISC 360 - TABLE N5.6-1 INSPECTION TASKS PRIOR TO BOLTING'. Columns: TASK, QC, QA. Includes items like Manufacturer's certifications, Fasteners marked, etc.

Table titled 'AISC 360 - TABLE N5.6-2 INSPECTION TASKS DURING BOLTING'. Columns: TASK, QC, QA. Includes items like Fastener assemblies placed, Joint brought to snug-tight, etc.

Table titled 'AISC 360 - TABLE N5.6-3 INSPECTION TASKS AFTER BOLTING'. Columns: TASK, QC, QA. Includes items like Document acceptance or rejection of bolted connections, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.1 INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT'. Columns: TASK, QC, QA. Includes items like Verify compliance of materials, Document acceptance, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.2 INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT'. Columns: TASK, QC, QA. Includes items like Verify compliance of deck and all deck accessories installation, Verify deck materials, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.3 INSPECTION OR EXECUTION TASKS PRIOR TO WELDING'. Columns: TASK, QC, QA. Includes items like Welding procedure specifications, Manufacturer certifications, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.4 INSPECTION OR EXECUTION TASKS DURING WELDING'. Columns: TASK, QC, QA. Includes items like Use of qualified welders, Control and handling of welding consumables, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.5 INSPECTION OR EXECUTION TASKS AFTER WELDING'. Columns: TASK, QC, QA. Includes items like Verify size and location of welds, Welds meet visual acceptance criteria, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.6 INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING'. Columns: TASK, QC, QA. Includes items like Manufacturer installation instructions, Proper tools available, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.7 INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING'. Columns: TASK, QC, QA. Includes items like Fasteners are positioned as required, Fasteners are installed, etc.

Table titled 'ANSI / SDI QA/QC - TABLE 1.8 INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING'. Columns: TASK, QC, QA. Includes items like Check spacing, type, and installation of support fasteners, etc.

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Table with 3 columns: NO., DATE, DESCRIPTION. Includes entry for 2026-04-03 ISSUE FOR CONSTRUCTION - HUB.

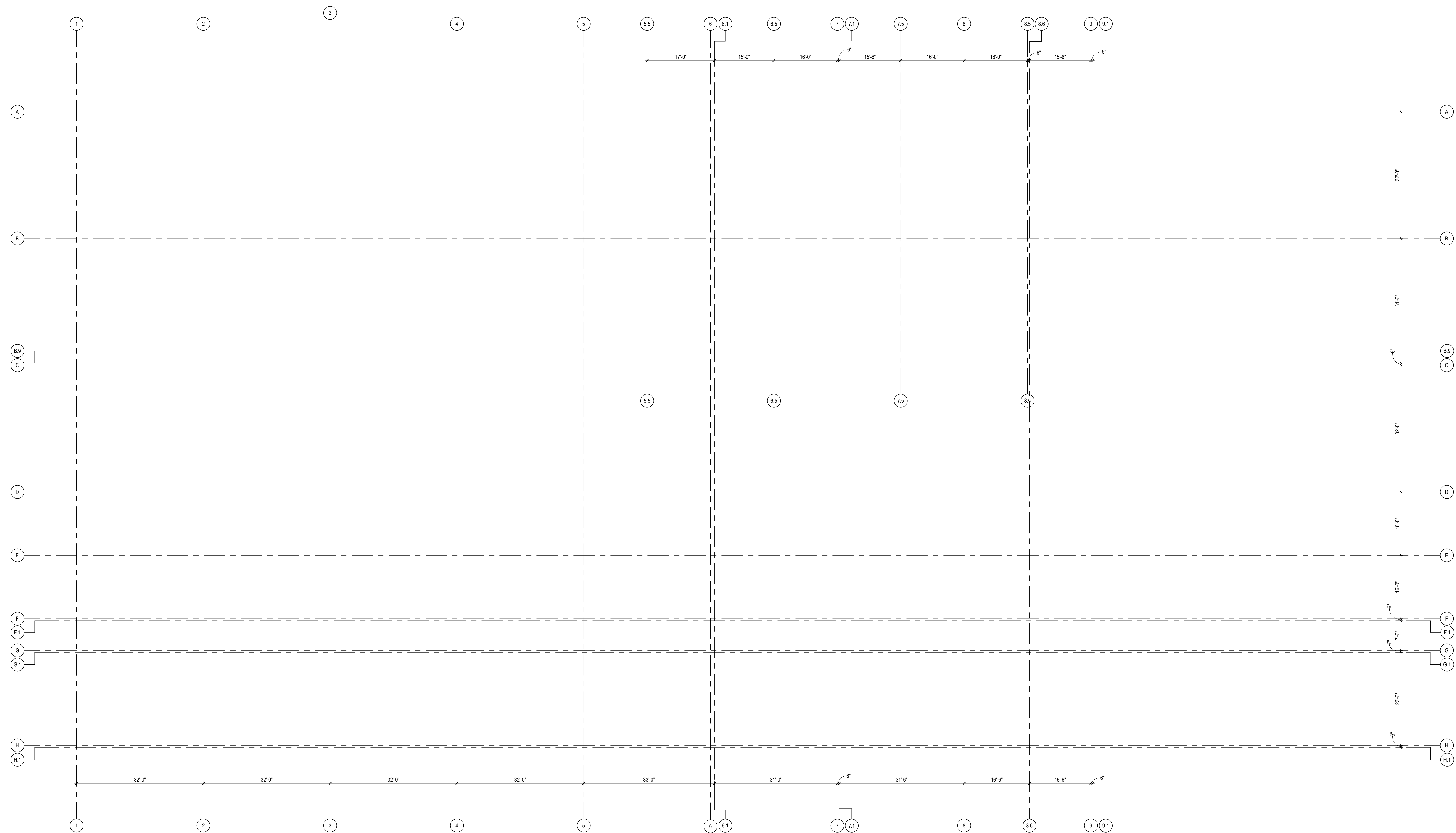
DRAWN: Author APPRVD: Approver

CYL-HUB PROJECT ADDRESS: CONFIDENTIAL PROJ. NO. 10438332

GENERAL STRUCTURAL NOTES & SPECIAL INSPECTIONS SCALE: 12" = 1'-0"

SHEET NUMBER: S0.02 PHASE: ISSUE FOR CONSTRUCTION - SPS

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GRID GEOMETRY PLAN
SCALE: 3/32" = 1'-0"



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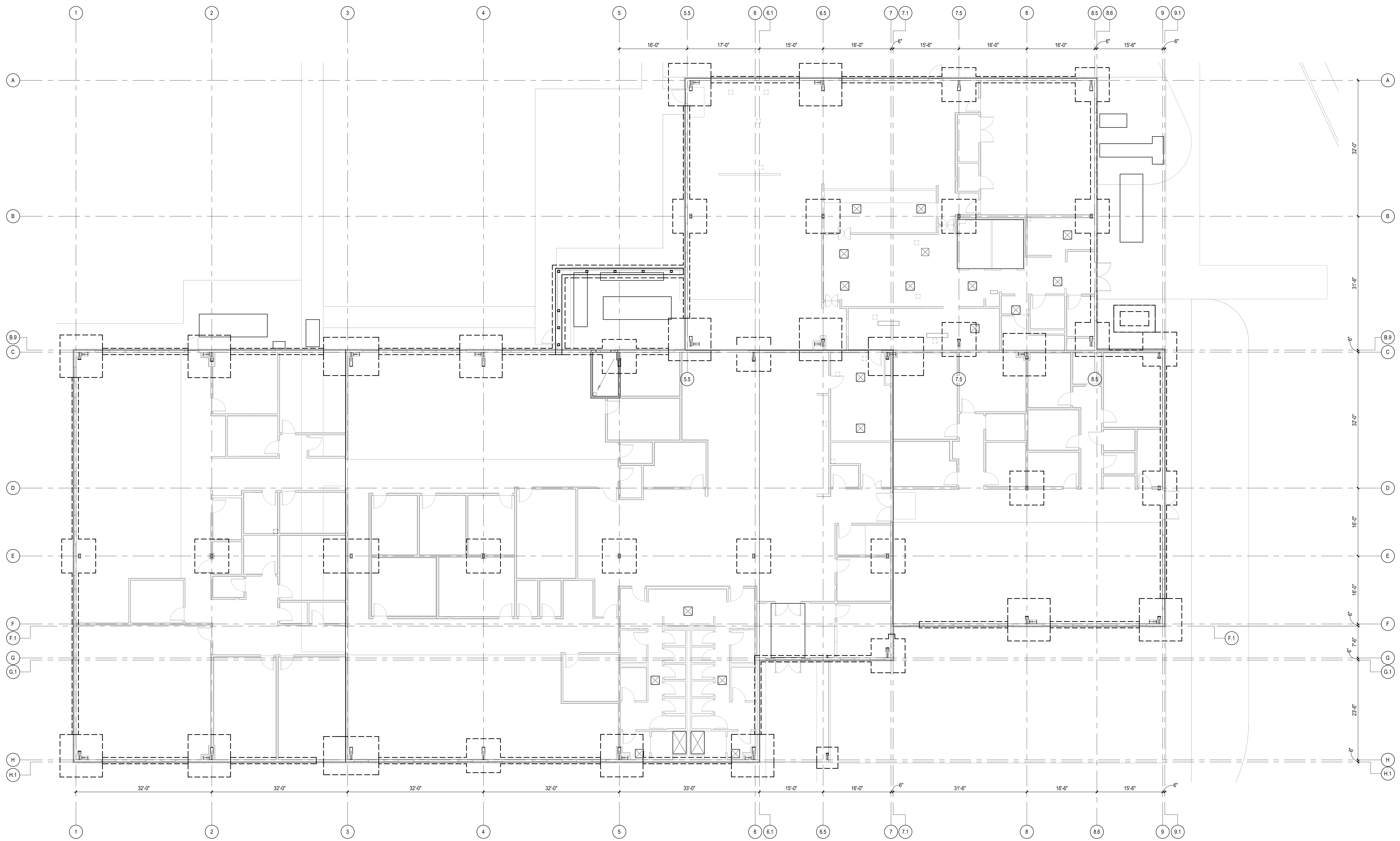
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GRID GEOMETRY PLAN
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OVERALL FOUNDATION PLAN

SCALE: 1" = 10'-0"

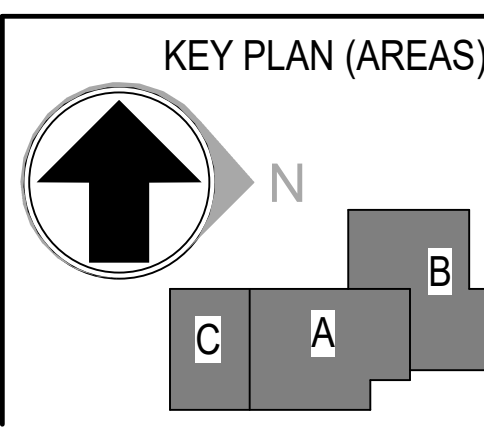


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DLR GROUP
1917 SOUTH 67th STREET
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(402) 399-1000
CA-0443

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KIMLEY-HORN & ASSOC., INC.
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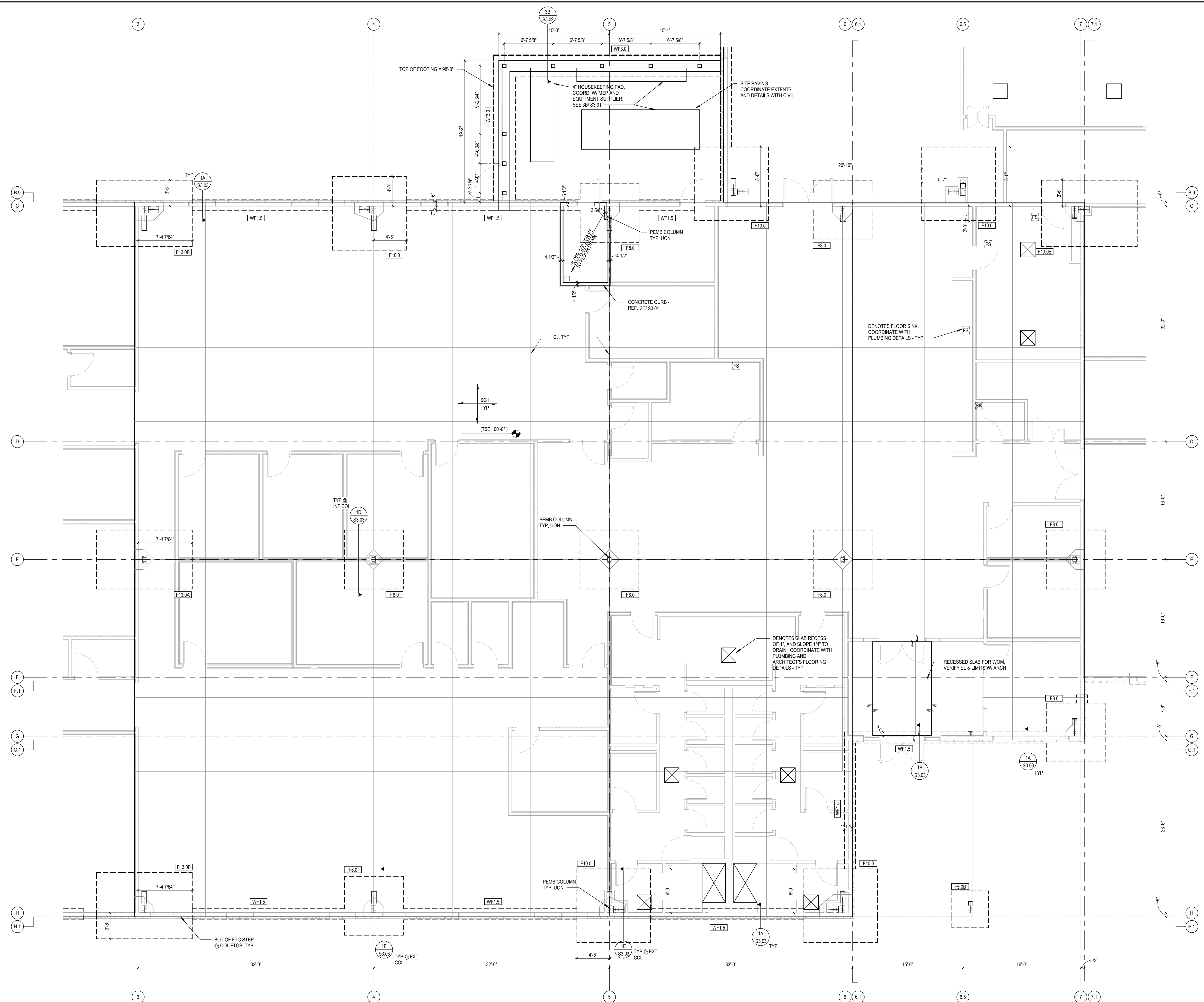
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Author
APPRVD:
Approver

CYL-HUB
PROJECT ADDRESS:
CONFIDENTIAL
PROJ. NO. 10438332

OVERALL FOUNDATION PLAN (4.0)
SCALE: 1" = 10'-0"

SHEET NUMBER:
S1.01.0
PHASE: ISSUE FOR CONSTRUCTION - SPS

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- A. ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 100'-0". TOP OF SLAB ON GRADE IS AT THE REFERENCE ELEVATION UNLESS OTHERWISE NOTED.
- B. SLAB ON GRADE "SG1" IS 5 INCHES THICK AND REINFORCED WITH #4 @ 16" OC EIV. SLAB ON GRADE SHALL BE PLACED OVER A VAPOR BARRIER AND 8 INCHES (MINI) COMPACTED GRANULAR FILL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. SEE TYPICAL SLAB ON GRADE DETAILS FOR MORE INFORMATION.
- C. SEE TYPICAL FOOTING BEARING AND DRAINAGE DETAIL FOR FOUNDATION BEARING AND DRAINAGE REQUIREMENTS. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT FOR MORE INFORMATION.
- D. T/ INTERIOR FOOTING ELEVATION = 98'-8", TYP. UNO
- E. T/ EXTERIOR FOOTING ELEVATION = 98'-0", TYP. UNO
- F. () INDICATES TOP OF FOOTING ELEVATION AT NON-TYPICAL LOCATIONS.
- G. TH # INDICATES COLUMN OR ISOLATED SPREAD FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- H. YWF # INDICATES WALL OR CONTINUOUS FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- I. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- J. COORDINATE LOCATION OF ALL EMBEDS WITH MECHANICAL, ELECTRICAL, PLUMBING, AND EXTERIOR WALL SYSTEMS PRIOR TO CASTING THE SLAB ON GRADE.
- K. FOR SIDEWALKS, PAVING, AND SITE DETAILS AT THE BUILDING EXTERIOR, SEE ARCHITECTURAL AND CIVIL DRAWINGS.
- L. REFERENCE ALL CONSTRUCTION DOCUMENTS FOR THE LOCATION, SIZE, AND EXTENT OF CONCRETE CURBS, HOUSEKEEPING PADS, CURB WALLS, PLANTER WALLS, BOLLARDS, EDGE ANGLES, AND SLAB PENETRATIONS. REINFORCE PER TYPICAL DETAILS.
- M. ALL EXTERIOR WALLS ARE 8" METAL STUD WALLS (605162-43 @ 16" OC MINIMUM), TYP. UNO. FINAL DESIGN IS BY SUPPLIER.

FOUNDATION PLAN - P.E.M.B. AREA A
SCALE: 3/16" = 1'-0"

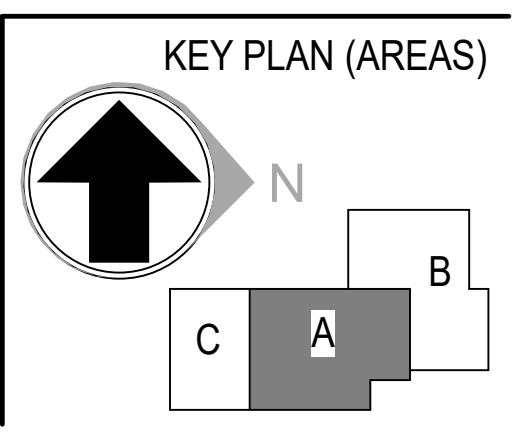
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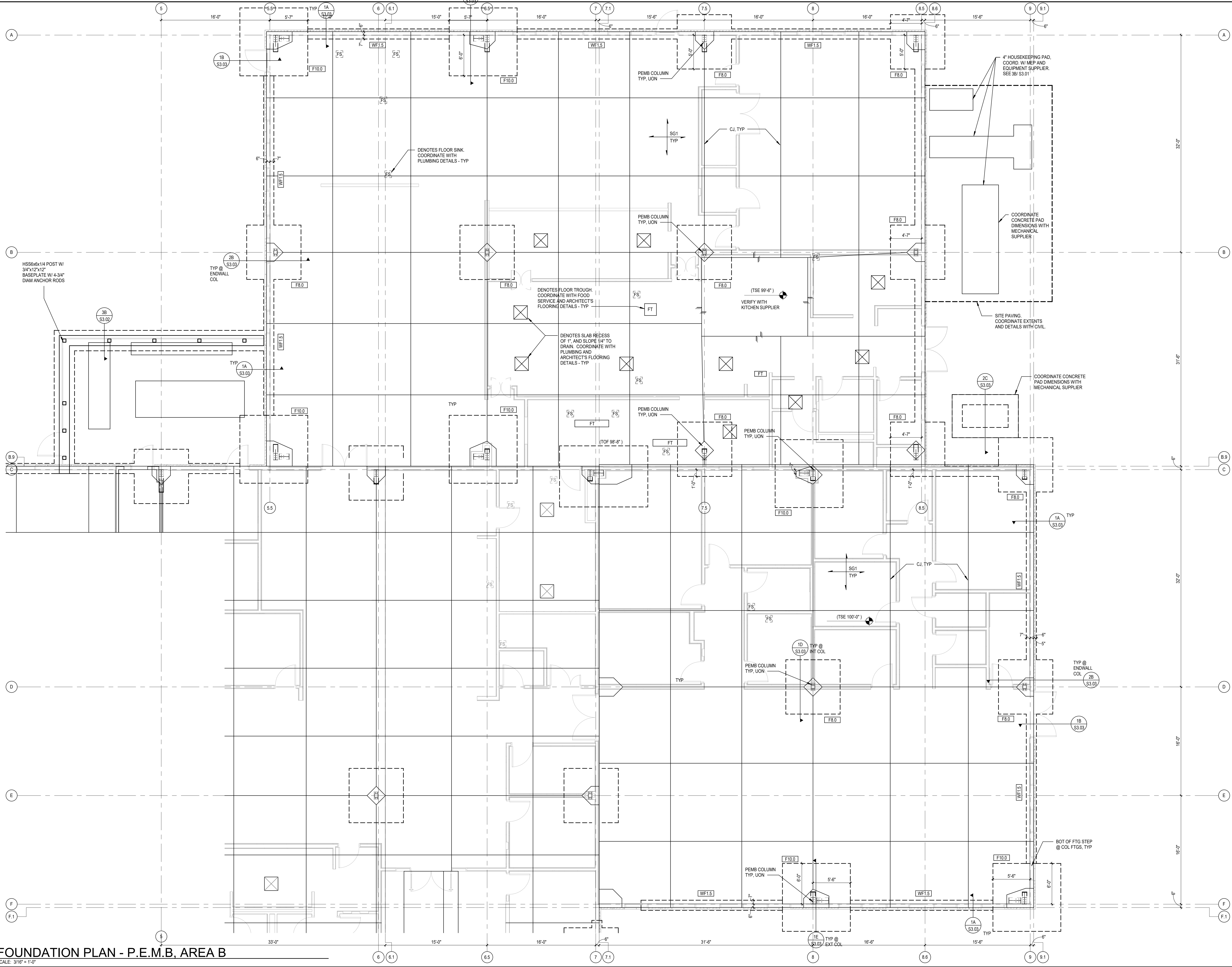
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PROJECT ADDRESS:
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PROJ. NO. 10438332

FOUNDATION PLAN - P.E.M.B. AREA A
SCALE: As indicated

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- B. SLAB ON GRADE "SG1" IS 5 INCHES THICK AND REINFORCED WITH #4 @ 16" OC EIV. SLAB ON GRADE SHALL BE PLACED OVER A VAPOR BARRIER AND 8 INCHES (MIN) COMPACTED GRANULAR FILL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. SEE TYPICAL SLAB ON GRADE DETAILS FOR MORE INFORMATION.
- C. SEE TYPICAL FOOTING BEARING AND DRAINAGE DETAIL FOR FOUNDATION BEARING AND DRAINAGE REQUIREMENTS. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT FOR MORE INFORMATION.
- D. TI INTERIOR FOOTING ELEVATION = 98'-8", TYP. UNO
- E. TE EXTERIOR FOOTING ELEVATION = 98'-0", TYP. UNO
- F. () INDICATES TOP OF FOOTING ELEVATION AT NON-TYPICAL LOCATIONS.
- G. TH # INDICATES COLUMN OR ISOLATED SPREAD FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- H. W/F # INDICATES WALL OR CONTINUOUS FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- I. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- J. COORDINATE LOCATION OF ALL EMBEDS WITH MECHANICAL, ELECTRICAL, PLUMBING, AND EXTERIOR WALL SYSTEMS PRIOR TO CASTING THE SLAB ON GRADE.
- K. FOR SIDEWALKS, PAVING, AND SITE DETAILS AT THE BUILDING EXTERIOR, SEE ARCHITECTURAL AND CIVIL DRAWINGS.
- L. REFERENCE ALL CONSTRUCTION DOCUMENTS FOR THE LOCATION, SIZE, AND EXTENT OF CONCRETE CURBS, HOUSEKEEPING PADS, CMU WALLS, PLANTER WALLS, BOLLARDS, EDGE ANGLES, AND SLAB PENETRATIONS. REINFORCE PER TYPICAL DETAILS.
- M. ALL EXTERIOR WALLS ARE 8" METAL STUD WALLS (6005162-43 @ 16" OC MINIMUM), TYP. UNO. FINAL DESIGN IS BY SUPPLIER.

FOUNDATION PLAN - P.E.M.B. AREA B
SCALE: 3/16" = 1'-0"

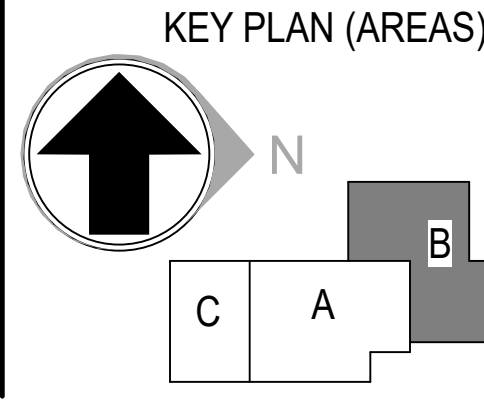
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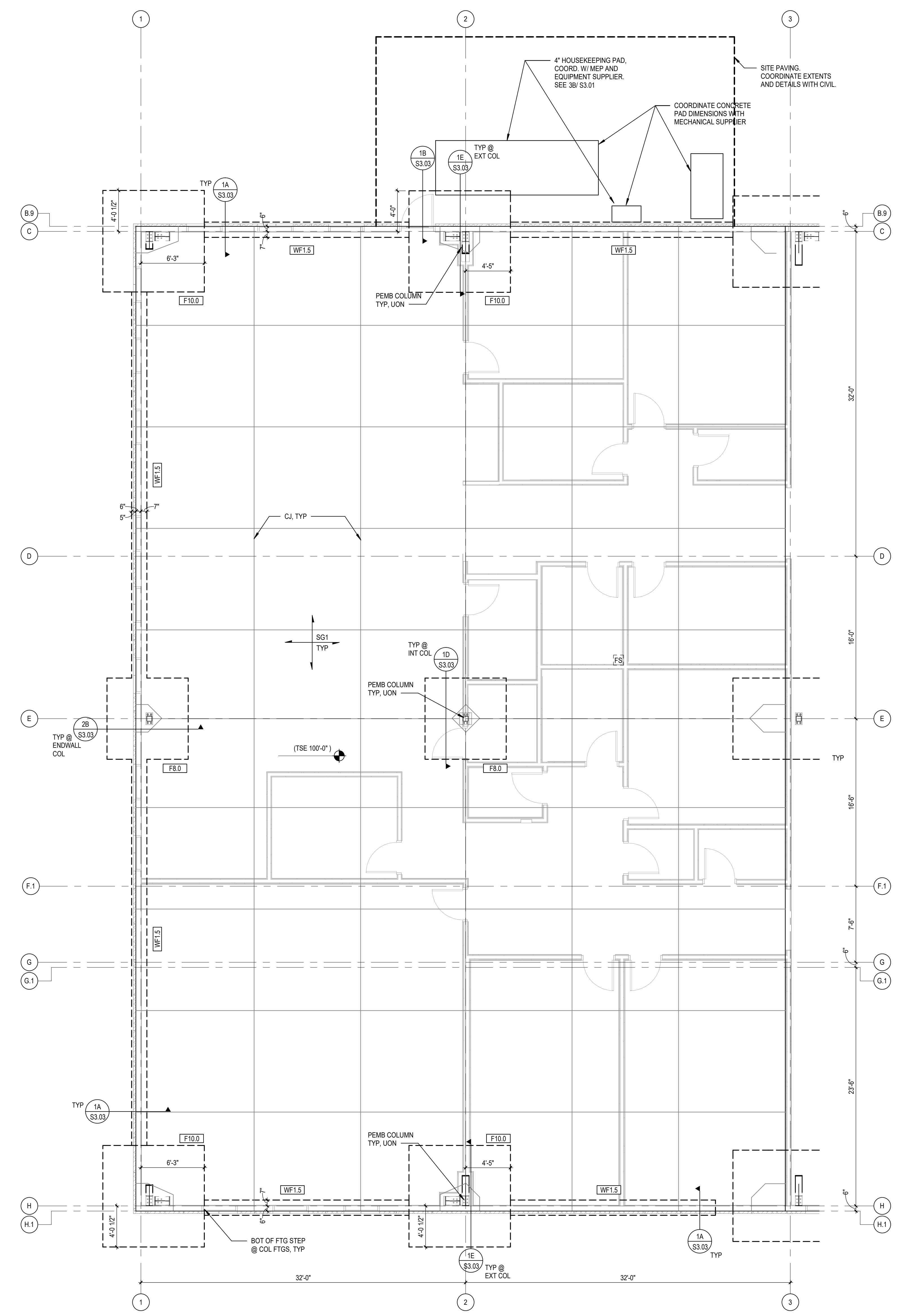
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APPRVD:
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FOUNDATION PLAN - P.E.M.B. AREA B (4.0)
SCALE: As indicated

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FOUNDATION PLAN - P.E.M.B. AREA C
SCALE: 3/16" = 1'-0"

- A. ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 100'-0". TOP OF SLAB ON GRADE IS AT THE REFERENCE ELEVATION UNLESS OTHERWISE NOTED.
- B. SLAB ON GRADE "SG1" IS 6 INCHES THICK AND REINFORCED WITH #4 @ 16" OC EIV. SLAB ON GRADE SHALL BE PLACED OVER A VAPOR BARRIER AND 8 INCHES (MIN) COMPACTED GRANULAR FILL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. SEE TYPICAL SLAB ON GRADE DETAILS FOR MORE INFORMATION.
- C. SEE TYPICAL FOOTING BEARING AND DRAINAGE DETAIL FOR FOUNDATION BEARING AND DRAINAGE REQUIREMENTS. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT FOR MORE INFORMATION.
- D. T/ INTERIOR FOOTING ELEVATION = 98'-8", TYP. UNO
- E. T/ EXTERIOR FOOTING ELEVATION = 98'-0", TYP. UNO
- F. () INDICATES TOP OF FOOTING ELEVATION AT NON-TYPICAL LOCATIONS.
- G. TH # INDICATES COLUMN OR ISOLATED SPREAD FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- H. W/F # INDICATES WALL OR CONTINUOUS FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- I. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- J. COORDINATE LOCATION OF ALL EMBEDS WITH MECHANICAL, ELECTRICAL, PLUMBING, AND EXTERIOR WALL SYSTEMS PRIOR TO CASTING THE SLAB ON GRADE.
- K. FOR SIDEWALKS, PAVING, AND SITE DETAILS AT THE BUILDING EXTERIOR, SEE ARCHITECTURAL AND CIVIL DRAWINGS.
- L. REFERENCE ALL CONSTRUCTION DOCUMENTS FOR THE LOCATION, SIZE, AND EXTENT OF CONCRETE CURBS, HOUSEKEEPING PADS, CURB WALLS, PLANTER WALLS, BOLLARDS, EDGE ANGLES, AND SLAB PENETRATIONS. REINFORCE PER TYPICAL DETAILS.
- M. ALL EXTERIOR WALLS ARE 8" METAL STUD WALLS (6059162-43 @ 16" OC MINIMUM), TYP. UNO. FINAL DESIGN IS BY SUPPLIER.

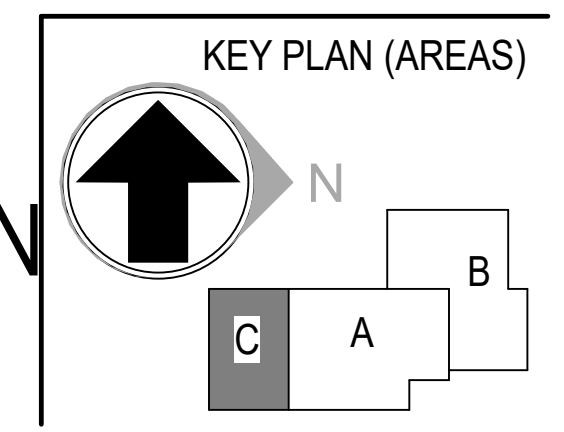
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PROJ. NO. 10438332

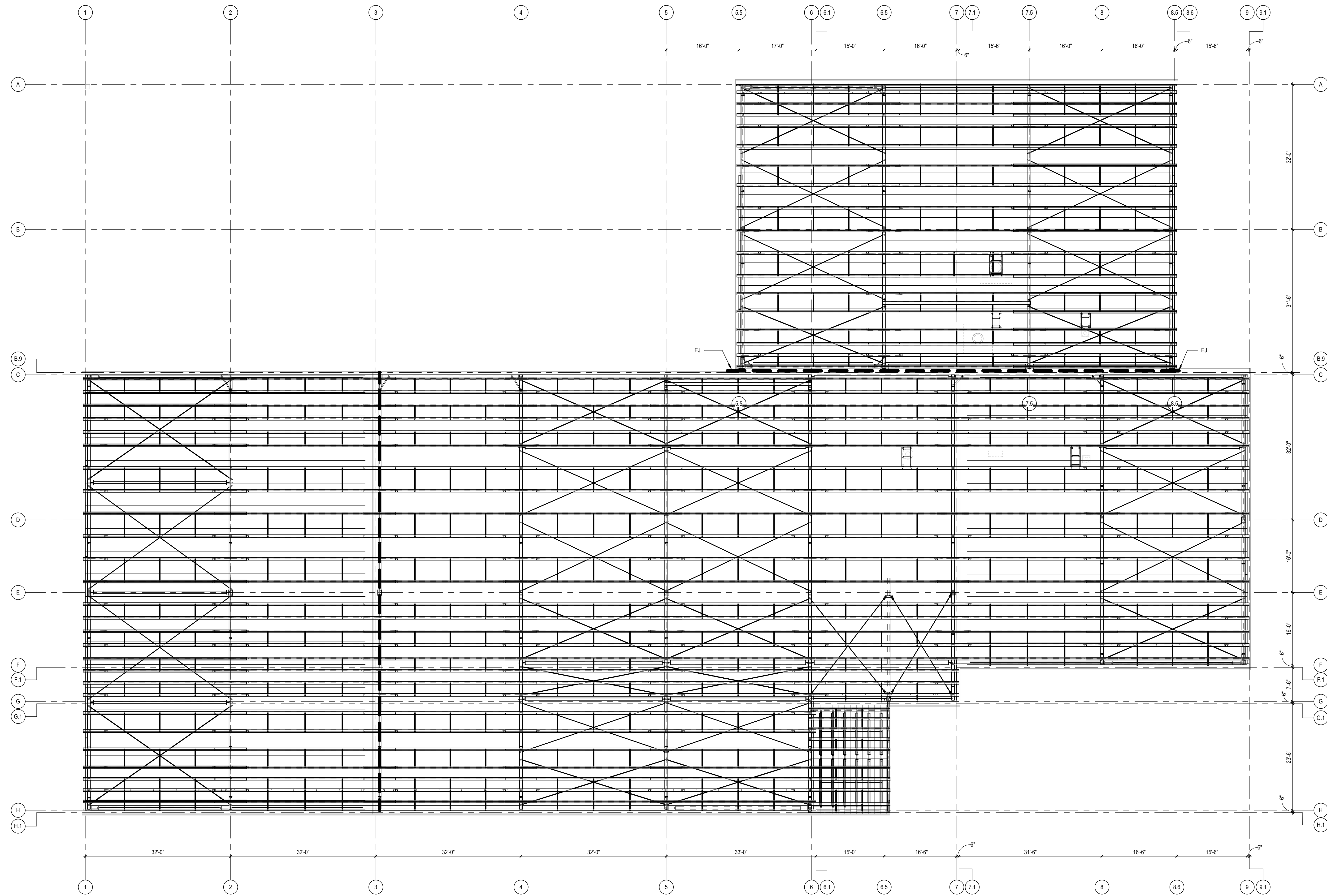
FOUNDATION PLAN - P.E.M.B. AREA C

SCALE: As indicated

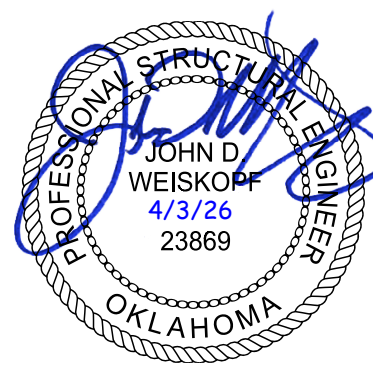
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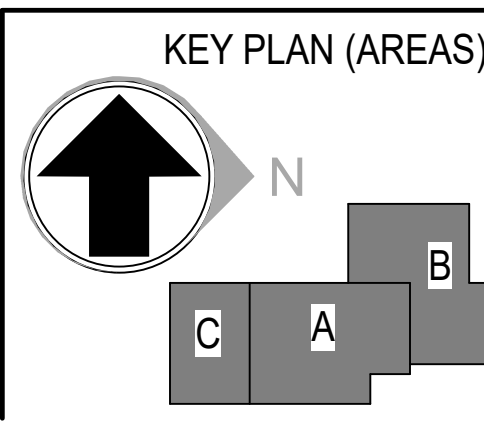
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OVERALL ROOF FRAMING PLAN
SCALE: 1" = 10'-0"



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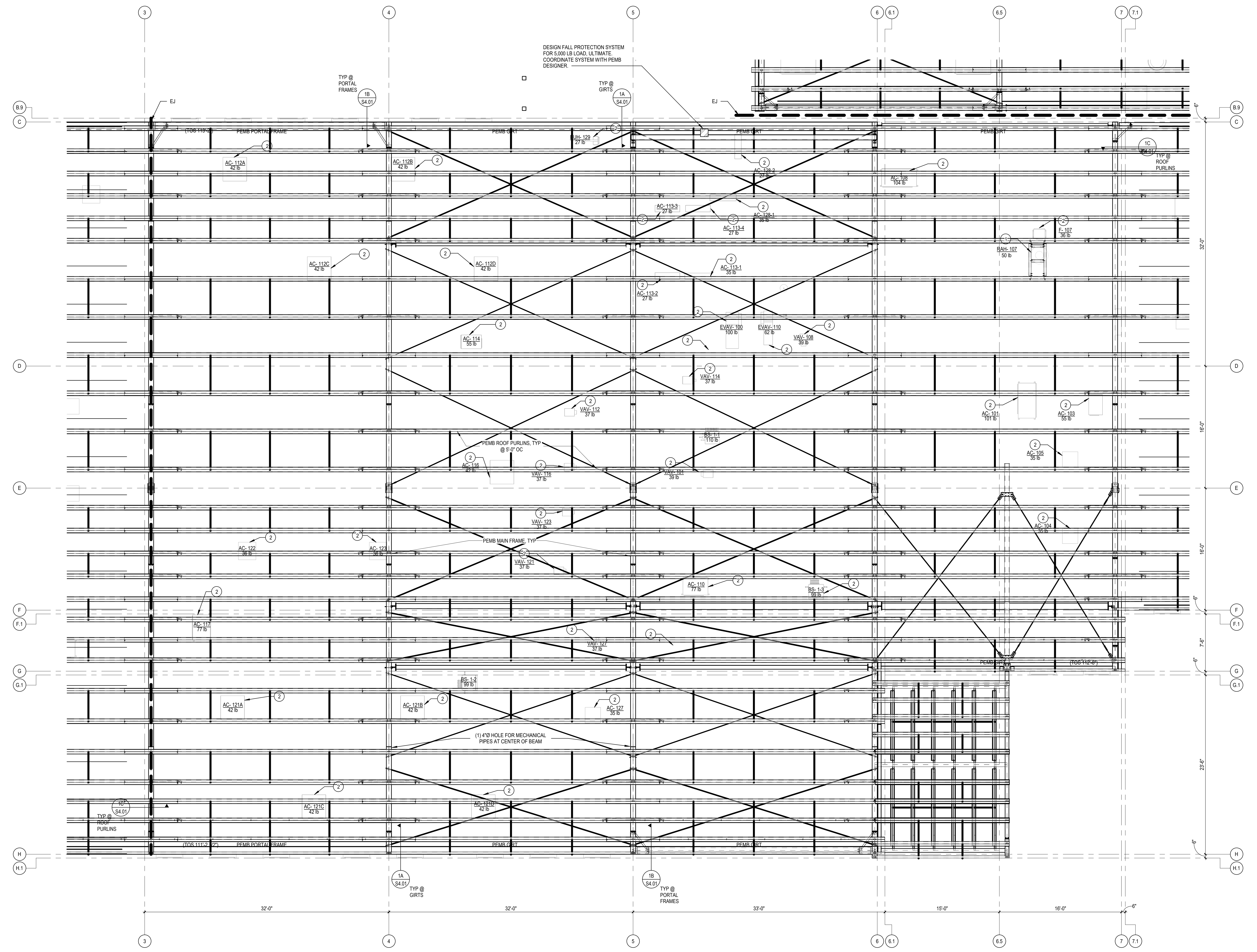
DRAWN:
Author
APPRVD:
Approver

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PROJECT ADDRESS:
CONFIDENTIAL
PROJ. NO. 10438332

OVERALL ROOF FRAMING PLAN (4.0)
SCALE: 1" = 10'-0"

SHEET NUMBER:
S2.01.0
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ROOF FRAMING PLAN - P.E.M.B. AREA A
SCALE: 3/16" = 1'-0"

- KEY NOTES**
- ROOF TOP MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CURB WEIGHT NOT INCLUDED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNIT SELECTED. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING UNDER UNIT CURBS.
 - HANGING MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNITS SELECTED AND COORDINATE ROOF SUPPORT STRUCTURE WITH PEMB SUPPLIER. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING AT HANGER LOCATIONS. REFER TO MECHANICAL DRAWINGS FOR HANGING SUPPORTS.

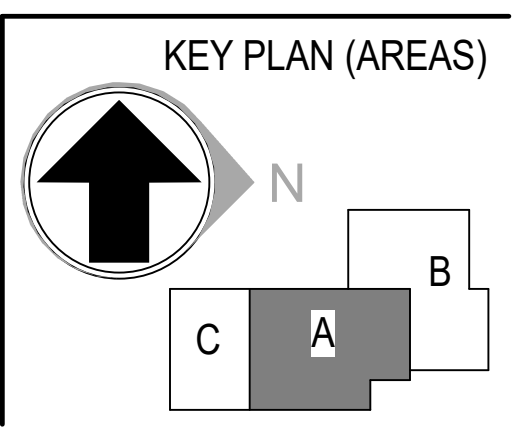
HDR, ENGINEERING INC.
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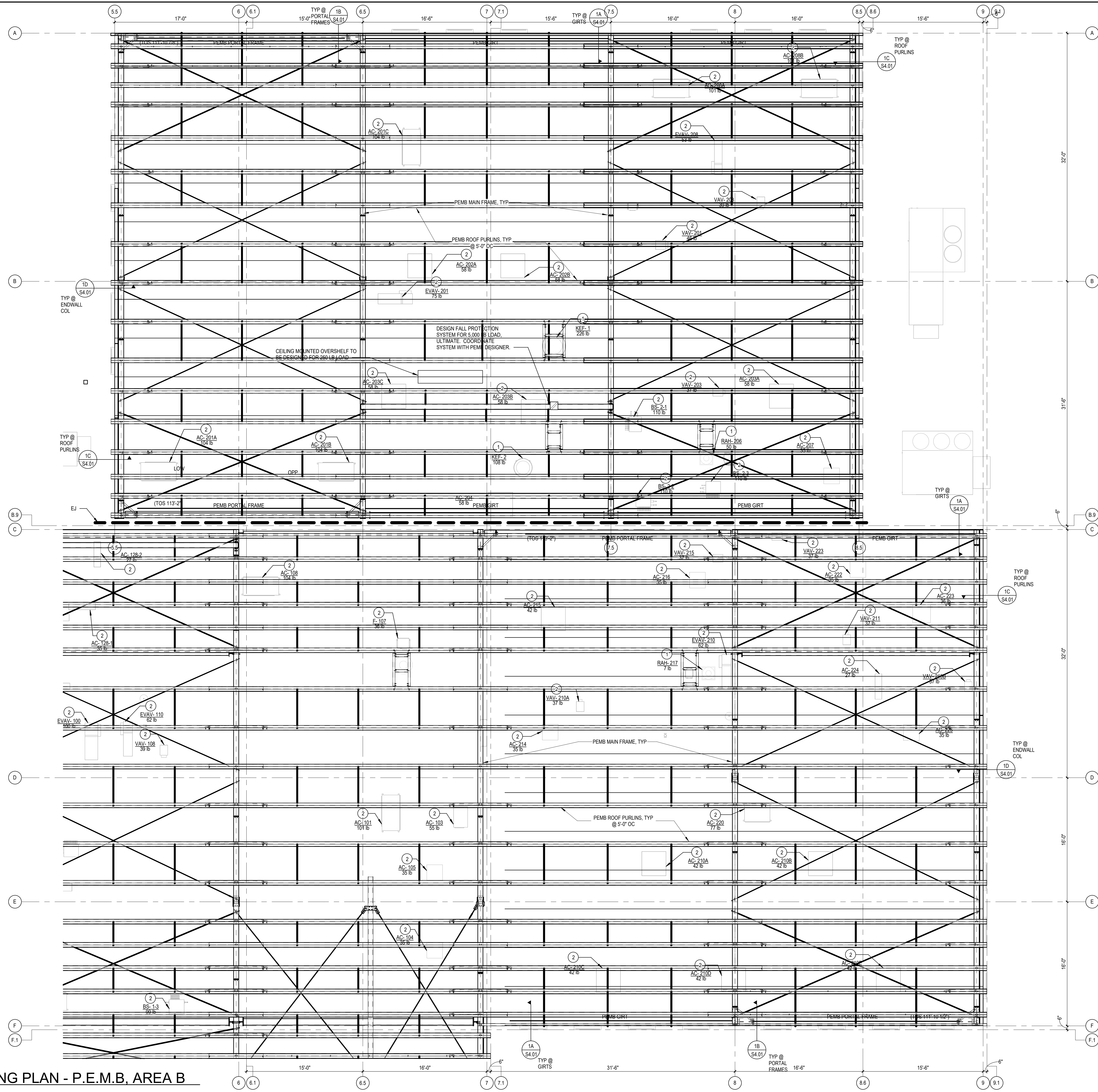
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Author
APPRVD:
Approver

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PROJ. NO. 10438332

ROOF FRAMING PLAN - P.E.M.B. AREA A
SCALE: As indicated

SHEET NUMBER:
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PHASE: ISSUE FOR CONSTRUCTION - SPS

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- A. ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 100'-0". UON.
- B. (#'-#") INDICATES DEVIATION FROM TYPICAL TOP OF STEEL ELEVATION. ELEVATION SHOWN IS TOP OF STEEL. UON.
- C. TOP OF STEEL SLOPES UNIFORMLY BETWEEN TOP OF STEEL ELEVATIONS SHOWN ON PLAN. WHERE BEAMS INTERSECT OTHER BEAMS OR COLUMNS, MATCH TOP OF STEEL ELEVATION UON.
- D. FOR INTERIOR METAL STUD FRAMING, SEE ARCHITECTURAL DRAWINGS FOR ALL INTERIOR WALL SECTIONS AND DIMENSIONS.
- E. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.

KEY NOTES

1. ROOF TOP MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CURB WEIGHT NOT INCLUDED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNIT SELECTED. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING UNDER UNIT CURBS.
2. HANGING MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNITS SELECTED AND COORDINATE ROOF SUPPORT STRUCTURE WITH PEMB SUPPLIER. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING AT HANGER LOCATIONS. REFER TO MECHANICAL DRAWINGS FOR HANGING SUPPORTS.

ROOF FRAMING PLAN - P.E.M.B. AREA B

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

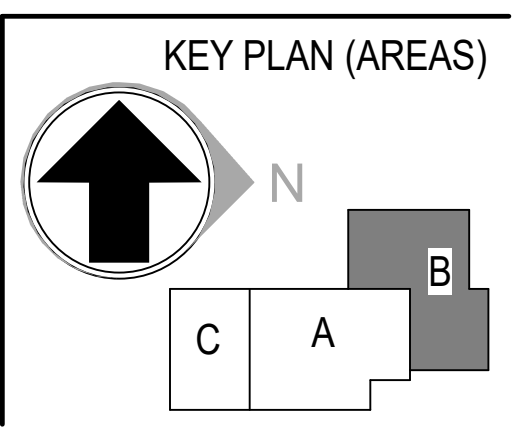
HDR, ENGINEERING INC.
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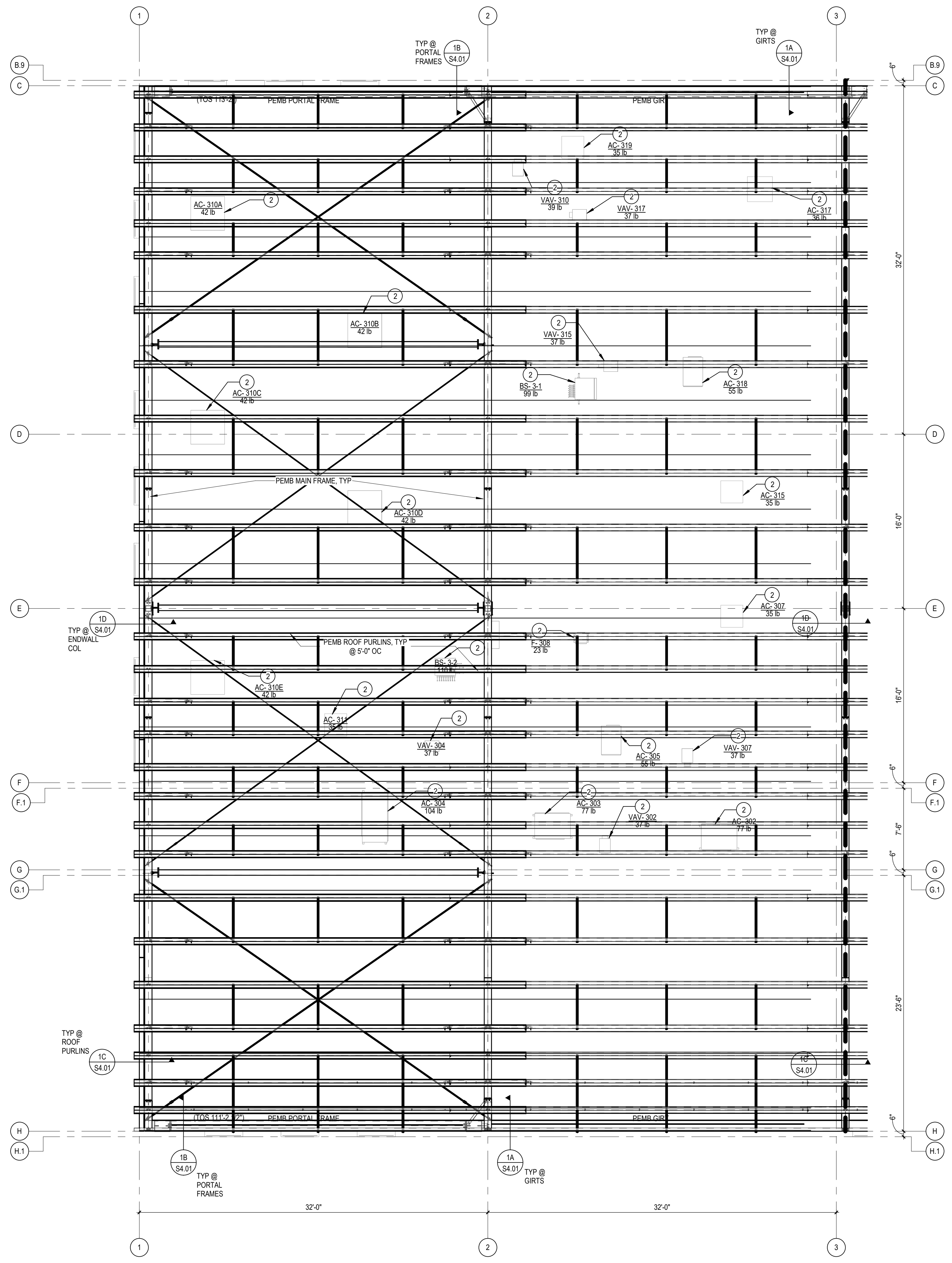
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Author
APPRVD:
Approver

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PROJ. NO. 10438332

**ROOF FRAMING PLAN - P.E.M.B. AREA B
(4.0)**
SCALE: As indicated

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ROOF FRAMING PLAN - P.E.M.B. AREA C
SCALE: 3/16" = 1'-0"

- A. ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 100'-0".
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- C. TOP OF STEEL SLOPES UNIFORMLY BETWEEN TOP OF STEEL ELEVATIONS SHOWN ON PLAN. WHERE BEAMS INTERSECT OTHER BEAMS OR COLUMNS, MATCH TOP OF STEEL ELEVATION UON.
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KEY NOTES

1. ROOF TOP MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CURB WEIGHT NOT INCLUDED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNIT SELECTED. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING UNDER UNIT CURBS.
2. HANGING MECHANICAL UNITS OF MAXIMUM WEIGHT INDICATED. CONFIRM WEIGHT AND LOCATION WITH ACTUAL UNITS SELECTED AND COORDINATE ROOF SUPPORT STRUCTURE WITH PEMB SUPPLIER. PEMB SUPPLIER TO PROVIDE ALL REQUIRED SUPPORT FRAMING AT HANGER LOCATIONS. REFER TO MECHANICAL DRAWINGS FOR HANGING SUPPORTS.

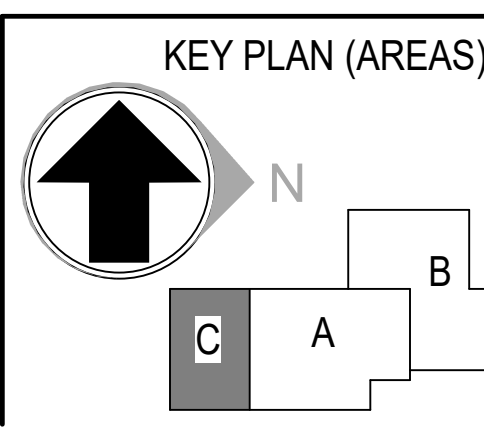


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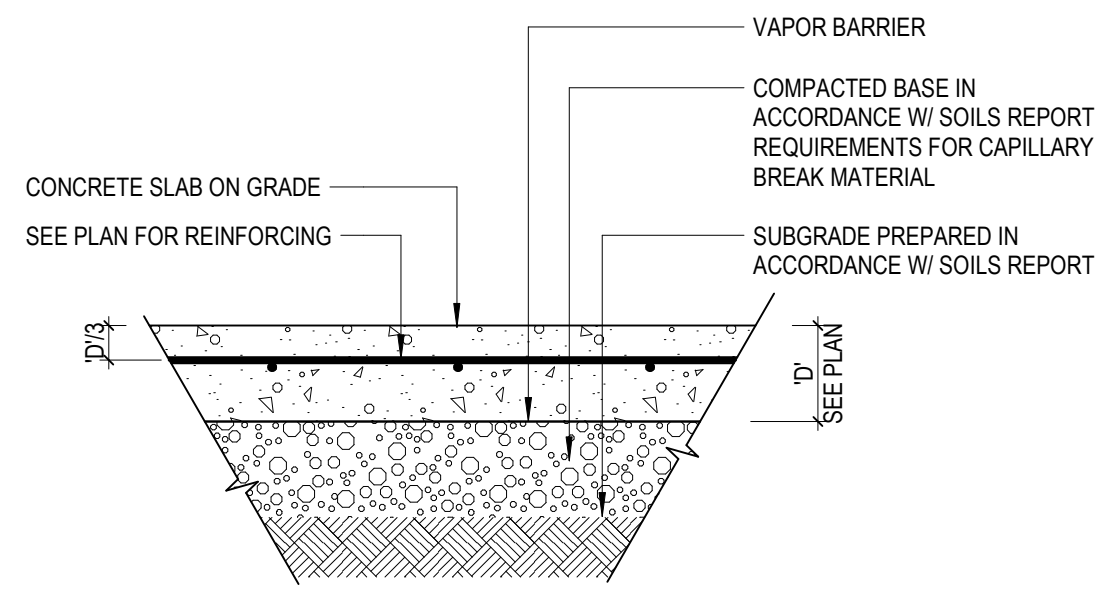
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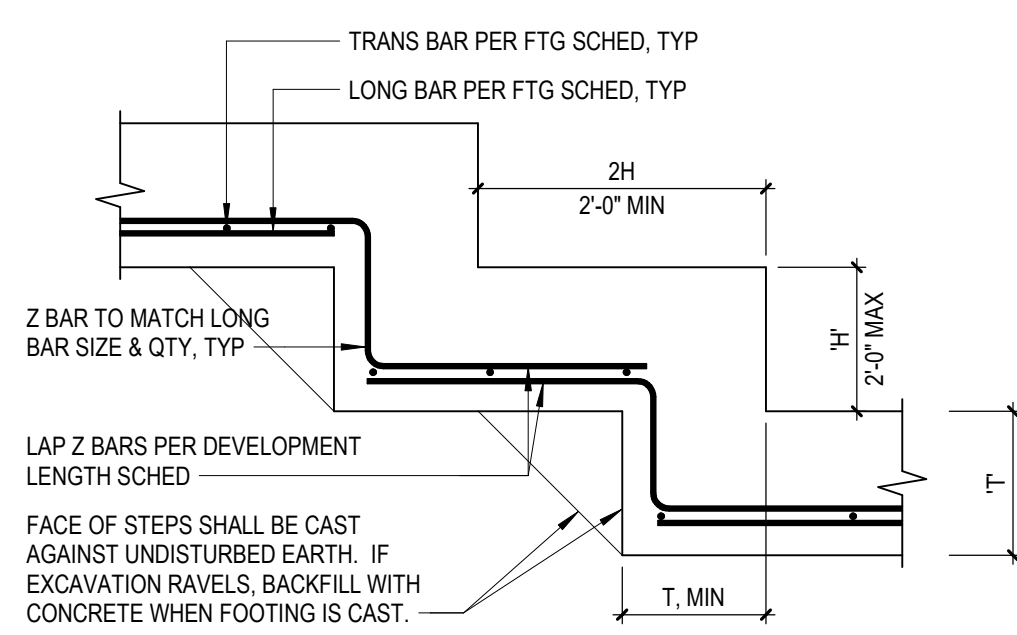
ROOF FRAMING PLAN - P.E.M.B. AREA C
SCALE: As indicated

SHEET NUMBER:
S2.31
PHASE: ISSUE FOR CONSTRUCTION - SPS

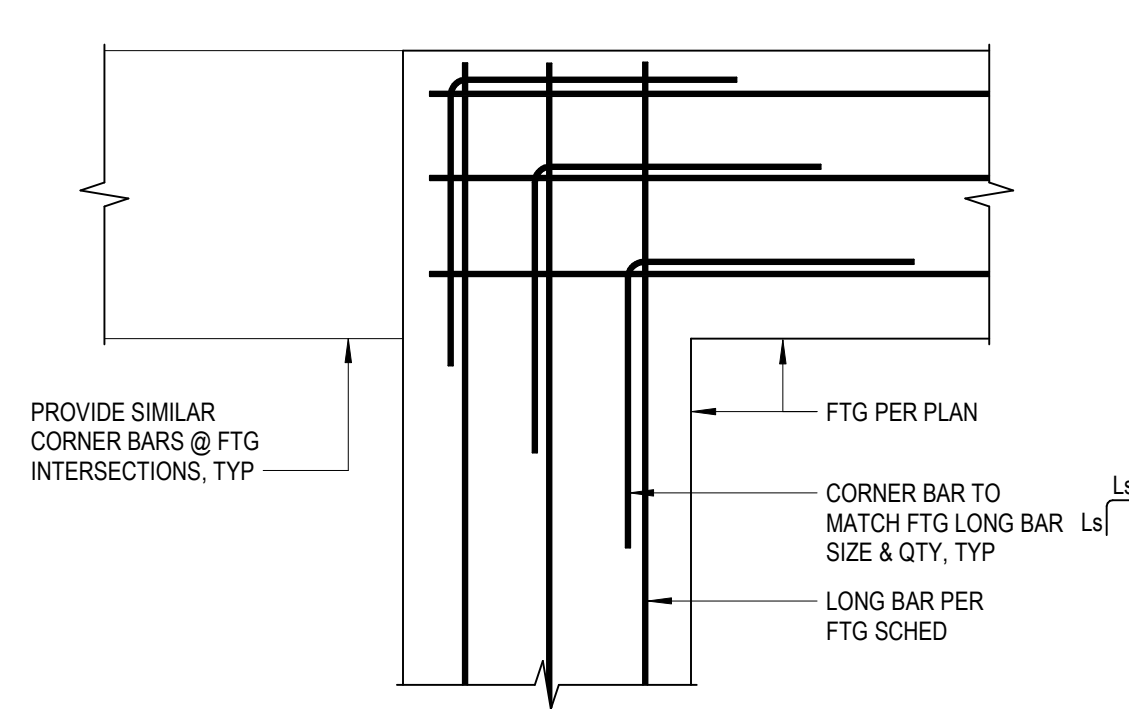
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1A SLAB ON GRADE
S3.01 NO SCALE



1B TYPICAL FOOTING STEP
S3.01 NO SCALE



1D TYPICAL FOOTING CORNER BARS
S3.01 NO SCALE

CONCRETE SPLICE OR DEVELOPMENT LENGTH (INCHES)

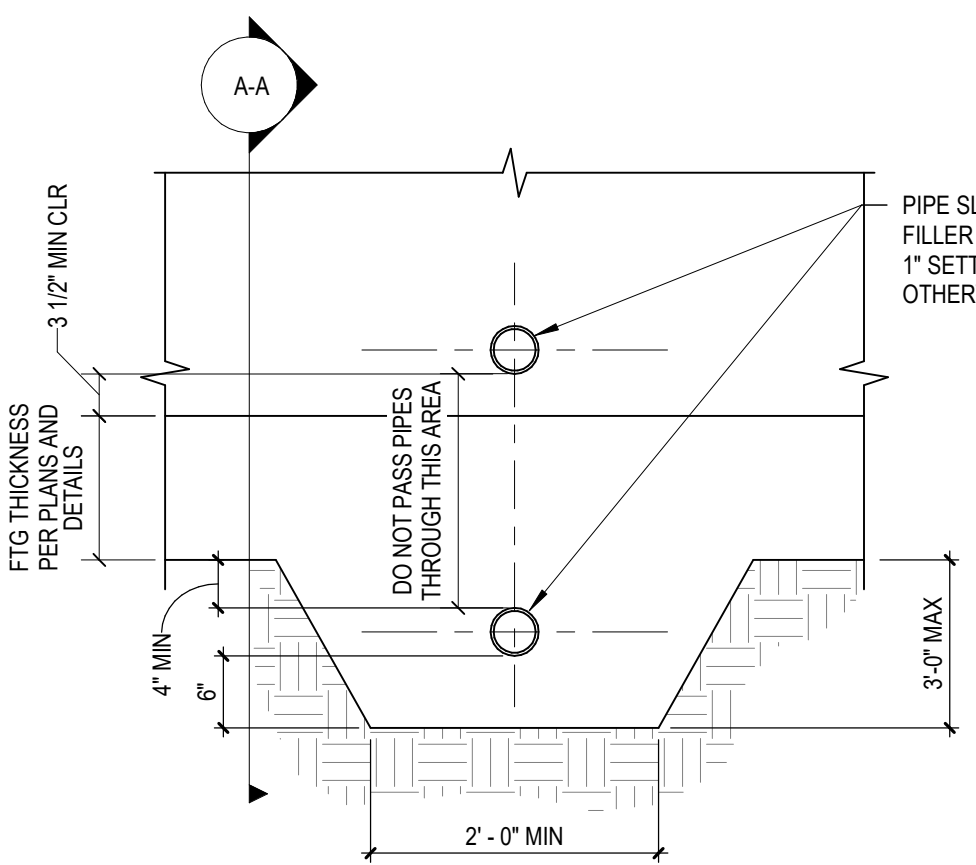
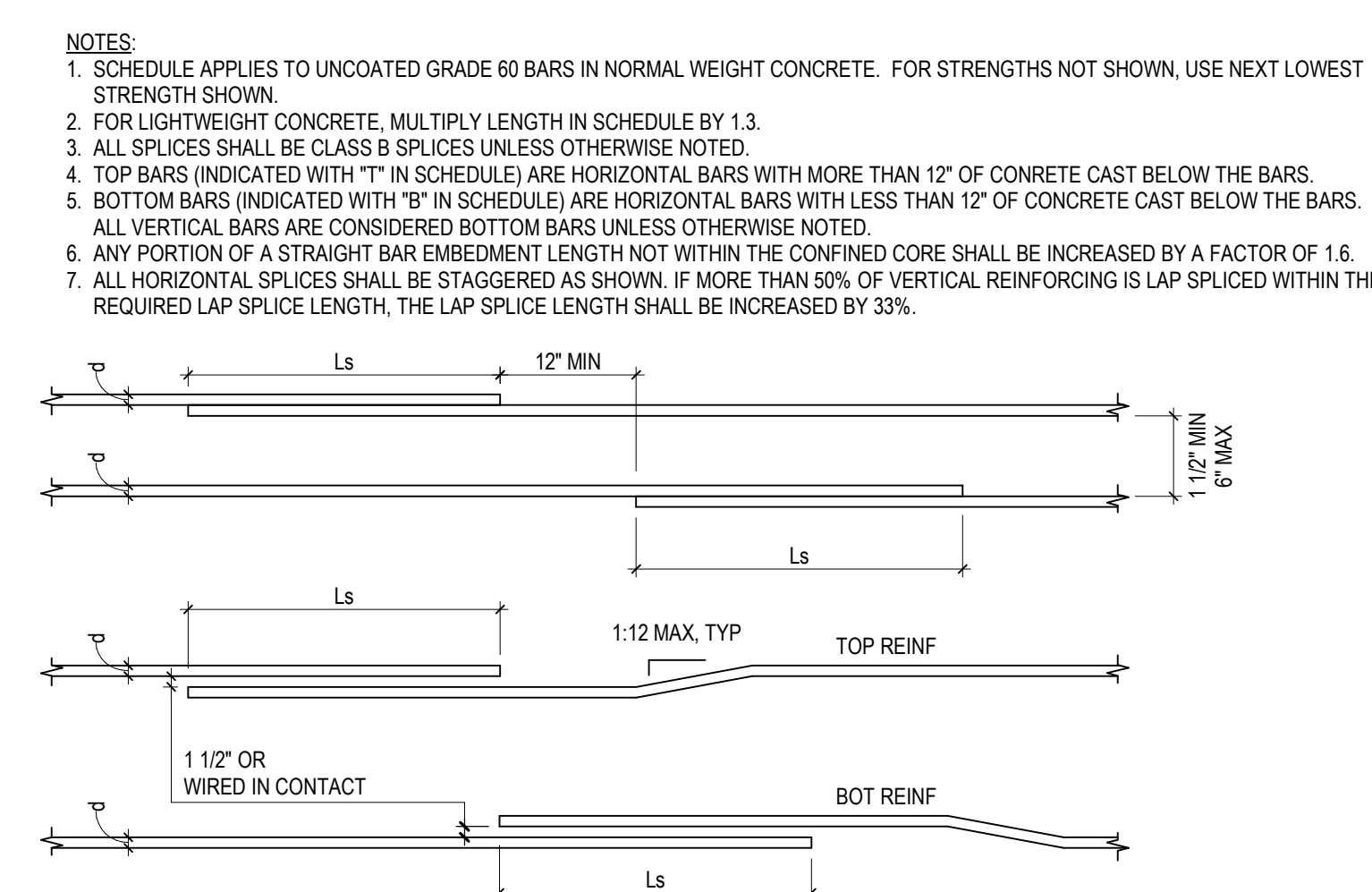
*CLASS B' TENSION LAP SPLICE "Ls" SCHEDULE

NORMAL WEIGHT CONCRETE f_c (psi)	CLASS B' TENSION LAP SPLICE "Ls" SCHEDULE																	
	0.375"		0.500"		0.625"		0.750"		0.875"		1.00"		1.125"		1.270"		1.410"	
	#3	#4	#5	#6	#7	#8	#9	#10	#11	#11	#11	#11	#11	#11	#11	#11	#11	
3000	28	22	38	29	47	36	56	43	81	63	93	72	105	81	116	90	128	98
4000	25	19	33	25	41	31	49	37	71	54	81	62	91	70	101	78	111	85
5000	22	17	29	23	36	28	44	34	63	49	72	56	81	63	90	69	99	76
6000	20	16	27	21	33	26	40	31	58	45	66	51	74	57	82	63	90	70

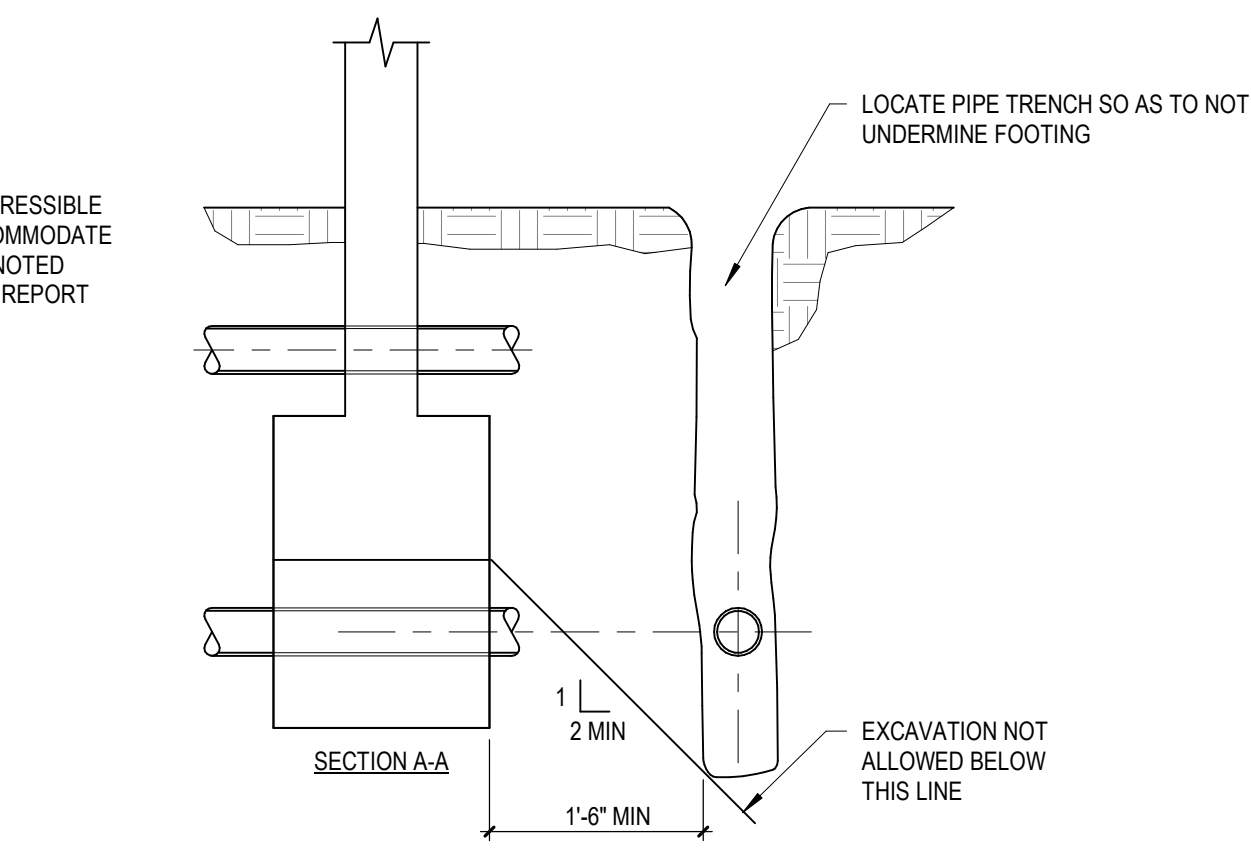
DEVELOPMENT LENGTH "Ld" SCHEDULE

NORMAL WEIGHT CONCRETE f_c (psi)	DEVELOPMENT LENGTH "Ld" SCHEDULE																	
	#3	#4	#5	#6	#7	#8	#9	#10	#11	#11	#11							
3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	96	76
4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
5000	17	13	23	17	28	22	34	26	49	38	56	43	63	48	69	54	76	59
6000	16	12	21	16	26	20	31	24	45	34	51	39	57	44	63	49	70	54

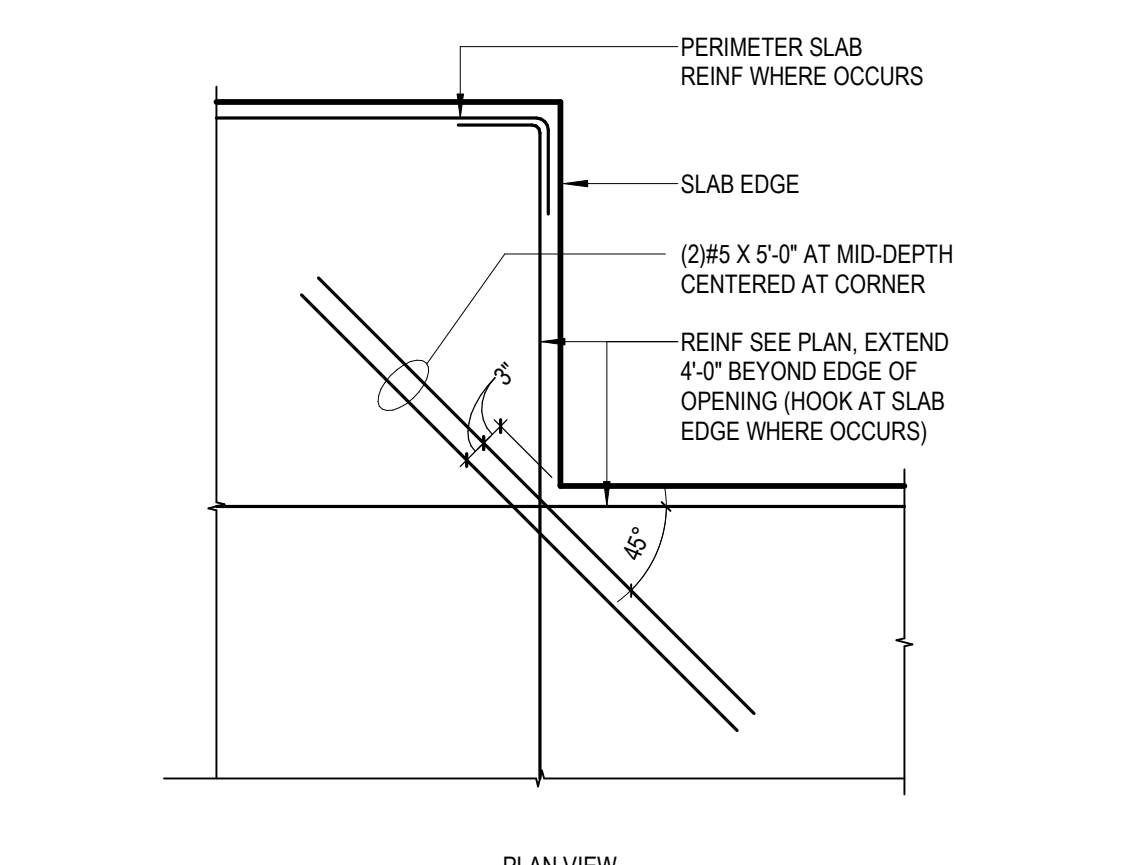
1E CONCRETE REINFORCING SPLICE SCHEDULE
S3.01 NO SCALE



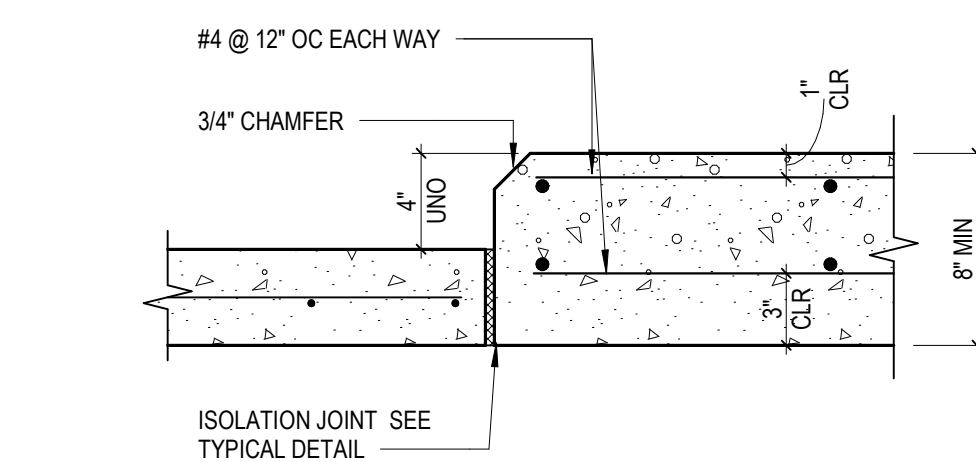
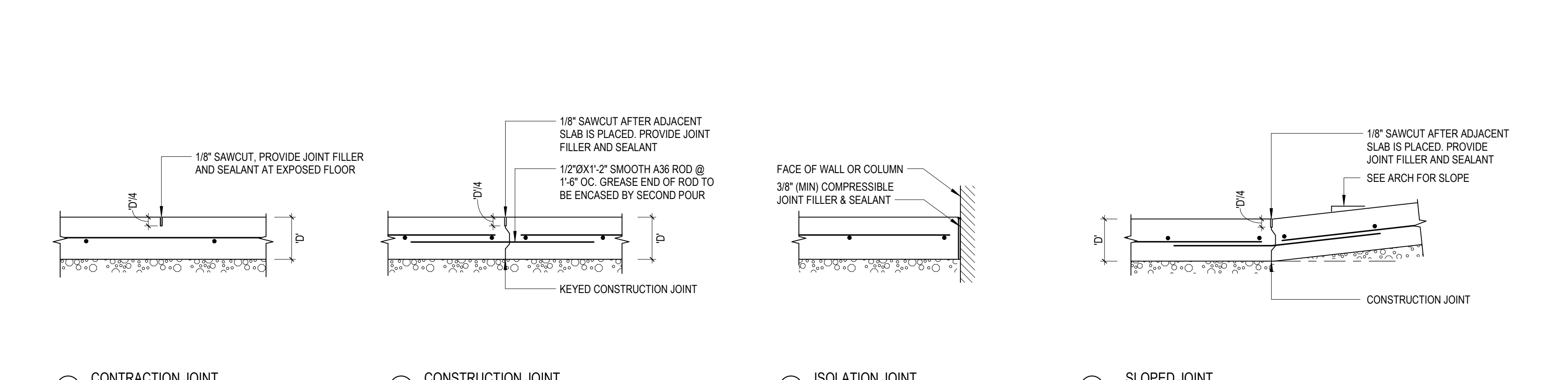
2A TYPICAL PIPE PENETRATIONS AT FOOTINGS / WALLS
S3.01 NO SCALE



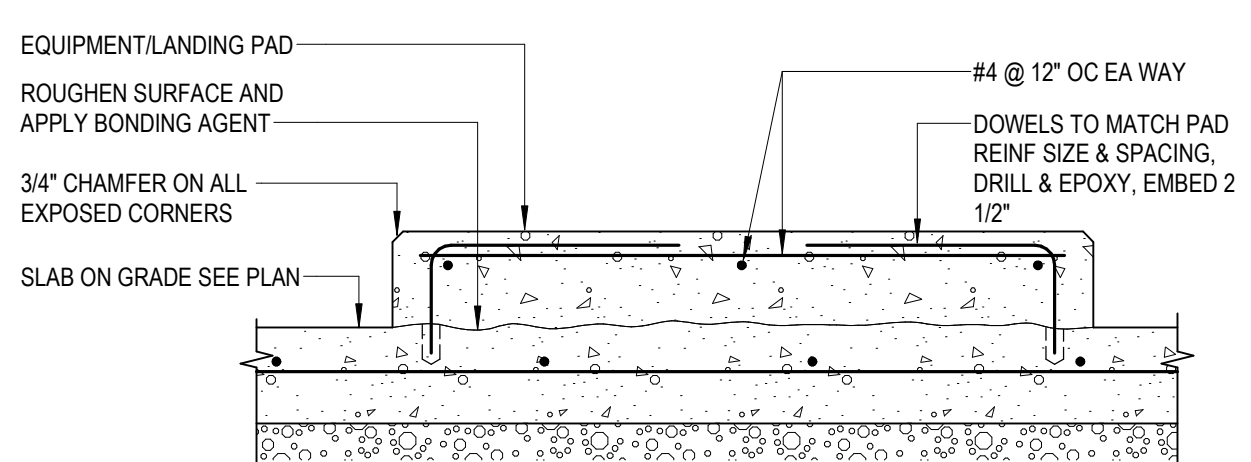
2B RE-ENTRANT CORNER AT SLAB EDGE
S3.01 NO SCALE



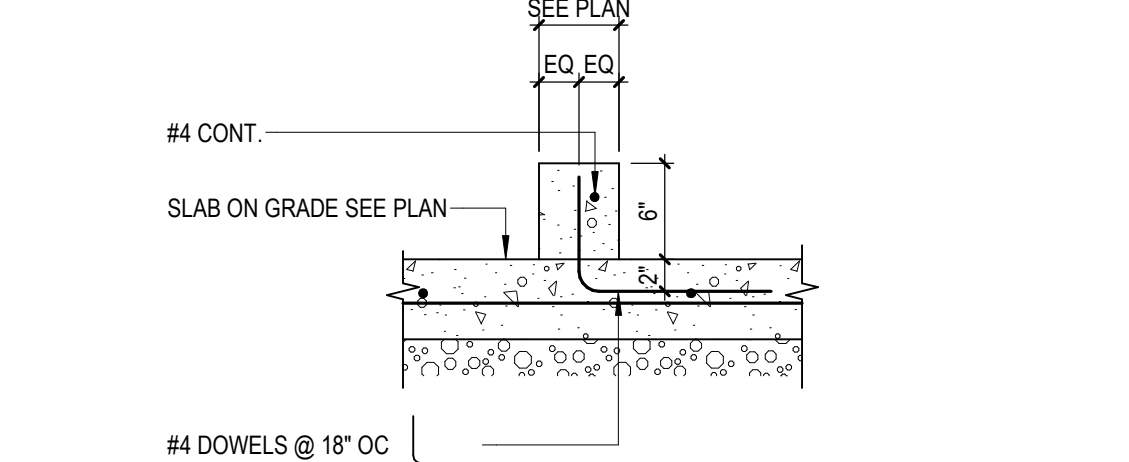
2D SLAB ON GRADE JOINTS
S3.01 NO SCALE



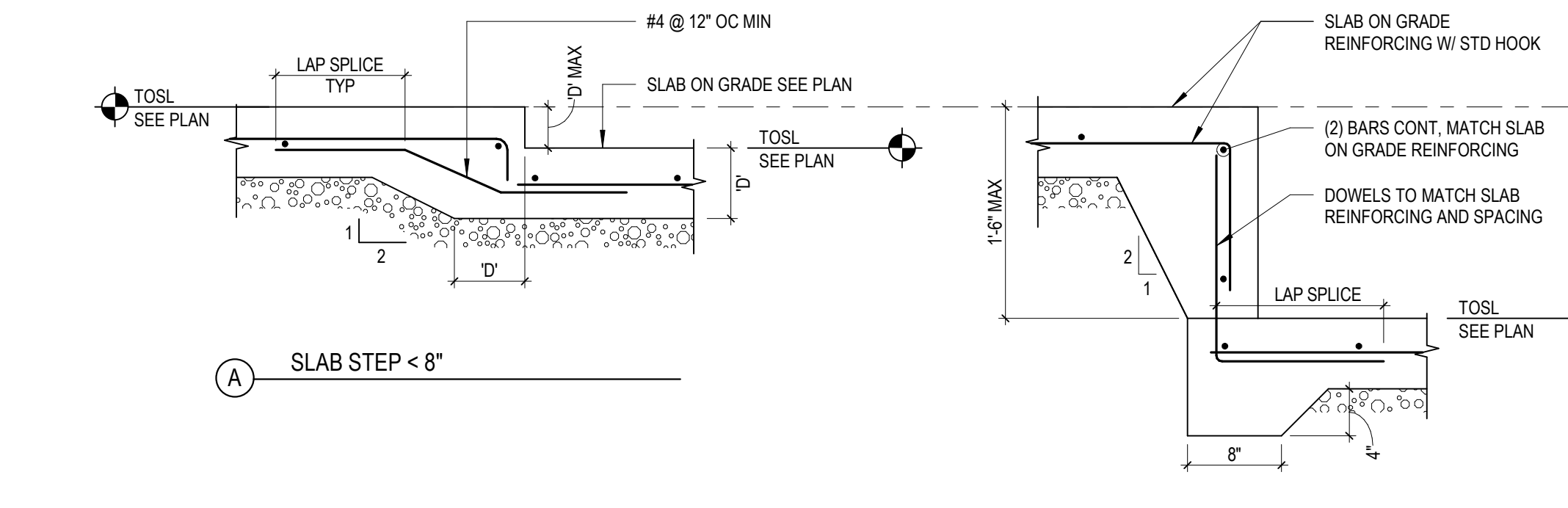
3A TYPICAL ISOLATED EQUIPMENT PAD
S3.01 NO SCALE



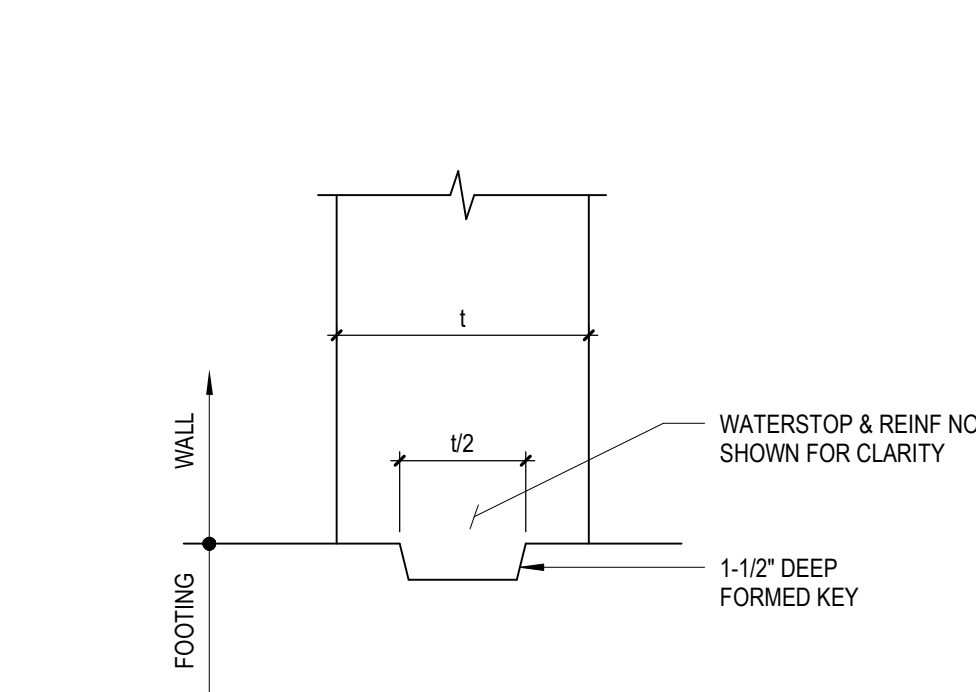
3B EQUIPMENT/HOUSEKEEPING PAD
S3.01 NO SCALE



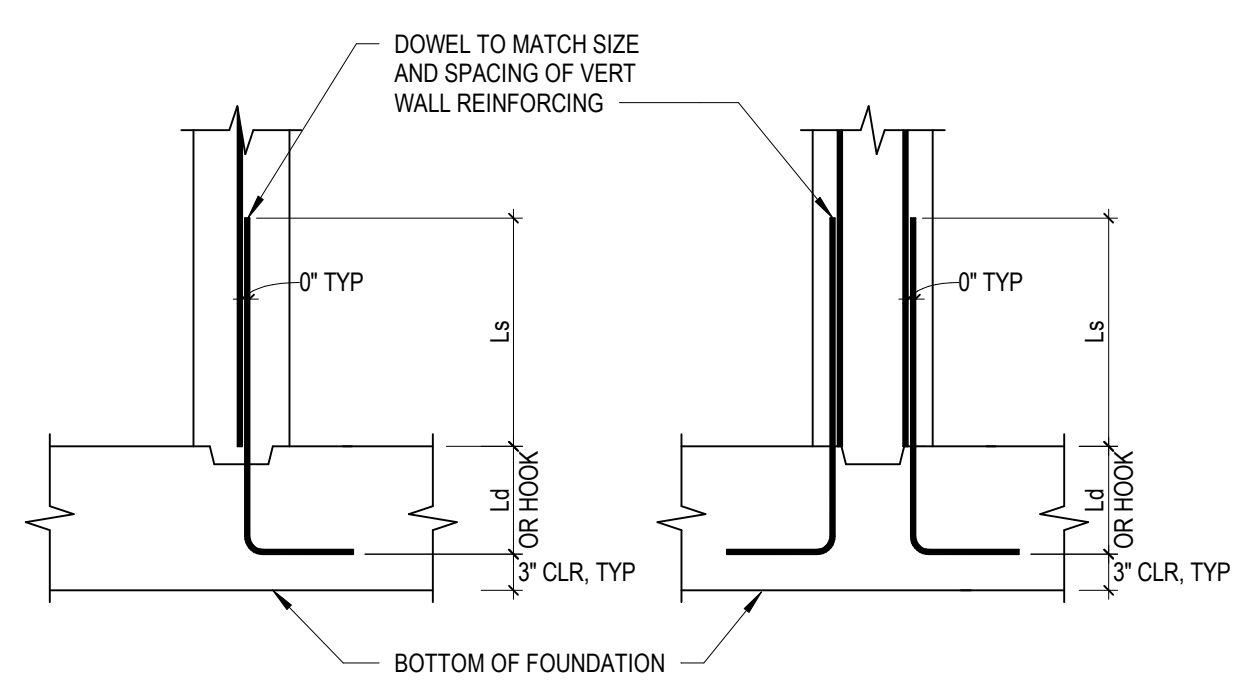
3C TYPICAL CONCRETE CURB DETAIL
S3.01 NO SCALE



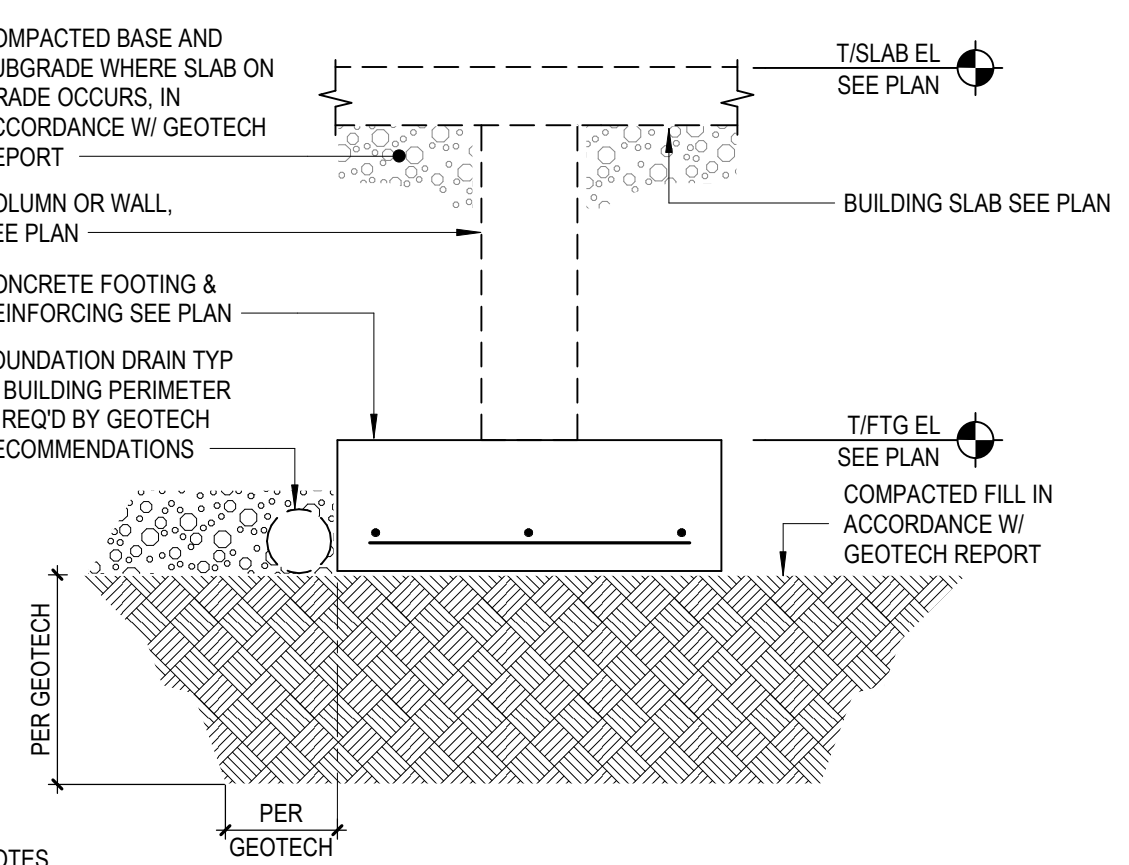
3D TYPICAL SLAB STEPS
S3.01 NO SCALE



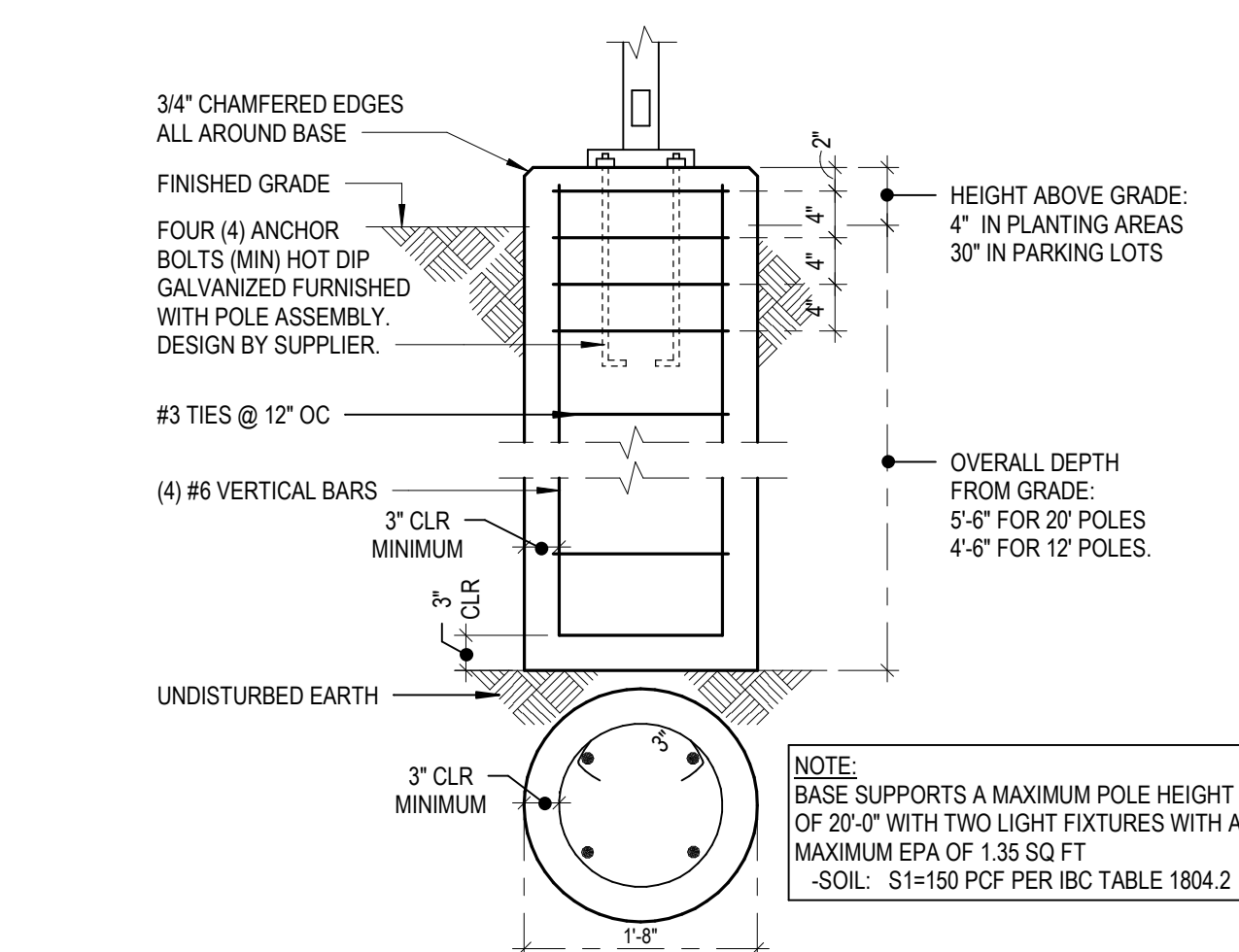
5A TYPICAL WALL KEY JOINT AT FOOTING
S3.01 NO SCALE



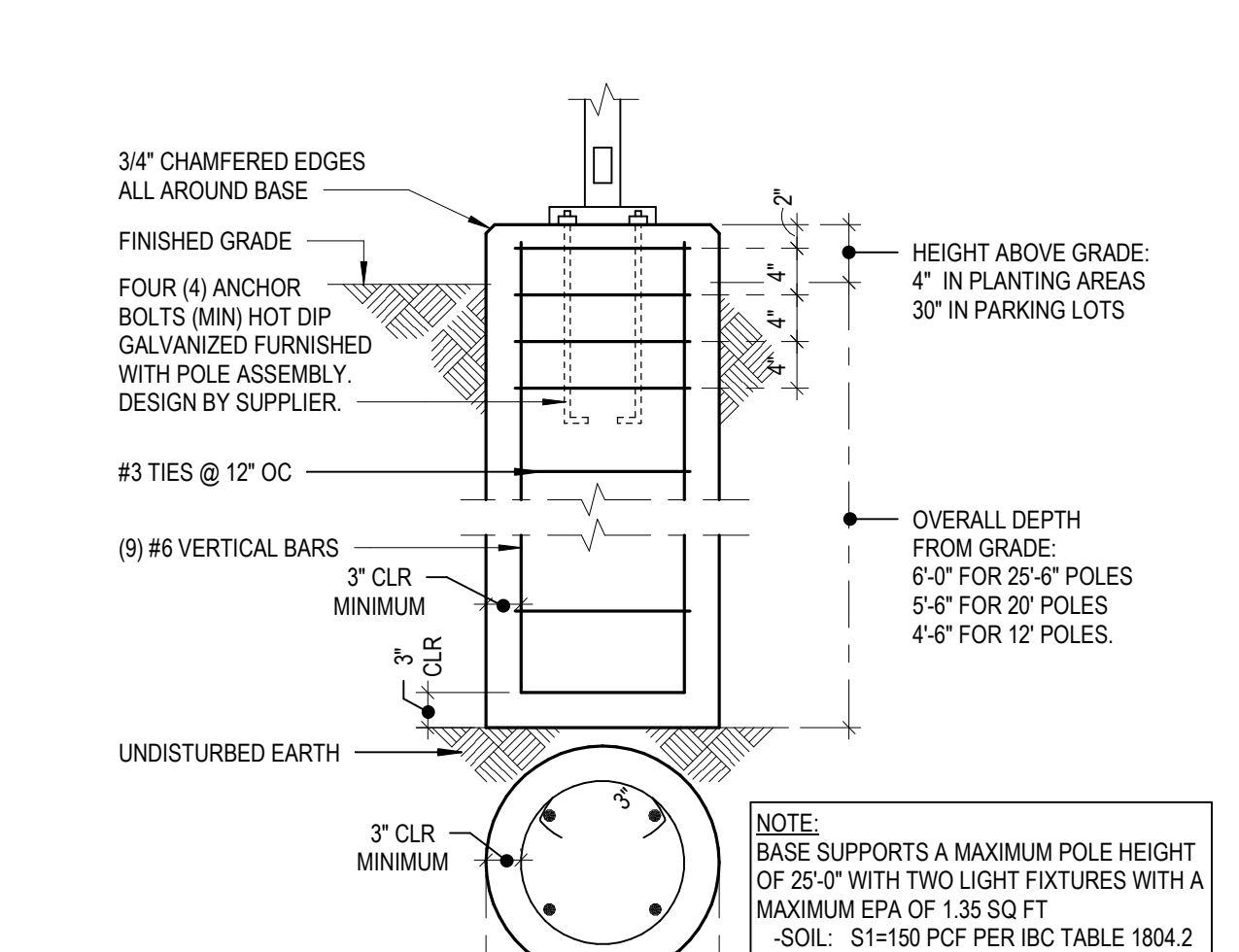
5B TYPICAL WALL DOWEL AT FOUNDATION
S3.01 NO SCALE



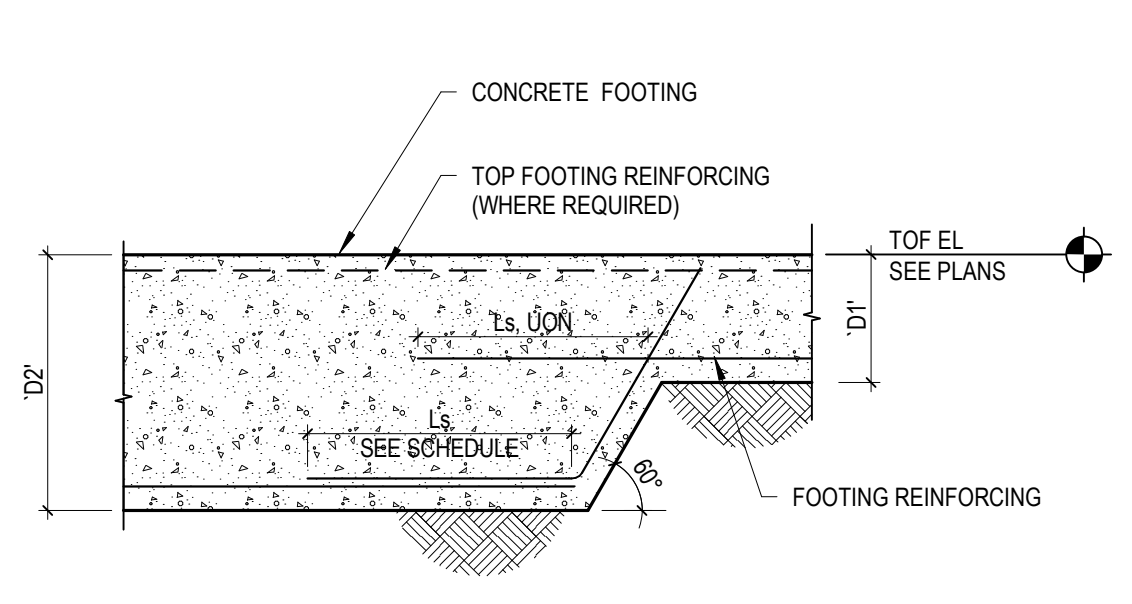
5C TYPICAL FOOTING BEARING AND DRAINAGE
S3.01 NO SCALE



5D TYP LIGHT POLE BASE
S3.01 SCALE: 3/4" = 1'-0"

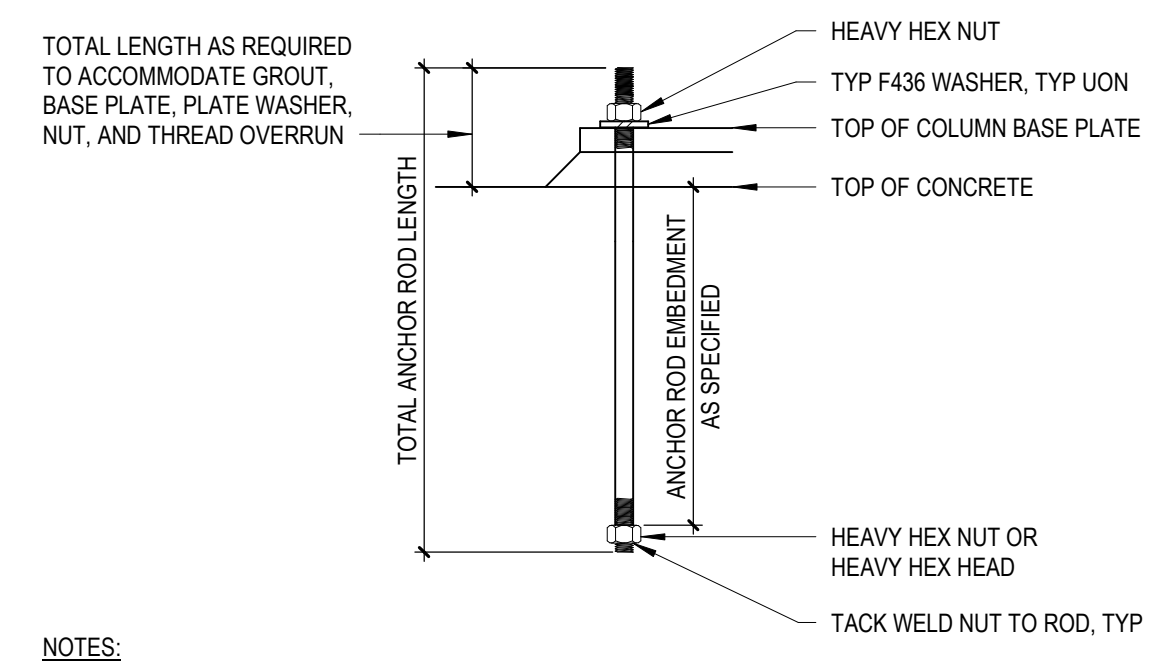


2 TYP SECURITY POLE BASE
S3.01 SCALE: 3/4" = 1'-0"



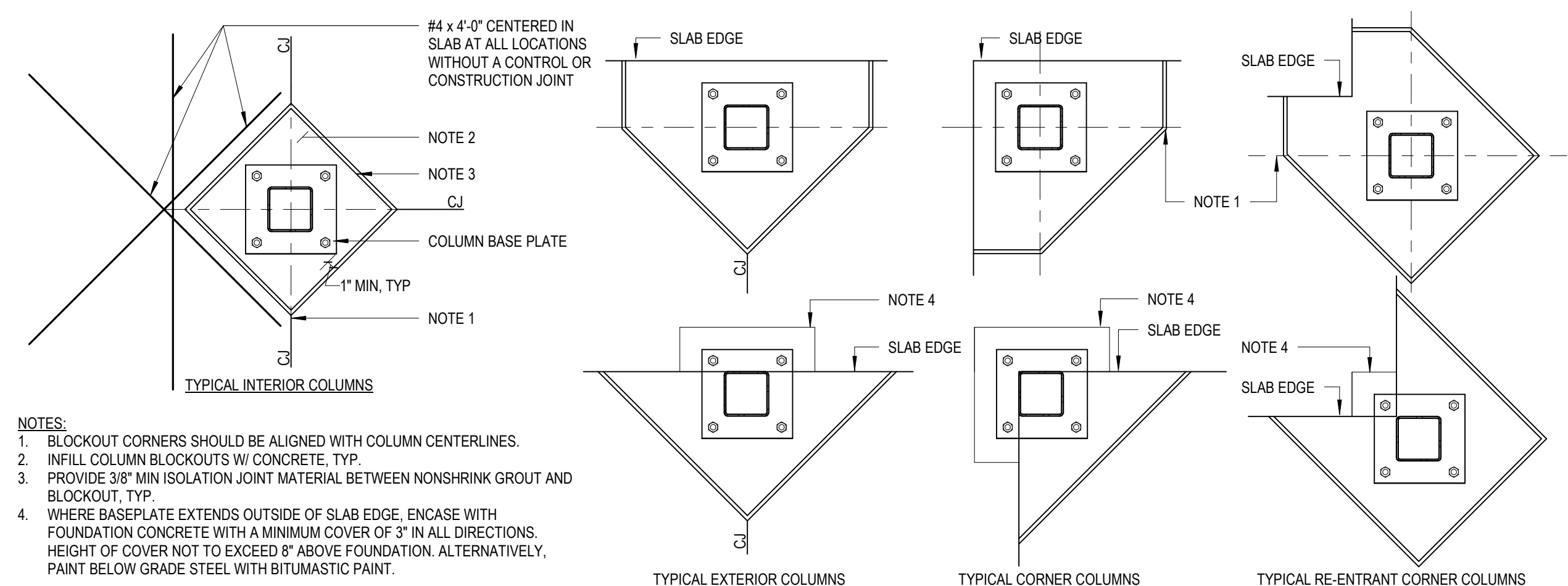
NOTE:
FOR FOOTING ELEVATIONS, DEPTH AND REINFORCING, SEE PLANS AND TYPICAL FOOTING DETAIL.

1A TYP BOTTOM STEP FOOTING DETAIL
S3.02 NO SCALE

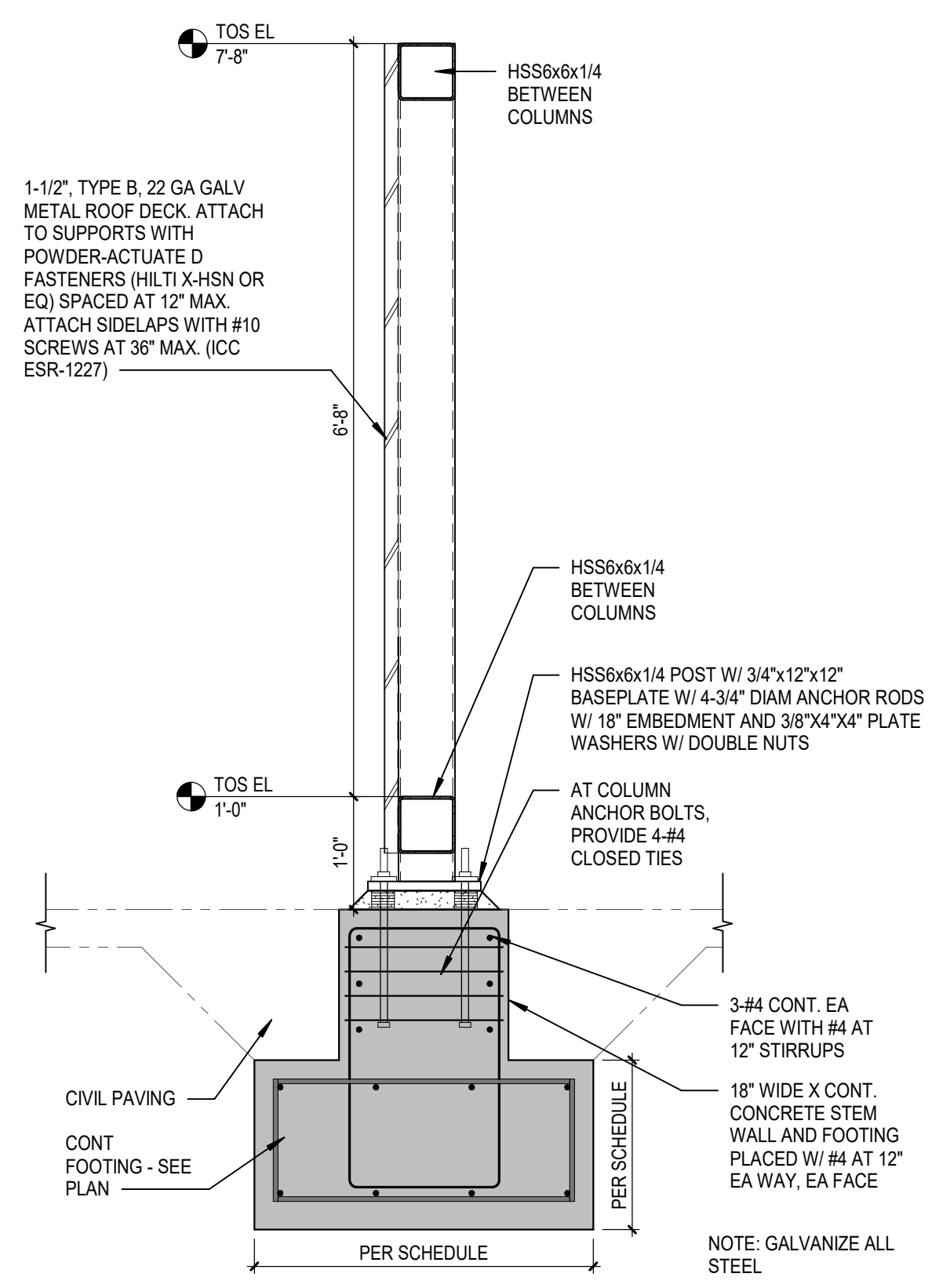


NOTES:
1. SEE STEEL COLUMN SCHEDULE AND DETAILS FOR ANCHOR ROD SIZE AND EMBEDMENT.
2. UNLESS NOTED OTHERWISE, ALL ANCHOR ROD NUTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISI; AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
3. HOLE IN PLATE WASHER SHALL BE 1/16" LARGER THAN THE ROD DIAMETER.

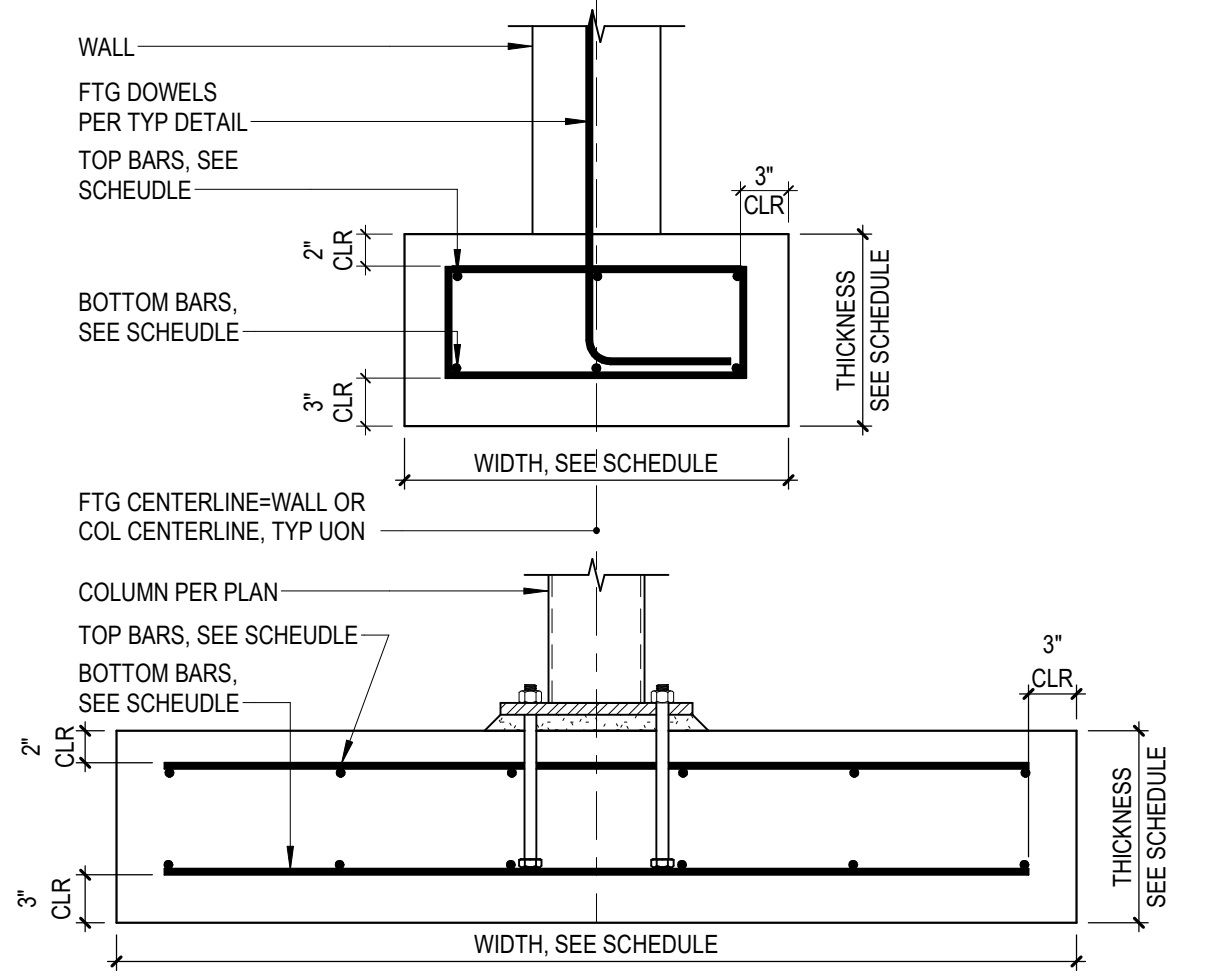
1B TYPICAL COLUMN ANCHOR ROD
S3.02 NO SCALE



3A TYPICAL SLAB-ON-GRADE BLOCKOUTS
S3.02 NO SCALE



3B FOUNDATION AT SCREENWALL
S3.02 SCALE: 3/4" = 1'-0"



CONTINUOUS FOOTING SCHEDULE			
MARK	WIDTH	THICKNESS	REINFORCEMENT
WF1.0	1'-3"	1'-6"	(2) #5 T/B, #4 STIRRUPS @ 18" OC
WF1.5	1'-6"	1'-6"	(2) #5 T/B, #4 STIRRUPS @ 18" OC
WF3.0	3'-0"	1'-6"	(4) #5 T/B, #4 STIRRUPS @ 9" OC

COLUMN FOOTING SCHEDULE						
MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT	MAX DOWNWARD CAPACITY	MAX LATERAL CAPACITY
F5.0B	5'-0"	5'-0"	2'-0"	(5) #6 EW T/B	62.5 KIPS	13.5 KIPS
F8.0	8'-0"	8'-0"	1'-6"	(9) #6 EW T/B	160 KIPS	10.8 KIPS
F10.0	10'-0"	10'-0"	2'-0"	(12) #6 EW T/B	250 KIPS	27 KIPS
F13.0A	8'-0"	13'-0"	2'-0"	#6 @ 10" OC EW T/B	280 KIPS	35.1 / 21.6 KIPS
F13.0B	8'-0"	13'-0"	2'-0"	#6 @ 10" OC EW T/B	292.5 KIPS	35.1 / 24.3 KIPS

4A FOOTING SCHEDULES
S3.02 NO SCALE

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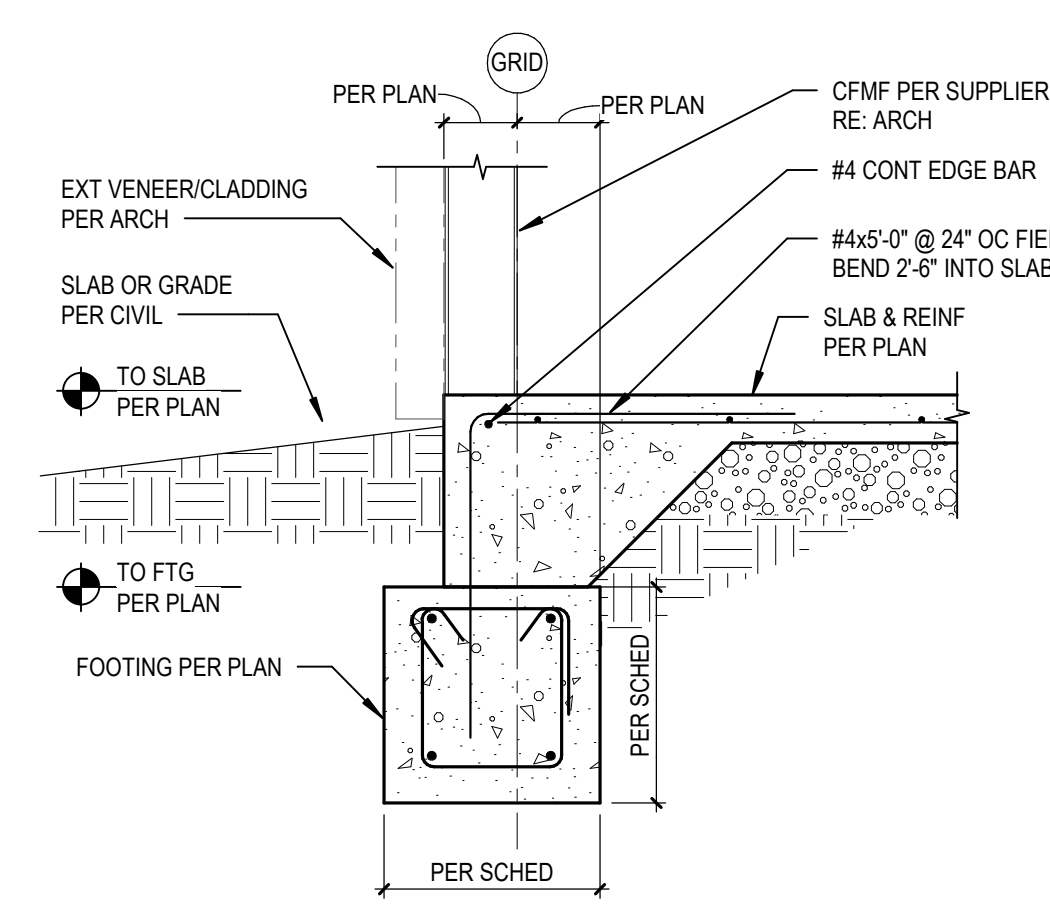
DRAWN:
Author
APPRVD:
Approver

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PROJECT ADDRESS:
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PROJ. NO. 10438332

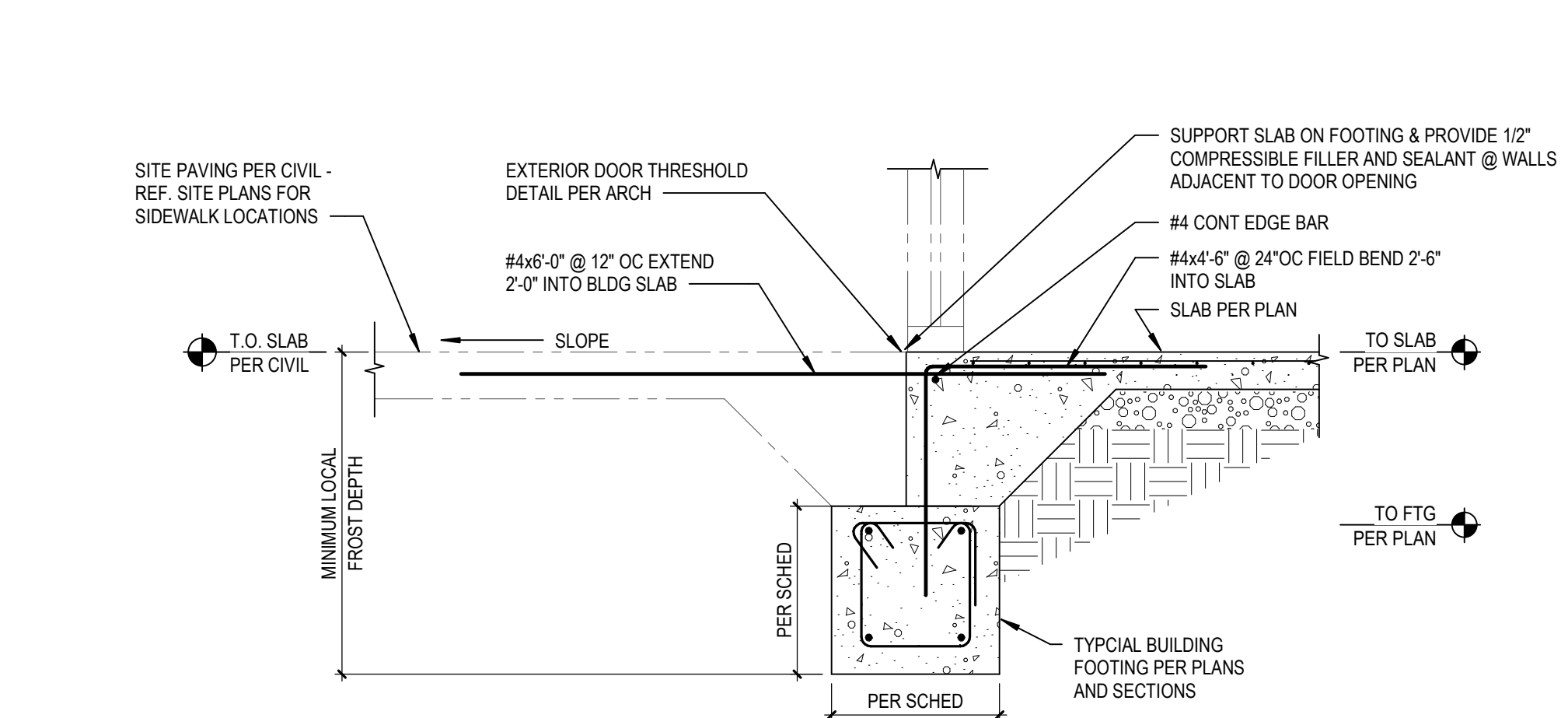
CONCRETE SECTIONS & DETAILS
SCALE: As indicated

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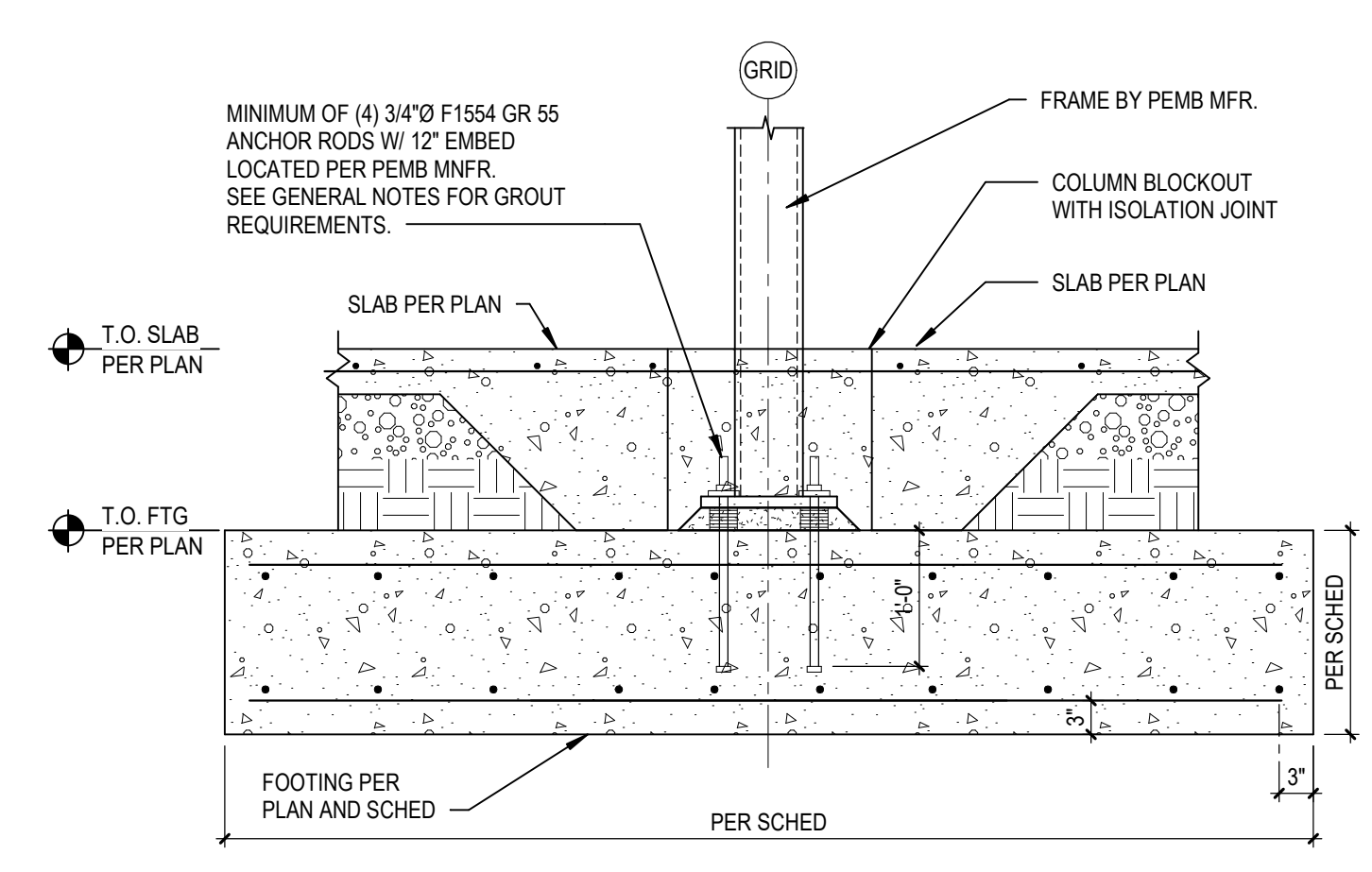
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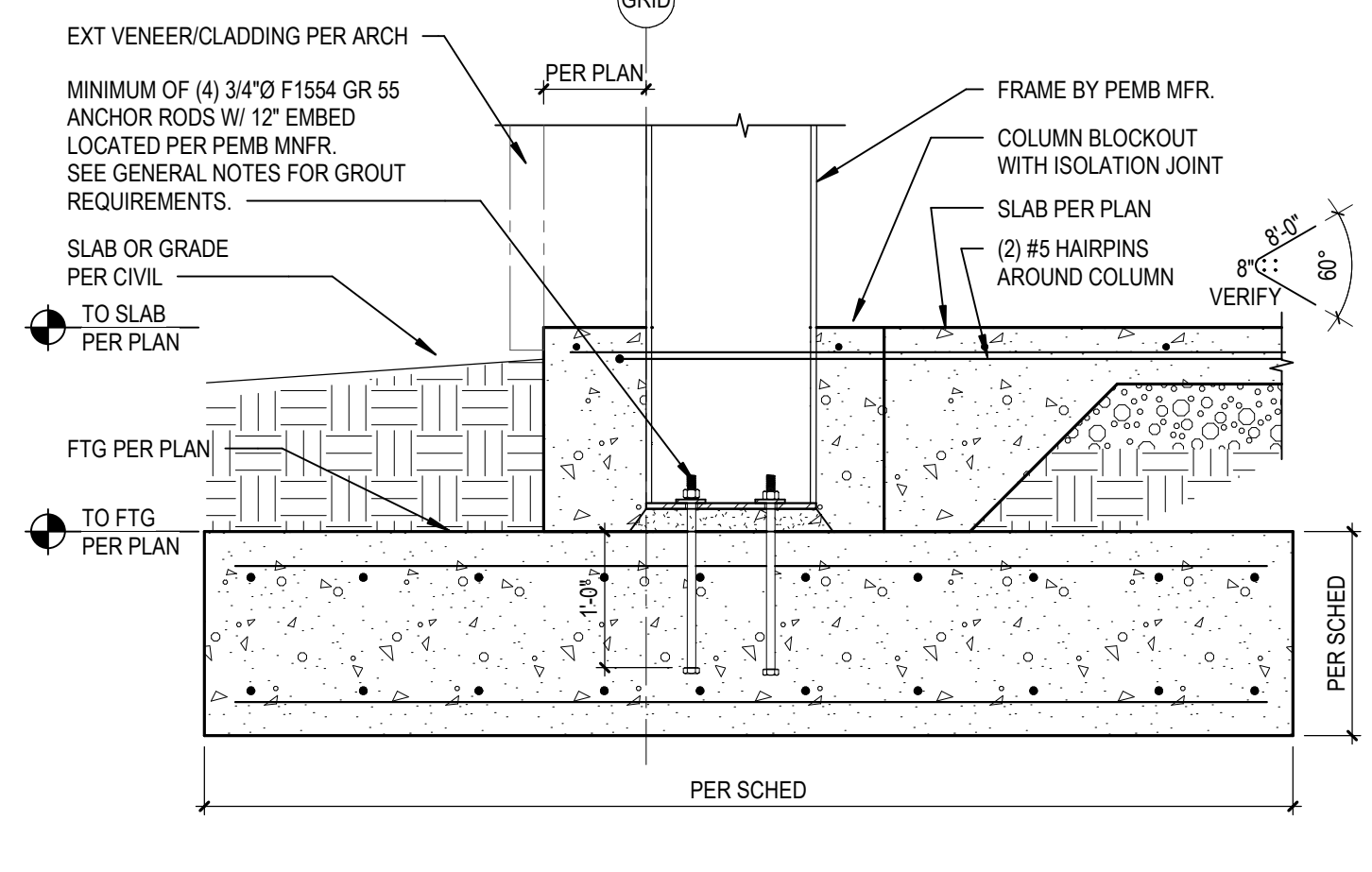
1A TYP WALL FOOTING DETAIL
S3.03 NO SCALE



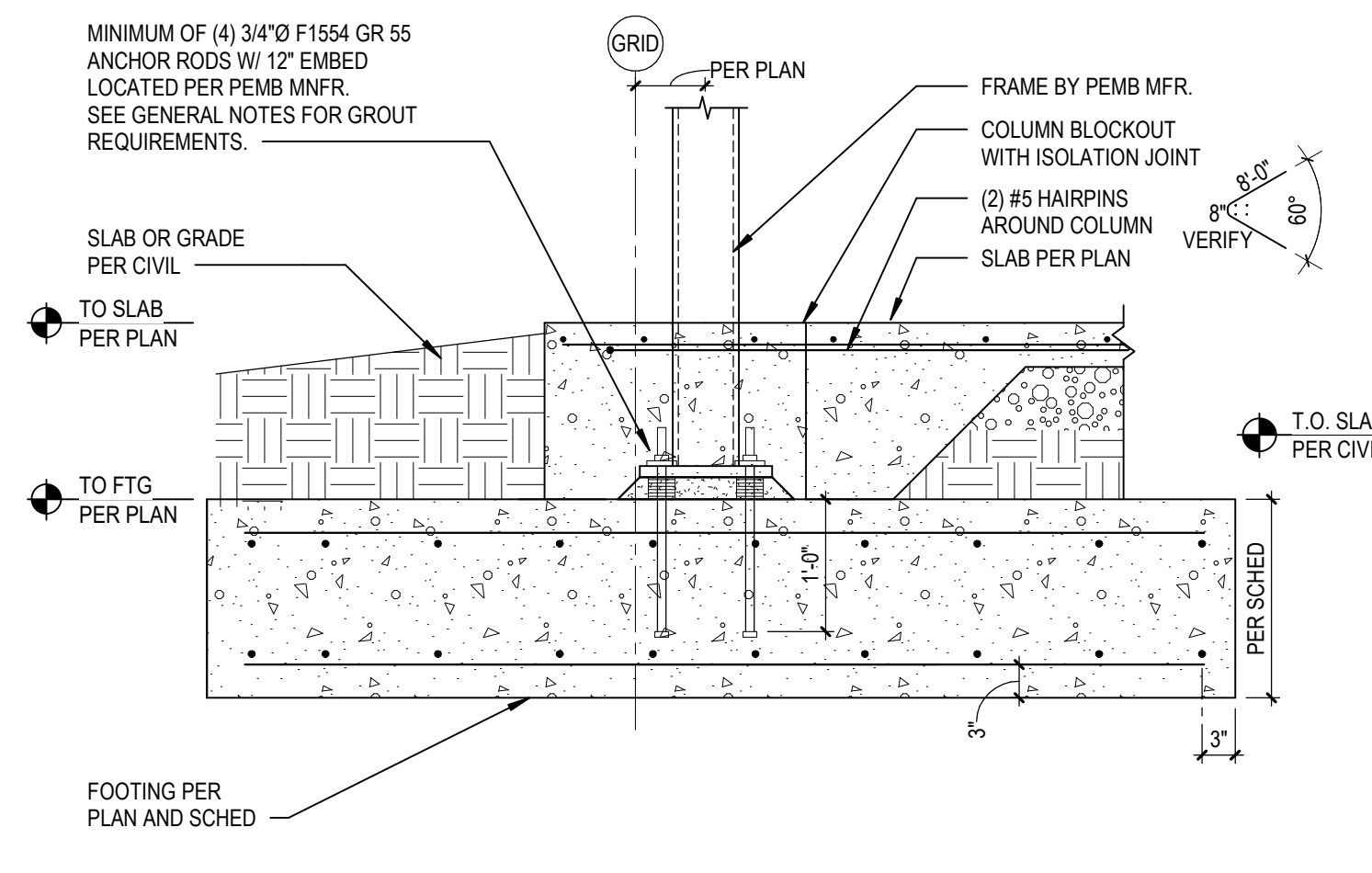
1B TYP DETAIL AT DOORWAY
S3.03 NO SCALE



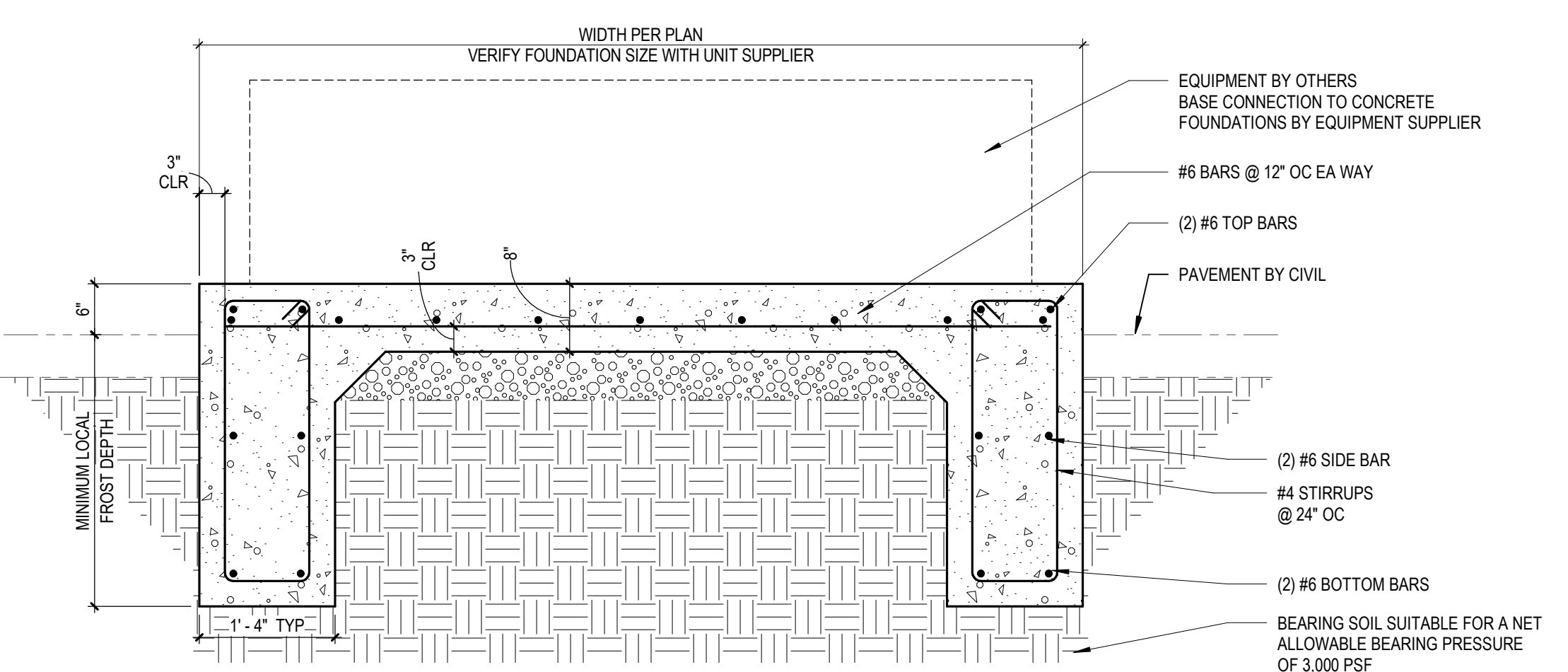
1D TYP PEMB INTERIOR COLUMN DETAIL
S3.03 NO SCALE



1E TYP PEMB MAIN FRAME COLUMN DETAIL
S3.03 NO SCALE



2B TYP PEMB ENDWALL COLUMN DETAIL
S3.03 NO SCALE



2C TYPICAL MECHANICAL EQUIPMENT FOUNDATION
S3.03 NO SCALE



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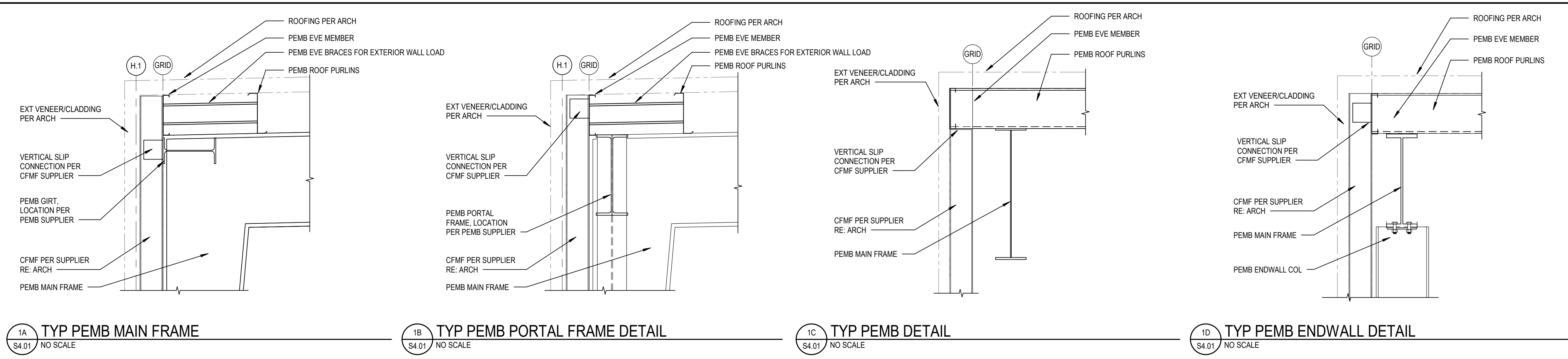
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CONCRETE SECTIONS & DETAILS
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1A TYP PEMB MAIN FRAME NO SCALE
 1B TYP PEMB PORTAL FRAME DETAIL NO SCALE
 1C TYP PEMB DETAIL NO SCALE
 1D TYP PEMB ENDWALL DETAIL NO SCALE



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STEEL SECTIONS & DETAILS
 SCALE: 3/4" = 1'-0"

SHEET NUMBER:
S4.01
 PHASE: ISSUE FOR CONSTRUCTION - SPS