

STRUCTURAL NOTES

LOADING:

1. DESIGNED IN ACCORDANCE WITH THE CURRENT WISCONSIN COMMERCIAL BUILDING CODE BASED ON 2009 INTERNATIONAL BUILDING CODE.

2. DESIGN LOADS:

- A. ROOF DEAD LOAD - RESTAURANT: 10.0 PSF ROOF MEMBRANE AND BALLAST 2.5 PSF 1/2" METAL ROOF B-DECK, 20 GA. 6.0 PSF INSULATION 4.0 PSF FRAMING 22.5 PSF TOTAL ROOF DEAD LOAD

- A.2 ROOF DEAD LOAD BEAR AND SEAL: 5.0 PSF MEMBRANE & INSULATION (NO BALLAST) 76.0 PSF 10" PRECAST PLANK 81.0 PSF TOTAL DEAD

- B. COLLATERAL GRAVITY LOAD: 3.0 PSF MISC. MECHANICAL 3.0 PSF SPRINKLERS 2.0 PSF CEILING ALLOWANCE 8.0 PSF TOTAL COLLATERAL GRAVITY LOAD

SEE PLAN AND MEP FOR ROOF MOUNTED EQUIPMENT

- C. ROOF LIVE LOAD: 20 PSF REDUCIBLE

- D. DESIGN SNOW LOAD: Pg = 30 PSF Pf = 0.7(Ce)(Ct)(Pg) = 21.0 PSF Ce = 1.0 Ct = 1.0 I = 1.0

DRIFTING SNOW: SEE PLANS FOR SNOW DRIFT DIAGRAMS

- E. WIND DESIGN CRITERIA WIND SPEED = 90 MPH EXPOSURE = C I = 1.00 Kzt = 1.0 GCp1 = +/- .018

- F. SEISMIC DESIGN CRITERIA SEISMIC USE GROUP = I Ss = 10.5%, S1 = 4.4% SITE CLASS = D SDS = 0.112, SD1 = 0.070 SEISMIC DESIGN CATEGORY = B SEISMIC RESISTING SYSTEM = ORDINARY PRECAST SHEAR WALLS DESIGN BASE SHEAR = 0.038W

- G. ASSUMED SOIL LOAD: GRANULAR BACK FILL ACTIVE EQV. FLUID PRESSURE = 30 PSF AT REST EQV. FLUID PRESSURE = 80 PSF PROVIDE BACK FILL SOILS APPROVED BY GEOTECHNICAL ENGINEER TO MEET THIS DESIGN ASSUMPTION. PROVIDE DRAIN TILE BEHIND ALL RETAINING WALLS TO DRAIN WATER.

GENERAL:

- 1.1. MAXIMUM ALLOWABLE DEFLECTION CRITERIA PER IBC: ROOF VERTICAL: L/360 LIVE, L/240 TOTAL WALL HORIZONTAL: H/200
- 2. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON NEW OR EXISTING STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- 3. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND ALL JOB SITE SAFETY.
- 5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER AND ARCHITECT OF ANY DISCREPANCY IMMEDIATELY.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL BUILDING MATERIALS AND COMPONENTS. COMPONENT LOCATIONS ARE SHOWN FOR DESIGN INTENT, NOT EXACT LOCATION, UNLESS NOTED SPECIFICALLY. INDEPENDENTLY PREPARED SHOP DRAWINGS ARE REQUIRED OF ALL TRADES FOR COORDINATION AND BEST PRACTICE. ERRORS OR OMISSIONS IN INSTALLATION DUE TO THE CONTRACTOR'S FAILURE TO COORDINATE THE WORK WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

FOUNDATION:

- 1. ALLOWABLE SOIL BEARING CAPACITY = 2,000 PSF/2,500 PSF. SEE GEOTECHNICAL REPORT FOR LOCATION. GEOTECHNICAL INFORMATION TAKEN FROM: CCC, INC GEOTECHNICAL EXPLORATION REPORT PROPOSED ARCTIC EXHIBIT HENRY VILAS ZOO MADISON, WI
- 2. PROJECT GEOTECHNICAL REPORT SUPERSEDES GEOTECHNICAL INFORMATION PROVIDED ON STRUCTURAL PLANS.
- 3. WHEN IT IS POSSIBLE FOR GROUND WATER TO SEEP TOWARD SUBGRADE FOUNDATIONS AND RETAINING WALLS, THESE WALLS SHALL HAVE A POSITIVE DRAINAGE SYSTEM AT THE BASE OF THE WALL CONSISTING OF A PERFORATED DRAIN PIPE PROTECTED BY A GEOTEXTILE FABRIC SURROUNDED BY CONCRETE SAND (TORPEDO SAND). NEAR THE BASE OF THE WALL, OTHER BACK FILL MATERIAL SHALL BE SAND WITH LESS THAN 12% PASSING THE #200 SIEVE.
- 4. DO NOT USE EXCESSIVE COMPACTION EFFORTS ADJACENT TO BASEMENT OR RETAINING WALLS. SUCCESSIVE PASSES OF A COMPACTOR CAN RESULT IN WALL PRESSURE BUILD UP BEYOND THE DESIGN INTENT.
- 5. REFER TO THE GEOTECHNICAL INVESTIGATION FOR INFORMATION REGARDING EXCAVATION, SIDE SLOPES, SUB-GRADE PREPARATION, AND FILL RECOMMENDATIONS.
- 6. PROVIDE SUB-GRADE PREPARATION AS PER THE PLANS OR PROJECT GEOTECHNICAL REPORT.
- 7. REMOVE TOPSOIL FROM BENEATH ALL PROPOSED CONSTRUCTION AREAS. SALVAGE AND STOCK PILE TOPSOIL, CUT/FILL MATERIAL AS NECESSARY TO MATCH GRADES SHOWN ON DRAWINGS.
- 8. SEE CIVIL & ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATION.
- 9. GRADE AREAS IN ACCORDANCE WITH ELEVATIONS AND GRADES SHOWN ON THE SITE DRAWINGS AND AS REQUIRED FOR DRAINAGE.
- 10. SLAB ON GROUND TO BE CONSTRUCTED ON A MINIMUM OF 6" OF CRUSHED STONE OR GRANULAR FILL COMPACTED TO 95% MODIFIED PROCTOR OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 11. ALL FILL MATERIAL USED IN GRADING OPERATIONS SHALL CONSIST OF EARTH, WHICH IS FREE OF DEBRIS, BouldERS OR ORGANIC MATERIAL. FILL SHALL BE PLACED IN MAXIMUM OF 12" LIFTS AND COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 12. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 4'-0" BELOW FINISHED GRADE (EXCEPT AT POOL WALLS- SEE PLAN).
- 13. ALL FOOTINGS SHALL BEAR ON A MINIMUM OF 10" COMPACTED FILL OR AS DIRECTED BY THE SOIL REPORT HAVING A MINIMUM ALLOWABLE BEARING CAPACITY EQUAL TO THE PRESUMPTIVE CAPACITY ABOVE.
- 14. THE ENGINEER SHALL BE NOTIFIED IF ACTUAL FIELD CONDITIONS DO NOT MEET BEARING REQUIREMENTS, OR IF QUESTIONABLE SOIL CONDITIONS ARE DISCOVERED INCLUDING BUT NOT LIMITED TO PEAT AND OTHER HIGH ORGANIC SOILS.
- 15. ALL BEARING SOIL OR FILL MUST BE PROTECTED FROM FREEZING. THE CONTRACTOR SHALL PROVIDE PROTECTION TO PREVENT FROST PENETRATION BELOW THE CONCRETE BEARING ELEVATIONS. ANY FROZEN SOIL BELOW THE FOUNDATION BEARING LEVEL MUST BE REMOVED PRIOR TO PLACING CONCRETE.
- 16. ALL SLABS ON GRADE AREAS SHALL BE PROOF ROLLED. ALL SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH COMPACTABLE FILL.

CONCRETE CONSTRUCTION:

- 1. ALL CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE LOCAL BUILDING CODE REQUIREMENTS AND THOSE OF THE LATEST EDITION OF THE FOLLOWING STANDARDS: ACI 318, ACI 315, ACI 301, AND ACI 305 & 306.
- 2. ALL CONCRETE UNLESS SPECIFICALLY NOTED SHALL BE NORMAL WEIGHT (145 PCF) AND SHALL ACHIEVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (F'c) AS FOLLOWS: 2.1. FOOTINGS BELOW FROST LINE: F'c = 3,000 PSI 2.2. EXTERIOR FOUNDATION WALLS AND GRADE BEAMS THAT ARE EXPOSED TO FREEZING: F'c = 4,000 PSI 2.3. SITE RETAINING WALLS & FOOTINGS: F'c = 4,000 PSI 2.4. POOL WALLS & FOOTINGS: F'c = 4,000 PSI 2.5. ALL OTHER CONCRETE: F'c = 3,000 PSI
- 3. ALL CONCRETE SUBJECT TO EXTERIOR EXPOSURE SHALL BE AIR ENTRAINED TO 6% (+/- 1.5%) AND HAVE A MAXIMUM 1" AGGREGATE. ALL CONCRETE WITHOUT SUPERPLASTICIZERS SHALL HAVE A MAXIMUM SLUMP OF 4".
- 4. ALL SLABS ON GROUND SHALL BE A MINIMUM 6-BAG MIX.
- 5. UNLESS THE MIX DESIGN INCLUDES THE USE OF SUPERPLASTICIZERS, CONCRETE WITH A SLUMP GREATER THAN 5" SHALL BE REFUSED.
- 6. ALL CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. ALL WELDED WIRE FABRIC (WWF) TO BE ASTM A-185. ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315 AND 315R.
- 7. ALL REINFORCING BARS AND WWF SHALL BE SET ON CHAIRS AND TIED IN PLACE.

8. CONCRETE SLABS ON GROUND CONTAINING WELDED WIRE REINFORCEMENT FABRIC (WWF) SHALL HAVE THE WWF LOCATED IN THE MIDDLE TO THE UPPER ONE-THIRD OF THE SLAB. WELDED WIRE REINFORCEMENT FABRIC SHALL BE SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACING NOT TO EXCEED 3 FEET (914 MM) OR IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WELDED PLAIN WIRE REINFORCEMENT FABRIC FOR CONCRETE SHALL CONFORM TO ASTM A 185.

9. AFTER CONCRETING HAS STARTED, IT SHALL BE CARRIED ON AS A CONTINUOUS OPERATION UNTIL PLACING OF A PANEL OR SECTION, AS DEFINED BY ITS BOUNDARIES OR PREDETERMINED JOINTS, IS COMPLETED. CONCRETE SHALL BE DEPOSITED AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.

10. CONCRETING OPERATIONS SHALL BE CARRIED ON AT SUCH A RATE THAT THE CONCRETE IS AT ALL TIMES PLASTIC AND FLOWS READILY INTO SPACES BETWEEN REINFORCEMENT.

11. CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND INTO CORNERS OF THE FORMS. THE TOP SURFACES OF VERTICALLY FORMED LIFTS SHALL BE GENERALLY LEVEL.

12. CONCRETE SHALL BE CURED ABOVE 50°F (10°C) AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT.

13. ALL FLAT WORK CONCRETE SHALL BE COVERED IMMEDIATELY FOLLOWING SAW CUTTING AND MAINTAINED CONTINUOUSLY WET FOR A MINIMUM OF 7-DAYS AFTER PLACING. CURING SHEETS ARE TO BE USED AND REMAIN IN PLACE. CURING COMPOUNDS MAY BE USED AND MUST BE APPROVED PER THE MANUFACTURER'S RECOMMENDATIONS. SUBMIT PRODUCT DATA TO A/E FOR APPROVAL.

14. RETEMPERED CONCRETE, CONCRETE THAT HAS BEEN REMOVED AFTER INITIAL SET OR PARTIALLY HARDENED SHALL NOT BE USED IN THE STRUCTURE.

15. ALL LAPS SHALL BE "B" SPLICES UNLESS NOTED OTHERWISE ON THE DRAWINGS OR UNLESS SPECIAL CARE IS TAKEN FOR THE REINFORCING TO BE DETAILED AND PLACED TO PROVIDE STAGGERED LAPS.

16. ALL CONCRETE SHALL BE CURED FOR A MINIMUM OF SEVEN DAYS.

17. UNLESS OTHERWISE APPROVED, ALL EXPOSED CONCRETE WALLS SHALL BE CURED WITH FORMS LEFT IN PLACE FOR SEVEN DAYS. IF FORMS CAN NOT BE LEFT IN PLACE THE CONTRACTOR SHALL SUBMIT IN WRITING TO THE ENGINEER ALL PROPOSED CURING METHODS.

18. WALL CRACKS DUE TO IMPROPER CURING METHODS, OR WEATHER PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

19. MINIMUM EMBEDMENT UNLESS NOTED OTHERWISE. THREADED RODS SHALL HAVE A NUT AND WASHER SECURED TO THE EMBEDDED END EITHER BY WELD OR DOUBLE NUT.

20. GROUT USED TO PROVIDE LEVEL BEARING OF COLUMN BASE PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT WITH A COMPRESSIVE STRENGTH 500 PSI OR MORE GREATER THAN THE COMPRESSIVE STRENGTH OF THE SUPPORTING CONCRETE MEMBER.

21. UNLESS NOTED OTHERWISE ON THE DRAWINGS ALL REINFORCING SHALL BE LAPPED TO DEVELOP ITS CAPACITY AS FOLLOWS:

Table with 5 columns: BAR SIZE, "A" SPLICE, "A" SPLICE TOP BAR, "B" SPLICE, "B" SPLICE TOP BAR. Rows include #3, #4, #5, #6, #7, #8, #10.

MULTIPLY B-SPLICE LENGTHS BY 1.3 FOR TOP BAR CONDITIONS. TOP BARS ARE HORIZONTAL BARS WITH 12 INCHES OR MORE OF CONCRETE BELOW. MULTIPLY SPLICE LENGTHS BY 1.5 WHEN USING EPOXY COATED REBAR.

- 22. SLAB-ON-GRADE SHALL HAVE CLASS "A" TOLERANCE.
- 23. A 6-MIL (MIN.) POLYETHYLENE VAPOR BARRIER WITH JOINTS LAPPED NOT LESS THAN 6" SHALL BE PLACED BETWEEN THE BASE COURSE OR SUBGRADE AND THE CONCRETE FLOOR.
- 24. CALCIUM CHLORIDE OR OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
- 25. PLACING OF CONCRETE SHALL BE DONE IN CONFORMANCE WITH ACI-306 FOR COLD WEATHER AND ACI-305 FOR HOT WEATHER.
- 26. WHEN IT IS POSSIBLE FOR GROUND WATER TO SEEP TOWARD SUBGRADE FOUNDATIONS AND RETAINING WALLS, THESE WALLS SHALL HAVE A POSITIVE DRAINAGE SYSTEM AT THE BASE OF THE WALL CONSISTING OF A PERFORATED DRAIN PIPE PROTECTED BY A GEOTEXTILE FABRIC SURROUNDED BY CONCRETE SAND (TORPEDO SAND) NEAR THE BASE OF THE WALL. OTHER BACK FILL MATERIAL SHALL BE SAND WITH LESS THAN 12% PASSING THE #200 SIEVE.
- 27. DO NOT USE EXCESSIVE COMPACTION EFFORTS ADJACENT TO BASEMENT OR RETAINING WALLS. SUCCESSIVE PASSES OF A COMPACTOR CAN RESULT IN WALL PRESSURE BUILD UP BEYOND THE DESIGN INTENT.
- 28. EXPOSED FOUNDATION WALLS SHALL HAVE VERTICAL CONTROL JOINTS SPACED NOT MORE THAN 25'-0" ON CENTER. EACH JOINT SHALL BE 3/4" WIDE BY 1/4" WALL DEPTH AND V-CHAMFERED ON BOTH SIDES. HORIZONTAL WALL REINFORCING SHALL BE DISCONTINUOUS AT THE CONTROL JOINT LOCATION. THE LOCATION OF WALL CONTROL JOINTS SHALL BE MID BAY BETWEEN COLUMNS.
- 29. EXPOSED FOUNDATIONS WALLS SHALL HAVE EXPANSION JOINTS LOCATED AT EVERY FOURTH CONTROL/CONTRACTION JOINT. SEE CONCRETE DETAILS FOR SPECIFIC CONSTRUCTION REQUIREMENTS.
- 30. CONSTRUCTION JOINTS SHALL BE LOCATED AT CONTROL JOINTS OR CONTRACTION JOINTS.
- 31. FLOOR SLAB CONTROL JOINTS SHALL FOLLOW THE INTENT SHOWN ON THE PLAN BUT SHALL NOT EXCEED AN ASPECT RATIO OF 1.5 TO 1.0. ALL REentrant CORNERS SHALL HAVE CONTROL JOINTS EXTENDING OUT FROM THE INSIDE CORNER. DEAD-END "T" CONTROL JOINTS INTO CONTIGUOUS JOINTS SHALL BE AVOIDED.
- 32. PIPE SLEEVES OVER 1-1/2" WHICH PASS THROUGH CONCRETE WALLS OR SLABS SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE. ALL OTHER SLEEVES SHALL BE 18 GAUGE SHEET METAL. SLEEVES SHALL BE ONE SIZE LARGER THAN OUTSIDE DIAMETER OF PIPE PASSING THROUGH SLEEVE. VERIFY SIZE AND NUMBER WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS.
- 33. ALUMINUM CONDUIT SHALL NOT BE EMBEDDED IN CONCRETE.

PRECAST CONCRETE CONSTRUCTION:

- 1. THE DESIGN OF ALL PRECAST UNITS SHALL CONFORM TO IBC 2009 AND THE FOLLOWING STANDARDS: ACI 318.
- 2. REINFORCING STEEL BARS SHALL CONFORM TO ASTM A615.
- 3. PRESTRESSING STRAND SHALL CONFORM TO ASTM A416, GRADE 250K OR 270K.
- 4. ALL PRECAST MEMBERS SHALL BE DESIGNED FOR THE LOADS SHOWN ON THE DRAWINGS AND AS INDICATED IN THE GENERAL NOTES.
- 5. THE DESIGN OF ALL PRECAST UNITS AND CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE PRECASTER.
- 6. ALL FLOOR PLANK SHALL BE DESIGNED AS NON-COMPOSITE WITH ANY FLOOR TOPPING.
- 7. SUBMIT SHOP DRAWINGS SHOWING LAYOUT, MARKS, MANUFACTURING DETAILS, PLANS, ELEVATIONS, ANCHORAGES, REINFORCEMENT, CONNECTION DETAILS AND METHODS, DIMENSIONS, FINISHES, RELATIONSHIPS TO ADJACENT MATERIALS, AND ERECTION AND PLACEMENT.
- 8. SUBMIT FOR REVIEW CALCULATIONS AND DRAWINGS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF ILLINOIS.
- 9. MANUFACTURER SHALL BE CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE, PLANT CERTIFICATION PROGRAM.
- 10. WELDING PROCESSES AND WELDING OPERATORS SHALL BE QUALIFIED BY THE AWS "STANDARD QUALIFICATION PROCEDURE."

STRUCTURAL STEEL CONSTRUCTION:

- 1. STRUCTURAL STEEL DESIGN AND FABRICATION SHALL BE IN ACCORDANCE WITH THE AISC ASD 13TH EDITION STEEL CONSTRUCTION MANUAL.
- 2. W-SHAPES SHALL CONFORM TO ASTM A992 (Fy = 50 ksi).
- 3. ALL STRUCTURAL STEEL ANGLE AND CHANNEL SHAPES SHALL CONFORM TO ASTM A36 (Fy = 36 ksi) UNLESS NOTED OTHERWISE.
- 4. PLATE STEEL SHALL CONFORM TO ASTM A36 (Fy = 36 KSI).
- 5. ALL SQUARE AND RECTANGULAR HSS SHALL CONFORM TO ASTM A500, GRADE B (Fy = 46 KSI).
- 6. ALL ROUND HSS WITH A WALL THICKNESS LESS THAN OR EQUAL TO 5/8" SHALL CONFORM TO ASTM A500, GRADE B (Fy = 46 KSI).
- 7. ALL ROUND HSS WITH A WALL THICKNESS GREATER THAN 5/8" (STEEL PIPE) SHALL CONFORM TO ASTM A53, GRADE B (Fy = 35 KSI).
- 8. ALL SQUARE AND ROUND BARS SHALL CONFORM TO ASTM A36 (Fy = 36 KSI).
- 9. ALL SHEAR CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWING SHALL BE SELECTED AND DETAILED BY THE FABRICATOR. ALL CONNECTIONS SHALL BE SELECTED FROM AISC ASD LOAD TABLES TO SUPPORT MAXIMUM LOADS SHOWN ON DRAWINGS OR ONE HALF OF THE FULL UNIFORM LOAD CAPACITY OF THE MEMBER PER AISC. DOUBLE ANGLE CONNECTIONS ARE PREFERRED WHEN POSSIBLE.
- 10. ALL CONNECTION BOLTING IS TO BE WITH 3/4" DIAMETER A-325N BOLTS UNLESS NOTED OTHERWISE. BOLTS NEED ONLY BE TIGHTENED TO THE SNUG-TIGHT CONDITION. SNUG-TIGHT IS DEFINED AS THE TIGHTNESS OBTAINED BY A FINGER WRENCH OR THE FULL EFFORT OF A PERSON USING AN ORDINARY SPUD WRENCH.
- 11. ALL CONNECTIONS BOLTING DENOTED AS SLIP CRITICAL, "SC" SHALL BE FULLY TIGHTENED BOLTS WITH HARDENED WASHERS. SECTIONS CONNECTED WITH SLIP CRITICAL CONNECTIONS SHALL NOT BE PRIMED OR PAINTED PRIOR TO INSTALLATION. LOAD INDICATOR BOLTS ARE REQUIRED FOR ALL SC CONNECTIONS.
- 12. ALL WELDING OF NEW STEEL TO BE WITH E70XX ELECTRODES.
- 13. ALL WELDING SHALL COMPLY WITH THE AWS STRUCTURAL WELDING CODES. ALL WELDING TO BE PERFORMED BY AWS PRE-QUALIFIED WELDERS CERTIFIED FOR THE GIVEN APPLICATION.
- 14. UNLESS SPECIFIED OTHERWISE REMOVE PAINT PRIOR TO WELDING NEW TO EXISTING STEEL. PRIME PAINT MAY BE WIRE BRUSHED, HOWEVER THE PRIMER COMPOSITION AND THICKNESS MUST BE COMPATIBLE WITH WELDING. INSPECT FOR POROSITY IN WELDS REMOVE AND RE-WELD ANY DEFECTIVE WELDS. DO NOT PAINT WELDS PRIOR TO INSPECTION.
- 15. SUBMIT PRODUCT DATA FOR EACH TYPE OF PRODUCT SPECIFIED. SUBMIT MIL TEST REPORTS SIGNED BY MANUFACTURERS CERTIFYING THAT THEIR PRODUCTS COMPLY WITH REQUIREMENTS.
- 16. ALL INSTALLED STEEL SHALL BE SMOOTH - HAZARD FREE.
- 17. SUBMIT SHOP DRAWINGS DETAILED FABRICATION OF STRUCTURAL STEEL COMPONENTS.

STEEL JOISTS:

- 1. ALL JOISTS TO BE K-SERIES SHORT SPAN JOISTS WITH 2 1/2 INCH SEAT DEPTH.
- 2. JOISTS SIZES SHOWN ON PLAN HAVE BEEN SELECTED BASED ON UNIFORM DEAD (INCLUDING BOTTOM CORD LOADS) AND LIVE/SNOW LOADS.

3. JOISTS SHOWN AS "SP" HAVE BEEN SELECTED BASED ON EQUIVALENT UNIFORM LOADS, FOR ALL LOADS INCLUDING SPECIAL POINT LOADS AND "SNOW DRIFTS" SHOWN. BASED ON MAXIMUM BENDING AND SHEAR. HOWEVER, THE JOIST SUPPLIER SHALL VERIFY AND MODIFY DESIGN AS REQUIRED DUE TO MOMENT AND SHEAR CHANGES.

4. ALL JOISTS SHALL BE DESIGNED FOR A MINIMUM 10 PSF BOTTOM CORD APPLIED COLLATERAL LOAD, AND A NET 10PSF UPLIFT.

5. PROVIDE HORIZONTAL, DIAGONAL, AND UPLIFT BRIDGING AS REQUIRED PER SJI SPECIFICATIONS.

6. PROVIDE THE FOLLOWING MAXIMUM ALLOWABLE DEFLECTION CRITERIA: L/240 TOTAL

7. SUBMIT SHOP DRAWINGS SHOWING LAYOUT, MARK, NUMBER, TYPE, LOCATION, AND SPACING OF JOISTS. INCLUDE JOINING AND ANCHORAGE DETAILS, BRACING, BRIDGING, ACCESSORIES, ETC.

8. SUBMIT FOR REVIEW CALCULATIONS AND ASSOCIATED REFERENCED ERECTION DRAWINGS. CALCULATIONS MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF ILLINOIS.

9. MANUFACTURER MUST BE CERTIFIED BY SJI TO MANUFACTURE JOISTS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

10. JOIST MANUFACTURE, DESIGN, HANDLING, INSTALLATION, CAMBER, ETC TO COMPLY WITH SJI SPECIFICATIONS.

11. COMPLY WITH AWS REQUIREMENTS AND PROCEDURES FOR SHOP WELDING, APPEARANCE, QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK.

12. PROVIDE FINISH AS REQUIRED PER THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

13. JOIST BRIDGING WHERE SHOWN IS SCHEMATIC IN NATURE ONLY. SUPPLIER SHALL DESIGN AND INDICATE LOCATION AND CONNECTION DETAILS OF ALL BRIDGING ON JOIST ERECTION DRAWINGS. SUPPLIER SHALL FURNISH ALL BRIDGING MATERIAL.

14. ROOF TOP UNITS AND DRIFT LOADS ARE NOT INCLUDED IN JOIST GIRDER PANEL POINT LOADS. SUPPLIER TO INCLUDE THESE LOADS IN GIRDER DESIGN.

STEEL DECK:

- 1. STEEL DECK SHALL COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF THE FOLLOWING STANDARDS: AISI, AWS, AND SDI.
- 2. WELDING PROCESSES AND WELDING OPERATORS SHALL BE QUALIFIED BY THE AWS "STANDARD QUALIFICATION PROCEDURE."
- 3. SUBMIT SHOP DRAWINGS SHOWING LAYOUT AND TYPES OF DECK UNITS, FASTENER PATTERNS, SUPPLEMENTARY FRAMING, ETC.
- 4. PROVIDE DECK CONFIGURATIONS COMPLYING WITH SDI "ROOF DECK SPECIFICATIONS" RELATING TO THE SECTION PROPERTIES AS INDICATED ON THE DRAWINGS.
- 5. INSTALL DECK UNITS AND ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND FINAL SHOP DRAWINGS.
- 6. AFTER DECKING INSTALLATION WIRE BRUSH, CLEAN, AND PAINT SCARRED AREAS, WELDS, AND RUST SPOTS ON TOP AND BOTTOM SURFACES OF DECKING UNITS AND SUPPORTING STEEL MEMBERS.
- 7. IN AREAS WHERE SHOP PAINTED SURFACES ARE TO BE EXPOSED APPLY TOUCH-UP PAINT TO BLEND INTO ADJACENT SURFACES.

LIGHT GAGE COLD FORMED STEEL FRAMING:

- 1. ALL LIGHT GAGE STEEL SHALL MEET THE SPECIFICATIONS OF 2001 EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE, AISI, SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- 2. ALL LIGHT GAGE MEMBERS SHALL BE CLASSIFIED AS STRUCTURAL MEMBERS. ALL MEMBERS 54 - 97 MIL (16 - 12 GAUGE) SHALL BE MADE FROM 50 KSI MATERIALS, OTHER MEMBERS SHALL BE AT LEAST 33 KSI UNLESS SPECIFICALLY NOTED ON THE PLANS.
- 3. ALL FLOOR JOISTS MUST BE BRACED AGAINST ROTATION AT EACH SUPPORT BY CHANNEL OR BLOCKING. JOISTS SHALL NOT HAVE WEB PUNCHHOLES WITHIN 1.5D OF THE EDGE OF BEARING.
- 4. PROVIDE 1 ROW OF BRIDGING FOR SPANS LESS THAN 14'-0" AND 2 ROWS AT 1/3RD POINTS FOR SPANS BETWEEN 14 AND 20 FEET.
- 5. STUDS AND JOISTS SHALL BE GALVANIZED AND SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE CURRENT AISI SPECIFICATION.
- 6. GALVANIZING SHALL MEET THE REQUIREMENTS OF ASTM A653.
- 7. THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY DETROIT INDUSTRIES SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS. SPECIFICALLY, THE FOLLOWING MINIMUM PROPERTIES, CALCULATED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATION SHALL BE PROVIDED: W (in^4), Sx (in^3), Area (in^2), Rx (in), Ry (in), Fy (ksi), Resisting Moment (in-lb). ANY SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- 8. ALL WELDING SHALL COMPLY WITH THE AWS STRUCTURAL WELDING CODES. ALL WELDING TO BE PERFORMED BY AWS PRE-QUALIFIED WELDERS CERTIFIED FOR THE GIVEN APPLICATION.
- 9. ALL WELDING OF LIGHT GAGE STEEL TO BE WITH E70XX ELECTRODES.
- 10. SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF COLD-FORMED STEEL FRAMING AND ACCESSORY REQUIRED. SUBMIT SHOP DRAWINGS SHOWING MEMBER, TYPE, LOCATION, SPACING, SIZE AND GAGE OF MEMBERS, METHOD OF ATTACHMENT TO SUPPORTING MEMBERS, AND ALL NECESSARY ERECTION DETAILS.

WOOD CONSTRUCTION:

- 1. TIMBER DESIGN AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.
- 2. ALL WOOD FRAMING SHALL CONFORM TO THE FOLLOWING MINIMUM STRENGTH AND GRADING CRITERIA UNLESS SPECIFICALLY SHOWN DIFFERENT ON PLAN. IF SPECIFIC SPECIES AND GRADE OF LUMBER IS UNAVAILABLE CONTACT MP-SQUARED STRUCTURAL ENGINEERS FOR SUITABLE SUBSTITUTIONS.

Table with 5 columns: USE, GRADE, Fb (psi), Fc (psi), E (psi). Rows include STUDS MANUFACTURED, BEAM 2x4, BEAM 2x12, BEAM MANUFACTURED.

3. ALL CALCULATIONS HAVE BEEN BASED ON NAILS WITH PROPERTIES AS SHOWN IN THE TABLE BELOW. NAIL SUBSTITUTIONS SHALL HAVE EQUAL OR GREATER DIAPHRAGM AND SHEAR CONNECTION CAPACITIES PER LATEST ICC ESR-1539 REPORTS.

Table with 4 columns: NAIL TYPE, LENGTH (in), DIAMETER (in), HEAD (in). Rows include 6d, 8d, 10d, 16d.

8D MINIMUM REQUIRED FOR ALL ROOF CONSTRUCTION.

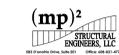
- 4. ALL CONNECTIONS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL HAVE A HOT-DIP GALVANIZED COATING OR THE SPECIFIC COATING SHALL BE SUBMITTED TO AND APPROVED BY THE PROJECT ARCHITECT.
- 5. ALL SIZES SHOWN FOR TIMBER MEMBERS ARE STANDARD NOMINAL DIMENSIONS.
- 6. PLYWOOD PANELS SHALL BE APA GRADED STRUCTURAL PLYWOOD OR OSB SHEATHING.
- 7. ALL EXTERIOR EXPOSED TIMBER MEMBERS, WOOD MEMBERS IN DIRECT CONTACT WITH FOUNDATIONS OR EXTERIOR MASONRY AND INTERIOR MEMBERS NOT TO BE PRESSURE TREATED WITH A NON-ARSENATE COMPOUNDS (AOC PREFERRED).
- 8. SIMPSON STRONG-TIE CONNECTORS ARE SPECIFICALLY REQUIRED TO MEET THE STRUCTURAL CALCULATIONS OF PLAN. BEFORE SUBSTITUTING ANOTHER BRAND, CONFIRM LOAD CAPACITY BASED ON RELIABLE PUBLISHED TESTING DATA OR CALCULATIONS. THE ENGINEER OF RECORD IS REQUIRED TO EVALUATE AND GIVE WRITTEN APPROVAL FOR SUBSTITUTION PRIOR TO INSTALLATION.
- 9. ALL EXTERIOR SIMPSON CONNECTORS SHALL BE ZMAX (1185) OR HOT-DIP GALVANIZED (HDG).
- 10. THE INSTALLATION OF BOLTS IN TIMBER MEMBERS SHALL MEET THE REQUIREMENTS OF ANS/ASME STANDARD B18.2.1
- 11. BOLT HOLES IN TIMBER MEMBERS SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN AND SIDE MEMBERS. BOLTS SHALL NOT BE FORGIBLY DRIVEN.
- 12. A STANDARD CUT WASHER, METAL PLATE OR STEEL STRAP OR PLATE, OF SIZE NOT LESS THAN THE STANDARD CUT WASHER, SHALL BE BETWEEN THE WOOD AND THE BOLT HEAD AND BETWEEN THE WOOD AND THE NUT.
- 13. ARCHITECT & CONTRACTOR SHALL DETAIL & CONSTRUCT BUILDING FINISHES TO ACCOMMODATE AN EXPECTED BUILDING SHRINKAGE OF APPROXIMATELY 3/4" TO 3/8" PER FLOOR OF WOOD CONSTRUCTION. PROPER CARE SHALL BE TAKEN TO PREVENT STORED AND INSTALLED LUMBER FROM THE ELEMENTS. DO NOT ALLOW LUMBER TO REST IN STANDING WATER.
- 14. PROVIDE EQUIVALENT SIZE SOLID BLOCKING & VERTICAL MEMBERS THROUGH UNDERLYING FLOORS/WALLS BELOW MULTIPLE MEMBERS OR POSTS CARRYING CONCENTRATED LOADS.

MISCELLANEOUS & DEFERRED SUBMITTALS:

- 1. STAIRS ARE TO BE PERFORMANCE DESIGNED AND DETAILED FOR 100 PSF LIVE LOAD BY THE SUPPLIER. PROVIDE INDEPENDENT STAIR COLUMNS AS SHOWN OR REQUIRED. REFER TO THE ARCHITECTURAL DRAWINGS FOR STAIR CONFIGURATION AND SIZE RESTRICTIONS.
- 2. ALL WINDOW FRAMES SHALL BE INSTALLED TO ALLOW FOR A MINIMUM OF L/600 OR 3/8 INCH VERTICAL DEFLECTION OF THE HEADER WHICH EVER IS MORE.
- 3. ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE WORK OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL CAREFULLY REVIEW AND COMPARE ALL DRAWINGS DURING THE BIDDING PERIOD AND BEFORE INSTALLATION OF THEIR WORK. ANY INCONSISTENCIES IN THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE ENGINEER AND ARCHITECT FOR CLARIFICATION.
- 4. EVERY EFFORT HAS BEEN MADE TO PROVIDE TO SCALE DRAWINGS, HOWEVER THE DRAWINGS ARE NOT NECESSARILY TO SCALE - USE GIVEN DIMENSIONS.

STRUCTURAL ABBREVIATION LEGEND:

Table with 3 columns: ABBREVIATION, DESCRIPTION, OTHER ABBREVIATION. Rows include AB, ACCOM, AFF, AGG, ALUM, ALT, ARCH, B-B, BL, BLDG, BLK, BM, BLV, BOT, BRG, BS, C, CB, C/C, C/I, CIP, CJ, CL, CLG, CLJ, CLR, CMU, COL, CONC, CONN, CONT, CONTR, D, DIA, DIM, DN, DTL, DWG, DWL, EA, EC, EJ, EL, ELEV, ENG, EQ, EW, E-W, EXIST, EXP, EXT, FB, FD, FIN, FF, F-F, FL, FLG, FUT, FV, GA, GALV, GC, GL, HC, HK, HM, HORIZ, HP, HT, HWAC, HWS, ID, INSL, INSTR, INT, JT, KB, L, LG, LGMF, LLH, LLV, LP, LVL, MAX, MFW, MFG, MIN, MTL, NIC, NOM, NTS, N-S, OC, OD, OPP, PC, P/C, PDM, PFM, PERM, P/F, P/L, P/T, PWT, R, R/C, RD, REIN, RFD, SCHED, SHT, SPA, SPEC, SQ, SSSL, STL, STR, TRB, TRK, TO, TC, TRF, TP, TW, WF, WP, WSW, UNO, VERT, W, W/, W/O, WCJ, WD, WF, WP, WSW, UNO, VERT, W, W/, W/O, WCJ, WD, WF, WP, WSW



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PRINTS ISSUED:

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13046 checked: MP2

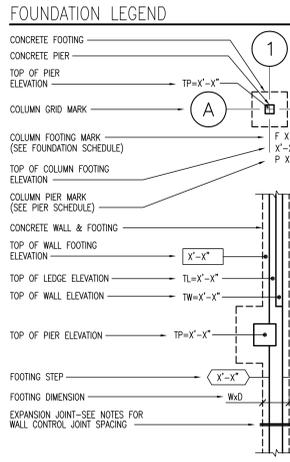
RESTAURANT FOUNDATION PLAN

PLAN

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S0.1

- PLAN NOTES**
- SEE SHEET S.01 FOR ADDITIONAL NOTES.
 - CONTROL JOINTS: ALL CONCRETE SLABS SHALL BE SAW CUT AS SOON AS THE CONCRETE WILL SUPPORT THE SAWING EQUIPMENT AND DOES NOT RAVEL DURING THE SAWING OPERATION. ALL SAW CUTTING SHALL BE PERFORMED THE SAME DAY THE CONCRETE IS PLACED. SAW CUTS SHALL BE $\frac{1}{2}$ " WIDE WITH DEPTHS OF AT LEAST 25% OF THE SLAB THICKNESS. JOINTING PATTERN SHALL BE IN A SQUARE PATTERN, WITH MAXIMUM SPACINGS OF 12'-0" FOR 4" THICK SLABS, 15'-0" FOR 6" THICK SLABS AND 20'-0" FOR 8" THICK SLABS, UNLESS NOTED OTHERWISE.
 - CURING: ALL CONCRETE FRESH WORK SHALL BE COVERED IMMEDIATELY FOLLOWING SAW CUTTING AND MAINTAINED CONTINUOUSLY WET FOR A MINIMUM OF 7 DAYS AFTER PLACING. CURING SHEETS SHALL BE USED, AND ARE TO REMAIN IN PLACE DURING THIS PERIOD. CURING COMPOUND MAY BE USED AND MUST BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS.
 - SEE SHEET S7.1 DETAIL 1 FOR ANCHOR BOLT REQUIREMENTS.
 - SEE SHEET S7.1 DETAILS 2 & 3 FOR FOOTING & FOUNDATION WALL CORNER REINFORCING.
 - SEE SHEET S7.1 DETAILS 4 & 5 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS.
 - PROVIDE 2-#4 BARS AT ALL DEAD ENDS & REINTRN CORNERS. SEE DETAIL 6/S7.1.
 - SLAB CONTROL JOINTS SHALL BE AS SHOWN ON PLAN OR SIMILAR. JOINT SPACING SHALL NOT EXCEED 10'-0" O.C. SLAB JOINT ASPECT RATIO SHALL NOT EXCEED 1.5:1. SEE DETAIL 7/S7.1.
 - SEE SHEET S7.1 DETAIL 8 FOR WALL JOINT REQUIREMENTS.
 - SEE SHEET S7.1 DETAIL 9 FOR FOOTING STEP REQUIREMENTS
 - SITE PLAN DATUM ELEVATION: 109.00' = 100'-0"



FOOTING SCHEDULE

FOOTING MARK	FOOTING DIMENSION (W x L x D)	FOOTING REINFORCING EACH WAY, BOTTOM
F1	3'-0" x 3'-0" x 1'-0"	3-#5 EA WAY
F2	4'-0" x 4'-0" x 1'-0"	4-#6 EA WAY
F3	5'-0" x 5'-0" x 1'-0"	5-#6 EA WAY
W1	2'-0" x 1'-0" x CONT	(2) #4 x CONT
W2	3'-0" x 1'-0" x CONT	(3) #5 x CONT
W3	5'-6" x 1'-0" x CONT	(5) #5 x CONT #5 @16"oc
W4	4'-0" x 1'-2" x CONT	(4) #5 x CONT #5 @16"oc

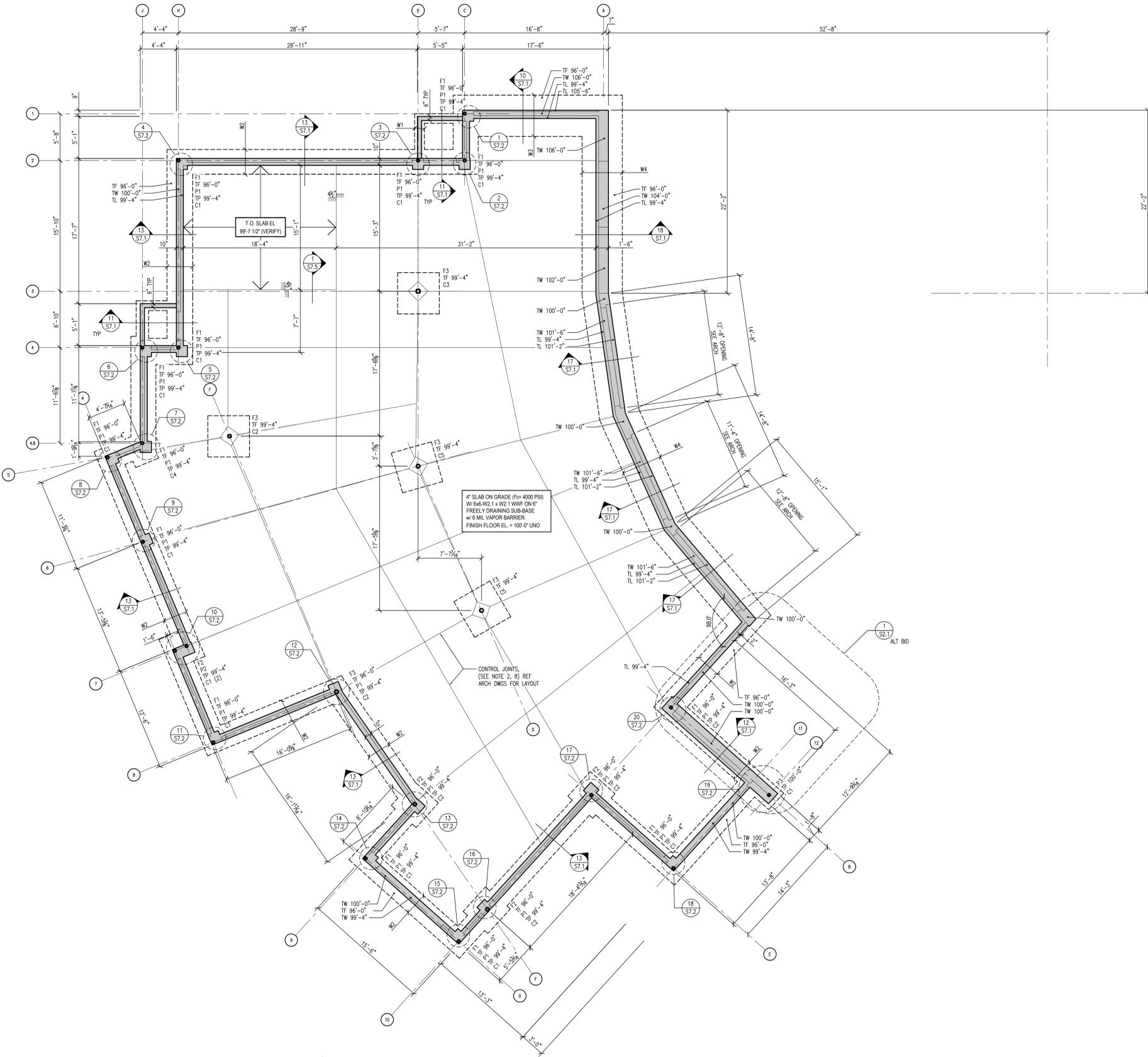
COLUMN SCHEDULE

MARK	SIZE	BASE \bar{r}	REMARKS
C1	HSS4x4@6	\bar{r} $\frac{3}{4}$ "x12"x1'-0" w/ (4) $\frac{3}{4}$ " A.B.'s	
C2	HSS5x5@6	\bar{r} $\frac{3}{4}$ "x12"x1'-0" w/ (4) $\frac{3}{4}$ " A.B.'s	
C3	HSS4x4@6	\bar{r} $\frac{3}{4}$ "x12"x1'-0" w/ (4) $\frac{3}{4}$ " A.B.'s	
C4	HSS5.000x0.375	\bar{r} $\frac{3}{4}$ "x12"x1'-0" w/ (4) $\frac{3}{4}$ " A.B.'s	
C5	HSS6.000x0.375	\bar{r} $\frac{3}{4}$ "x12"x1'-0" w/ (4) $\frac{3}{4}$ " A.B.'s	

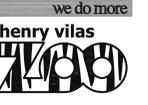
PIER SCHEDULE

PIER MARK	PIER DIMENSION (W x L)	PIER REINFORCING	TYPE	REMARKS
P1	1'-4" x 1'-4"	8-#6 VERT W/ #3 TIES @ 10"oc	B	
P2	2'-5" x 1'-4"	16-#6 VERT W/ #3 TIES @ 10"oc	B	
P3	1'-8" x 1'-8"	8-#6 VERT W/ #3 TIES @ 10"oc	B	
P4	1'-3" x 1'-3"	6-#6 VERT W/ #3 TIES @ 10"oc	C	

- CENTER PIER UNDER COLUMN OR UNDER BEAM BEARING UNLESS NOTED OTHERWISE.
- SEE DETAIL X/S7.X FOR TYPICAL PIER SECTION.



RESTAURANT FOUNDATION PLAN
SCALE: 3/16"=1'-0"



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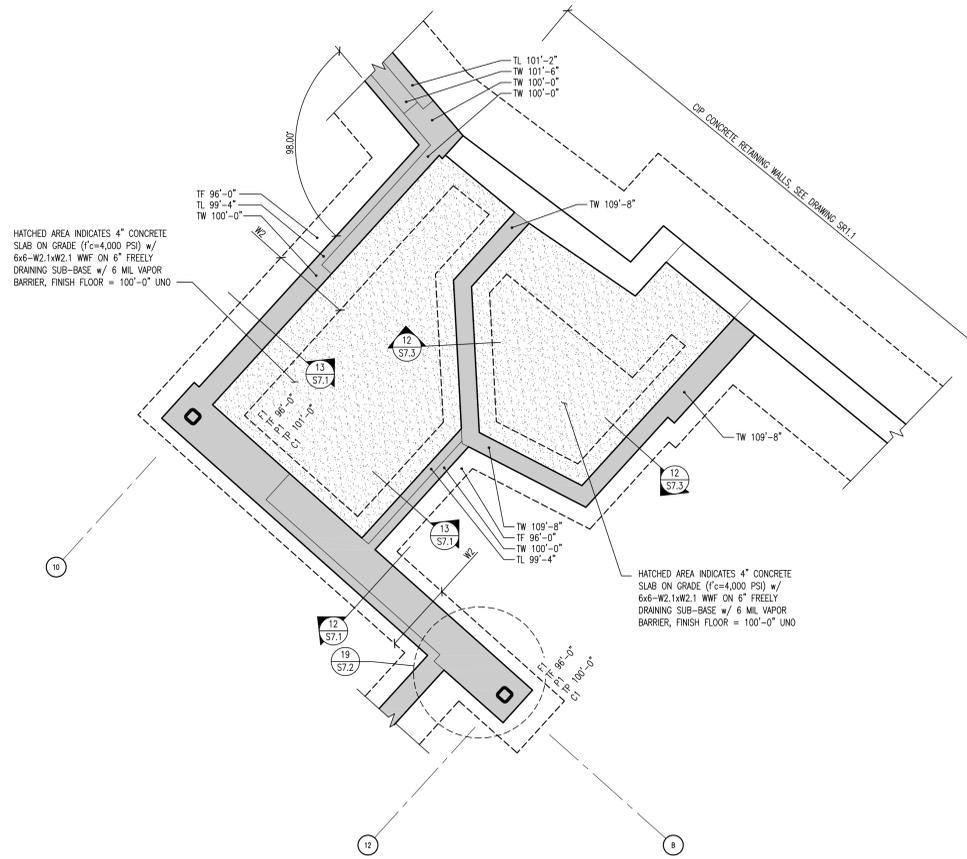
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checked: MP2

RESTAURANT FOUNDATION PLAN

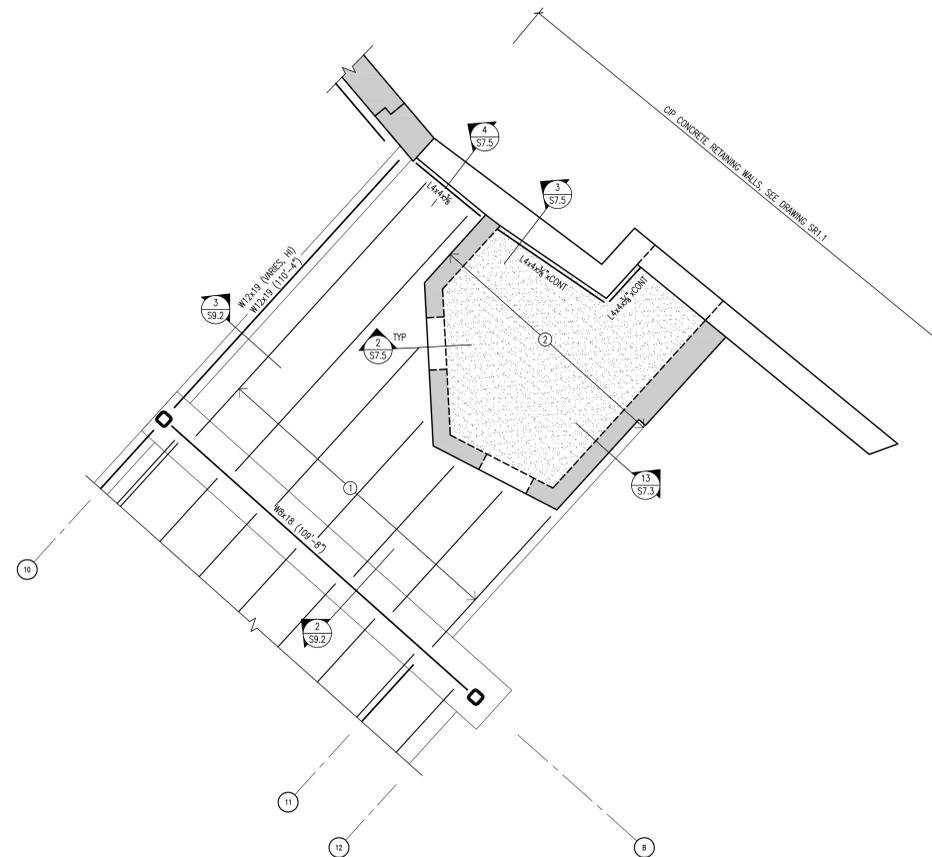
S1.1

PLAN NOTES

1. SEE SHEET S001 FOR ADDITIONAL NOTES.
2. ① 800S162-68 COLD FORM ROOF JOISTS @ 24"oc w/ 20 GA 1.5 B-DECK (D1)
3. ② 8" CAST-IN-PLACE STEEL REINFORCED SLAB



① DEN FOUNDATION PLAN
SCALE: 3/8"=1'-0"



② DEN ROOF FRAMING PLAN
SCALE: 3/8"=1'-0"



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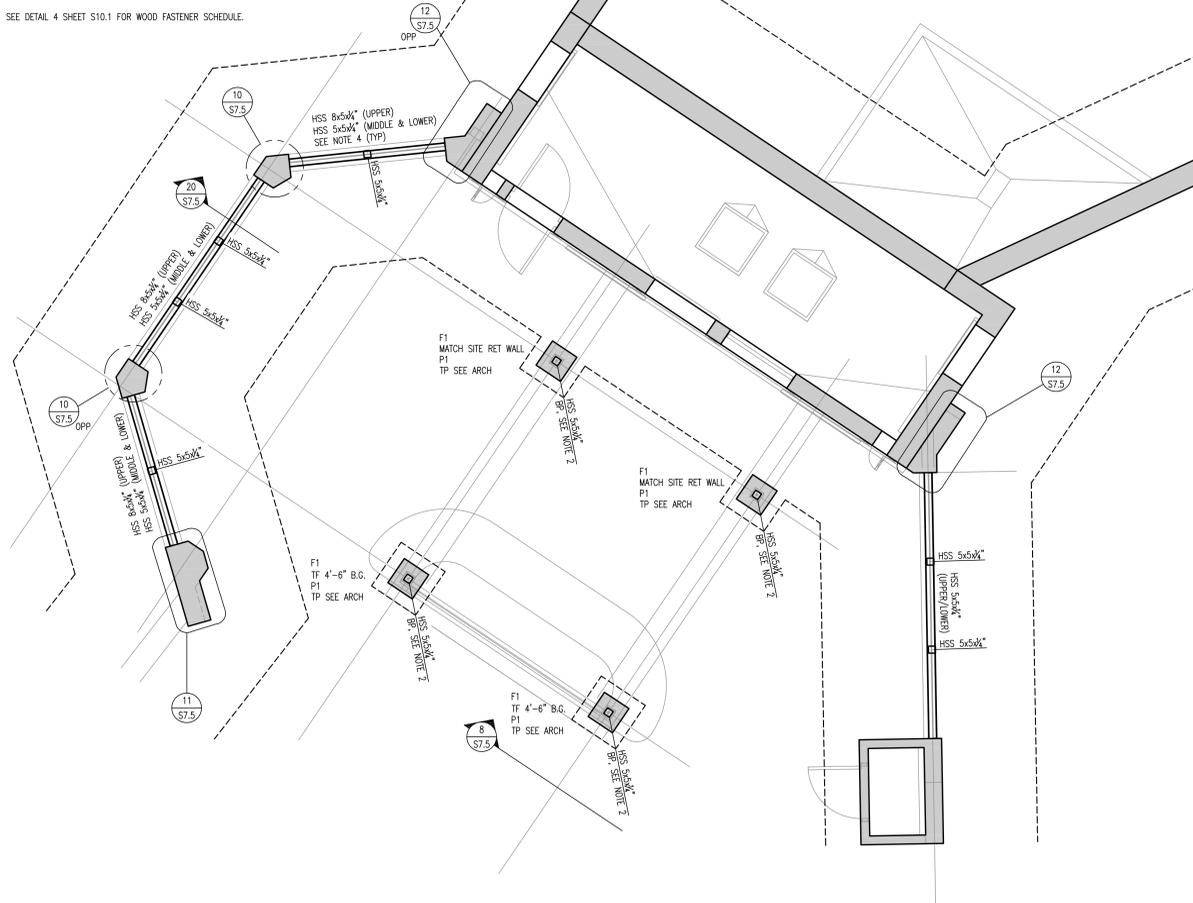
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drawn: MP2
checked: MP2
DEN FOUNDATION PLAN
DEN ROOF FRAMING PLAN

S2.1

PLAN NOTES

- SEE SHEET S.01 FOR ADDITIONAL NOTES.
- BP: 3/8"x12"x12" W/ (4) 3/8" ANCHORS
- SEE 1/S7.1 FOR ANCHOR BOLT DIMENSION CHART.
- PROVIDE HSS TO SUPPORT GLASS & CAGEWORK. SEE ARCH FOR ELEVATIONS. PROVIDE 3/8" EMBED PL W/ (4) 3/8"x4" HWS TO CONCRETE. FIELD WELD ALL AROUND W/ 3/8" FILLET HSS TO EMBED.
- SEE ARCH FOR JOIST BEARING & TOP OF STEEL ELEVATIONS.
- ROOF SHEATHING SHALL BE 1/8" APA RATED EXTERIOR. FASTEN TO FRAMING PER DETAIL 4 ON SHEET S10.1.
- SEE DETAIL 4 SHEET S10.1 FOR WOOD FASTENER SCHEDULE.



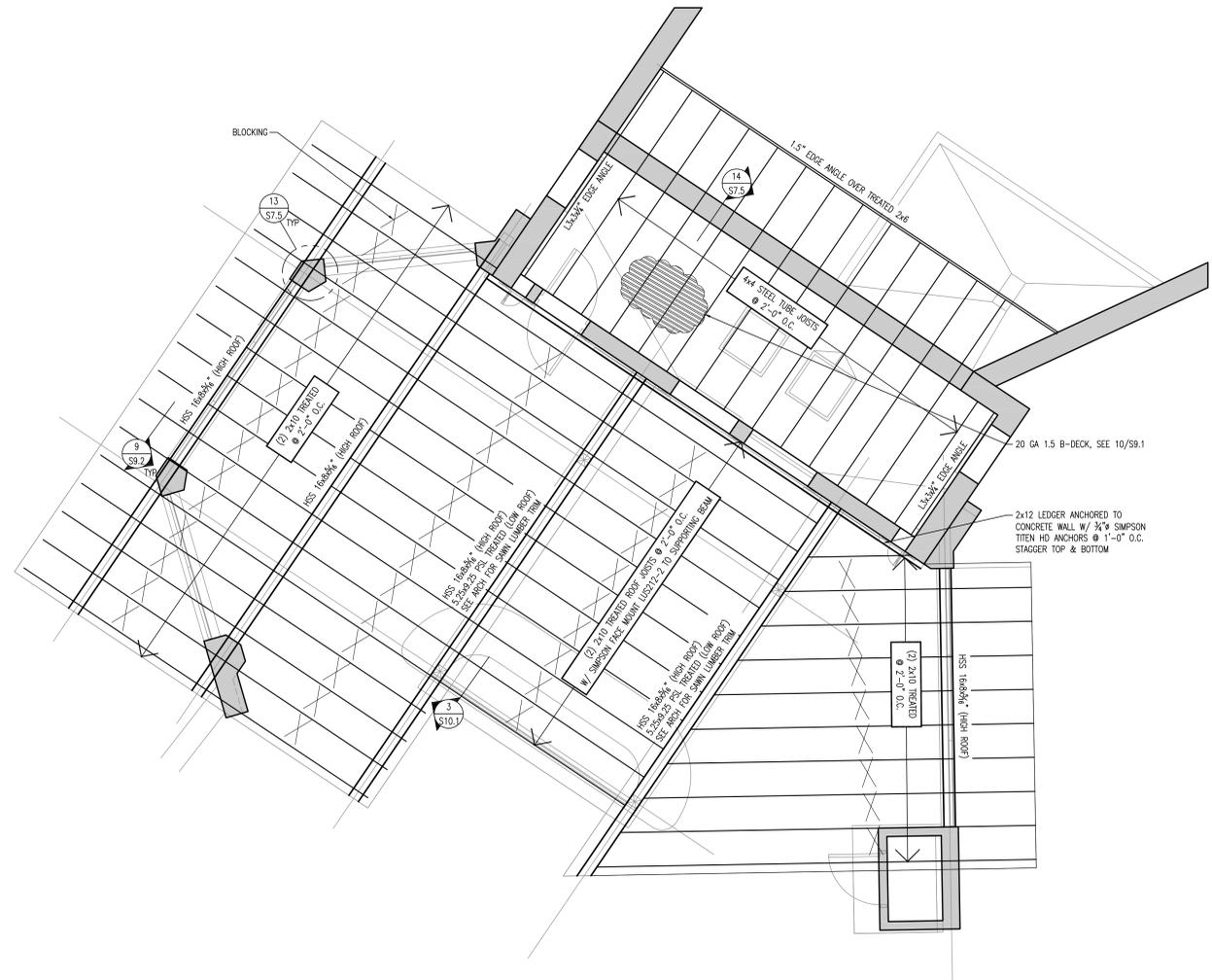
1 BEAR VIEWING & TRAINING WALL FOUNDATION PLAN
SCALE: 1/4"=1'-0"

FOOTING SCHEDULE		
FOOTING MARK	FOOTING DIMENSION (W x L x D)	FOOTING REINFORCING, BOTTOM
F1	3'-0" x 3'-0" x 1'-0"	3-#5 EA WAY

1. CENTER FOOTING UNDER COLUMN AND/OR PIER.

PIER SCHEDULE			
PIER MARK	PIER DIMENSION (W x L)	PIER REINFORCING	TYPE
P1	20"x20"	6-#6 VERT W/ #3 TIES @ 10"OC W/ (3) #3 TIES IN TOP 8"	C

1. CENTER PIER UNDER COLUMN OR UNDER BEAM BEARING UNLESS NOTED OTHERWISE.



2 BEAR VIEWING & TRAINING WALL ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

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BEAR VIEWING & TRAINING
FOUNDATION PLANS &
FRAMING PLANS

S4.2

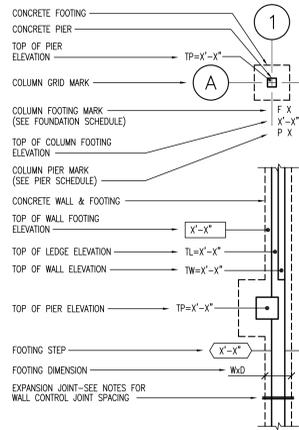
PLAN NOTES

- SEE SHEET S.01 FOR ADDITIONAL NOTES.
- SEE SHEET S7.1 DETAIL 1 FOR ANCHOR BOLT REQUIREMENTS.
- SEE SHEET S7.1 DETAILS 2 & 3 FOR FOOTING & FOUNDATION WALL CORNER REINFORCING.
- SEE SHEET S7.1 DETAILS 4 & 5 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS.
- PROVIDE 2-#4 BARS AT ALL DEAD ENDS & REINTRANT CORNERS. SEE DETAIL 6/S7.1.
- SLAB CONTROL JOINTS SHALL BE AS SHOWN ON PLAN OR SIMILAR. JOINT SPACING SHALL NOT EXCEED 10'-0" O.C. SLAB JOINT ASPECT RATIO SHALL NOT EXCEED 1.5:1. SEE DETAIL 7/S7.1.
- SEE SHEET S7.1 DETAIL 8 FOR WALL JOINT REQUIREMENTS.
- SITE PLAN DATUM ELEVATION: 114.00' = 100'-0"
- SLOPE SLAB TO DRAINS. MAINTAIN SLAB THICKNESS.
- ALL FLOOR BARS AND WWF IN SEAL HOLDING AREA AND ALL WALL REINFORCEMENT SURROUNDING POOLS SHALL BE EPOXY COATED (WHETHER SHOWN OR NOT SHOWN IN DETAILS).
- SEE A-DRAWINGS FOR ALL DOOR AND INTERIOR WALL DIMENSIONS.

FOOTING SCHEDULE		
FOOTING MARK	FOOTING DIMENSION (W x L x D)	FOOTING REINFORCING, BOTTOM
F1	3'-0" x 3'-0" x 1'-0"	4-#5 EA WAY

1. CENTER FOOTING UNDER COLUMN AND/OR PIER.

FOUNDATION LEGEND

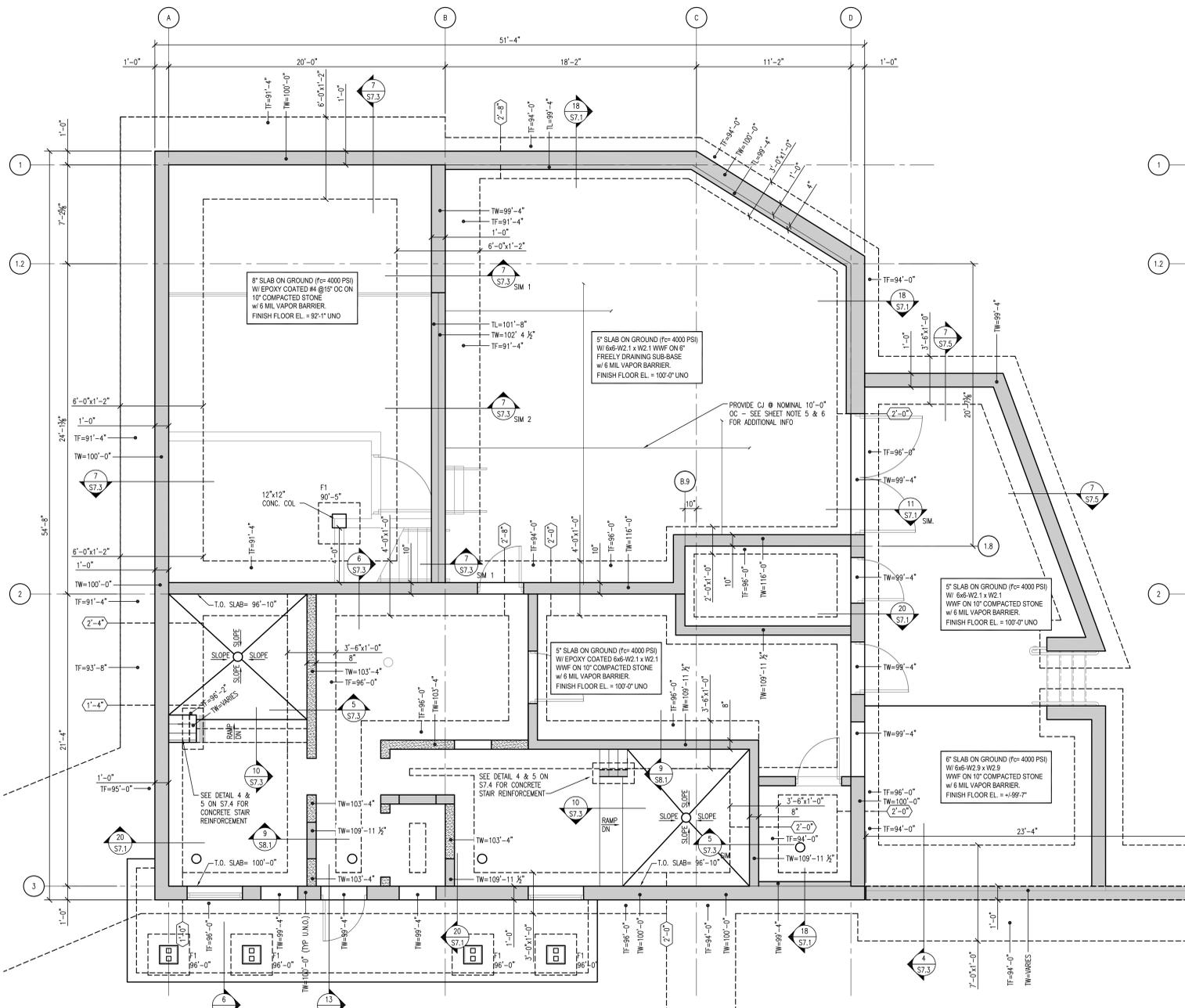


PRECAST SCHEDULE						
MARK	PLANK DEPTH	TOPPING	LOAD INFORMATION			P/C BEARING ELEVATION
			DL (psf)	LL (psf)	SL (psf)	
PC-1	8"	NONE	SELF WT. + 10	125	NONE	101'-8 1/2"

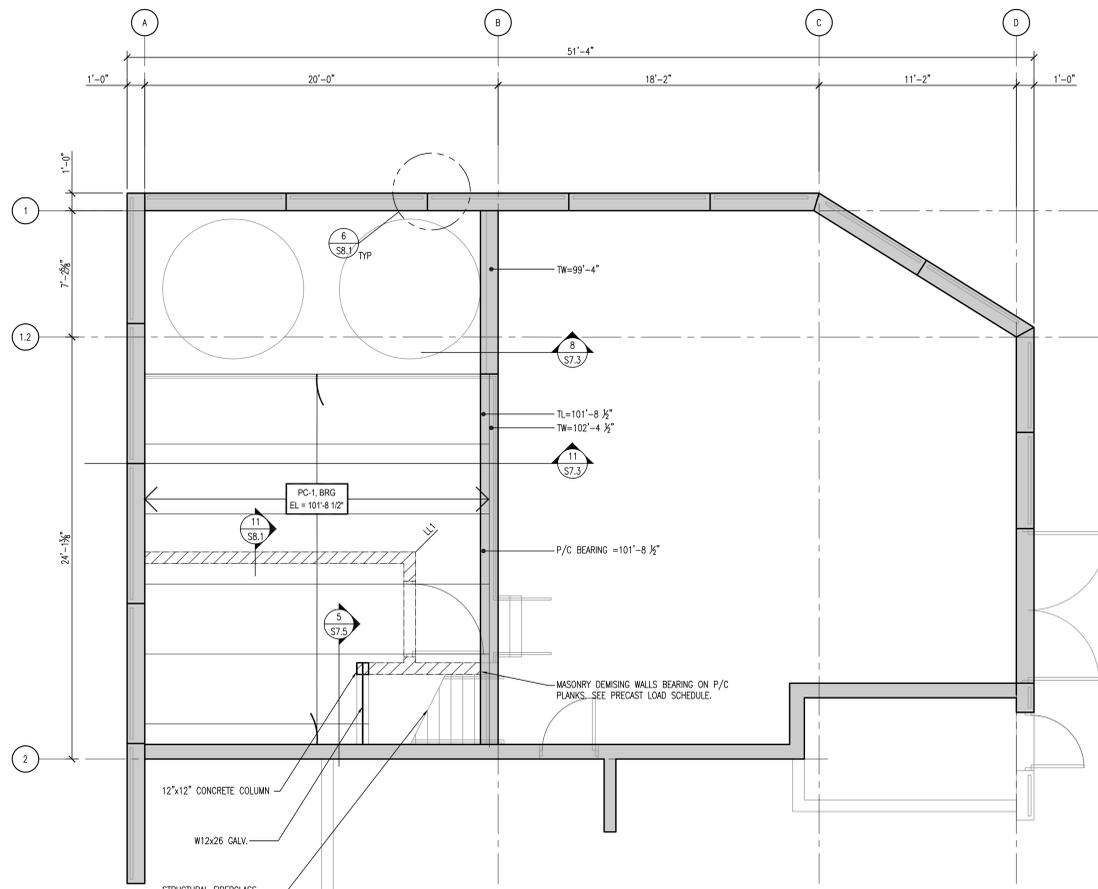
- NOTES:
 1. SELF WT. NOTED IN SCHEDULE TO INCLUDE WT. OF TOPPING SLAB NOTED.
 2. GROUT ALL SHEAR KEYS AND TOOL SMOOTH

PRECAST PLANK LOAD SCHEDULE			
MARK	DEAD LOAD (plf)	LIVE LOAD (plf)	SNOW LOAD (plf)
LL1	600	NONE	NONE

- NOTES:
 1. ALL LOADS ARE SERVICE LOADS.



1 SEAL HOLDING/LIFE SUPPORT FOUNDATION PLAN
 SCALE: 1/4"=1'-0"



2 SEAL HOLDING/LIFE SUPPORT MEZZANINE
 SCALE: 1/4"=1'-0"

(mp)²
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 draw: MP2
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 SEAL HOLDING / LIFE SUPPORT
 FOUNDATION PLAN
 MEZZANINE FRAMING PLAN

S5.1

PLAN NOTES

- SEE SHEET S.01 FOR ADDITIONAL NOTES.

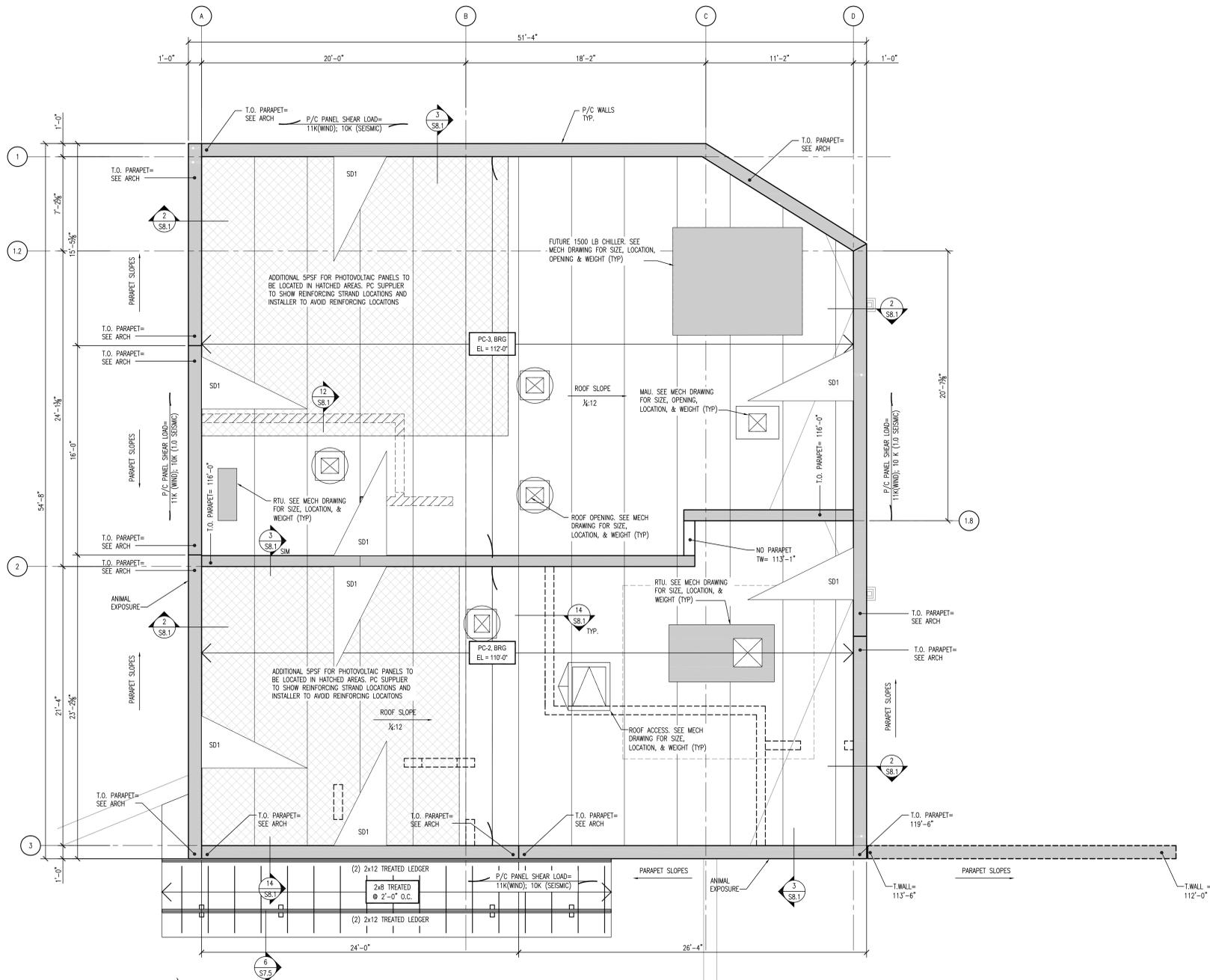
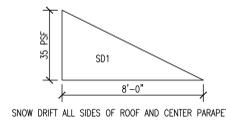
PRECAST NOTES

- ALL PRECAST ROOF PLANKS TO HAVE 2" MIN STRAND COVER.
- ALL PRECAST WALLS AND ROOF TO ACT AS DIAPHRAGM AND SHEAR WALLS. GROUT ALL ROOF PLANK SHEAR KEYS AND PROVIDE WALL PANEL TIES AS REQUIRED TO PREVENT UPLIFT AT PANEL BASE.
- SEE SHEET S.01 FOR ADDITIONAL PRECAST REQUIREMENTS AND ENVIRONMENTAL LOADING REQUIREMENTS.
- STYLE OF PRECAST WALLS (SANDWICH PANEL OR INSULATED CORES) SHOWN AS CONCEPTUAL ONLY. ALL PRECAST WALL PANELS SHALL HAVE ARCHITECTURAL FINISH AND "R" INSULATION VALUES AS SPECIFIED BY ARCHITECT.
- PRECAST WALLS EXPOSED TO ANIMAL ACTIVITY SHALL BE RIGID ENOUGH TO NOT CRACK WHEN ANIMAL LOADS ARE APPLIED (SEE NOTE 6 BELOW FOR LOADS). ALL WALLS OF BEAR BUILDING AND WEST & SOUTH WALLS OF SEAL BUILDING.
- ALL PRECAST WALL PANELS EXPOSED TO ANIMAL ACTIVITY SHALL BE DESIGNED FOR ENVIRONMENTAL LOADS SHOWN ON SHEET S.01 AND FOR (2) 2.0K IMPACT POINT LOADS APPLIED OVER A 0.5 SD-FIT AREA AT 2'-0" APART AT ANY LOCATION IN THE BOTTOM 12'-0" ON THE EXTERIOR FACE OF THE WALL.
- PRECAST WALL SHALL BE DESIGNED AS SHEAR WALLS TO RESIST SOIL, WIND, SEISMIC FORCES PER PLAN.
- PROVIDE FORM LINER PER ARCHITECTURAL PLANS.
- SEE A-DRAWINGS FOR WALL ELEVATION REQUIREMENTS & WALL OPENINGS. A-DRAWINGS SHALL GOVERN OVER STRUCTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS.

MARK	PLANK DEPTH	TOPPING	LOAD INFORMATION			P/C BEARING ELEVATION
			DL (psf)	LL (psf)	SL (psf)	
PC-2	8"	NONE	SELF WT. + 10	20	23.1 + DRIFT	110'-0"
PC-3	10"	NONE	SELF WT. + 10	20	23.1 + DRIFT	112'-0"

- NOTES:
- SELF WT. NOTED IN SCHEDULE TO INCLUDE WT. OF TOPPING SLAB NOTED.
 - GROUT ALL SHEAR KEYS AND TOOL SMOOTH

SNOW LOADING



1 S5.2 SEAL HOLDING/LIFE SUPPORT ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"



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SEAL HOLDING / LIFE SUPPORT
ROOF FRAMING PLAN

S5.2

PLAN NOTES

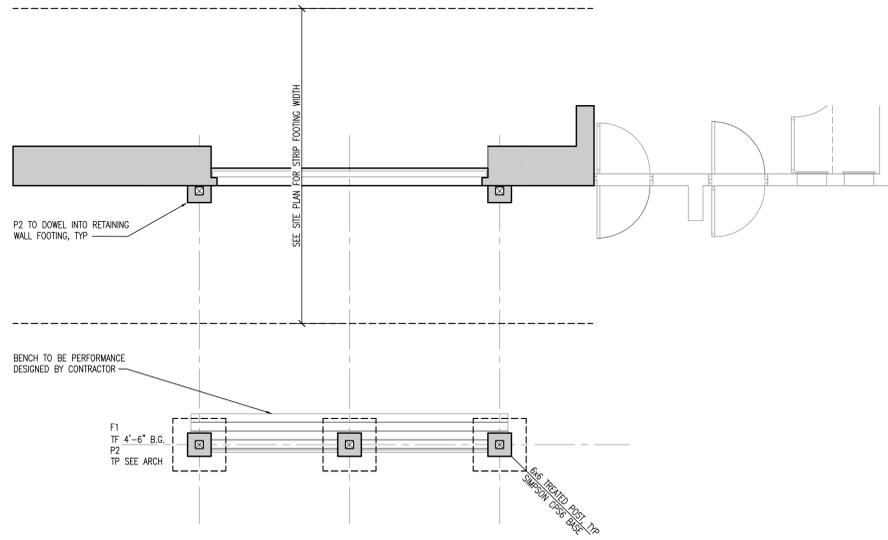
- SEE SHEET S.01 FOR ADDITIONAL NOTES.
- SEE ARCH FOR JOIST BEARING ELEVATION.
- ROOF SHEATHING SHALL BE 1/2" APA RATED EXTERIOR GRADE. FASTEN TO FRAMING PER DETAIL 4 ON SHEET 10.1.
- SEE DETAIL 4 SHEET S10.1 FOR WOOD FASTENER SCHEDULE.

FOOTING SCHEDULE		
FOOTING MARK	FOOTING DIMENSION (W x L x D)	FOOTING REINFORCING, BOTTOM
F1	3'-0" x 3'-0" x 1'-0"	3-#5 EA WAY

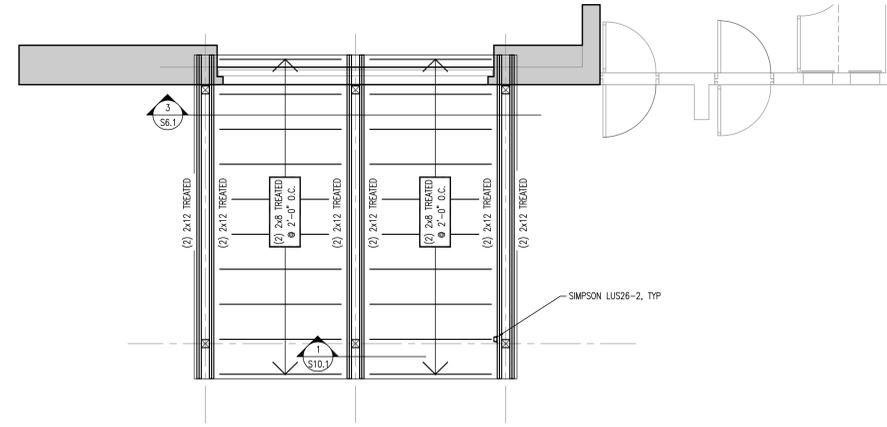
1. CENTER FOOTING UNDER COLUMN AND/OR PIER.

PIER SCHEDULE			
   			
PIER MARK	PIER DIMENSION (W x L)	PIER REINFORCING	TYPE
P2	16"x16"	4-#6 VERT W/ #3 TIES @ 10"OC W/ (3) #3 TIES IN TOP 8"	A

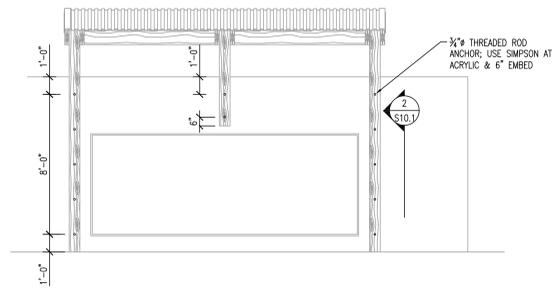
1. CENTER PIER UNDER COLUMN OR UNDER BEAM BEARING UNLESS NOTED OTHERWISE.



1 SEAL VIEWING FOUNDATION PLAN
SCALE: 1/4"=1'-0"



2 SEAL VIEWING ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"



3 SEAL VIEWING ELEVATION
SCALE: 1/4"=1'-0"



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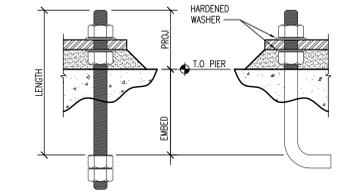
ARCTIC ANIMAL EXHIBIT AND CONCESSIONS
RFB No. 313086
Henry Vilas Zoo - County of Dane
Henry Vilas Zoo - Department of Public Works
702 S Randall Ave
1919 Alliant Energy Center Way
Madison, Wisconsin

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09.23.2013 - 65% CD's
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10.21.2013 - 95% CD's
11.13.2013 - Bid Documents

WDM No. 13046
drawn: MP2
checked: MP2

SEAL VIEWING
FOUNDATION PLAN &
ROOF FRAMING PLAN

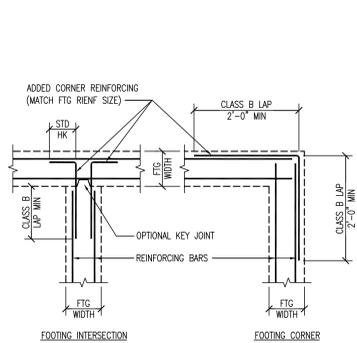
S6.1



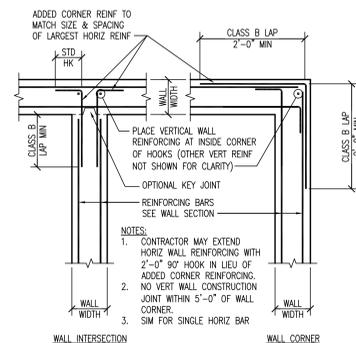
DIMENSION CHART					
DIAMETER	LENGTH	EMBED	HOOK	PROJECTION	NOTES
1/2	12	8	2	4	1,2
3/4	16	12	3	4	1,2
1	19	15	4	4	1,2

NOTES:
 1. ALL ANCHORS F1554, GRADE 36.
 2. LENGTH = 1'-0" AT INTERIOR COLUMN FOOTINGS WITH 12" DEPTH.

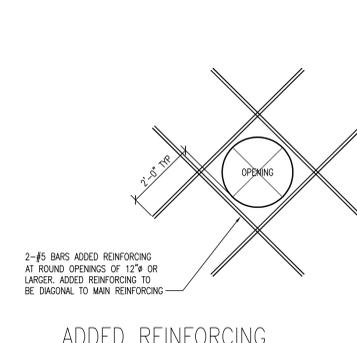
1 ANCHOR BOLT DIMENSION CHART
 SCALE: NTS



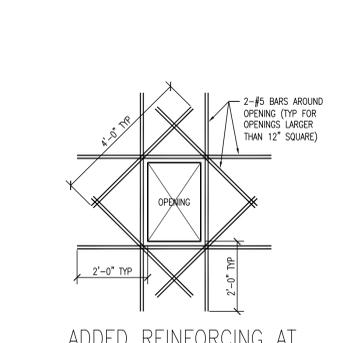
2 FOOTING CORNER REINFORCING
 SCALE: 3/4"=1'-0"



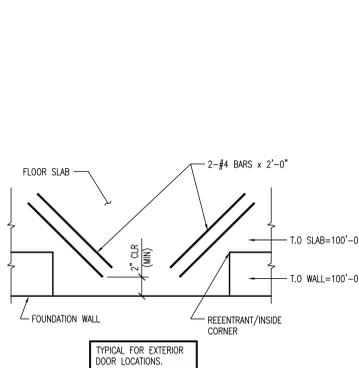
3 WALL CORNER REINFORCING
 SCALE: 3/4"=1'-0"



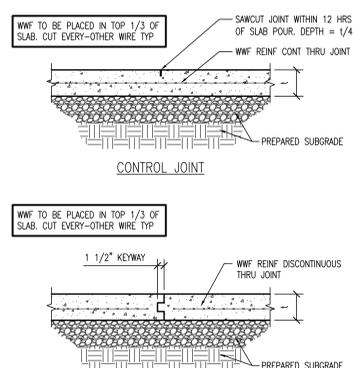
4 ADDED REINFORCING AT ROUND OPENINGS
 SCALE: 1/2"=1'-0"



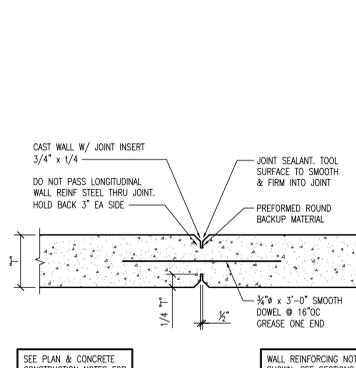
5 ADDED REINFORCING AT RECTANGULAR OPENINGS
 SCALE: 1/2"=1'-0"



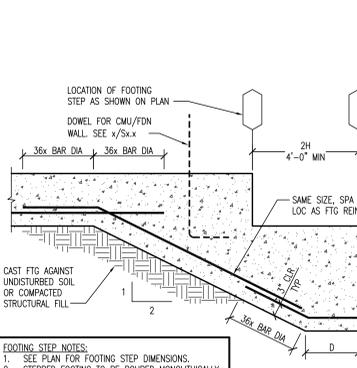
6 SLAB REINF AT REENTRANT CORNERS W/O CONTROL JTS
 SCALE: 3/4"=1'-0"



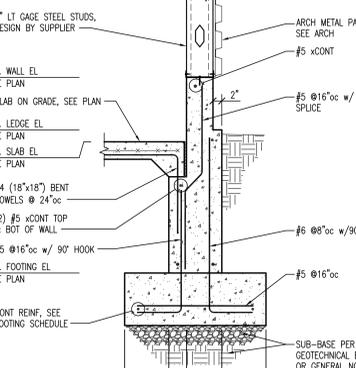
7 SLAB JOINTS
 SCALE: 3/4"=1'-0"



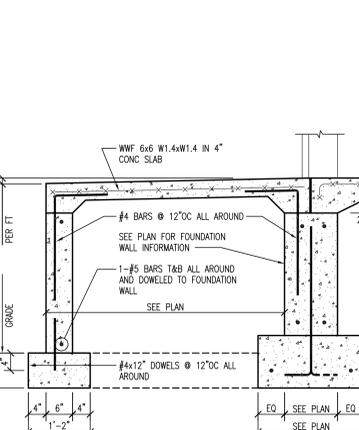
8 WALL CONTROL JOINT
 SCALE: 3/4"=1'-0"



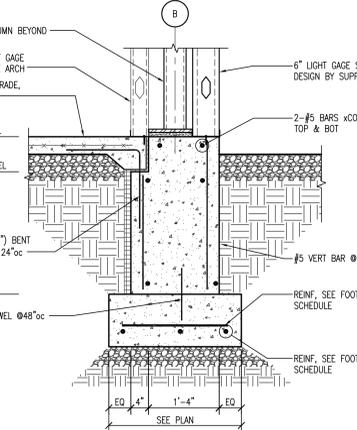
9 FOOTING STEP DETAIL
 SCALE: 3/4"=1'-0"



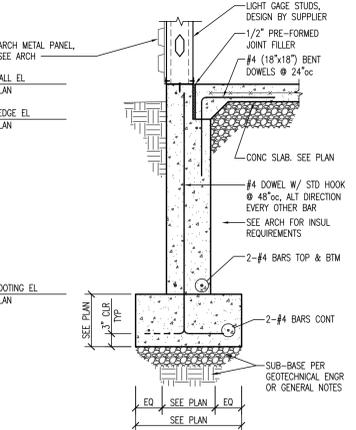
10 FOUNDATION WALL DETAIL
 SCALE: 3/4"=1'-0"



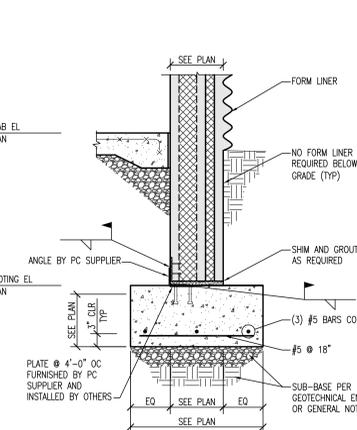
11 STOOP AT DOOR/WINDOW
 SCALE: 3/4"=1'-0"



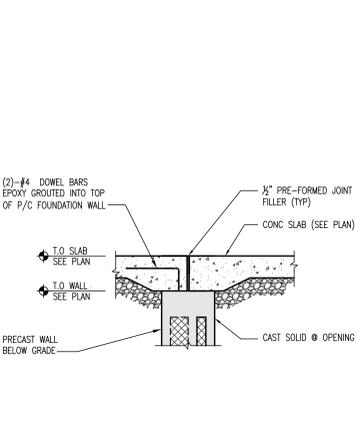
12 WALL FOOTING DETAIL
 SCALE: 3/4"=1'-0"



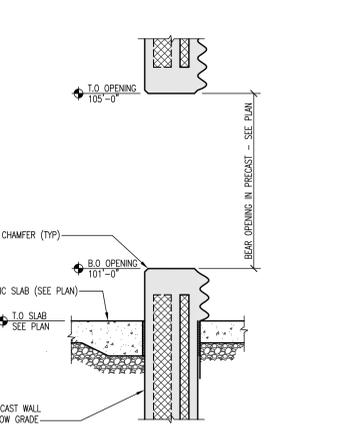
13 TYPICAL FOUNDATION WALL
 SCALE: 3/4"=1'-0"



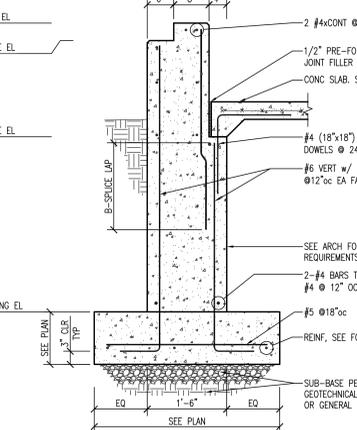
14 PC FOUNDATION WALL
 SCALE: 3/4"=1'-0"



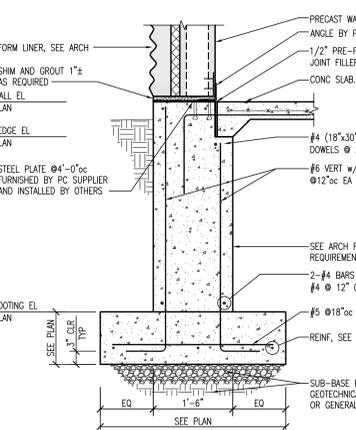
15 PC WALL AT DOOR
 SCALE: 3/4"=1'-0"



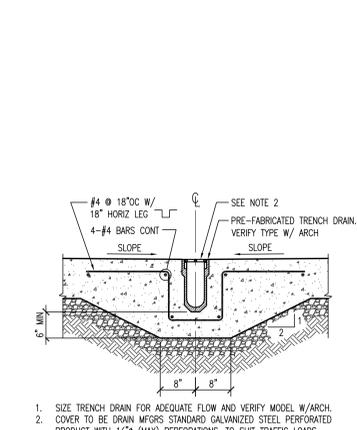
16 PC WALL AT BEAR OPENING
 SCALE: 3/4"=1'-0"



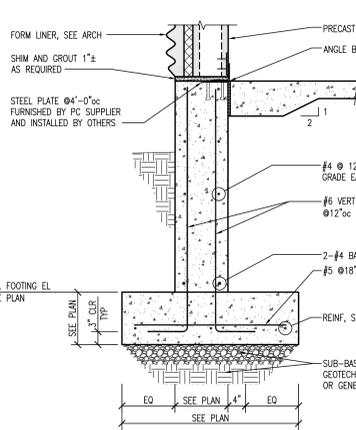
17 FOUNDATION WALL @ WINDOW
 SCALE: 3/4"=1'-0"



18 FOUNDATION WALL @ PC WALLS
 SCALE: 3/4"=1'-0"



19 TRENCH DRAIN DETAIL
 SCALE: 3/4"=1'-0"



20 FOUNDATION WALL @ PC WALLS
 SCALE: 3/4"=1'-0"



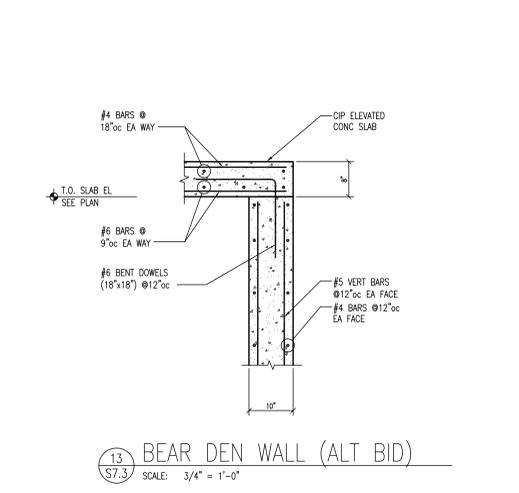
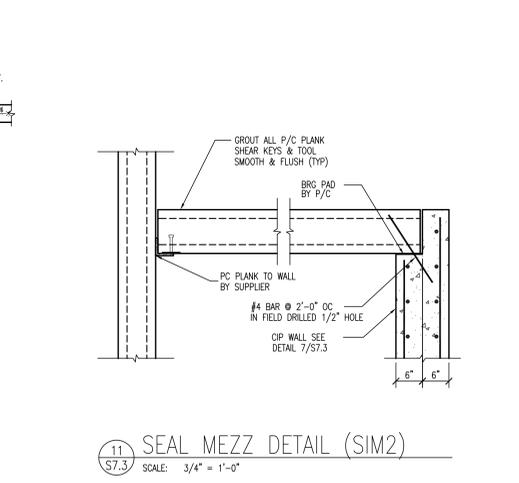
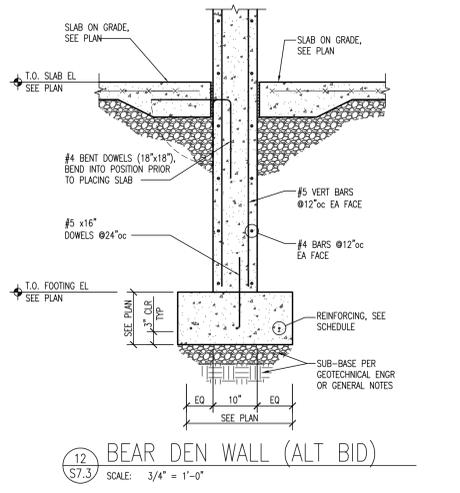
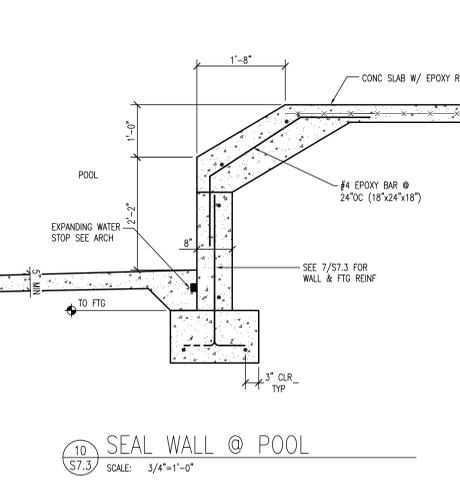
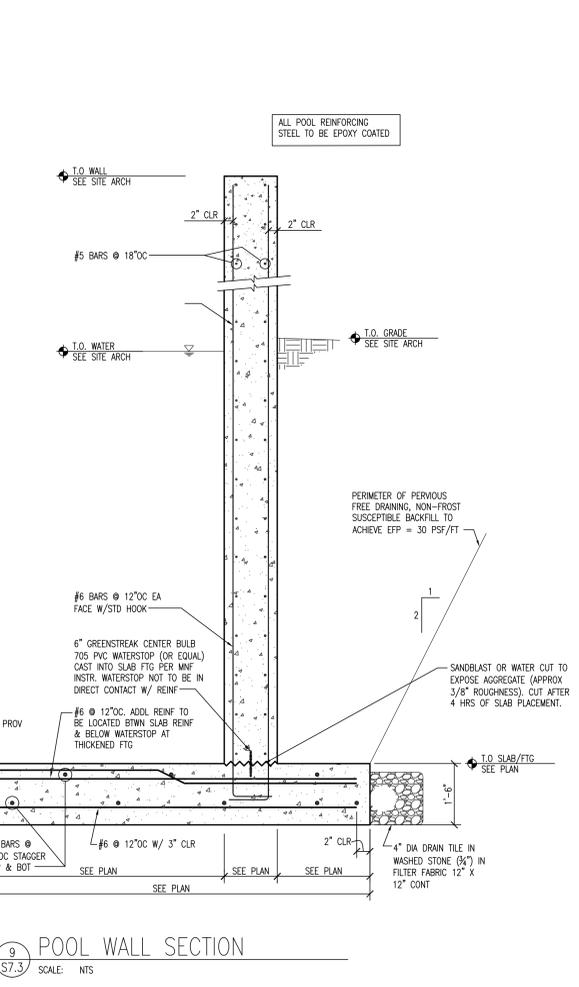
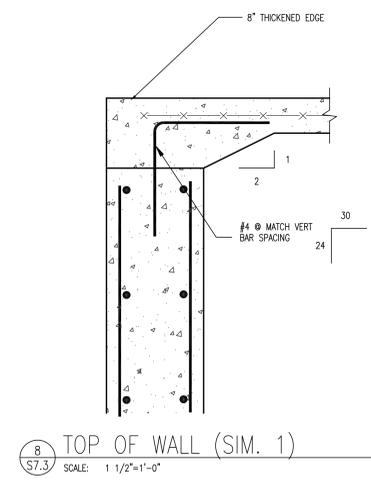
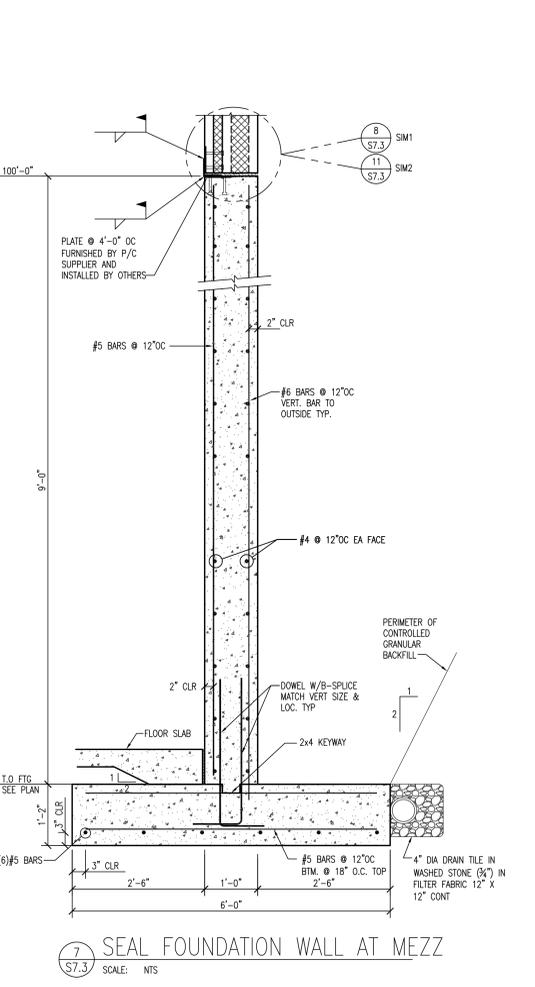
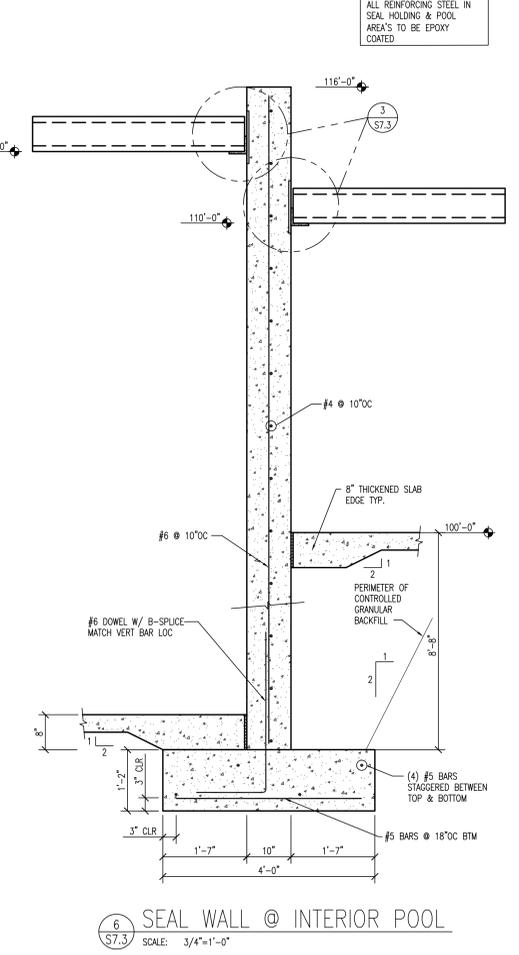
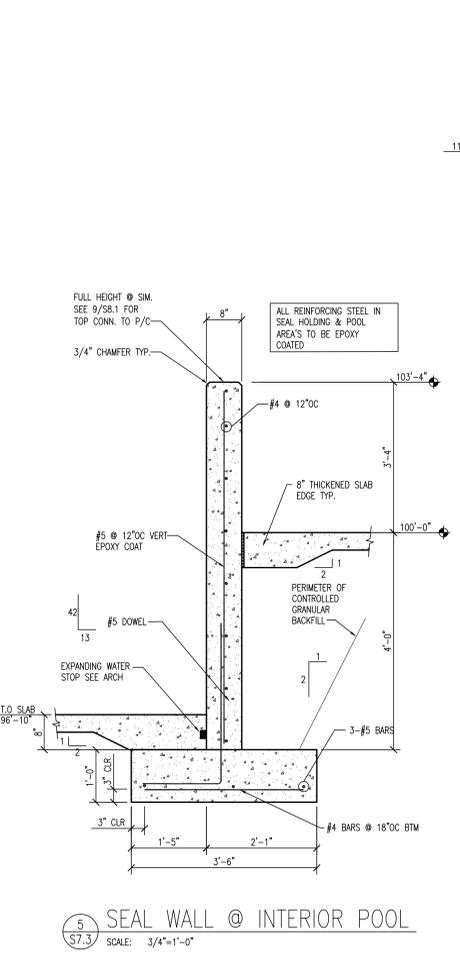
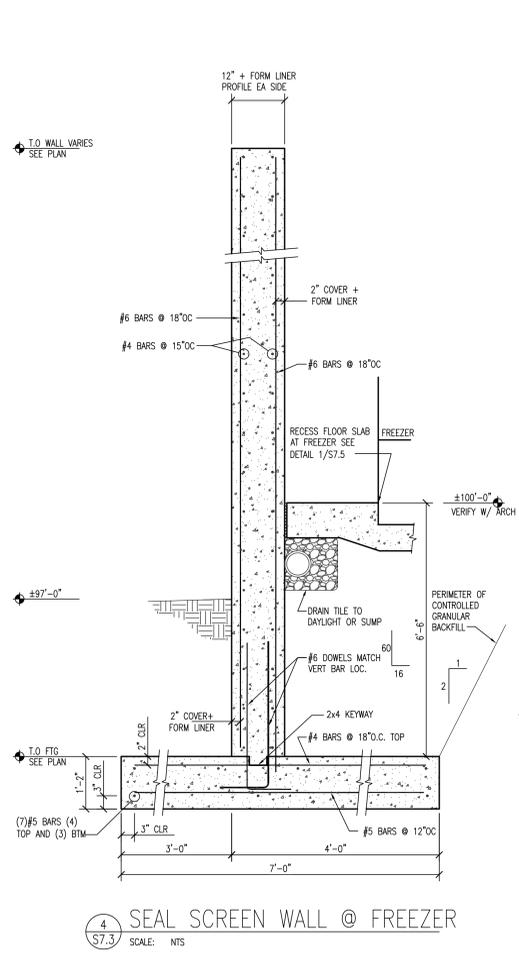
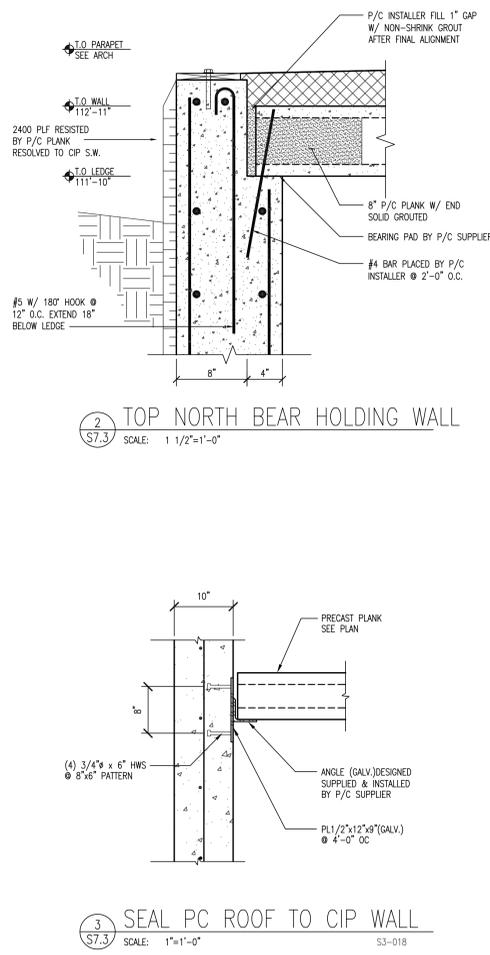
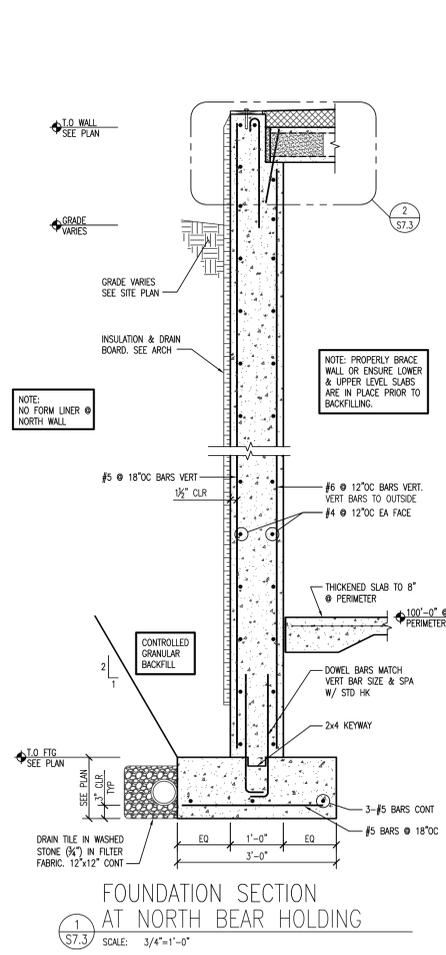
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WDM No. draw: MP2
 13046 checked: MP2

FOUNDATION DETAILS

S7.1



ALL REINFORCING STEEL IN SEAL HOLDING & POOL AREA'S TO BE EPOXY COATED

ALL POOL REINFORCING STEEL TO BE EPOXY COATED

PERIMETER OF PERVIOUS FREE DRAINING, NON-FROST SUSCEPTIBLE BACKFILL TO ACHIEVE EPF = 30 PSF/FT

(mp)² STRUCTURAL ENGINEERS, LLC
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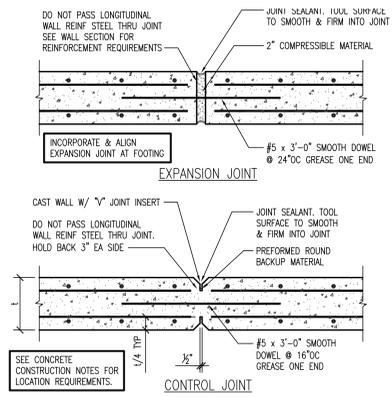
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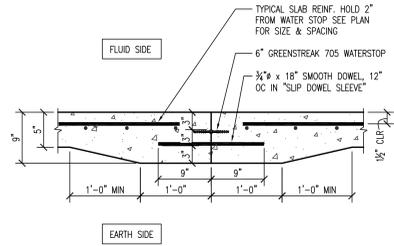
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13046 checked: MP2
 FOUNDATION DETAILS

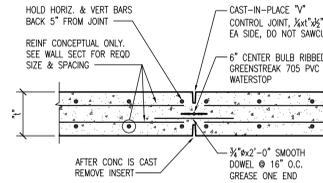
S7.3



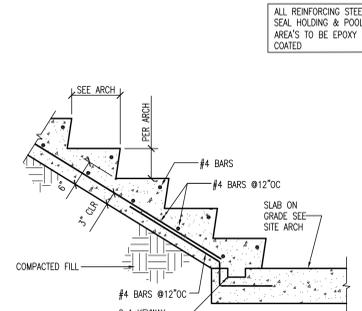
1 RETAINING WALL JOINTS
S7.4 SCALE: 3/4"=1'-0"



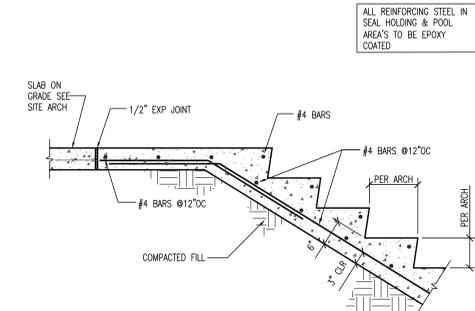
2 POOL SLAB CONSTRUCTION JOINT
S7.4 SCALE: NTS



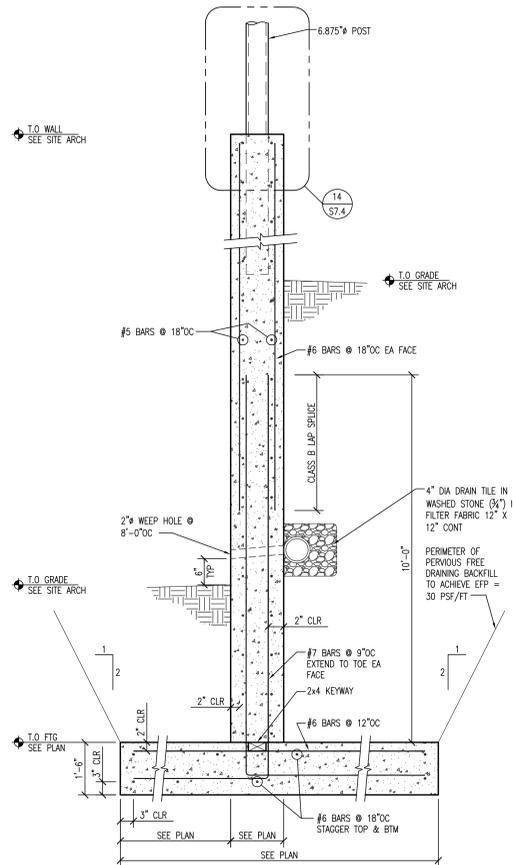
3 POOL WALL CONSTRUCTION CONTROL JOINT
S7.4 SCALE: NTS



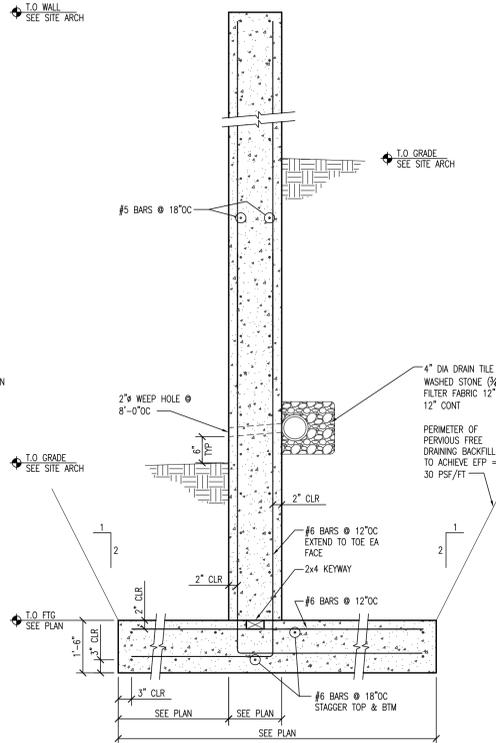
4 CONCRETE STAIR SECTION
S7.4 SCALE: 3/4"=1'-0"



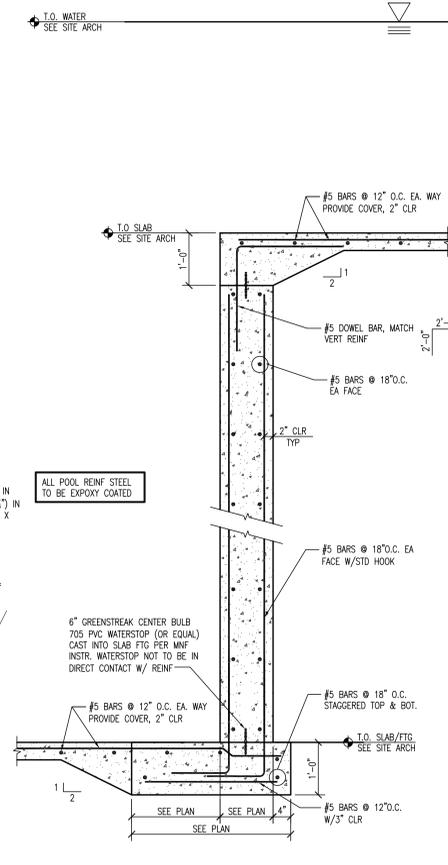
5 CONCRETE STAIR SECTION
S7.4 SCALE: 3/4"=1'-0"



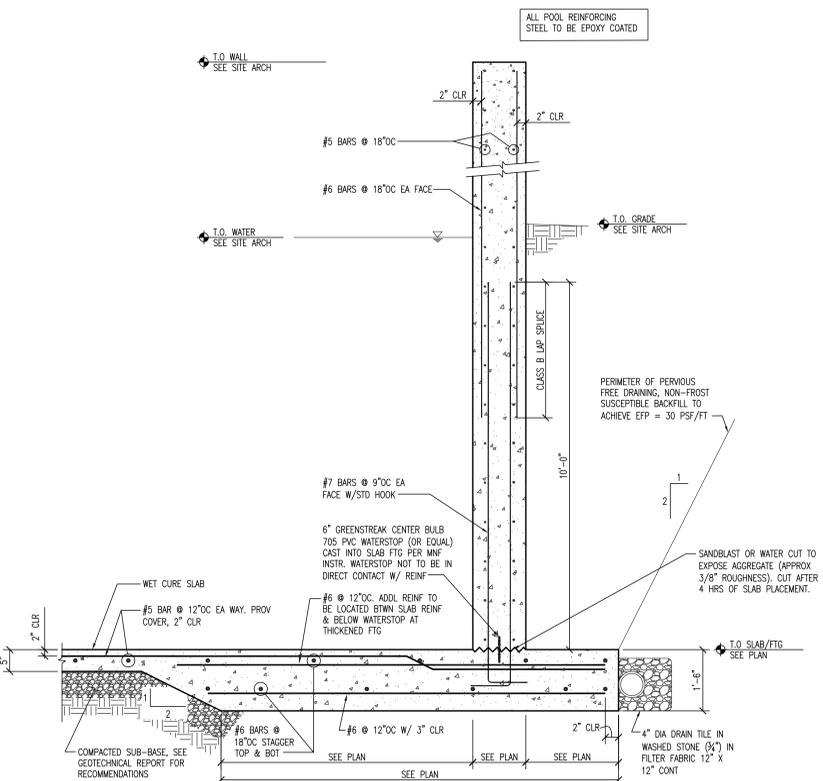
6 RETAINING WALL SECTION
S7.4 SCALE: NTS



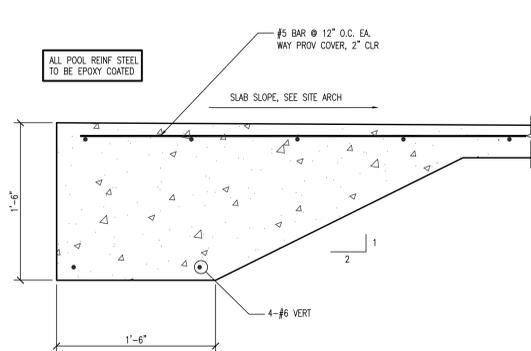
7 RETAINING WALL SECTION
S7.4 SCALE: NTS



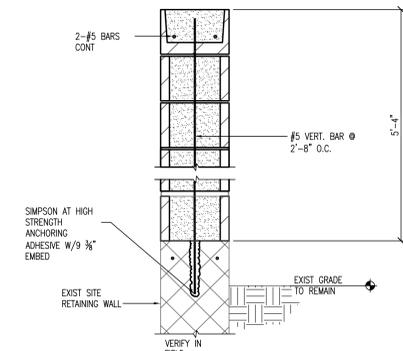
8 POOL WALL SECTION
S7.4 SCALE: 3/4"=1'-0"



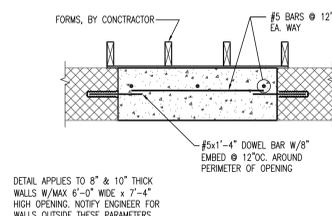
9 POOL WALL SECTION
S7.4 SCALE: NTS



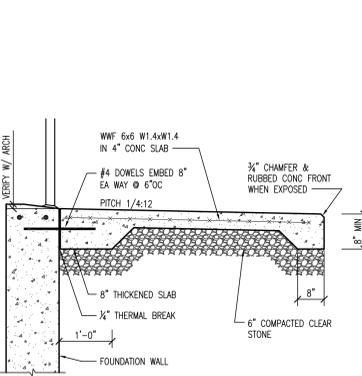
10 POOL SLAB EDGE @ ZERO DEPTH
S7.4 SCALE: 1 1/2"=1'-0"



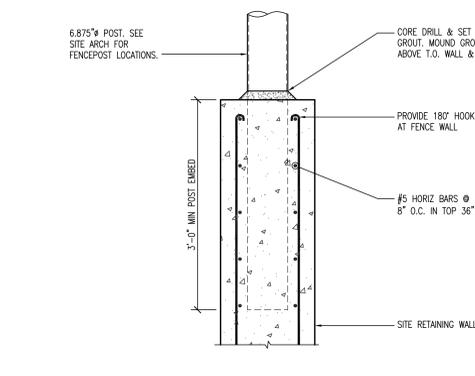
11 5'-4" EXTENSION AT EXIST SITE RETAINING WALLS
S7.4 SCALE: 1"=1'-0"



12 TYP. EXIST CIP WALL INFILL
S7.4 SCALE: 3/4"=1'-0"



13 STOOP ON GRADE
S7.4 SCALE: 3/4"=1'-0"



14 FENCE POST EMBEDMENT
S7.4 SCALE: 1"=1'-0"

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henry vilas

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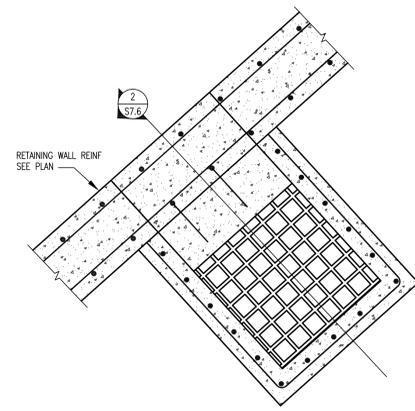
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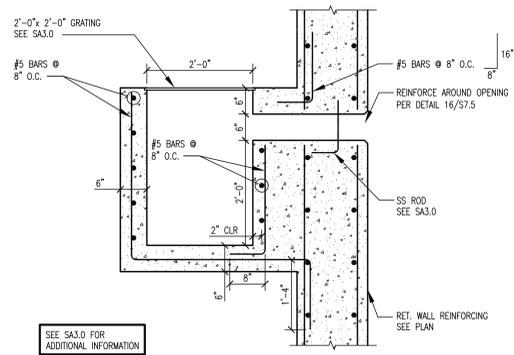
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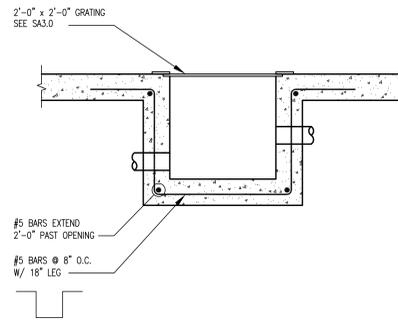
FOUNDATION DETAILS



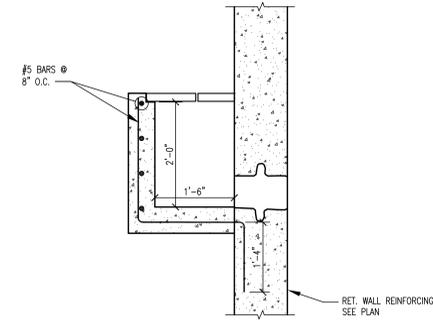
1 PLAN VIEW AT SKIMMER
SCALE: 3/4"=1'-0"



2 TYPICAL SKIMMER SECTION
SCALE: 3/4"=1'-0"



3 POOL DRAIN
SCALE: 3/4"=1'-0"



4 POOL LEVEL SENSOR
SCALE: 3/4"=1'-0"



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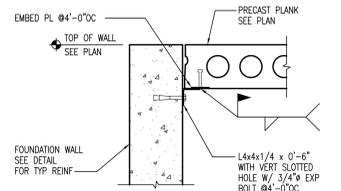
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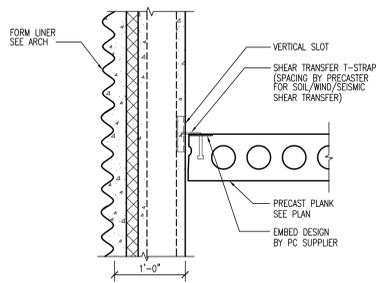
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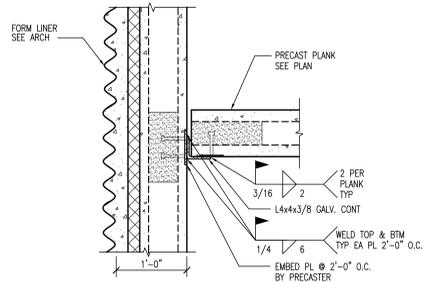
S7.6



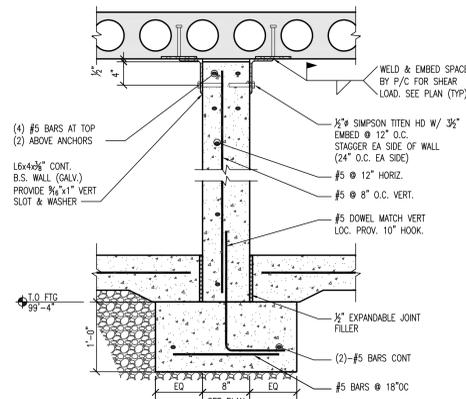
1 PRECAST PLANK AT NON-BEARING WALL
SCALE: 3/4" = 1'-0"



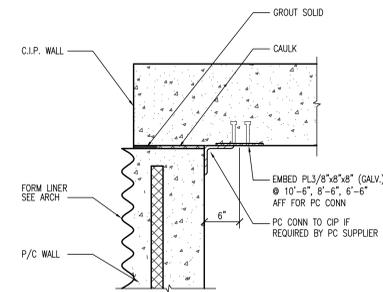
2 PRECAST DETAIL
SCALE: 1" = 1'-0"



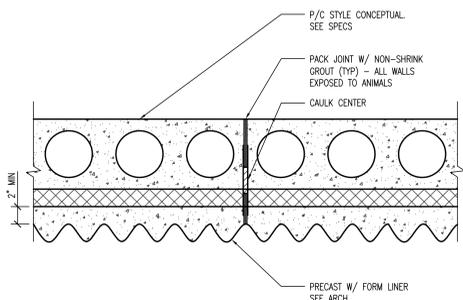
3 PRECAST DETAIL
SCALE: 1" = 1'-0"



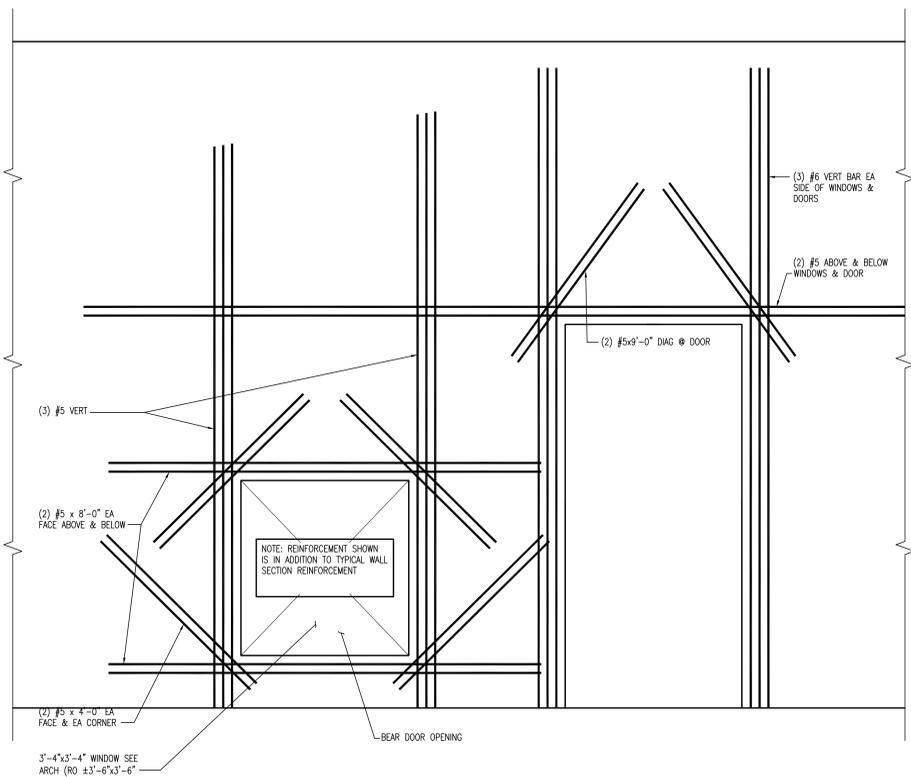
4 INTERIOR WALL @ BEAR HOLDING
SCALE: 1" = 1'-0"



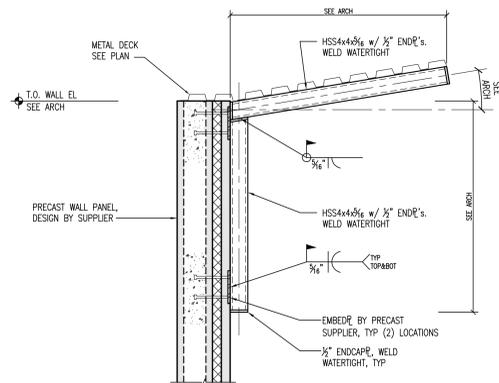
5 CIP TO PC AT BEAR HOLDING
SCALE: 1" = 1'-0"



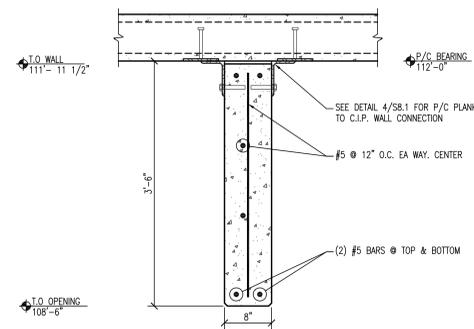
6 PRECAST JOINT DETAIL @ ANIMAL EXPOSURE
SCALE: 1 1/2" = 1'-0"



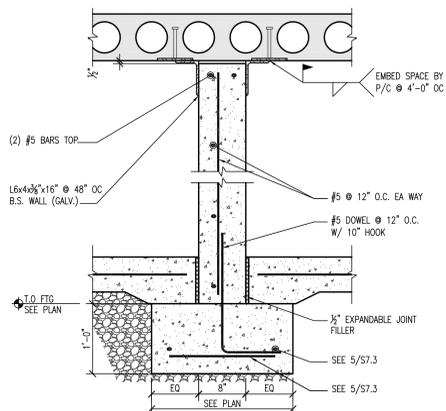
10 ADDITIONAL CONCRETE WALL REINFORCING AT OPENINGS
SCALE: NTS



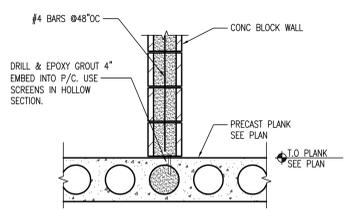
7 SUN SHADE FRAME DETAIL
SCALE: 3/4" = 1'-0"



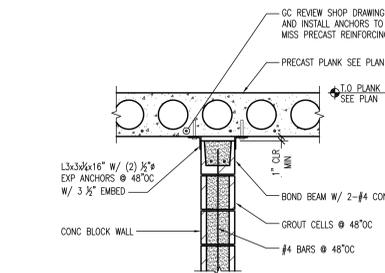
8 HEADER @ BEAR HOLDING
SCALE: 1" = 1'-0"



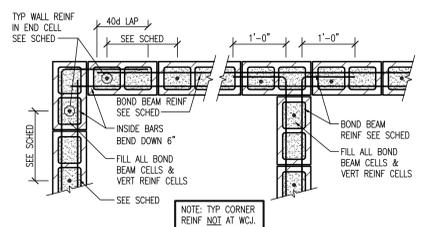
9 INTERIOR WALL @ SEAL
SCALE: 1" = 1'-0"



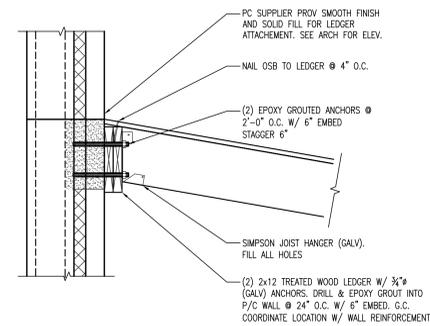
11 MASONRY WALL SECTION
SCALE: 3/4" = 1'-0"



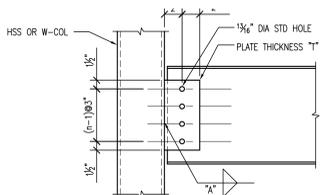
12 MASONRY WALL SECTION
SCALE: 3/4" = 1'-0"



13 MASONRY CORNER REINFORCING
SCALE: 3/4" = 1'-0"

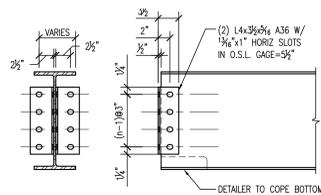


14 CANOPY TO PC WALL
SCALE: 1" = 1'-0"



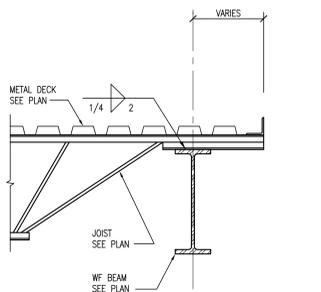
BOLTING SCHEDULE FOR SINGLE PLATE CONNECTIONS (WELD-BOLT)			
ROWS OF 3/4" A325N BOLTS (n)	NOMINAL BEAM DEPTH	PLATE THICKNESS "T" (in)	WELD SIZE "A" (in)
2	W8 - W10	3/8	5/16
3	W12 - W14	3/8	5/16
4	W16 - W18	3/8	5/16
5	W21 - W24	3/8	5/16
N/A	W27 - W30		
N/A	W33 - W36		

1
S9.1 SCALE: NTS
BEAM TO COLUMN SINGLE PLATE CONNECTION

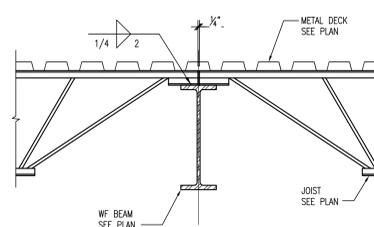


DOUBLE ANGLE CONNECTION (BOLT-BOLT)	
ROWS OF 3/4" A325N BOLTS (n)	NOMINAL BEAM DEPTH
2	W8 - W10
3	W12 - W14
4	W16 - W18
5	W21 - W24
6	W27 - W30
7	W33 - W36

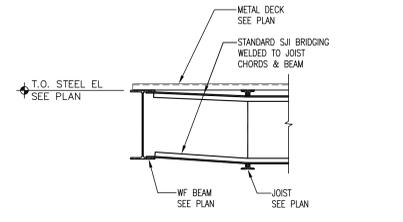
2
S9.1 SCALE: NTS
BEAM TO BEAM DOUBLE ANGLE CONNECTION



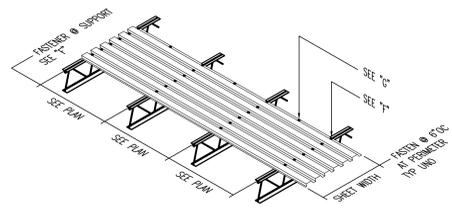
3
S9.1 SCALE: 1"=1'-0"
STEEL SECTION



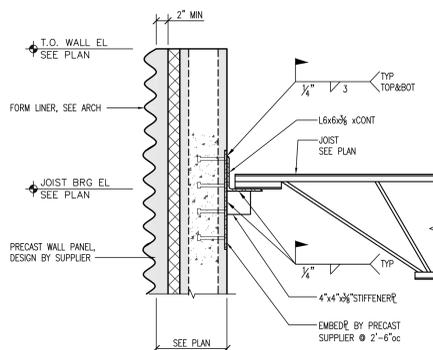
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S9.1 SCALE: 1"=1'-0"
STEEL SECTION



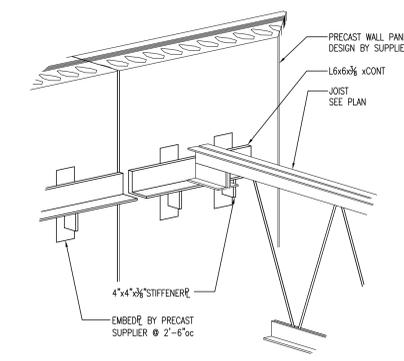
5
S9.1 SCALE: 3/4"=1'-0"
BRIDGING ANCHORAGE DETAIL



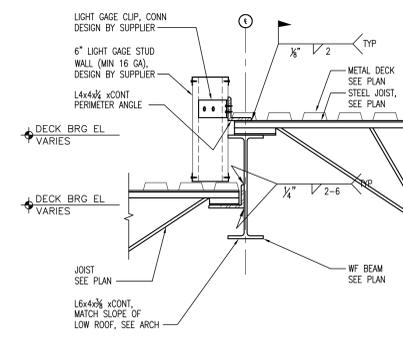
6
S9.1 SCALE: 1"=1'-0"
STEEL SECTION



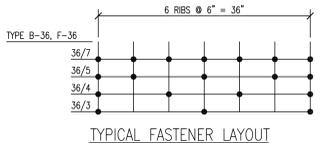
7
S9.1 SCALE: 1"=1'-0"
JOIST BRG ON PRECAST WALL



8
S9.1 SCALE: 1"=1'-0"
JOIST BRG ON PRECAST WALL



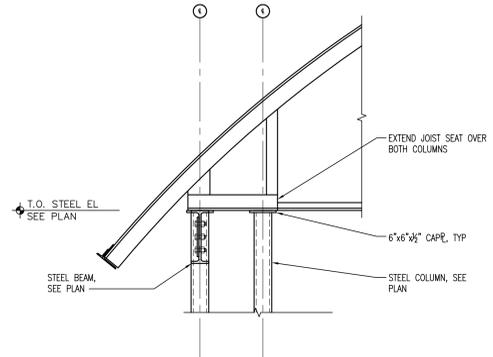
9
S9.1 SCALE: 1"=1'-0"
STEEL SECTION



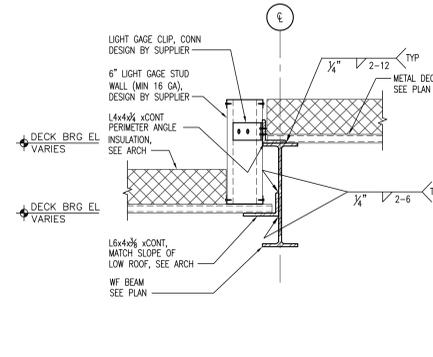
A	B	C	D	E	F	G	H
DECK ID	DECK TYPE (DEPTH)	MIN SECTION PROPERTIES	DESIGN # OF SPANS	SUPPORT CONN PATTERN	SIDELAP CONN (PER SPAN)	NOTES	
D1	ROOF DECK	1.5B	0.235 IN ³	0.247 IN ³	3	36/5 #12 SCREWS OR WELD	2-#12 SELF-DRILLING SCREWS

- NOTES:
 1. ALL DECK PROPERTIES SHOWN SHALL BE WITHIN ± 3%.
 2. SEE ARCHITECTURAL PLAN FOR PITCH CHANGES & FINISH.
 3. PROVIDE BULDEX SCREW PER BULDEX REPORT NO. 845 FOR SELF-DRILLING SCREWS.
 4. ENDLAPS SHALL OCCUR AT SUPPORT POINTS.

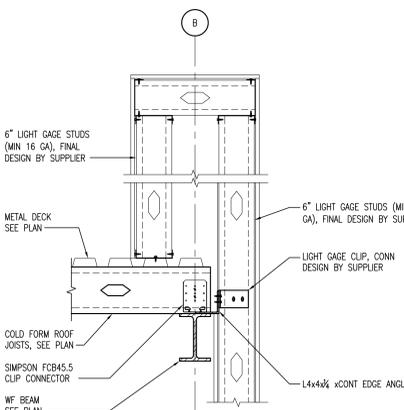
10
S9.1 SCALE: 1"=1'-0"
METAL DECK SCHEDULE AND DECK ATTACHMENT



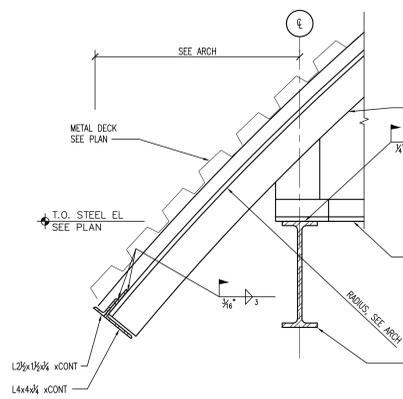
11
S9.1 SCALE: 3/4"=1'-0"
JOIST COLUMN CONNECTION



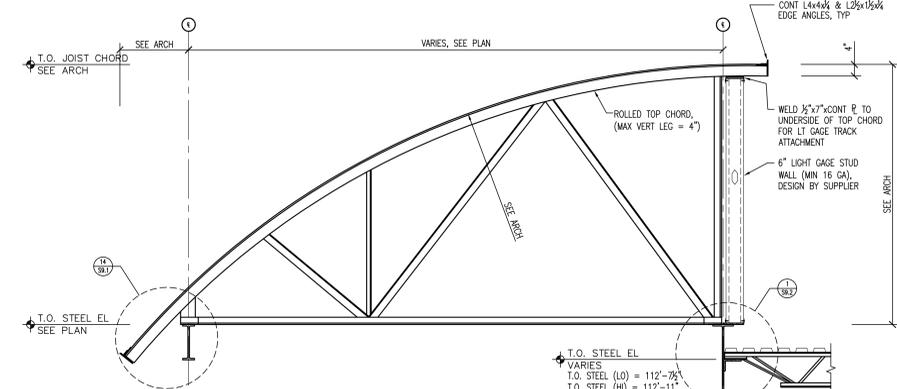
12
S9.1 SCALE: 1"=1'-0"
DECK BRG @ SLOPING BEAM



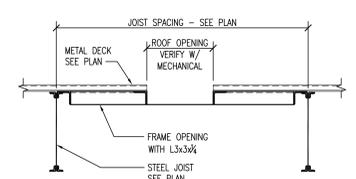
13
S9.1 SCALE: 1"=1'-0"
ROOF FRAMING DETAIL



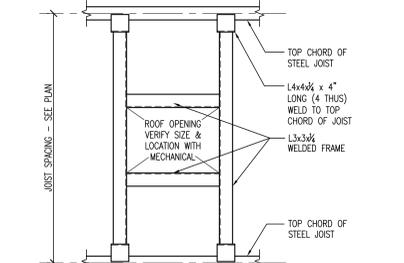
14
S9.1 SCALE: 3/4"=1'-0"
BOWSTRING JOIST TAIL DETAIL



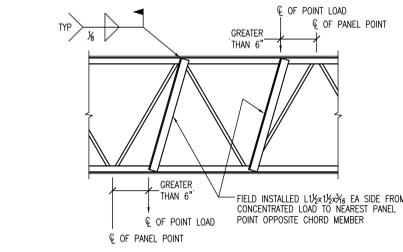
15
S9.1 SCALE: 1/2"=1'-0"
BOWSTRING JOIST PROFILE



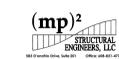
16
S9.1 SCALE: 3/4"=1'-0"
FRAMING AT ROOF OPENING



17
S9.1 SCALE: 3/4"=1'-0"
FRAMING AT ROOF OPENING



18
S9.1 SCALE: NTS
TYP JOIST REINFORCEMENT AT CONCENTRATED LOADS



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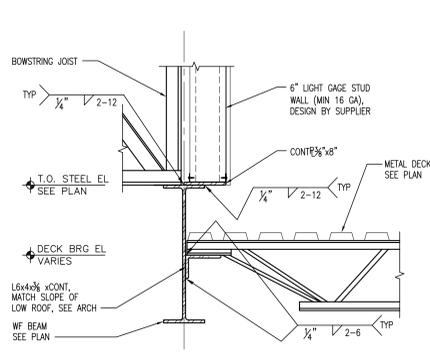


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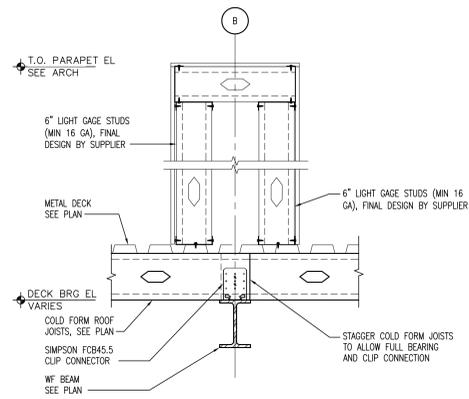
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 draw: MP2
 checked: MP2
 STEEL FRAMING DETAILS

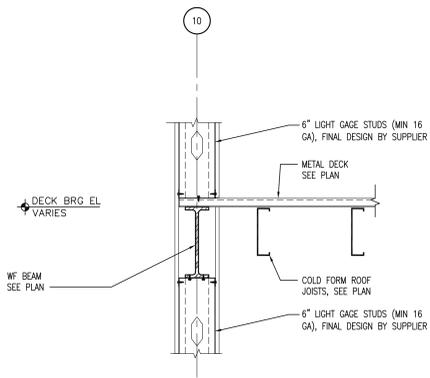
S9.1



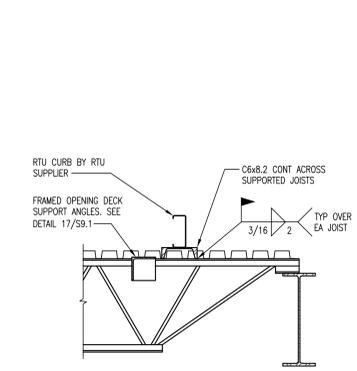
1 SECTION @ HI/LO ROOF
SCALE: 1"=1'-0"



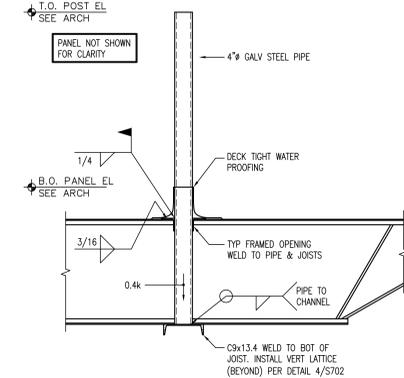
2 ROOF FRAMING DETAIL (ALT BID)
SCALE: 1"=1'-0"



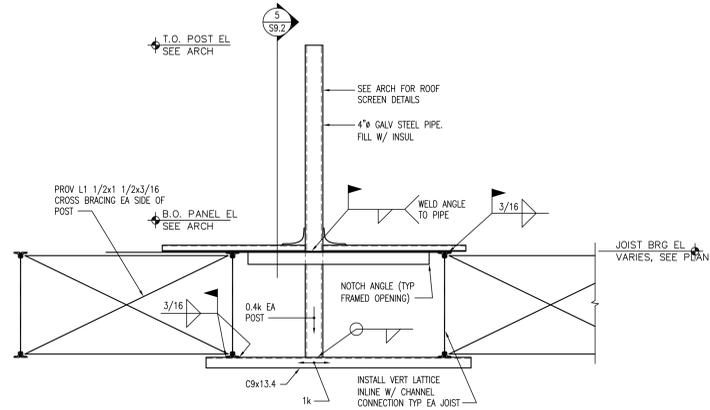
3 ROOF FRAMING DETAIL (ALT BID)
SCALE: 1"=1'-0"



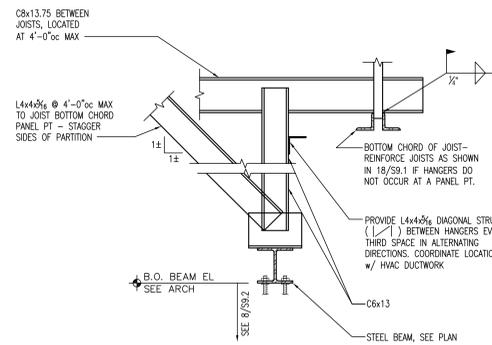
4 RTU SUPPORT
SCALE: 1"=1'-0"



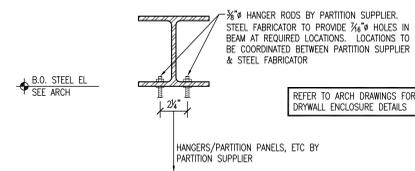
5 SHELF ANGLE BRACKET
SCALE: 3/4"=1'-0"



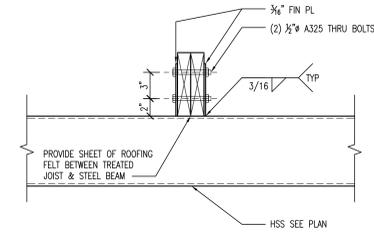
6 SHELF ANGLE BRACKET
SCALE: 3/4"=1'-0"



7 PARTITION WALL SUPPORT
SCALE: 3/4"=1'-0"



8 PARTITION SUPPORT BEAM
SCALE: 1 1/2"=1'-0"



9 ROOF JOIST TO HSS BEAM
SCALE: 1 1/2"=1'-0"



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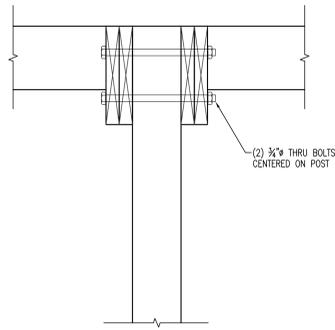
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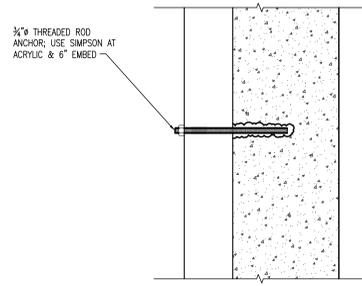
WDM No. 13046
drawn: MP2
checked: MP2

STEEL FRAMING DETAILS

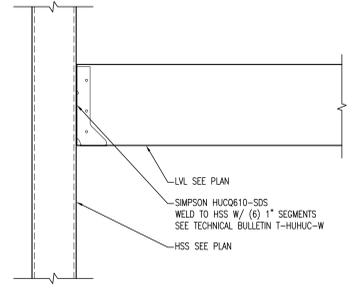
S9.2



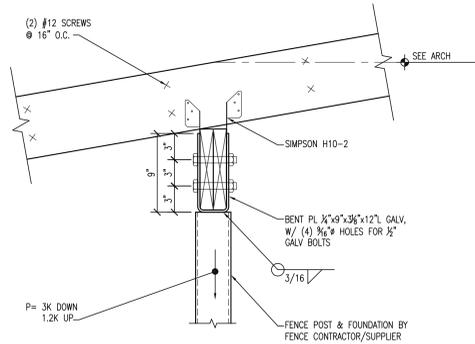
1 LEDGER TO WOOD POST
SCALE: 1 1/2"=1'-0"



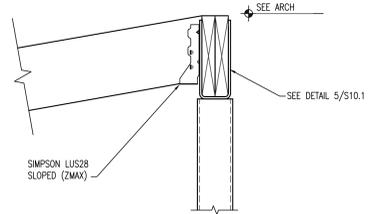
2 WOOD POST TO SITE WALL
SCALE: 1 1/2"=1'-0"



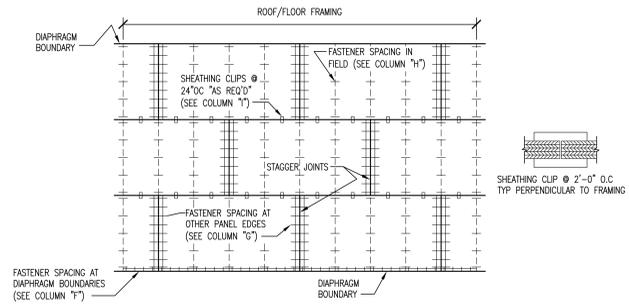
3 LVL TO HSS COLUMN
SCALE: 1 1/2"=1'-0"



5 LEDGER DETAIL
SCALE: 1 1/2"=1'-0"



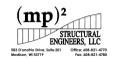
6 LEDGER DETAIL
SCALE: 1 1/2"=1'-0"



FLOOR & ROOF DECK FASTENER SCHEDULE								
A	B	C	D	E	F	G	H	I
DECK LOCATION	FRAMING TYPE	DECK TYPE	FASTENER TYPE	FASTENER ROWS	FASTENER SPACING AT DIAPHRAGM BOUNDARIES	FASTENER SPACING AT OTHER PANEL EDGES	FASTENER SPACING IN FIELD	CLIPS REQ'D?
ROOF	TRUSSES	19/32" OSB OR PLYWOOD, EXTERIOR	84 COMMON	N/A	6" OC	6" OC	12" OC	YES

NOTE:
1. SEE ARCH FOR ROOFING REQUIREMENTS.
2. GLUE AND FASTEN FLOOR SHEATHING TO TRUSSES.

4 ROOF/FLOOR SHEATHING LAYOUT AND NAILING SCHEDULE AT UNBLOCKED DIAPHRAGMS
SCALE: 1/4"=1'-0"



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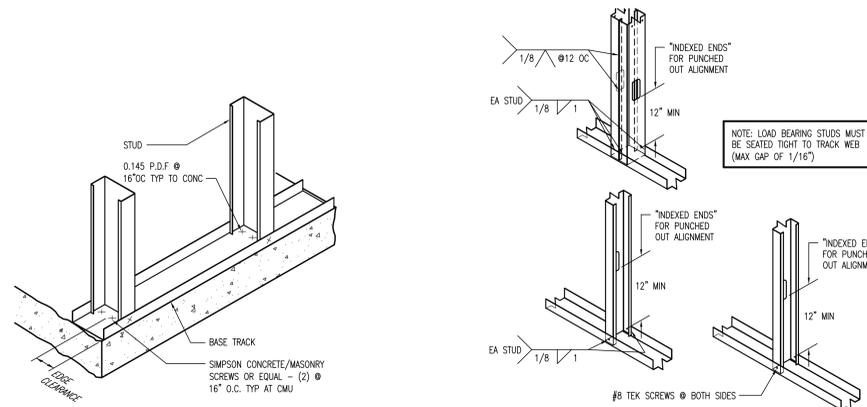
WDM No. 13046
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checked: MP2

WOOD FRAMING DETAILS

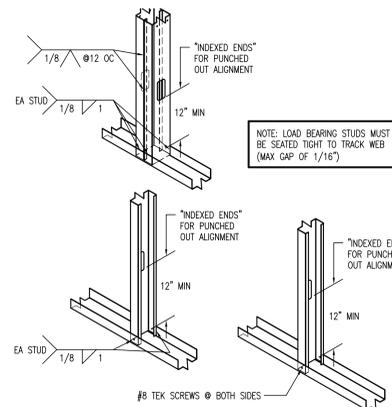
S10.1

STEEL STUD SCHEDULE		
550 S 162-43		
MEMBER THICKNESS (1/1000 in)		
FLANGE WIDTH (in)		
S=STUD, T=TRACK		
WEB DEPTH (in)		
MEMBER THICKNESS (mils)	DESIGN THICKNESS (in)	REFERENCE ONLY GAGE No.
18	0.0188	25
27	0.0283	22
30	0.0312	20 - DRYWALL
33	0.0346	20 - STRUCTURAL
43	0.0451	18
54	0.0566	16
68	0.0713	14
97	0.1017	12

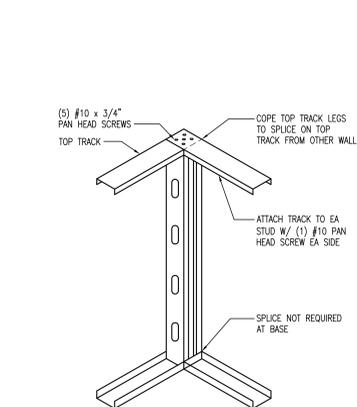
1 STEEL STUD SCHEDULE
SCALE: NTS



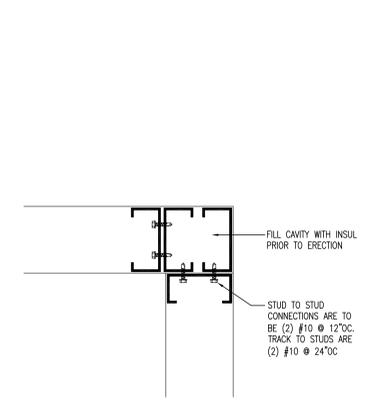
2 BOTTOM TRACK ANCHORAGE
SCALE: 1"=1'-0"



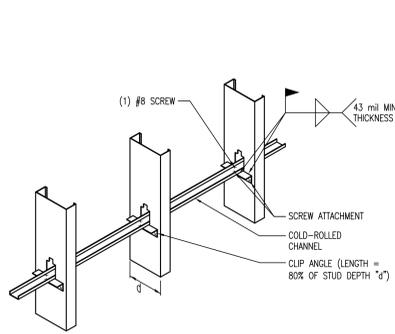
3 TYP STUD TO TRACK CONN
SCALE: 1"=1'-0"



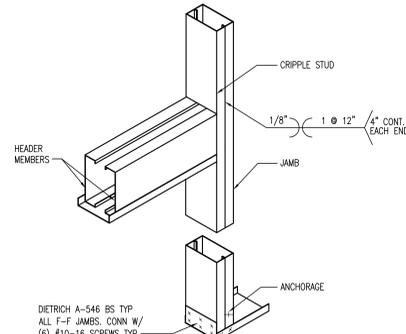
4 WALL CORNER FRAMING
SCALE: NTS



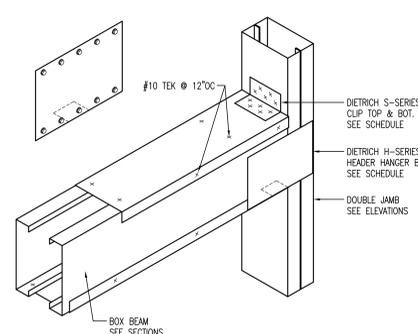
5 TYPICAL CORNER FRAMING
SCALE: NTS



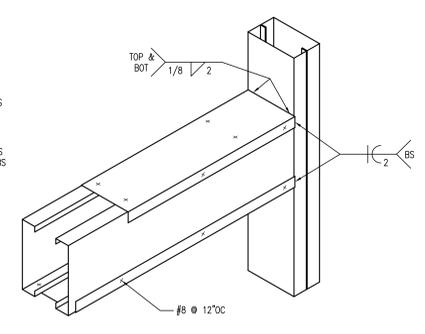
6 BRIDGING COLD-ROLLED CHANNEL WITH CLIP ANGLE
SCALE: 1"=1'-0"



7 FACE TO FACE JAMB
SCALE: 1"=1'-0"

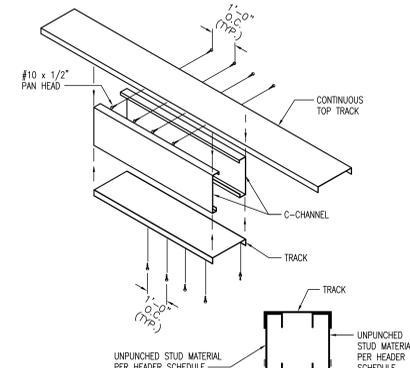


SCREWED HEADER

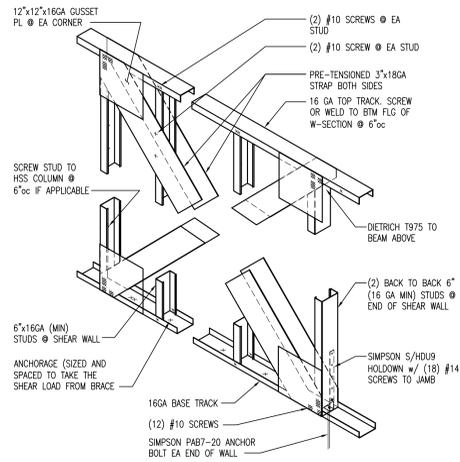


WELDED HEADER

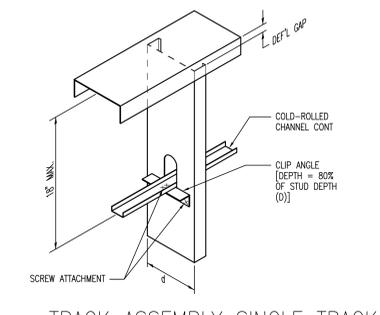
8 BOXED HEADER CONNECTION
SCALE: 1"=1'-0"



9 BOX HEADER ASSEMBLY
SCALE: NTS



10 SHEARWALL X-BRACING
SCALE: 1"=1'-0"



11 TRACK ASSEMBLY SINGLE TRACK WITH COLD-ROLLED CHANNEL
SCALE: 1"=1'-0"



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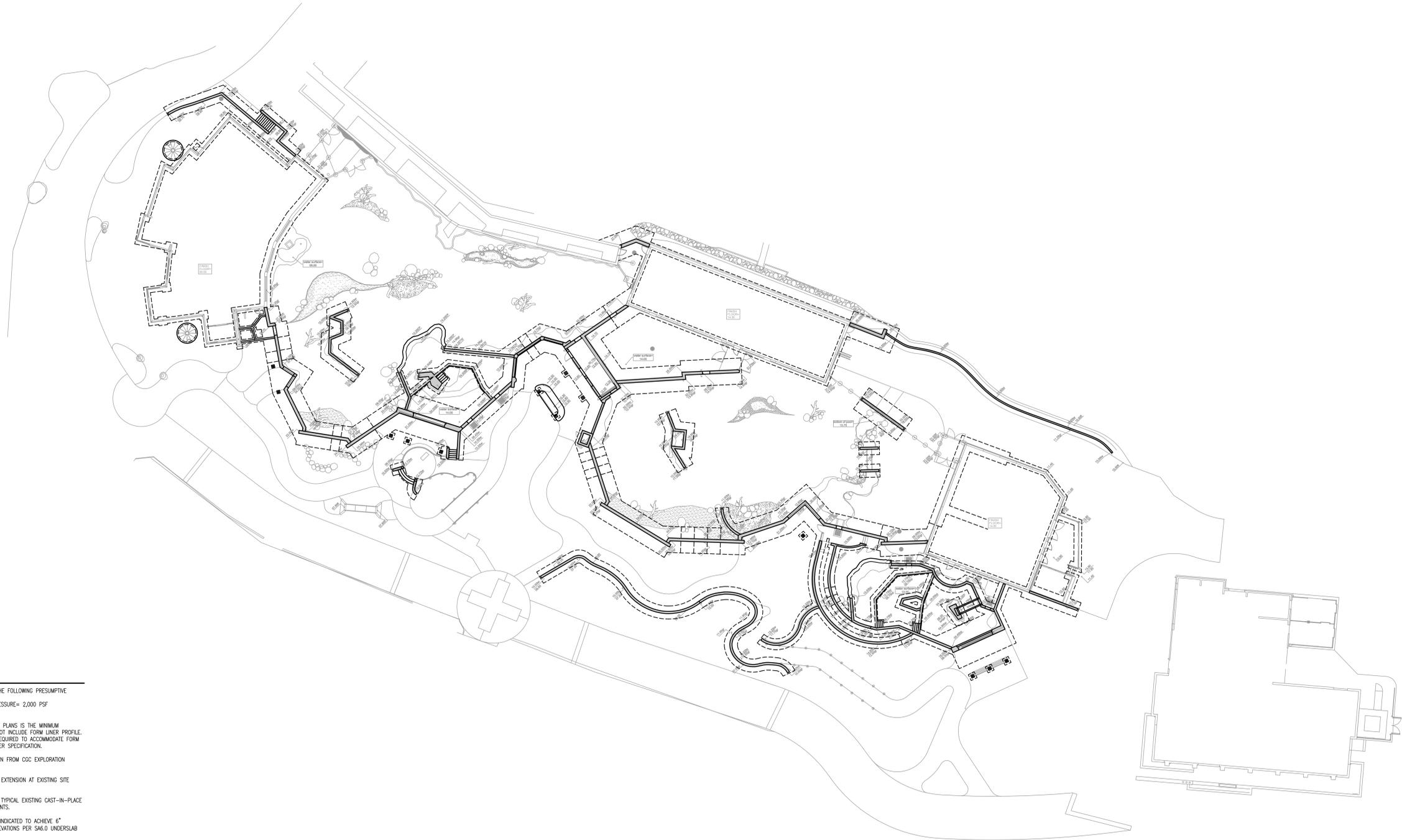
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drawn: MP2
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LIGHT GAGE STEEL
DETAILS

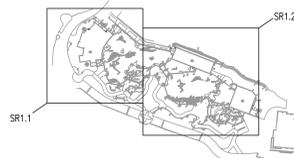
S11.1



PLAN NOTES

1. RETAINING WALLS SIZED USING THE FOLLOWING PRESUMPTIVE PARAMETERS:
 ALLOWABLE BEARING PRESSURE = 2,000 PSF
 EFP (ACTIVE) = 30 PSF
2. WALL THICKNESS SHOWN ON THE PLANS IS THE MINIMUM THICKNESS REQUIRED & DOES NOT INCLUDE FORM LINER PROFILE. INCREASE WALL THICKNESS AS REQUIRED TO ACCOMMODATE FORM LINER. SEE ARCH FOR FORM LINER SPECIFICATION.
3. GEOTECHNICAL INFORMATION TAKEN FROM CGC EXPLORATION REPORT. SEE SO.1.
4. SEE SHEET S7.4 DETAIL 11 FOR EXTENSION AT EXISTING SITE RETAINING WALLS.
5. SEE SHEET S7.4 DETAIL 12 FOR TYPICAL EXISTING CAST-IN-PLACE WALL OPENING INFILL REQUIREMENTS.
6. THICKEN FOOTING IN LOCATIONS INDICATED TO ACHIEVE 6" CONCRETE BELOW FLOW LINE ELEVATIONS PER S46.0 UNDERSLAB DRAINAGE PLAN.
7. SEE SHEET S7.5 DETAILS 15 & 16 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS, UNLESS NOTED OTHERWISE.
8. REFERENCE SITE ARCH FOR ALL WALL OPENING LOCATIONS & SIZES.
9. SEE SHEET S7.4 DETAIL 1 FOR CONTROL JOINT & EXPANSION JOINT REQUIREMENTS.
10. SEE SHEET S7.1 DETAILS 2& 3 FOR FOOTING & WALL CORNER REINFORCING.
11. SEE SHEET S7.6 DETAIL 4 FOR REINFORCEMENT AT POOL LEVEL SENSOR.

KEY PLAN



1
SR1.0 SCALE: 1"=20'-0"



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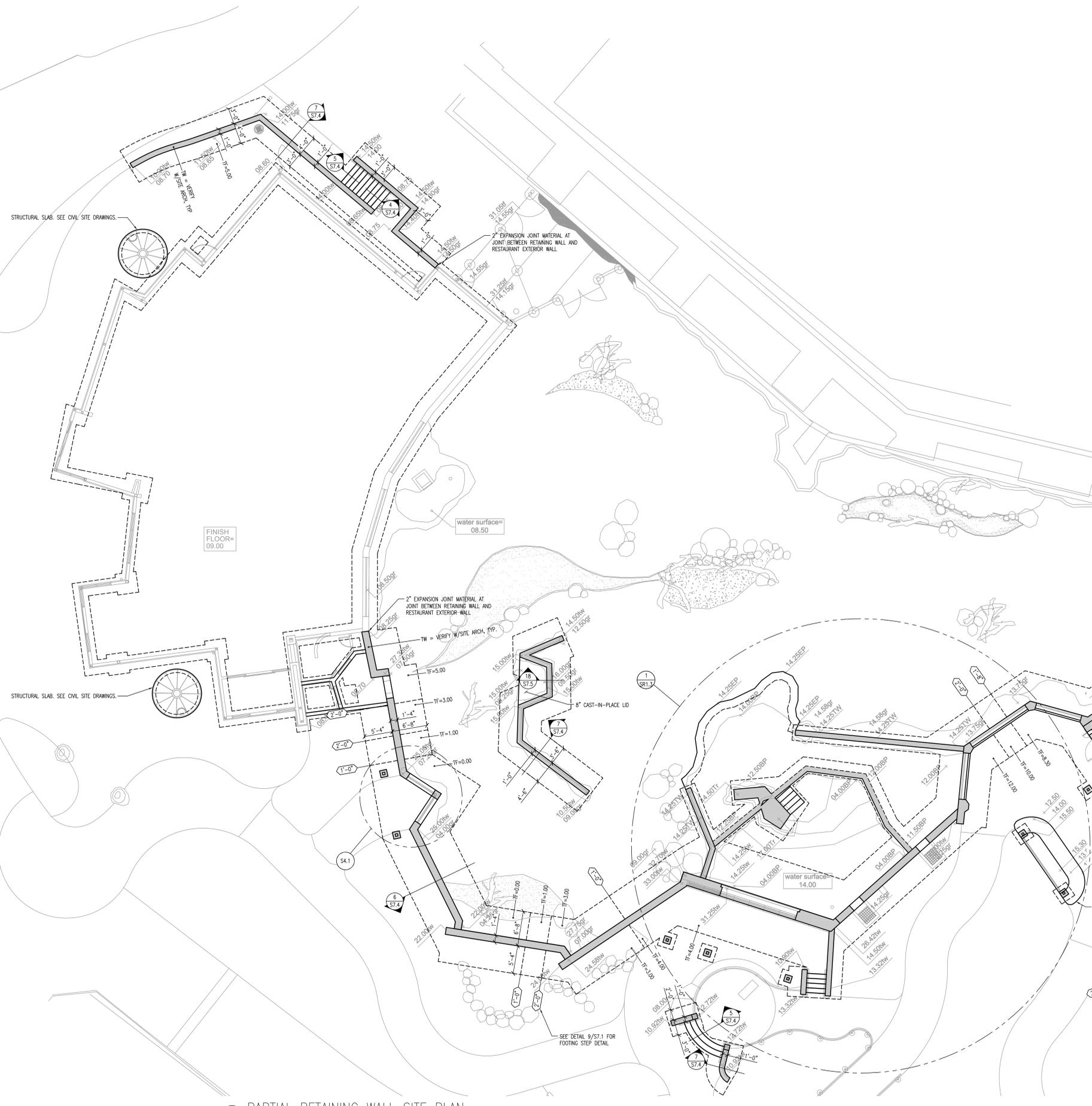
checked: MP2

OVERALL RETAINING WALL
 SITE PLAN

SR1.0

PLAN NOTES

- RETAINING WALLS SIZED USING THE FOLLOWING PRESUMPTIVE PARAMETERS:
ALLOWABLE BEARING PRESSURE = 2,000 PSF
ETP (ACTIVE) = 30 PSF
- WALL THICKNESS SHOWN ON THE PLANS IS THE MINIMUM THICKNESS REQUIRED & DOES NOT INCLUDE FORM LINER PROFILE. INCREASE WALL THICKNESS AS REQUIRED TO ACCOMMODATE FORM LINER. SEE ARCH FOR FORM LINER SPECIFICATION.
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- SEE SHEET S7.4 DETAIL 11 FOR EXTENSION AT EXISTING SITE RETAINING WALLS.
- SEE SHEET S7.4 DETAIL 12 FOR TYPICAL EXISTING CAST-IN-PLACE WALL OPENING INFILL REQUIREMENTS.
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- SEE SHEET S7.5 DETAILS 15 & 16 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS, UNLESS NOTED OTHERWISE.
- REFERENCE SITE ARCH FOR ALL WALL OPENING LOCATIONS & SIZES.
- SEE SHEET S7.4 DETAIL 1 FOR CONTROL JOINT & EXPANSION JOINT REQUIREMENTS.
- SEE SHEET S7.1 DETAILS 2& 3 FOR FOOTING & WALL CORNER REINFORCING.
- SEE SHEET S7.6 DETAIL 4 FOR REINFORCEMENT AT POOL LEVEL SENSOR.



1 PARTIAL RETAINING WALL SITE PLAN
SCALE: 1/8" = 1'-0"



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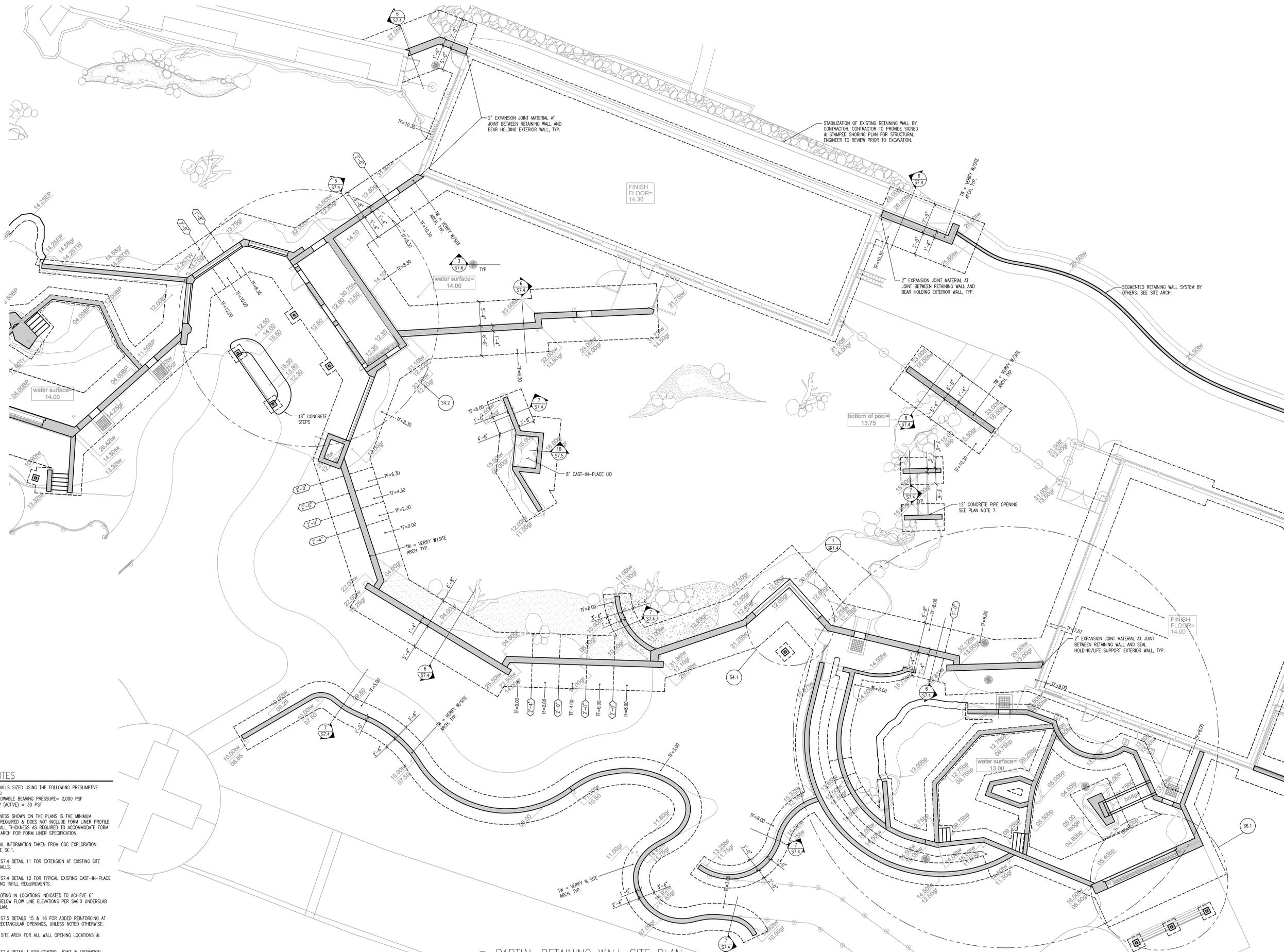
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RFB No. 313086
Henry Vilas Zoo - County of Dane
Department of Public Works
702 S Randall Ave
Madison, Wisconsin

PRINTS ISSUED
07.26.2013 - Schematic Design
08.23.2013 - Design Development
09.23.2013 - 85% CD's
10.07.2013 - Pricing Set
10.21.2013 - 95% CD's
11.13.2013 - Bid Documents

WDM No. 13046
drawn: MP2
checked: MP2

RETAINING WALL
PARTIAL SITE PLAN

SR1.1



- PLAN NOTES**
- RETAINING WALLS SIZED USING THE FOLLOWING PRESUMPTIVE PARAMETERS:
ALLOWABLE BEARING PRESSURE = 2,000 PSF
EFT (ACTIVE) = 30 PSF
 - WALL THICKNESS SHOWN ON THE PLANS IS THE MINIMUM THICKNESS REQUIRED & DOES NOT INCLUDE FORM LINER PROFILE. INCREASE WALL THICKNESS AS REQUIRED TO ACCOMMODATE FORM LINER. SEE ARCH FOR FORM LINER SPECIFICATION.
 - GEOTECHNICAL INFORMATION TAKEN FROM CGC EXPLORATION REPORT. SEE SO.1.
 - SEE SHEET S7.4 DETAIL 11 FOR EXTENSION AT EXISTING SITE RETAINING WALLS.
 - SEE SHEET S7.4 DETAIL 12 FOR TYPICAL EXISTING CAST-IN-PLACE WALL OPENING INFILL REQUIREMENTS.
 - THICKEN FOOTING IN LOCATIONS INDICATED TO ACHIEVE 6" CONCRETE BELOW FLOW LINE ELEVATIONS PER S46.0 UNDERSLAB DRAINAGE PLAN.
 - SEE SHEET S7.5 DETAILS 15 & 16 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS, UNLESS NOTED OTHERWISE.
 - REFERENCE SITE ARCH FOR ALL WALL OPENING LOCATIONS & SIZES.
 - SEE SHEET S7.4 DETAIL 1 FOR CONTROL JOINT & EXPANSION JOINT REQUIREMENTS.
 - SEE SHEET S7.1 DETAILS 2 & 3 FOR FOOTING & WALL CORNER REINFORCING.
 - SEE SHEET S7.6 DETAIL 4 FOR REINFORCEMENT AT POOL LEVEL SENSOR.

1 PARTIAL RETAINING WALL SITE PLAN
SCALE: 1/8" = 1'-0"

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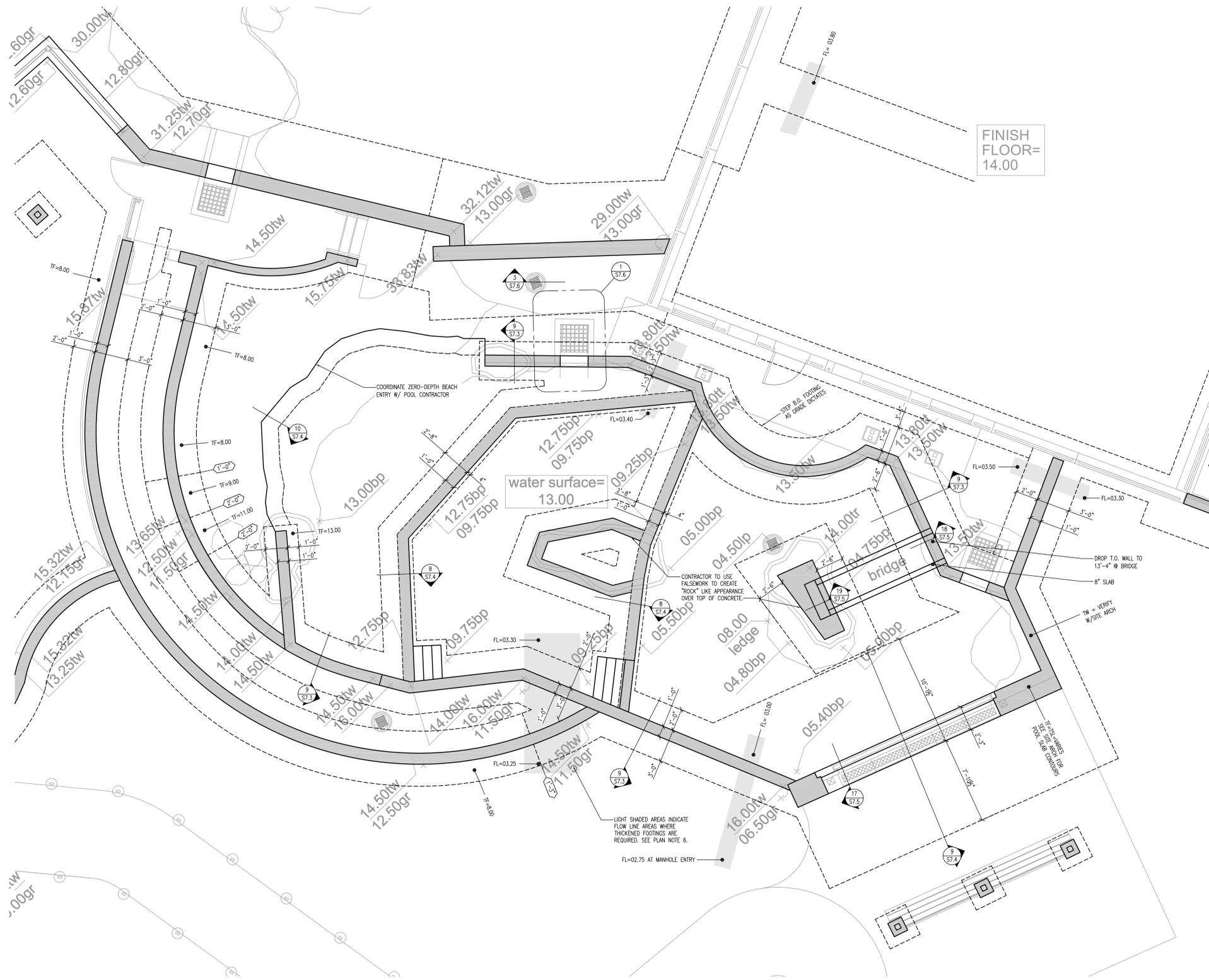
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checked: MP2

RETAINING WALL
PARTIAL SITE PLAN

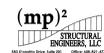
SR1.2



PLAN NOTES

1. RETAINING WALLS SIZED USING THE FOLLOWING PRESUMPTIVE PARAMETERS:
 ALLOWABLE BEARING PRESSURE = 2,000 PSF
 ETP (ACTIVE) = 30 PSF
2. WALL THICKNESS SHOWN ON THE PLANS IS THE MINIMUM THICKNESS REQUIRED & DOES NOT INCLUDE FORM LINER PROFILE. INCREASE WALL THICKNESS AS REQUIRED TO ACCOMMODATE FORM LINER. SEE ARCH FOR FORM LINER SPECIFICATION.
3. GEOTECHNICAL INFORMATION TAKEN FROM CGC EXPLORATION REPORT. SEE SO.1.
4. SEE SHEET S7.4 DETAIL 11 FOR EXTENSION AT EXISTING SITE RETAINING WALLS.
5. SEE SHEET S7.4 DETAIL 12 FOR TYPICAL EXISTING CAST-IN-PLACE WALL OPENING INFILL REQUIREMENTS.
6. THICKEN FOOTING IN LOCATIONS INDICATED TO ACHIEVE 6" CONCRETE BELOW FLOW LINE ELEVATIONS PER S46.0 UNDERSLAB DRAINAGE PLAN.
7. SEE SHEET S7.5 DETAILS 15 & 16 FOR ADDED REINFORCING AT ROUND & RECTANGULAR OPENINGS, UNLESS NOTED OTHERWISE.
8. REFERENCE SITE ARCH FOR ALL WALL OPENING LOCATIONS & SIZES.
9. SEE SHEET S7.4 DETAIL 1 FOR CONTROL JOINT & EXPANSION JOINT REQUIREMENTS.
10. SEE SHEET S7.1 DETAILS 2 & 3 FOR FOOTING & WALL CORNER REINFORCING.
11. SEE SHEET S7.6 DETAIL 4 FOR REINFORCEMENT AT POOL LEVEL SENSOR.

1 SEAL POOL WALL PLAN
 SCALE: 1/4" = 1'-0"



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SEAL POOL WALL PLAN

SR1.4