

1.0 GENERAL

1.1 ALL WORK IS TO BE PERFORMED IN A GOOD, WORKMANLIKE AND PROFESSIONAL MANNER.

1.2 ALL CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, LATEST EDITION, OR LOCAL BUILDING CODE REQUIREMENTS IF MORE STRINGENT.

1.3 THESE DRAWINGS DO NOT SHOW PROVISIONS FOR SAFETY DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THE REQUIRED BRACING, SHORING, AND SAFETY DEVICES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

2.0 COORDINATION

2.1 STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH, CIVIL, ELECTRICAL, HVAC, AND MECHANICAL DRAWINGS, INCLUDING VENDOR SUBMITTAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.

2.2 COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES AND OPENINGS THROUGH WALLS OR CONCRETE SLABS WITH, CIVIL, ELECTRICAL, HVAC, AND MECHANICAL, INCLUDING VENDOR SUBMITTAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.

2.3 THE CONTRACTOR SHALL SUBMIT COMPOSITE DRAWINGS INDICATING ALL FLOOR AND WALL OPENINGS AND PENETRATIONS THROUGH STRUCTURAL MEMBERS REQUIRED TO ACCOMMODATE ALL OTHER WORK. THE CONTRACTOR SHALL FOLLOW THE TYPICAL DETAILS AT OPENINGS AND SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW.

2.4 ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS ARE TO BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE WORK PROCEEDS, INCLUDING ORDERING AND FABRICATING MATERIALS.

2.5 INDEPENDENT TESTING OF MATERIALS SHALL BE PROVIDED AS DEFINED IN PROJECT SPECIFICATIONS. IN GENERAL, PROJECT INVOLVES THE FOLLOWING:

- A. SOIL/FILL COMPACTION & BEARING.
- B. C.I.P., PRE-CAST & PRE-STRESSED CONCRETE.
- C. MASONRY.
- D. STEEL.

2.6 IF COORDINATION OF INFORMATION PRESENTED CONFLICTS w/ THE PROJECT SPECIFICATIONS, THE DRAWINGS WILL TAKE PRECEDENCE.

2.7 IN GENERAL CALL-OUTS ARE FOR NEW CONSTRUCTION U.N.O.. EXISTING CONSTRUCTION CALL-OUTS, ELEVATIONS AND DIMENSIONS OF EXISTING STRUCTURES ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED BY MANATEE COUNTY.

2.8 THE (*) SYMBOL ON INDIVIDUAL DIMENSIONS INDICATES DIMENSION TO BE VERIFIED EITHER BY FIELD MEASUREMENT FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.

2.9 EQUIPMENT ANCHOR BOLT SIZES, TYPES AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.

2.10 IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE ENGINEER.

3.0 FOUNDATIONS

3.1 DESIGN ALLOWABLE SOIL BEARING PRESSURE – SUPPORTED ON PILES IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AS PREPARED BY DRIGGERS ENGINEERING SERVICES, INC. (PROJECT No. DES147525, DATED APRIL 14, 2015 AND SEPTEMBER 4, 2015). THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THIS VALUE PRIOR TO FOUNDATION CONSTRUCTION. IN AREAS WHERE THE SOIL DOES NOT YIELD THIS BEARING STRESS VALUE, ADJUSTMENT IN THE FOOTING DEPTHS AND FOUNDATION DIMENSION MAY BE MADE BY THE ENGINEER BEFORE WORK PROCEEDS. CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY SUCH ADJUSTMENTS.

3.2 PREPARE THE EXISTING SUBGRADE IN ACCORDANCE w/ THE PROJECT GEOTECHNICAL REPORT AS PREPARED BY DRIGGERS ENGINEERING SERVICES, INC. (PROJECT No. DES147525, DATED APRIL 14, 2015 AND SEPTEMBER 4, 2015). IN THE EVENT UNUSUAL SOIL CONDITIONS ARE UNCOVERED, INCLUDING CONDITIONS THAT DEViate FROM THOSE DESCRIBED IN THE PROJECT GEOTECHNICAL REPORT, NOTIFY THE OWNER AND ENGINEER PRIOR TO FOUNDATION CONSTRUCTION FOR INSTRUCTIONS HOW TO PROCEED. ADJUSTMENT IN THE FOOTING DEPTHS AND GENERAL FOUNDATION CONSTRUCTION MAY BE MADE BY THE ENGINEER BEFORE WORK PROCEEDS. CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY SUCH ADJUSTMENTS.

3.3 FOOTING & BASE SLAB EXCAVATIONS, FORMS AND REINFORCEMENT SHALL BE REVIEWED BY AN OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.

3.4 FOOTING & BASE SLAB ELEVATIONS SHALL NOT BE RAISED OR LOWERED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

3.5 ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED BEFORE PLACEMENT OF CONCRETE. NO CONCRETE OR CONCRETE FILL SHALL BE PLACED IN STANDING WATER. WATER ACCUMULATION SHALL BE PUMPED OUT.

3.6 ALL FILL BELOW FOUNDATIONS SHALL BE SELECT MATERIAL FREE FROM ROOTS, TRASH, WOOD SCRAPs, AND OTHER EXTRANEOUS MATERIALS. PLACE FILL IN LIFTS NOT EXCEEDING THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.

3.7 ALL FOOTINGS SHALL BE CENTERED UNDER THE SUPPORTING MEMBER UNLESS NOTED OTHERWISE.

3.8 CONSTRUCTION JOINTS IN SLABS, WALLS & FOOTINGS SHALL BE MADE AT LOCATIONS SHOWN ON DRAWINGS.

3.9 ANCHOR BOLTS SHALL BE SET BY MEANS OF TEMPLATE. "FLOATING" ANCHOR BOLTS INTO PLACE IS PROHIBITED.

3.10 CONTRACTOR IS TO VERIFY THE ELEVATION AND LOCATION OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. UTILITY LINES DAMAGED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IF UNDOCUMENTED UTILITY LINES ARE ENCOUNTERED WHEN EXCAVATING, THE CONTRACTOR IS TO CEASE ALL EXCAVATION ACTIVITY UNTIL THE ENGINEER AND OWNER ARE NOTIFIED AND INSTRUCTIONS ARE PROVIDED ABOUT HOW TO PROCEED.

3.11 THE CONTRACTOR SHALL OBTAIN THE OWNER'S PERMISSION BEFORE ENCASING OR BACK FILLING AROUND ANY EXISTING UNDERGROUND STRUCTURE, PIPING, ELECTRICAL, OR OTHER UNDERGROUND WORK.

4.0 REINFORCING STEEL

4.1 BARS SHALL BE ROLLED FROM NEW BILLET-STEEL OF DOMESTIC MANUFACTURE CONFORMING TO "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT," ASTM A615, GRADE 60 AND SUPPLEMENTARY REQUIREMENT S-1.

4.2 DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL," LATEST PUBLICATION.

4.3 REINFORCING STEEL IN PLACE SHALL BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.

4.4 WELDED WIRE FABRIC SHALL CONFORM TO "STANDARD SPECIFICATION FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT," ASTM A185.

4.5 PLACE WELDED WIRE FABRIC AT CENTER OF SLABS-ON-GRADE AND ELEVATED SLAB TOPPINGS OVER METAL DECK, UNLESS NOTED OTHERWISE.

4.6 PROVIDE BARS AT CORNERS AND INTERSECTIONS OF WALLS & FOOTINGS OF THE SAME NUMBER AND SIZE AS LONGITUDINAL BARS, U.N.O. ON THE DRAWINGS.

4.7 FABRICATE CONTINUOUS BARS IN WALLS & FOOTINGS TO THE LONGEST PRACTICABLE LENGTHS.

4.8 REINFORCING STEEL SHALL NOT BE BENT AFTER BEING PARTIALLY EMBEDDED IN HARDENED CONCRETE.

4.9 BARS SHALL BE COLD BENT AND SHALL NOT BE HEATED FOR ANY REASON.

4.10 REINFORCING BARS SHALL NOT BE WELDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

4.11 REFERENCE DRAWINGS FOR REQUIREMENTS FOR LAP SPlicing REINFORCING STEEL IN CONCRETE. ALL "LCS" SHALL CONFORM TO CLASS B SPLICE CRITERIA.

4.12 LAP SPliced BARS IN CONCRETE ARE TO BE WIRE TIED.

4.13 LAP SPliced BARS IN MASONRY ARE TO BE NO FARTHER APART THAN 8".

5.0 CONCRETE

5.1 IN GENERAL, CONCRETE SHALL DEVELOP 3,000 TO 4,500 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. REFERENCE "DESIGN CRITERIA" THIS DWG. & PROJECT SPECIFICATIONS, FOR APPLICATION & SPECIFIC CONCRETE MIX DESIGN REQUIREMENTS.

5.2 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318 & TO "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES", ACI 350 (LATEST EDITIONS).

5.3 PLACE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN EDGES OF SLABS AND VERTICAL SURFACES UNLESS NOTED OTHERWISE.

5.4 PROVIDE CONSTRUCTION OR CONTROL JOINTS IN SLABS & WALLS AT LOCATIONS SHOWN ON DRAWINGS. AT OFFSETS AND CHANGES IN DIRECTION AND AT THIRTY (30) FEET MAXIMUM U.N.O.. GENERAL CONTRACTOR TO PROVIDE CONSTRUCTION JOINT LAYOUT PLAN PER THE PROJECT SPECIFICATIONS PRIOR TO CONSTRUCTION, INCLUDING ORDERING & FABRICATING MATERIALS.

5.5 CHAMFER EXPOSED EDGES OF CONCRETE 3/4 INCH, UNLESS NOTED OTHERWISE.

5.6 CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CURING OF ALL CONCRETE. CURING METHODS SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES" ACI 350 AND "STANDARD PRACTICE FOR CURING CONCRETE," ACI 308, LATEST EDITIONS.

5.7 UNLESS NOTED OTHERWISE DOWELS SHALL BE THE SAME NUMBER AND SIZE AS THE LARGEST VERTICAL BAR TO WHICH THEY ARE SPliced.

5.8 REFERENCE PROJECT SPECIFICATIONS FOR REQUIRED FINISHES.

5.9 CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR APPROVAL TO OWNER PRIOR TO FABRICATION. DO NOT FABRICATE REINFORCING PRIOR TO RECEIPT OF APPROVED SHOP DRAWINGS.

5.10 CONCRETE MIXES TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE. COMPRESSIVE STRENGTH TEST CYLINDERS TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE

THROUGHOUT CONCRETE CONSTRUCTION OF THE PROJECT.

5.11 ROUGHEN THE "BASE" CONCRETE POUR SURFACE TO A FULL AMPLITUDE OF 1/4" MINIMUM, WHERE NOTED ON THE CONSTRUCTION DRAWINGS.

5.12 CONCRETE ACCESSORIES AS FOLLOWS:

- a.) PREFORMED WATERSTOPS SHALL BE PVC IN ACCORDANCE w/ THE PROJECT SPECIFICATIONS.
 - b.) EXPANSIVE WATERSTOPS SHALL BE ADEKA ULTRA SEAL TYPE MC-2010M. THE WATERSTOPS CAN BE EITHER ADHERED TO THE CONCRETE WITH 3M-2141 BONDING ADHESIVE OR NAILED IN PLACE USING 1.5 INCH SS 316 CONCRETE NAILS 3 TO 6 INCHES APART.
 - c.) CAULK/SEALANT – SONOLASTIC (2) PART POLYSULFIDE.
 - d.) BONDING AGENT – SHALL BE STRUCTURAL EPOXY ADHESIVE CONFORMING TO ASTM C-881 TYPE I STRENGTH AND II, GRADE 2, CLASS B AND C WITH A MINIMUM BOND STRENGTH OF 1900 PSI.
- 1.) Sika ARMATEC 110 EpoCem.

5.13 CONCRETE COVER FOR REINFORCING:

- A.) UNFORMED SURFACES CAST AGAINST EARTH 3" MIN
- B.) ALL OTHER SURFACES, U.N.O. 2" MIN

6.0 GROUT

6.1 PROVIDE NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES & ELSEWHERE AS INDICATED ON DRAWINGS. NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107.

6.2 GROUT SHALL BE NON-METALLIC AND NON-STAINING AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi.

7.0 MASONRY

7.1 THE CONSTRUCTION OF MASONRY SHALL COMPLY WITH THE REQUIREMENTS OF ACI 530.1/ASCE8/TMS 602. SPECIAL ATTENTION SHALL BE GIVEN TO THE MOISTURE CONTENT AND WEATHER CONDITIONS DURING CONSTRUCTION. SEE THESE STRUCTURAL DRAWINGS FOR LOCATIONS OF VERTICAL CONTROL/EXPANSION JOINTS.

7.2 CONCRETE MASONRY UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90. UNITS ARE TO BE NORMAL WEIGHT UNLESS NOTED OTHERWISE.

7.2 REQUIRED COMPRESSIVE STRENGTH OF MASONRY ASSEMBLAGE, f_m, IS 1,800 psi (AVERAGE), UNLESS NOTED OTHERWISE ON THE DRAWINGS.

7.3 MORTAR SHALL CONFORM TO THE REQUIREMENTS OF ASTM C270 AND SHALL BE TYPE "S" w/ PORTLAND CEMENT (ASTM C150), MASONRY SAND (ASTM C144) AND HYDRATED LIME (ASTM C207). CALCIUM CHLORIDE IS PROHIBITED.

7.4 GROUT/CONCRETE FILL FOR HOLLOW MASONRY UNITS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 psi & IF CONCRETE, SHALL BE NORMAL WEIGHT PEA-GRAVEL CONCRETE.

7.5 JOINT REINFORCING: "LADDER/TRUSS TYPE" REFERENCE PROJECT SPECIFICATIONS.

7.6 JOINT ANCHORS: REFERENCE PROJECT SPECIFICATIONS.

7.7 WALL TO COLUMN TIES: REFERENCE PROJECT SPECIFICATIONS.

7.8 MASONRY CONSTRUCTION INCLUDING GROUT FILL, MORTAR AND HORIZONTAL & VERTICAL REINFORCING TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE THROUGHOUT MASONRY & CONCRETE CONSTRUCTION OF THE PROJECT.

8.0 STRUCTURAL STEEL

8.1 STEEL SHALL CONFORM TO "STANDARD SPECIFICATION FOR STRUCTURAL STEEL," ASTM A36 (F_y=36 ksi) FOR ANGLES, PLATES & CHANNELS. WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A572 (F_y=50ksi). HOLLOW STEEL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B (F_y=46 ksi). STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, (F_y=35 ksi).

8.2 STEEL WORK SHALL CONFORM TO "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC., (LATEST EDITION), INCLUDING ALL SUPPLEMENTS AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", (LATEST EDITION).

8.3 CONNECTION BOLTS SHALL BE 3/4 INCH DIAMETER CONFORMING TO "STANDARD SPECIFICATION FOR HIGH-STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS", ASTM A325, UNLESS NOTED OTHERWISE CONNECTIONS ARE BEARING TYPE WITH THREADS EXCLUDED FROM SHEAR PLANES (A325x).

8.4 WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY AWS D1.1 "STRUCTURAL WELDING CODE". WELDING SHALL BE PERFORMED BY CERTIFIED PERSONNEL WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TEST PRESCRIBED IN THE AWS "STRUCTURAL WELDING CODE". ELECTRODES SHALL CONFORM TO AWS 5.5, E70XX.

8.5 UNTELS SHALL BEAR EIGHT (8) INCHES MINIMUM ON MASONRY UNLESS NOTED OTHERWISE.

8.6 THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING, SHORING, AND CURING OF STEEL FRAMING AGAINST WIND, CONSTRUCTION LOADS, AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAMING.

8.7 ALL COPES, BLOCKS, CUTS, CUT-OFFS AND OTHER CUTTING OF STRUCTURAL MEMBERS SHALL HAVE ALL RE-ENTRANT CORNERS SHAPED, AND NOTCH-FREE TO A RADIUS OF AT LEAST 1/2 INCH. THE FILLET AND ITS CONTIGUOUS CUTS SHALL MEET WITHOUT OFFSET OR CUTTING

PAST THE POINT OF TANGENCY.

8.8 ANCHOR BOLTS SHALL BE TYPE 316 S.S. & SHALL BE HEADED w/ NUTS TACK WELDED TO BOLTS AS REQUIRED BY THE DRAWINGS. PROVIDE (2) NUTS AND WASHERS WITH EACH ANCHOR BOLT AT COLUMNS UNLESS NOTED OTHERWISE.

8.9 OVERSIZED AND SLOTTED HOLES SHALL NOT BE USED FOR BOLTED CONNECTIONS ON THIS PROJECT EXCEPT AT LOCATIONS NOTED ON DRAWINGS.

8.10 SPlicing OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER, AS TO LOCATION AND TYPE OF SPLICE. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON THE SHOP DRAWINGS SHALL BE REPLACED.

8.11 PRE-GROUTING BASE PLATES IS NOT PERMITTED.

8.12 ALL HOLES IN STRUCTURAL STEEL ARE TO BE PUNCHED OR DRILLED. FLAME CUTTING OF STEEL IS STRICTLY PROHIBITED.

8.13 ALL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION.

8.14 IN GENERAL SHOP CONNECTIONS SHALL BE EITHER WELDED OR BOLTED AND FIELD CONNECTIONS SHALL BE BOLTED UNLESS NOTED OTHERWISE.

8.15 FABRICATOR/CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR OWNER/ENGINEER APPROVAL PRIOR TO FABRICATION. ALL SHOP DRAWINGS MAY BE EXPEDITED IF THE FABRICATOR ADHERES CLOSELY TO THE DETAILS, NOTES, AND INSTRUCTIONS, SHOWN ON THE DRAWINGS.

8.16 ALL GALVANIZED MATERIALS THAT ARE FIELD CUT, FIELD WELDED OR DAMAGED IN SURFACE FINISH SHALL BE CLEANED AND RE-COATED AS CALLED OUT IN THE PROJECT SPECIFICATIONS.

8.17 STRUCTURAL STEEL FRAMING & DECKING ERECTION TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE THROUGHOUT CONCRETE & STEEL CONSTRUCTION OF THE PROJECT.

9.0 ALUMINUM

9.1 ALUMINUM FABRICATION SHALL BE IN CONFORMANCE WITH THE ALUMINUM ASSOCIATION, INC. "SPECIFICATIONS FOR ALUMINUM STRUCTURES".

9.2 UNLESS NOTED OTHERWISE, MATERIALS SHALL BE:

- a. PLATE & SHEET – ASTM B209; 6061-T6, 6061-T651 ALLOY.
- b. EXTRUDED SHAPES – ASTM B221; 6061-T6, 6061-T651 ALLOY. PIPE SECTIONS ARE SCHEDULE 40 U.N.O..
- c. CASTINGS – ASTM B108; 214 ALLOY.
- d. BOLTS – ASTM 276; TYPE 316 STAINLESS STEEL.
- e. NUTS – ASTM 276; TYPE 316 STAINLESS STEEL.

9.3 ALUMINUM SHALL BE SEPARATED FROM DIRECT CONTACT WITH OTHER MATERIALS (STEEL, CONCRETE, ETC.) BY PRESSURE SENSITIVE TAPE, BITUMASTIC COATING, OR OTHER PROTECTIVE METHOD SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE.

9.4 CONNECTIONS SHALL HAVE A MINIMUM OF TWO 3/4" DIAMETER STAINLESS STEEL BOLTS.

9.5 WELDING ALUMINUM SHALL CONFORM TO AWS D1.2 & AWS A5.10 AND THE REQUIREMENTS OF THE ALUMINUM ASSOCIATIONS "ALUMINUM DESIGN MANUAL" (LATEST EDITION) TABLE 7.1-1 FOR WELD FILLERS FOR WROUGHT ALLOYS.

9.6 REFERENCE PROJECT SPECIFICATIONS FOR HANDRAIL & GUARDRAIL REQUIREMENTS.

10.0 PRE-CAST CONCRETE

10.1 PRE-CAST CONCRETE TO BE DESIGNED BY THE PRE-CAST CONCRETE ROOF PANEL MANUFACTURER UTILIZING "DESIGN LOADS" PROVIDED ON THE RESPECTIVE FACILITY STRUCTURAL DRAWINGS. COORDINATE w/ THE BUILDING, ELECTRICAL, HVAC, MECHANICAL PLUMBING AND VENDOR EQUIPMENT DRAWINGS FOR ADDITIONAL MATERIALS REQUIRED FOR CALCULATION OF THE DEAD LOADS, LIVE LOADS AND EQUIPMENT LOADS, THAT MAY BE SUSPENDED FROM THE UNDERSIDE OF THE ROOFING PANELS.

10.2. PRE-CAST CONCRETE ROOF PANEL MANUFACTURER IS REQUIRED TO SUBMIT DRAWINGS AND CALCULATION PACKAGES SEALED, SIGNED AND DATED BY AN ENGINEER CURRENTLY LICENSED BY THE STATE OF FLORIDA. FABRICATION OF THE PRE-CAST ROOF PANELS SHOULD NOT OCCUR UNTIL "FINAL" APPROVAL OF THE MANUFACTURER'S DRAWINGS AND CALCULATIONS SUBMITTALS.

10.3 REFERENCE STRUCTURAL DRAWINGS FOR PRE-CAST CONCRETE ROOF PANEL SYSTEM FOR BEARING ELEVATIONS, DIMENSIONS, ROOF OPENINGS, EAVE HEIGHTS & ROOF SLOPE REQUIREMENTS.

10.4 REFERENCE STRUCTURAL DRAWINGS FOR ALL INTERIOR AND EXTERIOR ROOF PANEL FINISH REQUIREMENTS.

10.5 PRE-CAST ROOF PANELS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

10.6 REFERENCE ALL PROJECT SPECIFICATIONS RELATED TO THE PRE-CAST CONCRETE ROOF PANELS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

10.7 CONSTRUCTION ACTIVITIES RELATED TO THE PRE-CAST ROOF PANEL SHALL BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE.

12.0 ABBREVIATIONS

12.1 THE FOLLOWING LIST OF ABBREVIATIONS IS NOT INTENDED TO REPRESENT ALL THOSE USED ON THE DRAWINGS, BUT TO SUPPLEMENT THE MORE COMMON ABBREVIATIONS USED.

- ADD'L = ADDITIONAL
- AL = ALUMINUM
- ALT. = ALTERNATE
- BLDG. = BUILDING
- BLK. = BLOCK
- BM. = BEAM
- B.O. = BOTTOM OF
- BRG. = BEARING
- C.I.P. = CAST-IN-PLACE
- C.J. = CONTRACTION JOINT
- CLR. = CLEAR
- CMU = CONC. MASONRY UNIT
- COL = COLUMN
- CONC. = CONCRETE
- CONN. = CONNECTION
- CONST. = CONSTRUCTION
- CONT. = CONTINUOUS
- COORD. = COORDINATE
- CTR. = CENTER
- CTR'D. = CENTERED
- DBL. = DOUBLE
- DIR. = DIRECTION
- DWG.'s. = DRAWINGS
- EA. = EACH
- EL. = ELEVATION
- E.O. = EDGE OF
- E.Q. EQUIP. = EQUIPMENT
- EXIST. = EXISTING
- EXP. = EXPANSION
- FLG. = FLANGE
- FDN. = FOUNDATION
- F.S. = FAR SIDE
- FT. = FEET
- FTG. = FOOTING
- GA. = GAGE
- GALV. = GALVANIZED
- HK. = HOOK
- H.P. = HIGH POINT
- I/F. = INSIDE FACE
- INFO. = INFORMATION
- INTR. = INTERIOR
- JST. = JOIST
- JT. = JOINT
- LCS = LIQUID CONTAINMENT STRUCTURES
- LLH = LONG LEG HORIZONTAL
- LLV = LONG LEG VERTICAL
- L.P. = LOW POINT
- LSL = LONG SLOTTED
- HRS. = MASONRY
- MAT'L. = MATERIAL
- MFG. = MANUFACTURER
- MIN. = MINIMUM
- MTL. = METAL
- NOM. = NOMINAL
- N.S. = NEAR SIDE
- N.T.S. = NOT TO SCALE
- O.C. = ON CENTER
- O/F. = OUTSIDE FACE
- O/H. = OVERHANG
- O/O. = OUT TO OUT
- OPNG. = OPENING
- OPP. = OPPOSITE
- ORIENT. = ORIENTATION
- PLCS. = PLACES
- P.P. = PUMP PAD
- RAD. = RADIUS
- REF. = REFERENCE
- REINF. = REINFORCING
- REQ'D. = REQUIRED
- RET. = RETAINING
- ROT. = ROTATE
- SIM. = SIMILAR
- SPA. = SPACED
- SPECS. = SPECIFICATIONS
- S.S. = STAINLESS STEEL
- STD. = STANDARD
- STL. = STEEL
- T&B. = TOP & BOTTOM
- T/D. = TURN DOWN
- THK. = THICK
- THK'D. = THICKENED
- T.O. = TOP OF
- T.O.S. = TOP OF SLAB
- TYP. = TYPICAL
- U.N.O. = UNLESS NOTED OTHERWISE
- XB. = CROSS BRACE
- VERT. = VERTICAL
- W.A. = WORK POINT

DESIGN LOADS:

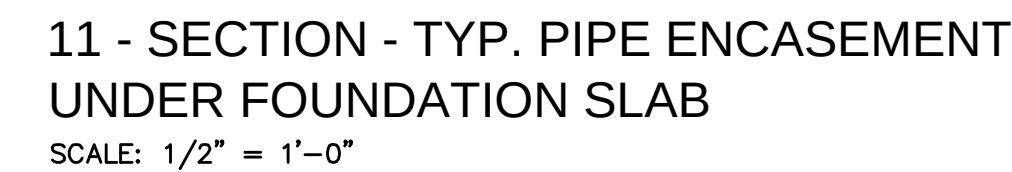
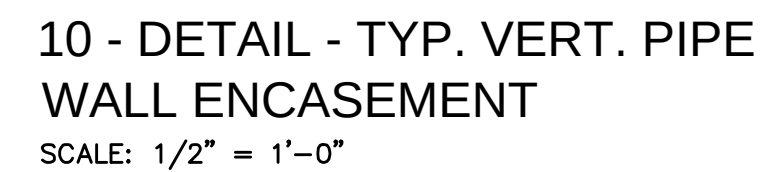
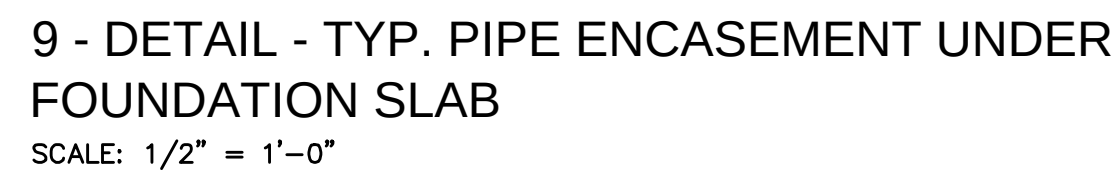
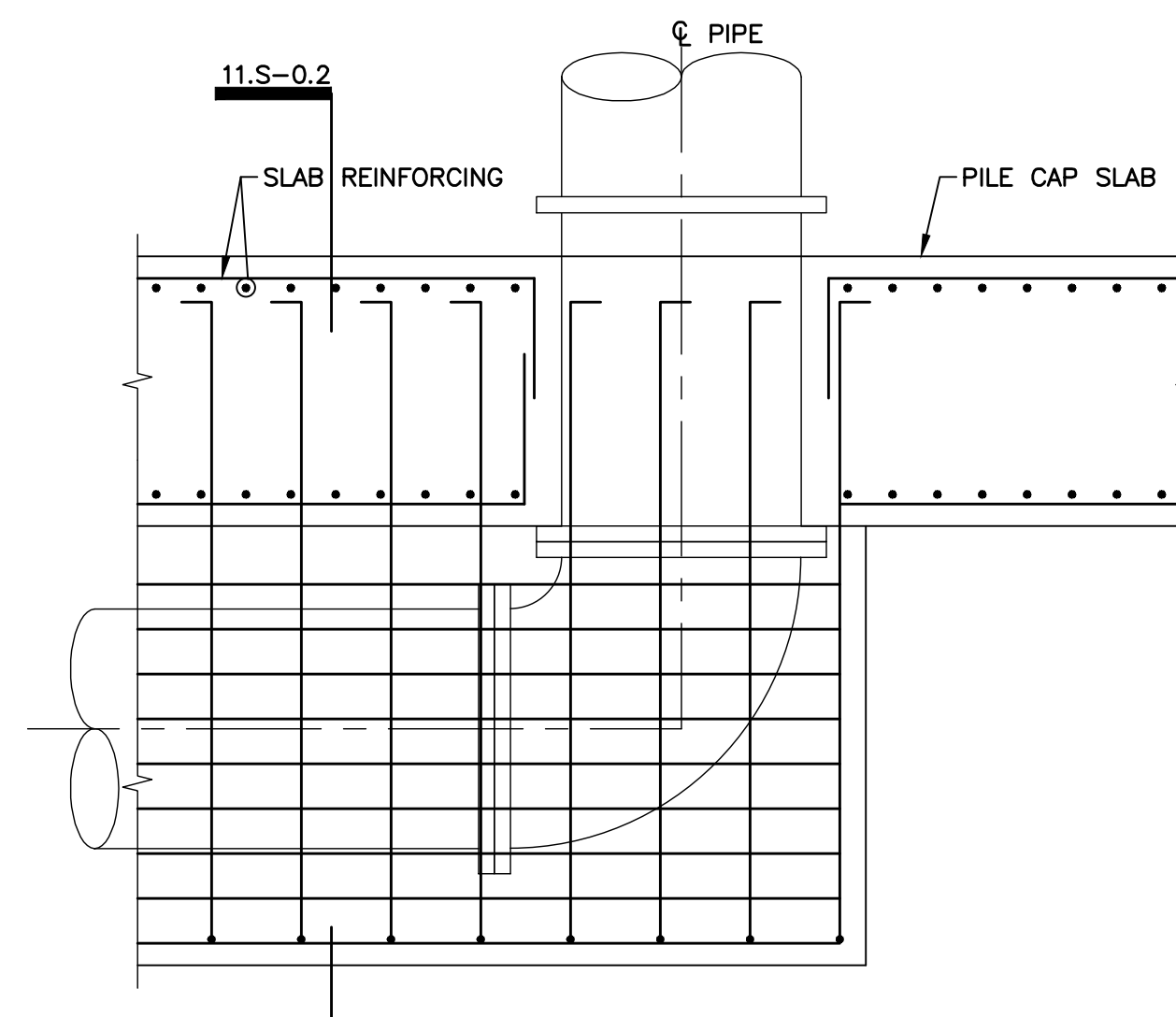
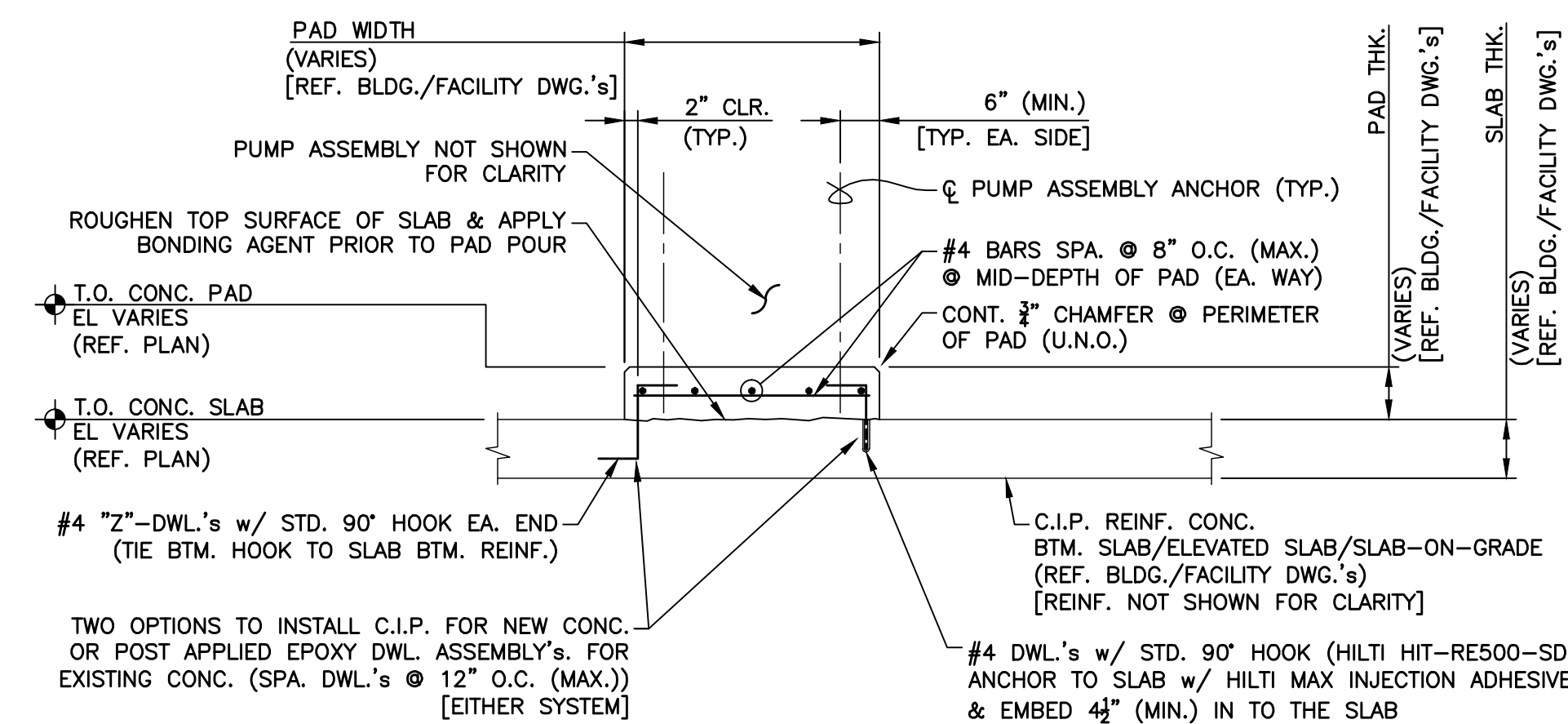
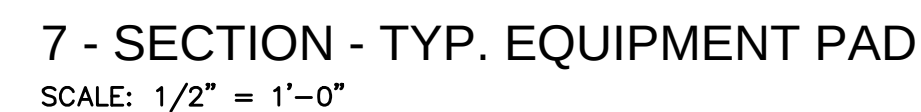
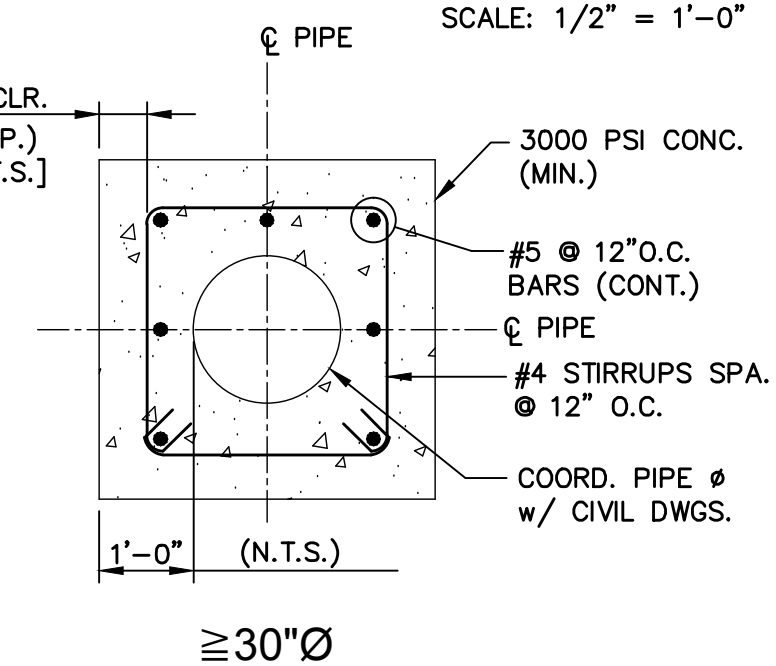
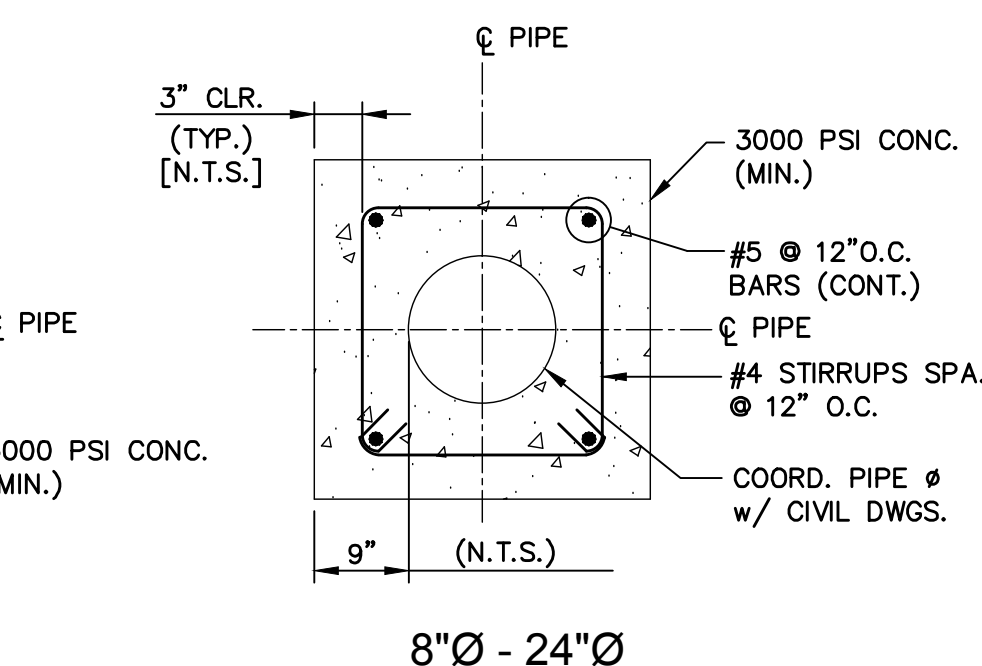
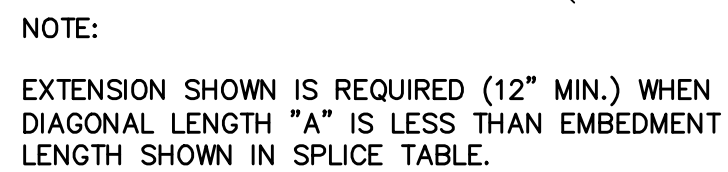
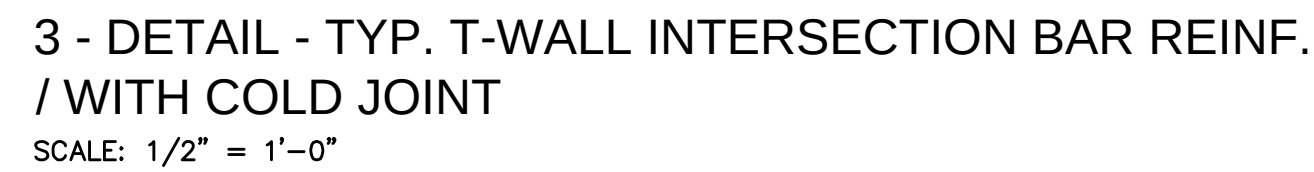
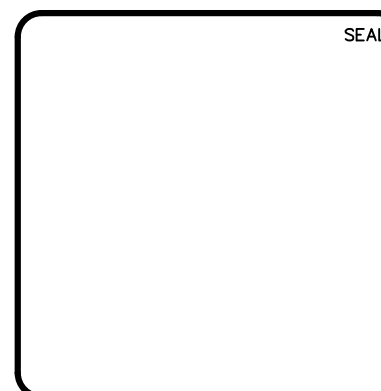
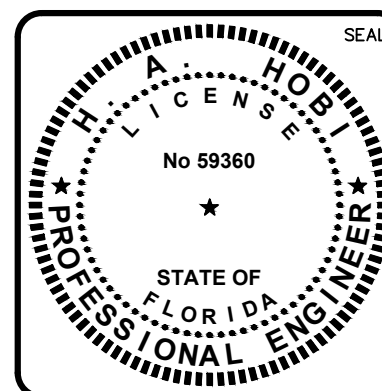
- 1. FLOOR LIVE LOAD 250 PSF
- 2. ROOF LIVE LOAD 30 PSF
- 3. STAIR, PLATFORMS AND WALKWAYS 100 PSF
- 4. WIND LOAD: A. ULTIMATE WIND SPEED 154 MPH
B. EXPOSURE CATEGOARY C
C. RISK CATEGORY III/IV
D. ENCLOSURE CLASSIFICATION: ENCLOSED
E. INTERNAL PRESSURE COEFFICIENT +/- 0.18
F. COMPONENTS AND CLADDING PRESSURE:
WALL ZONE 4: -59.29 PSF
WALL ZONE 5: -64.85 PSF
ROOF ZONE 1: -64.70 PSF
ROOF ZONE 2: -70.18 PSF
ROOF ZONE 3: -70.18 PSF
- 5. DESIGN IN ACCORDANCE WITH ASCE 7-10 AND 2010 FLORIDA BUILDING CODE.

DESIGN CRITERIA:

CONCRETE 28 DAY COMPRESSIVE STRENGTH: f'c = 4,500 psi
SLAB-ON-GRADE:----- f'c = 4,500 psi
EQUIPMENT PADS, PIPE ENCASEMENTS:----- f'c = 4,500 psi
WALLS OF LIQUID CONTAINMENT STRUCTURES (LCS):--- f'c = 4,500 psi
SLABS OF LCS:----- f'c = 4,500 psi
FOOTINGS:----- f'c = 4,500 psi
BELOW GRADE & RETAINING WALLS:----- f'c = 4,500 psi
SIDEWALK, DRIVEWAY, CURB & GUTTER:----- f'c = 3,000 psi
REINFORCING STEEL:----- ASTM A615, GRADE 60
WELDED WIRE FABRIC:----- ASTM A185
STRUCTURAL STEEL:----- REF. STRUCTURAL NOTE 8.1
ALUMINUM:----- REF. STRUCTURAL NOTE 9.2
ANCHOR BOLTS SHALL BE 3/4"Ø TYPE 316 S.S.:----- REF. STRUCTURAL NOTES 9.2.d
STEEL ELECTRODES SHALL CONFORM TO:----- AWS 5.5 E70XX
STEEL ELECTRODES SHALL CONFORM TO:----- AWS 5.5 E70XX
ALUMINUM WELD FILLERS ALLOYS SHALL
CONFORM TO:----- AWS A5.10 (REF. STRUCTURAL NOTE 9.5)
SOIL BEARING CAPACITY:----- REF. STRUCTURAL NOTE 3.1

LEGEND:

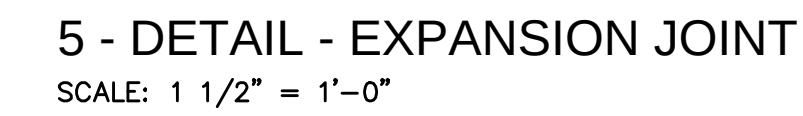
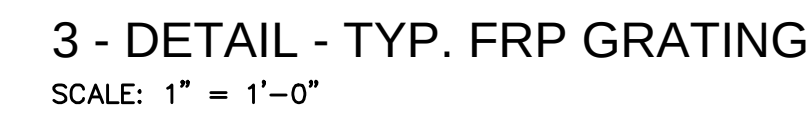
- ENLARGED PLAN AREA, DETAIL =
- CONC. MASONRY BLOCK =
- BRICK VENEER =
- CONC. WALL, PAD, ETC. =
- GROUT =
- GRATING =
- DETAIL OR SECTION NO./SHEET NO. REFERENCE =
- PROJECT NORTH =
- ELEVATION DATUM =
- ELEVATION NO./SHEET NO. REFERENCE =
- ELEVATIONS X'-X" (Y.YYY) = X'-X" = DISTANCE TO/FROM FACILITY REFERENCE EL. 0'-0" Y.YYY = EQUIVALENT SITE EL VERTICAL DATUM

[illegible]

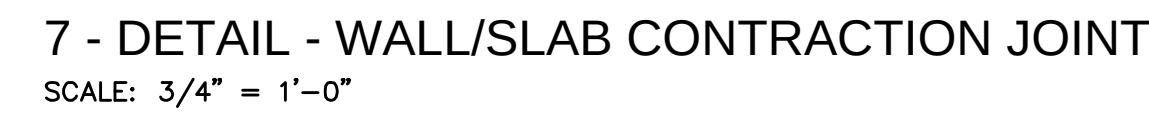
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

STRUCTURAL DETAILS
1 OF 7

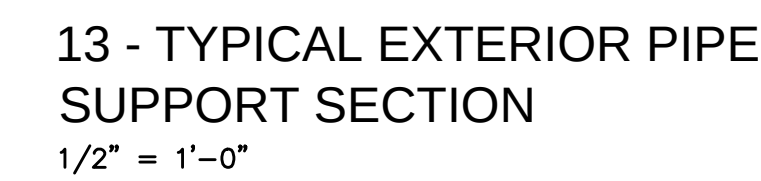
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DESIGNED HAH	VERTICAL:	
CHECKED JSL	NA	
PROJ. MGR. PJL		



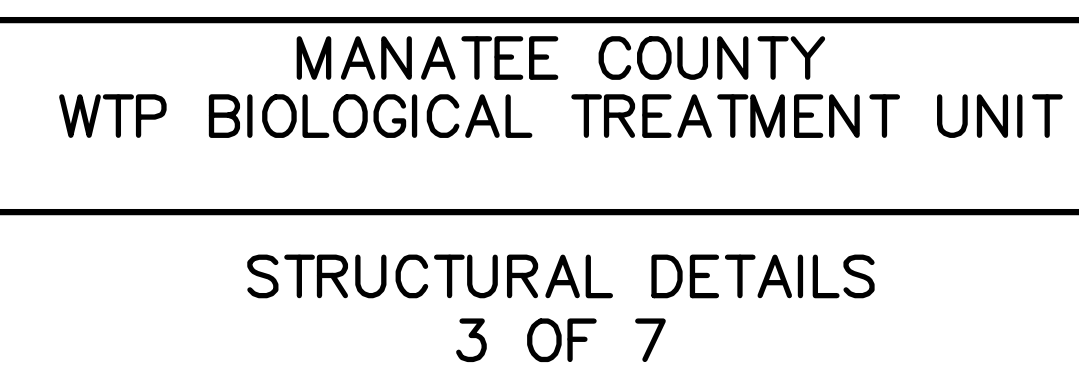
6 - DETAIL - TYP. WALL / FLOOR SLAB CONST. JOINT
SCALE: 1" = 1'-0"



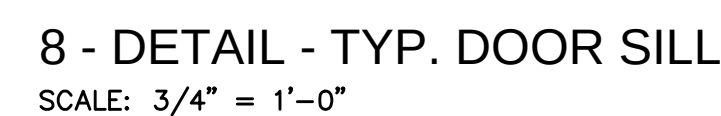
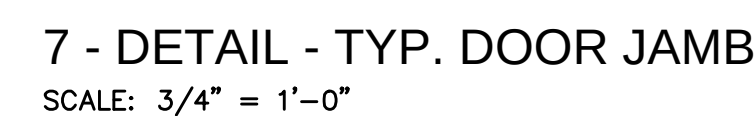
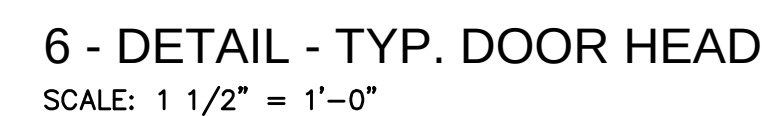
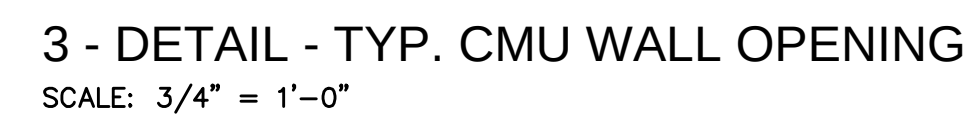
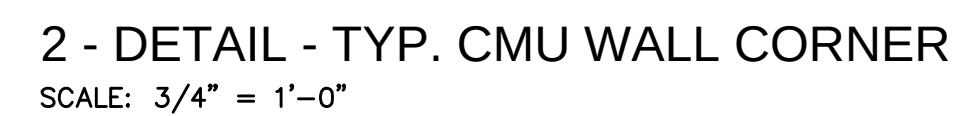
11 - TYPICAL ANCHOR BOLT DETAIL
N.T.S.



SEAL OF H. A. HOBBS
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 LICENSE NO. 59360



DATE: OCTOBER 2015		SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0167		HORIZONTAL: AS SHOWN VERTICAL: NA	S-0.4
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DESIGNED HAH			
CHECKED JSL			
PROJ. MGR. PJL			
STATUS:		REVISION	

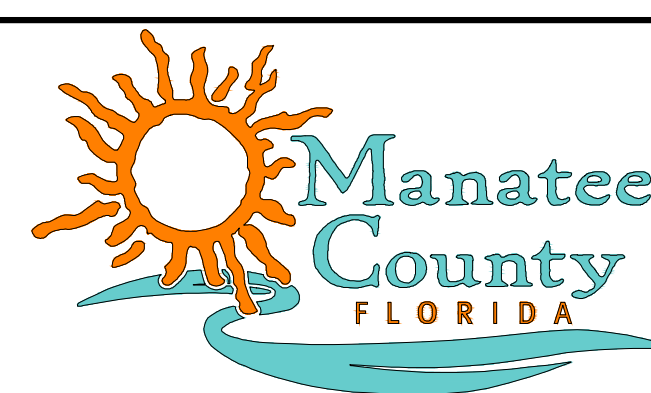
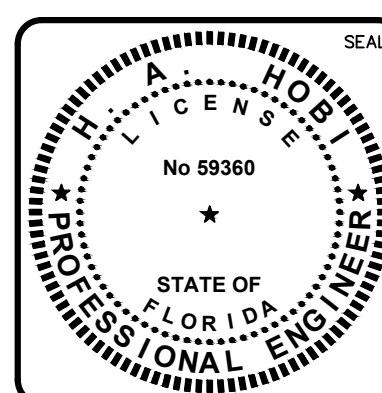


HW-1

- 1 SL-1HD 95" CLR SELECT PRODUCTS
CONTINUOUS HINGE
1 9957E0 4'x8' US28 299 STK, 304L STK
VON DUPRIN SVR 3-POINT EXIT DEVICE
1 CLOSER
1 315CR (2) 96" (1) 48"
PEMCO WEATHERSTRIP SET
1 THRS-4 SPECIAL-LITE THRESHOLD
1 345AV 48" - PEMCO SWEEP

HW-2

- 2 SL-1HD 95" CLR
SELECT PRODUCTS CONTINUOUS HINGE
2 9957E0 4'x8" US28 299 STK., 304L STK
VON DUPRIN SVR 3-POINT EXIT DEVICE
1 4954 .8' SP28 X 156 SP28
VON DUPRIN REMOVABLE MULLION
W/STABILIZER
1 CLOSER
1 315CR (5) 96"
PEMKO WEATHERSTRIP SET
1 THRS-4 SPECIAL-LITE THRESHOLD
2 345AV 48" - PEMKO SWEEP

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MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

STRUCTURAL DETAILS
4 OF 7

DATE:	OCTOBER 2015
MCE PROJ. #	1024-0167
DRAWN	JZM
DESIGNED	HAH
CHECKED	JSL
PROJ. MGR.	PJL

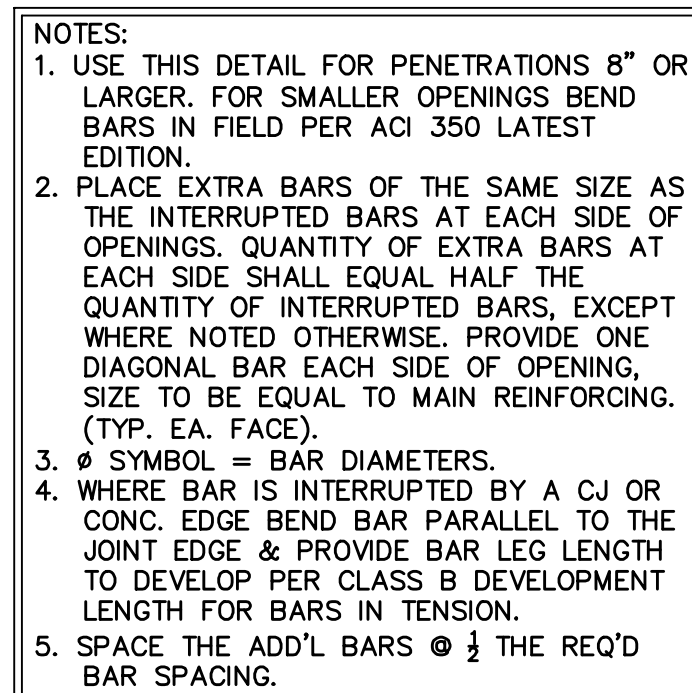
STATUS:

ISSUE FOR BID

SCALE
HORIZONTAL:
AS SHOWN
VERTICAL:
NA

0.5

VISION



WALL

FINISHED GRADE ELEV. VARIES

CONDUIT DUCTBANK

CONDUITS

FOR REINF. SEE STRUCTURAL DRAWINGS

SLAB

2" CL (TYP)

#5 @ 12"

#5 @ 12" L

AT WALL

NOTES:

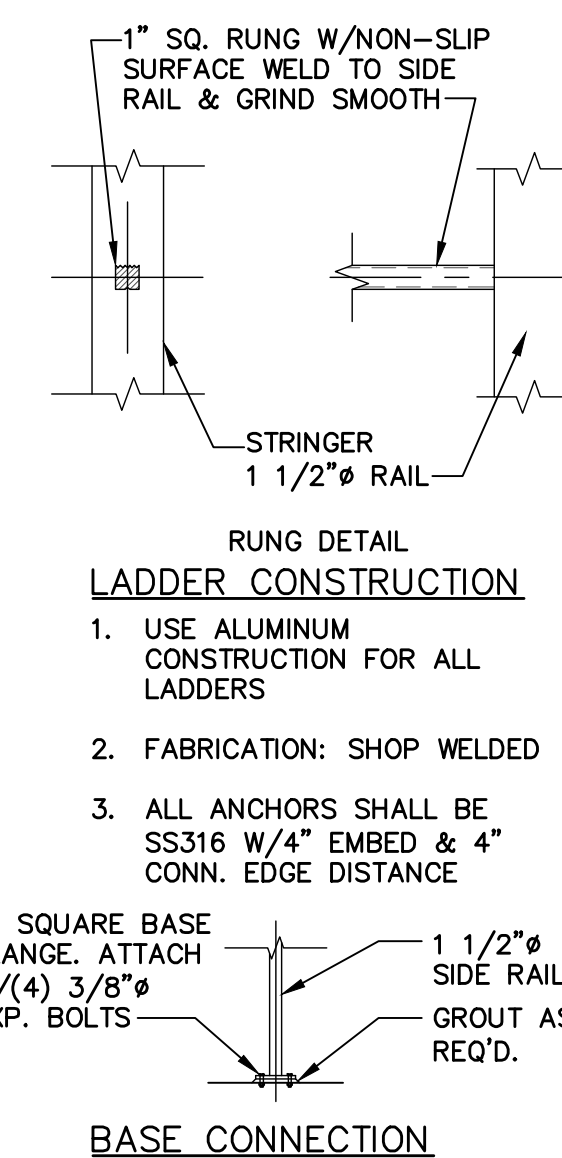
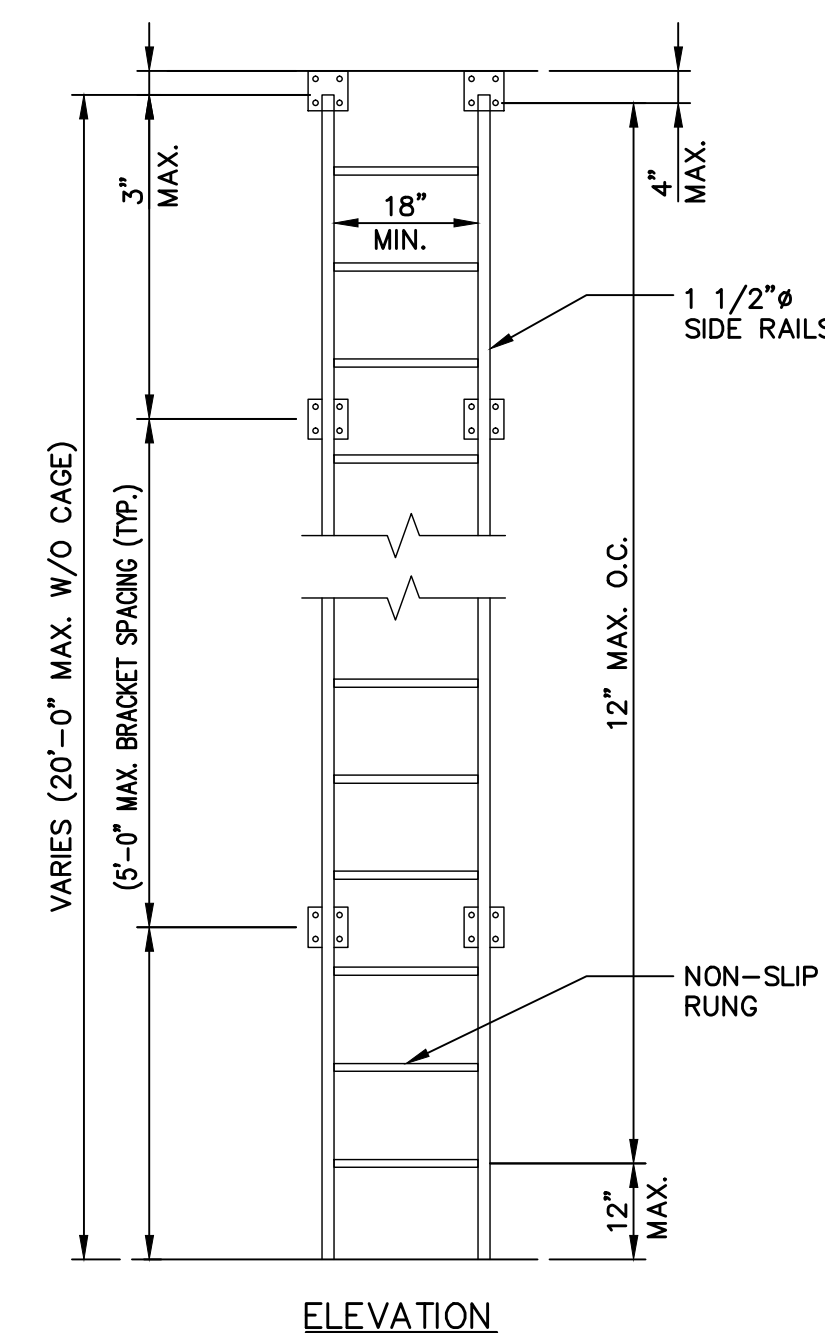
- * INDICATES DIMENSIONS TO BE DETERMINED BY EQUIPMENT FURNISHED.
- D = PIPE OR CONDUIT O.D.

IN SLAB

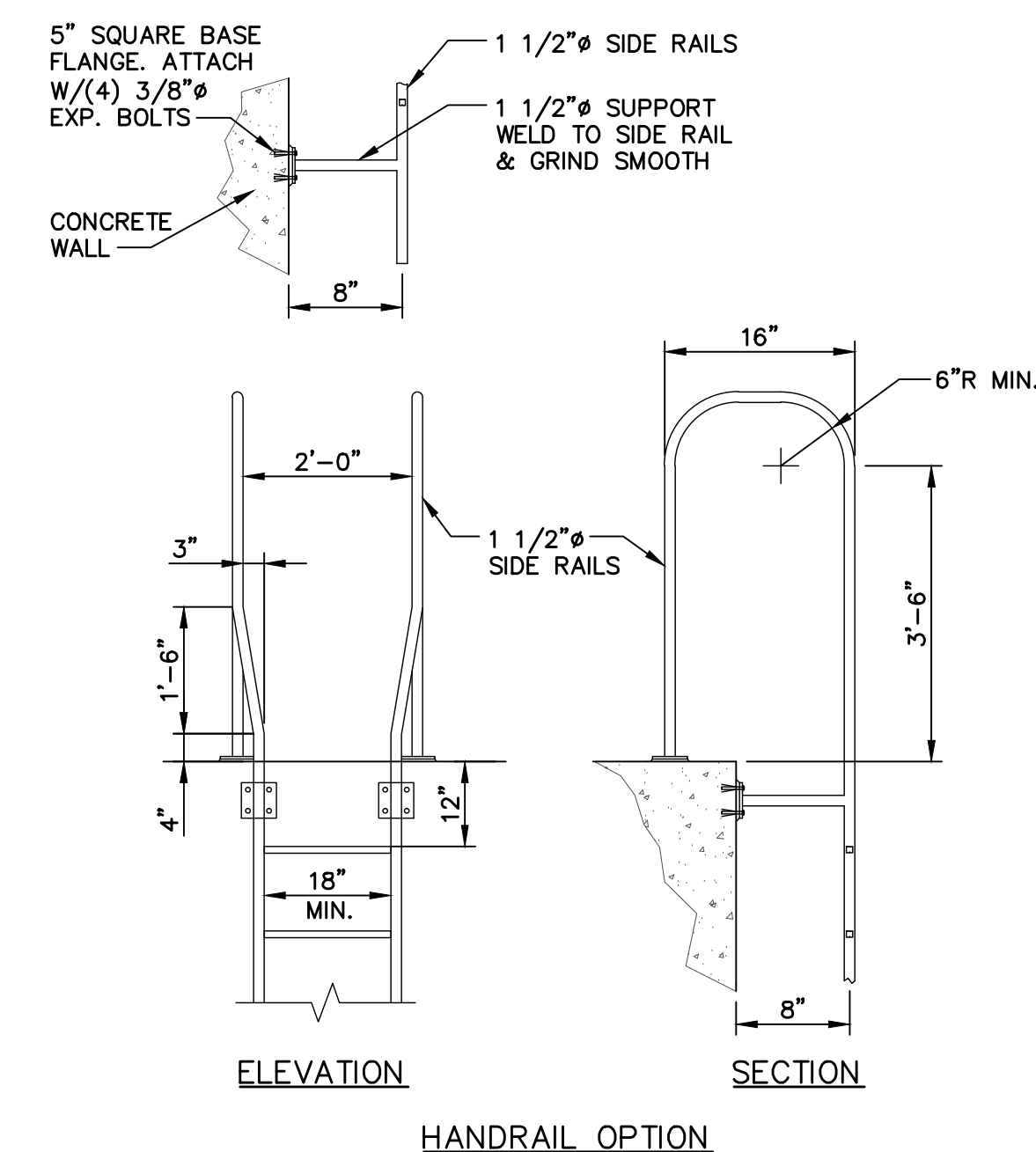
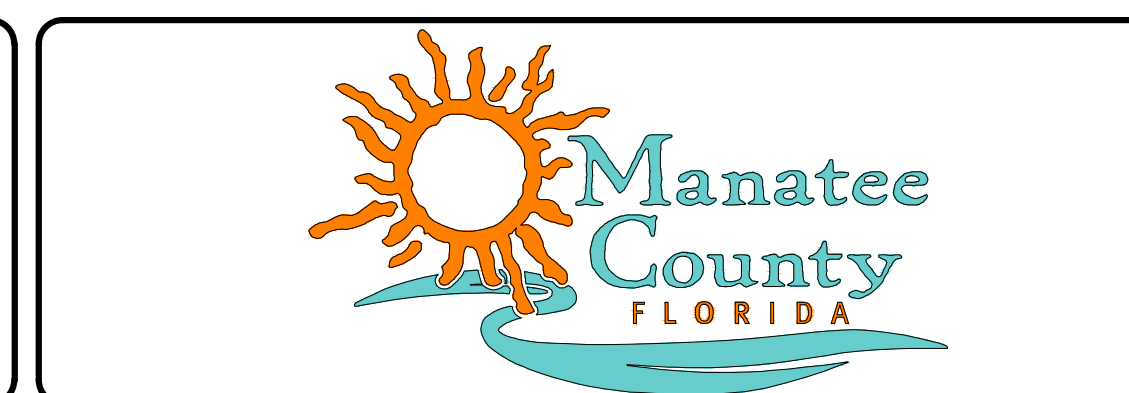
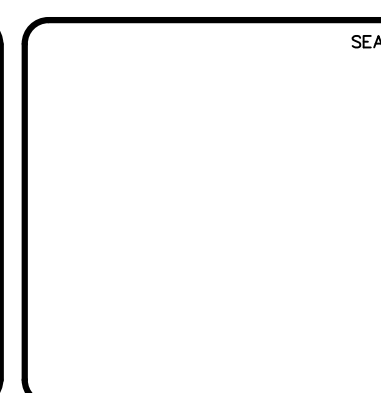
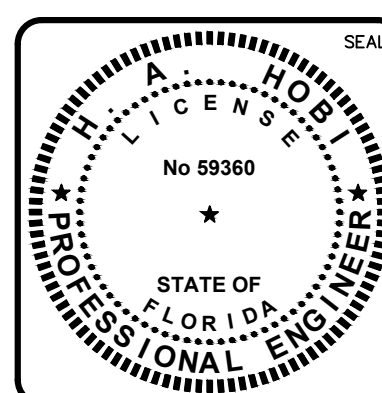
BELOW SLAB



4 - TYPICAL REINFORCED CONCRETE BEAM DETAIL
SCALE: N.T.S.



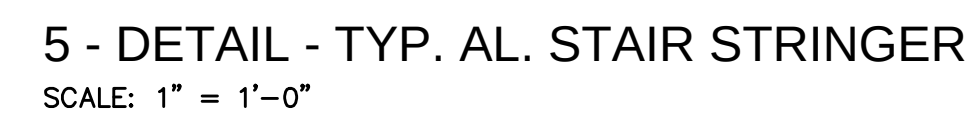
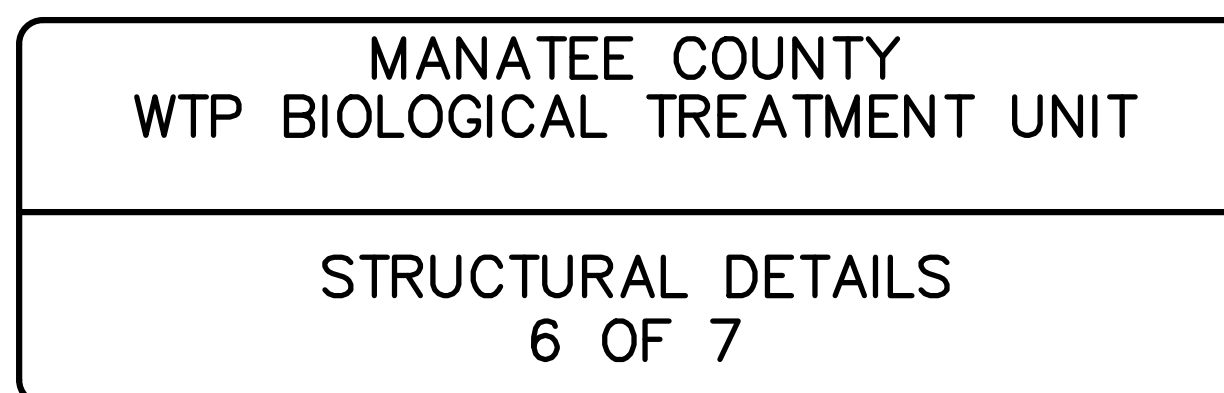
6 - LADDER DETAILS
SCALE: NTS

[illegible]

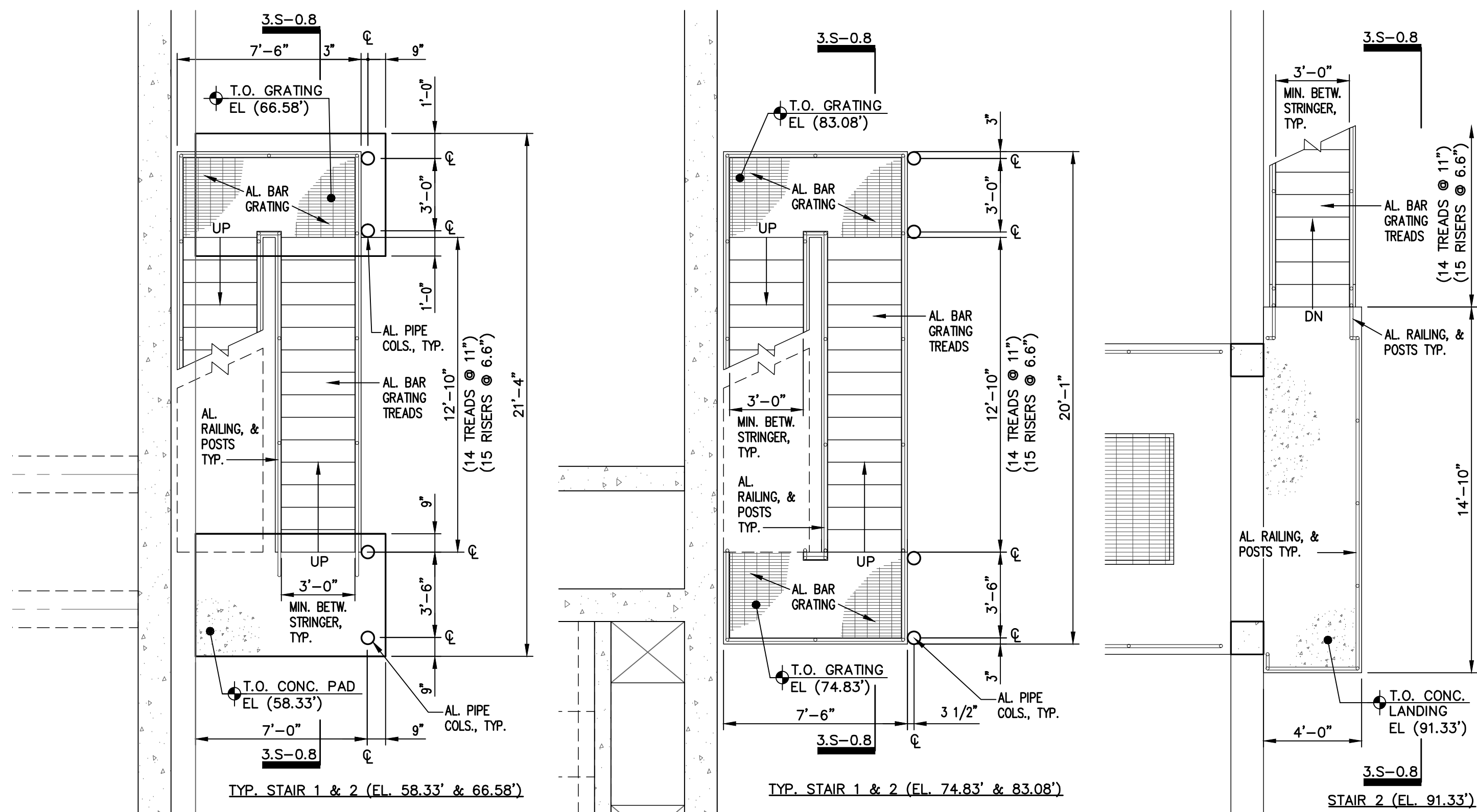
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

STRUCTURAL DETAILS
5 OF 7

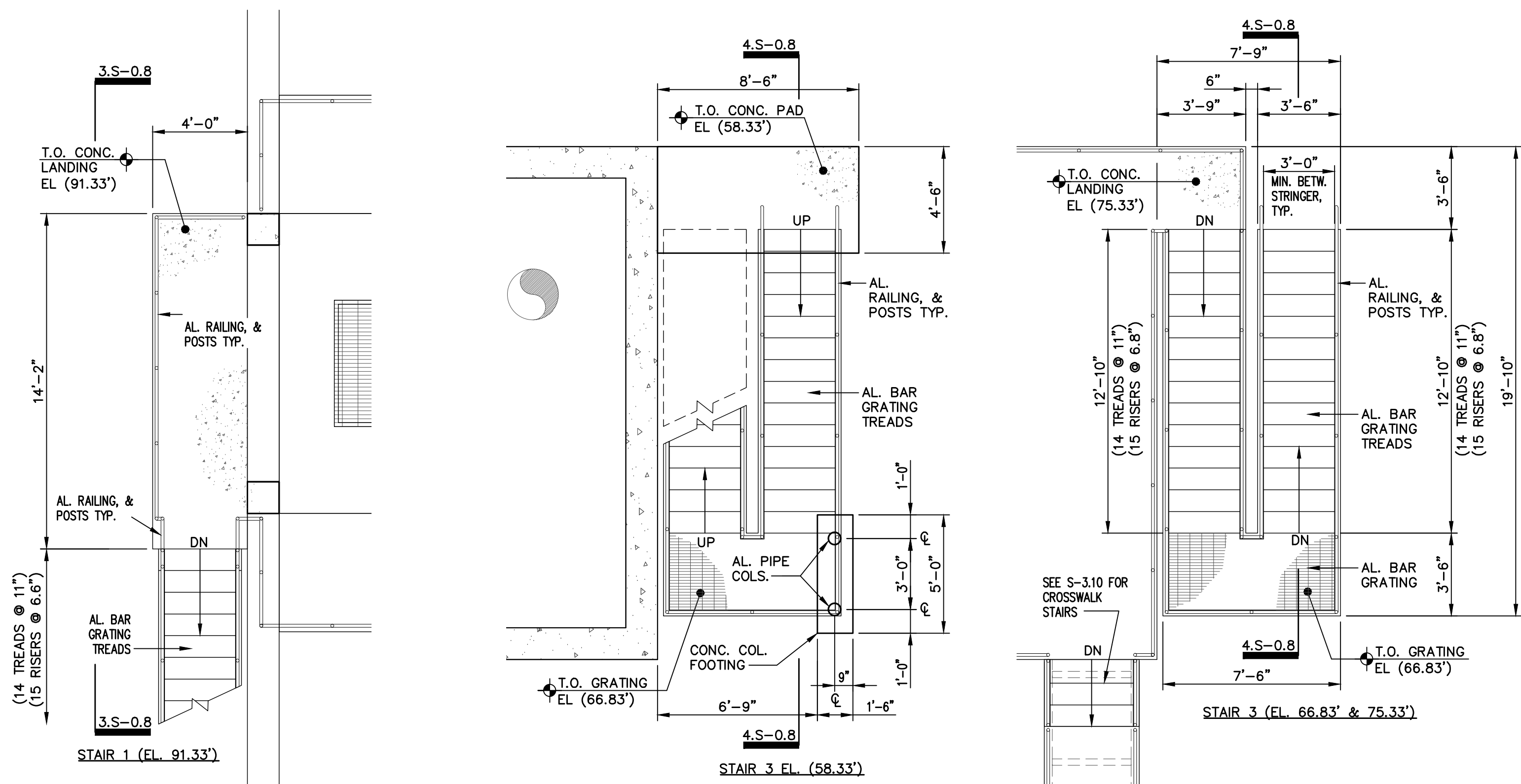
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DESIGNED	HAH		
CHECKED	JSL		
PROJ. MGR.	PUL		
STATUS:		REVISION	
ISSUE FOR BID			

A circular professional engineer seal for H. A. Hobbs. The outer ring contains the text "H. A. HOBBS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside the ring, the word "LICENSE" is at the top and "STATE OF FLORIDA" is at the bottom, also separated by two stars. In the center of the seal, the license number "No 59360" is printed above a single star.

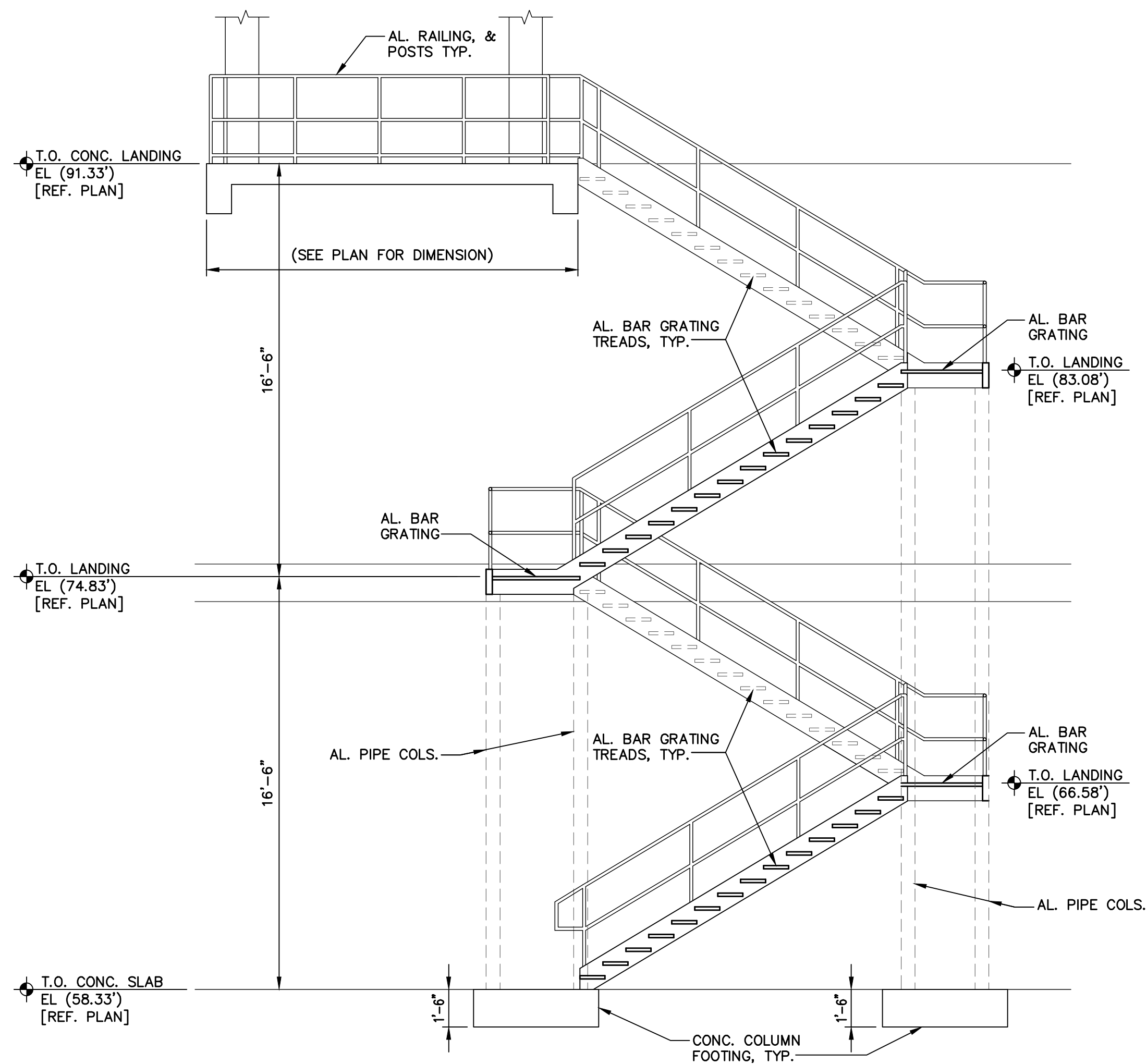
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DESIGNED	HAH	VERTICAL:	
CHECKED	JSL	NA	
PROJ. MGR.	PJL		
STATUS:		REVISION	
ISSUE FOR BID			



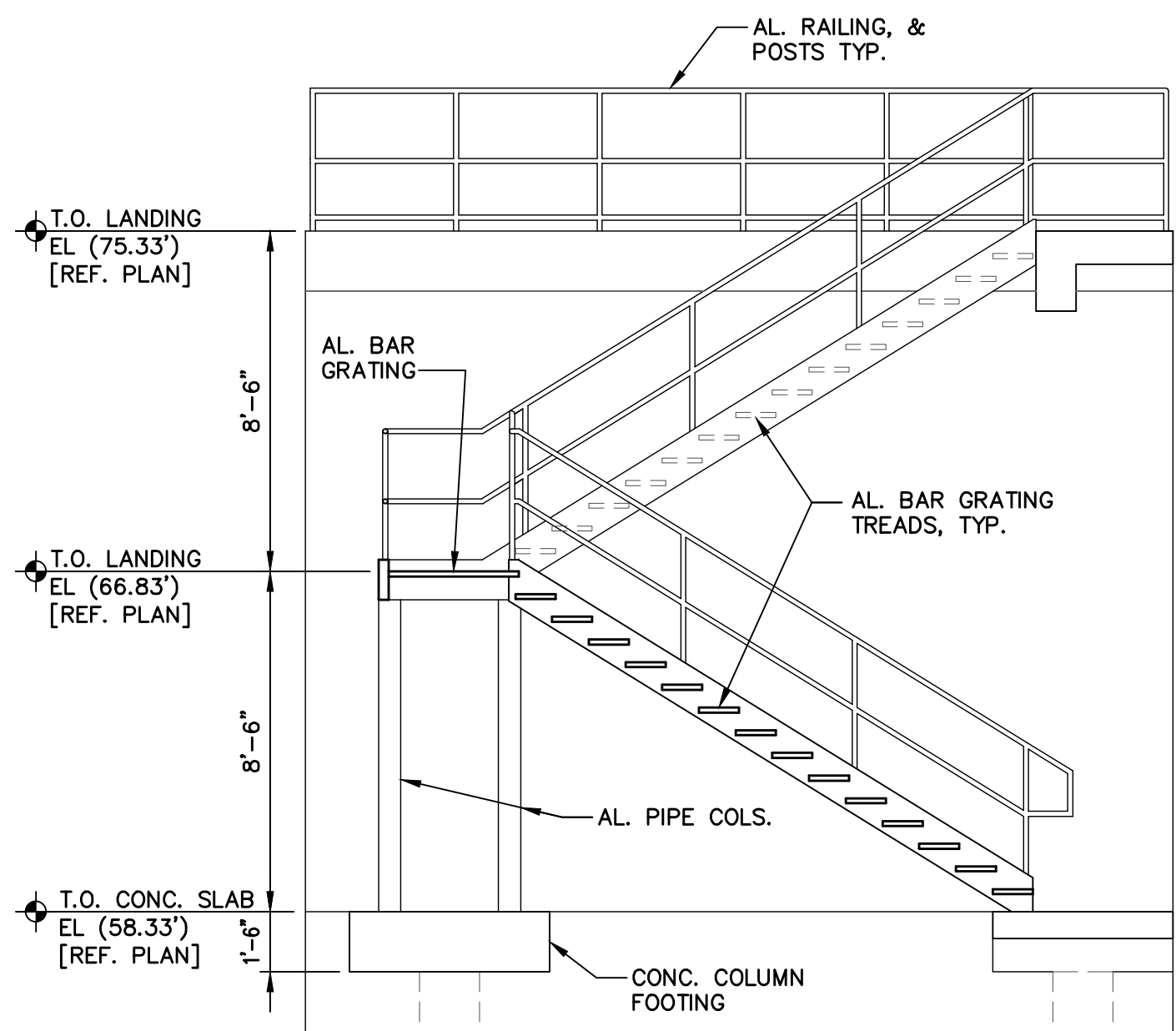
PLANS - TYP. ALUM. STAIR 1 & 2
SCALE: 1/4" = 1'-0"



PLANS - TYP. ALUM. STAIR 3
SCALE: 1/4" = 1'-0"



3 - SECTION - TYP. ALUM. STAIR 1 & 2
SCALE: 1/4" = 1'-0"



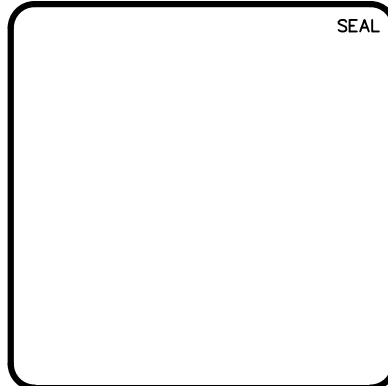
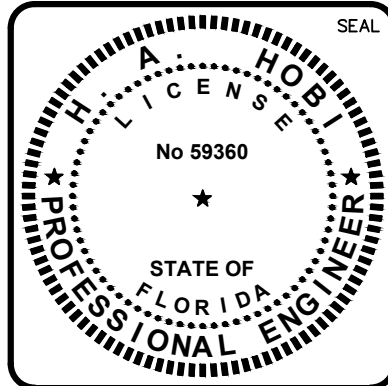
4 - SECTION - TYP. ALUM. STAIR 3
SCALE: 1/4" = 1'-0"

STAIR NOTES:

1. COAT OR ISOLATE ALL ALLUMINIUM SURFACES IN CONTACT WITH CONCRETE.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR PRE-ENGINEERED ALUMINUM STAIRS AND PLATFORMS, BOTH SHALL BE SIGNED AND SEALED BY A FLORIDA PROFESSIONAL ENGINEER FOR APPROVAL, BY ENGINEER.
3. ALL ALUMINUM SECTIONS SHALL BE SIZED BY MANUFACTURER TO RESIST APPLICABLE LOADS, REFERENCE SPECIFICATIONS SECTION 0511.
4. ALL STAIR LANDINGS SHALL BE PROPERLY SUPPORTED BY ALUMINUM FRAMING THAT IS PROPERLY ANCHORED TO CONCRETE. ALL ANCHORS SHALL BE ADHESIVE ANCHORS.
5. ALL ADHESIVE ANCHORS SHALL BE DESIGNED BY STAIR MANUFACTURER.
6. MINIMUM AL. PIPE DIAMETER SUPPORTING ALL LANDINGS SHALL BE 6"Ø.

S:\1024\0167\06-Drawings\Structural\S-0.3-10240167.dwg, 9/29/2015, 3:55:49 PM, Jon Mackay

REV. NO.	DESCRIPTIONS	DATE



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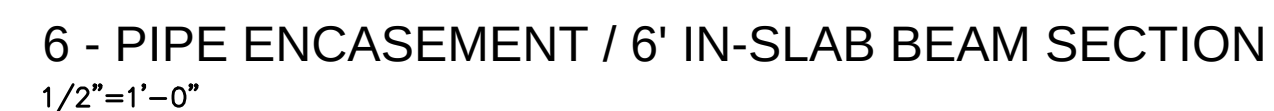
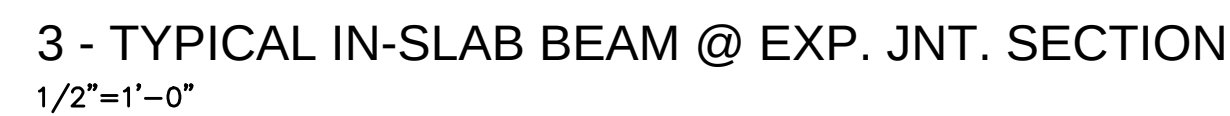
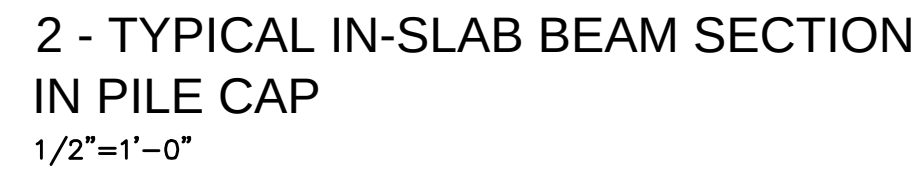
STRUCTURAL DETAILS
7 OF 7

DATE: OCTOBER 2015 MCE PROJ. # 1024-0167 DRAWN: JZM DESIGNED: HAH CHECKED: JSL PROJ. MGR: PUL	SCALE: HORIZONTAL: AS SHOWN VERTICAL: NA	DRAWING NUMBER: S-0.8
STATUS: ISSUE FOR BID	REVISION:	

1. REFERENCE DRAWING S-0.1 FOR ADDITIONAL GENERAL NOTES, MATERIAL SPECIFICATIONS, DESIGN CRITERIA & INFORMATION.
2. REFERENCE ELEVATION FOR THE BTU FACILITY IS THE BOTTOM SLAB T.O. CONC. EL 58.33'.
3. PREPARE THE SUBGRADE MATERIAL BELOW THE FACILITY BASE SLABS PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT. REFERENCE DRAWING S-0.1 & PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PIPE & EQUIPMENT LAYOUTS ARE SHOWN FOR GENERAL INFORMATION ONLY. REFERENCE CIVIL, MECHANICAL & EQUIPMENT VENDOR DRAWINGS FOR SIZES, LOCATIONS & INFO REGARDING PIPING & MISCELLANEOUS EQUIPMENT EITHER SHOWN OR NOT SHOWN.
5. CONSTRUCT AUGER CAST PILES IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION SECTION 455, STRUCTURES FOUNDATION - AUGER CAST PILES.
6. THE INSTALLATION OF ALL AUGER CAST PILES SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER TO BE HIRED BY THE COUNTY.
7. PRIOR TO THE START OF PRODUCTION PILING A MINIMUM OF ONE COMPRESSION LOAD TEST, IN ACCORDANCE WITH (ASTM D 1143), SHALL BE PERFORMED ON A NON-PRODUCTION PILE BY THE CONTRACTOR, AT A LOCATION DETERMINED BY THE GEOTECHNICAL ENGINEER. LOAD TESTS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER, AND THE RESULTS SHALL BE INTERPRETED IN ACCORDANCE WITH 2010 FLORIDA BUILDING CODE. THE MINIMUM TEST LOADS SHALL BE TWICE THE PILE DESIGN CAPACITY. IF INSTALLATION CONDITIONS OF PRODUCTION PILES ARE MARKEDLY DIFFERENT FROM THOSE OBSERVED DURING TEST PILE INSTALLATION ANOTHER COMPRESSION LOAD TEST PILE SHALL BE INSTALLED AT A LOCATION DETERMINED BY THE GEOTECHNICAL ENGINEER TO DETERMINE IF REPLACEMENT PILES ARE REQUIRED.
8. AUGER CAST PILE GROUT - MIX DESIGN: THE GROUT SHALL CONSIST OF A MIXTURE OF THE FOLLOWING:
 - A. TYPE II PORTLAND CEMENT WITH 20% MAXIMUM FLY ASH CONTENT.
 - B. WATER
 - C. FINE AGGREGATE, FDOT APPROVED NATURAL SILICA SAND
 - D. FLUIDIFIER, COMPLY WITH ASTM C 937
 - E. ADMIXTURES

GROUT SHALL BE PROPORTIONED AND MIXED SO THAT IT WILL EXHIBIT THE FOLLOWING PROPERTIES:

1. ALL SOLIDS SHALL REMAIN IN SUSPENSION IN THE GROUT WITHOUT EXCESSIVE BLEED-WATER.
2. THE GROUT SHALL BE TESTED FOR FLUID CONSISTENCY (USING A FLOW CONE) IN ACCORDANCE WITH ASTM C 939
3. THE GROUT SHALL NOT EXHIBIT SHRINKAGE IN EXCESS OF 0.15 % IN THE VERTICAL DIRECTION, AS TESTED IN ACCORDANCE WITH ASTM C 1090. GROUT SAMPLES SHALL BE HOUSED IN A 100 % HUMIDITY ROOM AT A TEMPERATURE OF 68° F TO 74° F
4. GROUT SAMPLES RECOVERED FOR STRENGTH TESTING, SHALL EXHIBIT A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI 28 DAYS AFTER CASTING.
5. THE SUBMITTED MIX DESIGN SHALL INCLUDE CURVES OF VISCOSITY LOSS VERSUS TIME. IN ADDITION, GROUT SHALL BE DESIGNED SO AS TO MAINTAIN THE RANGE OF ACCEPTABLE FLUID CONSISTENCY FOR A PERIOD OF AT LEAST 2 HOURS OR LONGER REQUIRED BY THE PROJECT-SPECIFIC PILE INSTALLATION PLAN.
6. STRENGTH DEVELOPMENT VERSUS TIME CURVES/DATA SHALL BE PROVIDED, WITH DATA FOR TIMES BEYOND 28 DAYS AS REQUIRED FOR MIXES THAT INCLUDE FLY ASH.
7. FOR VOLUME ESTIMATE, GROUT VOLUME MAY BE 1.5 TIMES OR GREATER THAN THE THEORETICAL PILE VOLUME.
8. GROUT FACTOR IS THE RATIO OF THE PUMPED GROUT VOLUME TO THE THEORETICAL VOLUME OF THE DRILLED HOLE. GROUT FACTOR SHALL BE EQUAL TO OR GREATER THAN 1.2.
9. A MINIMUM OF ONE SET OF SIX 4" x 8" GROUT CYLINDERS SHALL BE MADE FOR EACH DAY OF PILE INSTALLATION.
9. PILES WITHIN 6' OF EACH OTHER SHALL NOT BE INSTALLED ON THE SAME DAY.
10. IF SUBSIDIANCE OF FRESH GROUT OCCURS WITHIN TWO HOURS FOLLOWING GROUTING OPERATION, THE PILE SHOULD BE TOPPED WITH FRESH GROUT TO THE CORRECT CUTOFF ELEVATION.
11. REFUSAL CRITERIA IS ONE MINUTE DURATION REQUIRED FOR 12" OR LESS OF PENETRATION, AUGER CAST PILES SHALL BE DRILLED TO REFUSAL AFTER THE DESIGN TIP ELEVATION IS REACHED.
12. CONTRACTOR SHALL SUBMIT AUGER CAST PILE INSTALLATION PLAN IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION 455-47.
13. PRE-DRILLING MAY BE REQUIRED TO PENETRATE SHALLOW HARD LAYERS. REFERENCE PROJECT GEOTECHNICAL REPORT.



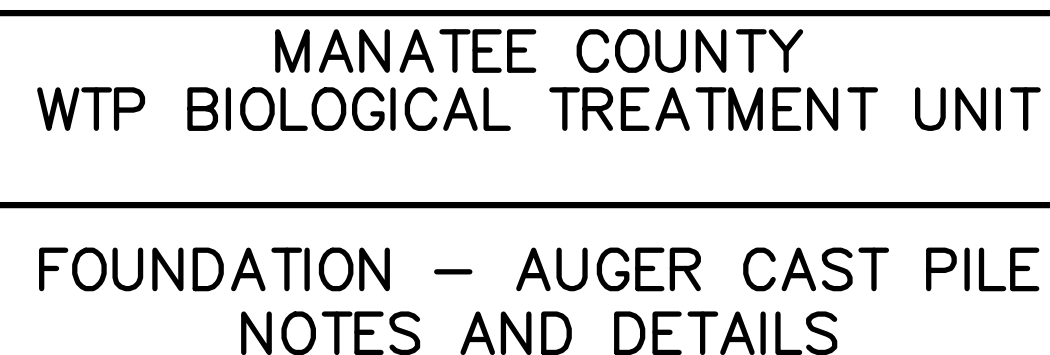
A circular professional engineer seal for the State of Florida. The outer ring contains the text "PROFESSIONAL ENGINEER" at the bottom and "H. A. HOBBS" at the top. Inside the ring, the word "LICENSE" is at the top and "STATE OF FLORIDA" is at the bottom. In the center, the license number "No 59360" is displayed above a single star.



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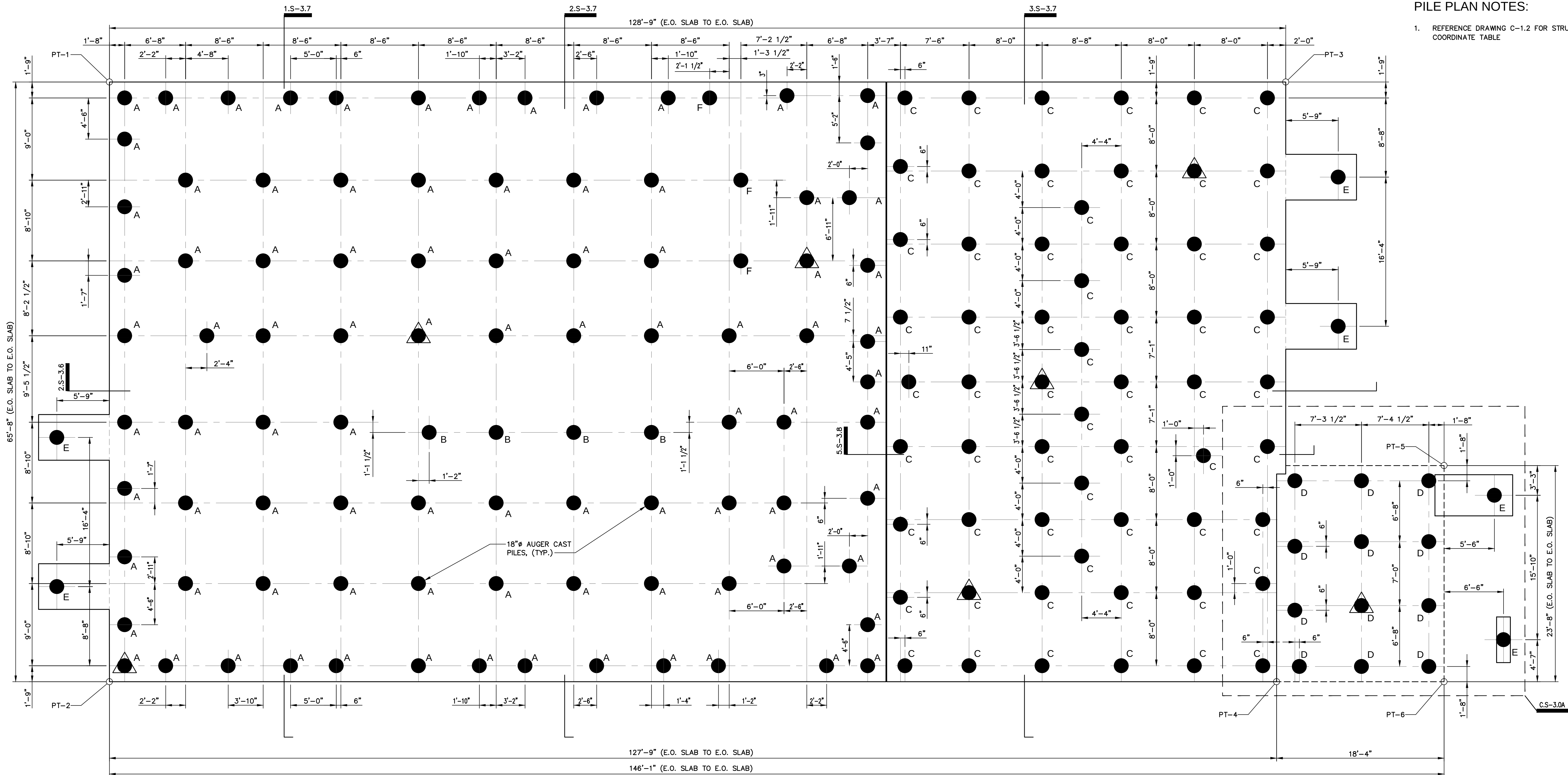
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DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0167	HORIZONTAL: AS SHOWN VERTICAL: NA	S-3.0A
DRAWN JZM		
DESIGNED HAH		
CHECKED JSL		
PROJ. MGR. PJL		
STATUS: ISSUE FOR BID REVISION		

PILE PLAN NOTES:

1. REFERENCE DRAWING C-1.2 FOR STRUCTURE COORDINATE TABLE



PILE TABLE			
PILE #	CAPACITY (TONS)	MIN. TIP ELEVATION	CUTOFF ELEVATION
A	75	-4.17	55.83
B	75	-9.67	50.33
C	75	-4.17	55.83
D	75	-10.67	49.33
E	75	-3.17	56.83
F	75	-7.33	52.66

* SEE TYPICAL PILE SECTION SHEET S-3.0A



FOUNDATION - AUGER CAST PILE LAYOUT PLAN AND NOTES

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

LEGEND

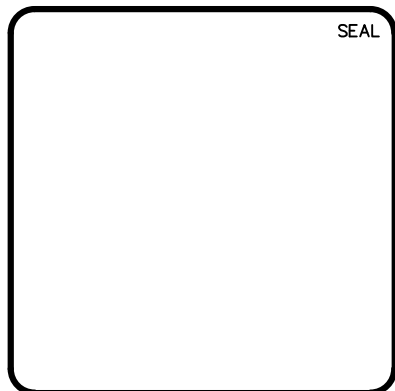
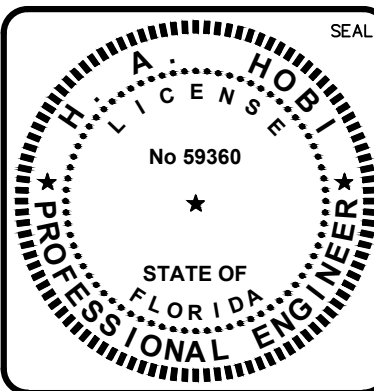
- 18"Ø PRODUCTION AUGER CAST PILE
- ▲ 18"Ø PRODUCTION AUGER CAST PILE SUBJECT TO PILE INTEGRITY TEST *

PT-# STRUCTURE COORDINATE POINT (SEE NOTE 1)

* A TOTAL OF 20 AUGER CAST PILES SHALL BE SUBJECT TO PILE INTEGRITY TESTING. THE ENGINEER SHALL SELECT PILES TO BE TESTED DURING PILE PRODUCTION.

S:\1024\0187\1024-0187.dwg, 9/29/2015 2:54:16 PM, Joe Mackey

REV.	NO.	DESCRIPTION	DATE



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FOUNDATION - AUGER CAST PILE
LAYOUT PLAN AND TABLE

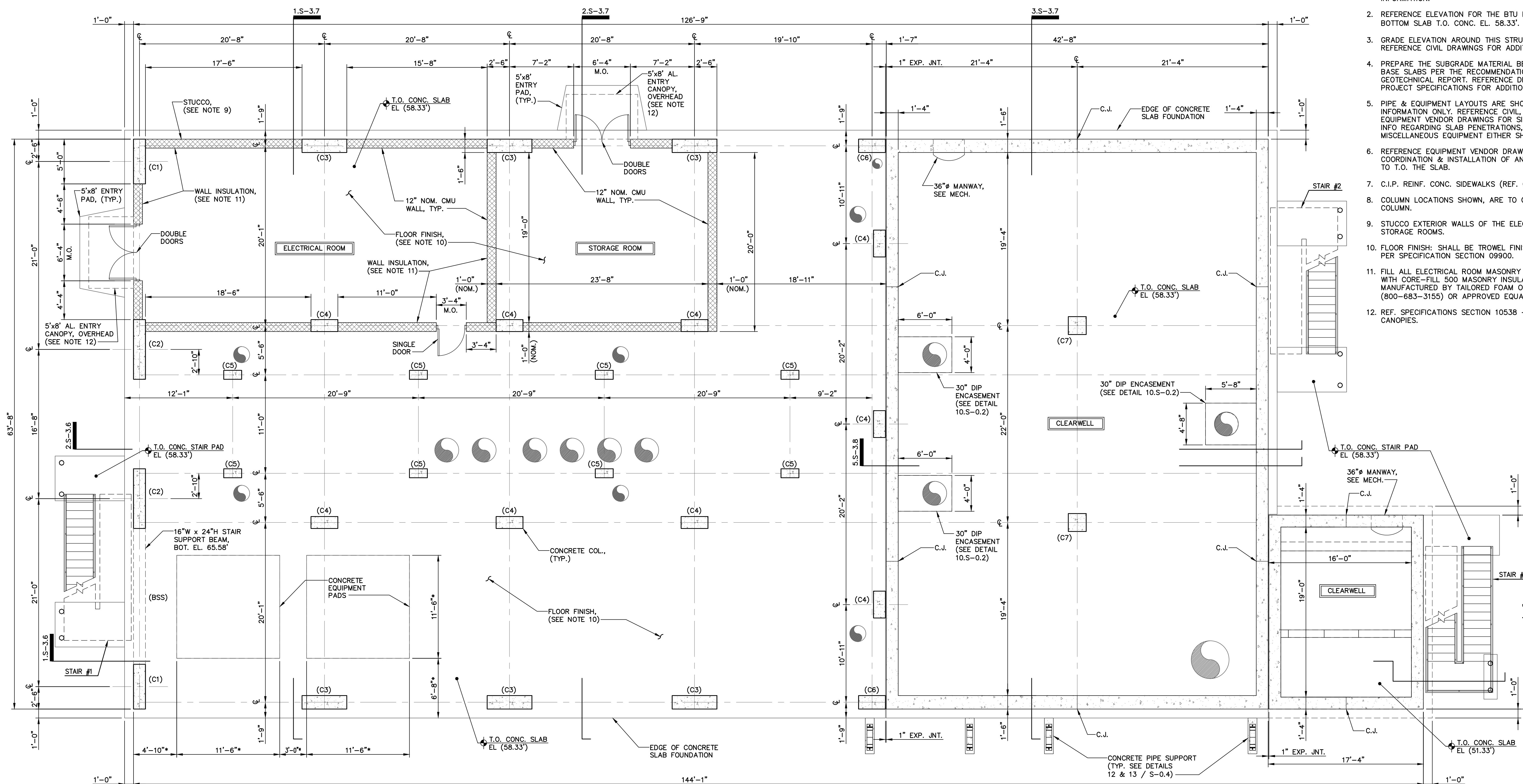
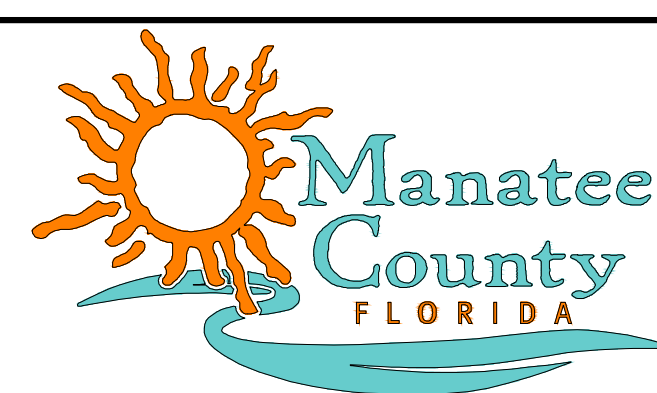
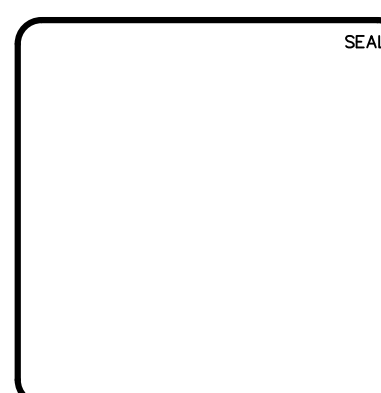
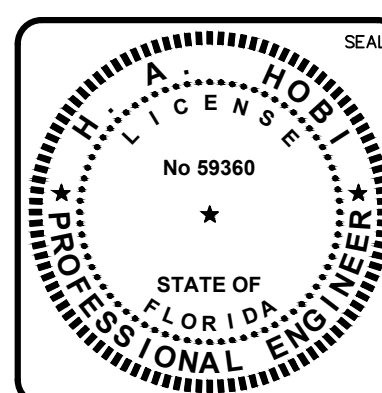
DATE:	OCTOBER 2015
MCE PROJ. #	1024-0187
DRAWN:	JZM
DESIGNED:	HAH
CHECKED:	JSL
PROJ. MGR.	PJL

SCALE	HORIZONTAL:
AS SHOWN	VERTICAL:
NA	NA

DRAWING NUMBER	REVISION
S-3.0B	

STATUS: **ISSUE FOR BID**

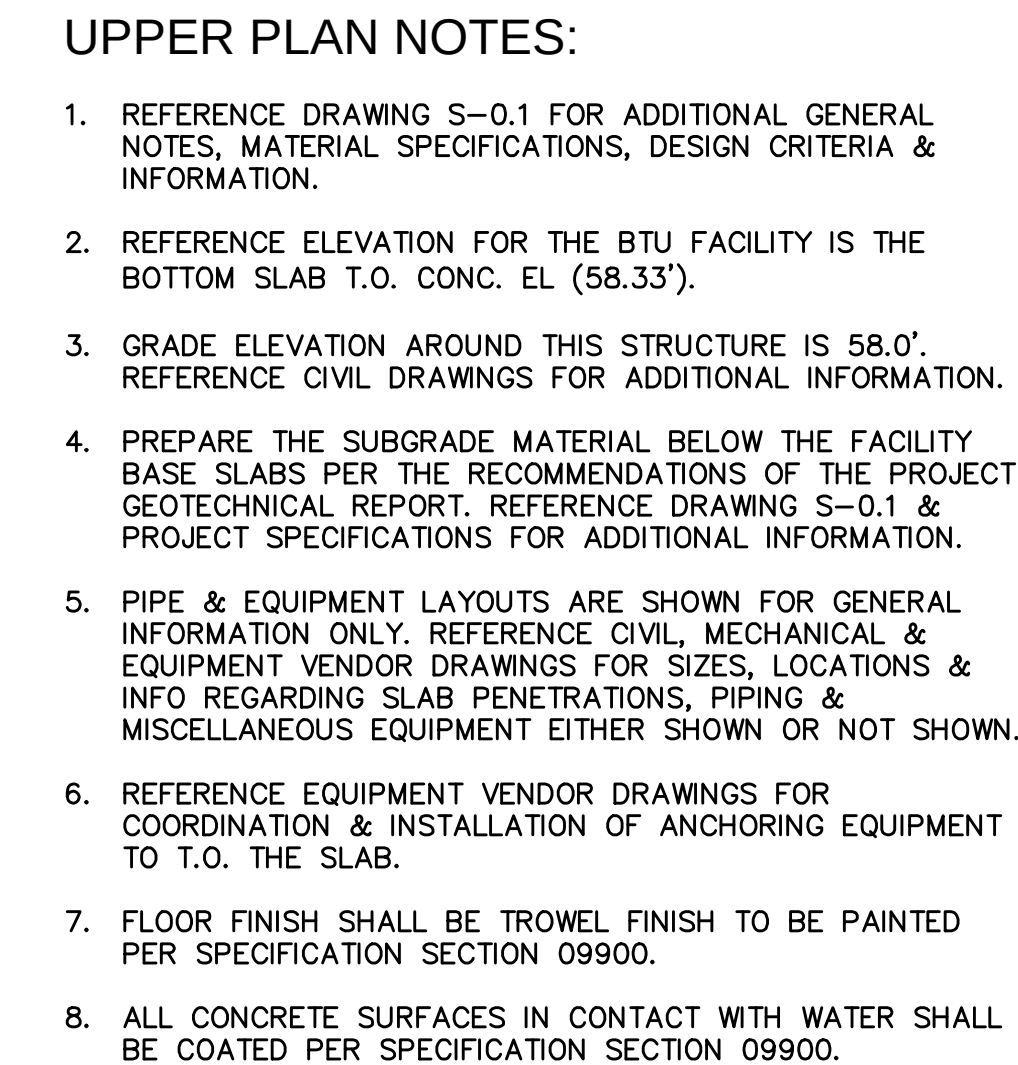
1. REFERENCE DRAWING S-0.1 FOR ADDITIONAL GENERAL NOTES, MATERIAL SPECIFICATIONS, DESIGN CRITERIA & INFORMATION.
2. REFERENCE ELEVATION FOR THE BTU FACILITY IS THE BOTTOM SLAB T.O. CONC. EL. 58.33'.
3. GRADE ELEVATION AROUND THIS STRUCTURE IS 58.0'. REFERENCE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
4. PREPARE THE SUBGRADE MATERIAL BELOW THE FACILITY BASE SLABS PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT. REFERENCE DRAWING S-0.1 & PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. PIPE & EQUIPMENT LAYOUTS ARE SHOWN FOR GENERAL INFORMATION ONLY. REFERENCE CIVIL MECHANICAL & EQUIPMENT VENDOR DRAWINGS FOR SIZES, LOCATIONS & INFO REGARDING SLAB PENETRATIONS, PIPING & MISCELLANEOUS EQUIPMENT EITHER SHOWN OR NOT SHOWN.
6. REFERENCE EQUIPMENT VENDOR DRAWINGS FOR COORDINATION & INSTALLATION OF ANCHORING EQUIPMENT TO T.O. THE SLAB.
7. C.I.P. REINF. CONC. SIDEWALKS (REF. CIVIL DWG.'s)
8. COLUMN LOCATIONS SHOWN, ARE TO CENTER OF EACH COLUMN.
9. STUCCO EXTERIOR WALLS OF THE ELECTRICAL AND STORAGE ROOMS.
10. FLOOR FINISH: SHALL BE TROWEL FINISH TO BE PAINTED PER SPECIFICATION SECTION 09900.
11. FILL ALL ELECTRICAL ROOM MASONRY WALL VOID CELLS WITH CORE-FILL 500 MASONRY INSULATION AS MANUFACTURED BY TAILORED FOAM OF FLORIDA (800-683-3155) OR APPROVED EQUAL.
12. REF. SPECIFICATIONS SECTION 10538 - ARCHITECTURAL CANOPIES.

[illegible]

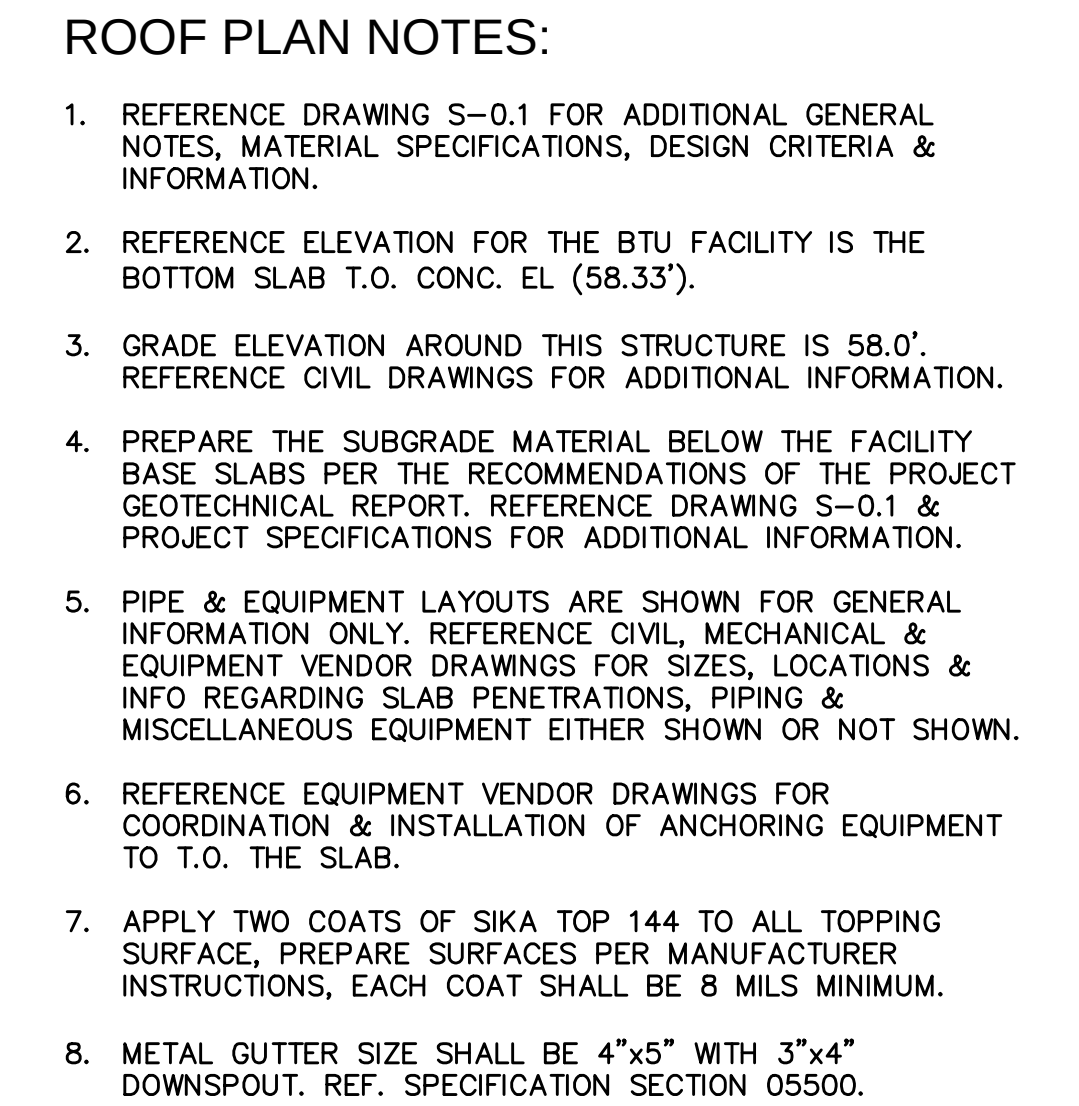
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

STRUCTURAL LOWER PLAN
COLUMN LOCATIONS

DATE: OCTOBER 2015		SCALE	DRAWING NUMBER
MCE PROJ. #	1024-0167		
DRAWN	JZM	HORIZONTAL: AS SHOWN VERTICAL: NA	S-3.1
DESIGNED	HAH		
CHECKED	JSL		
PROJ. MGR.	PUL		
STATUS:		REVISION	



S:\1024\0167\80-Drawings\Structural\S-3.4-10240167.dwg, 9/29/2015 2:54:58 PM, Jon Mackey



SEAL

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STATE OF
FLORIDA
PROFESSIONAL ENGINEER ★



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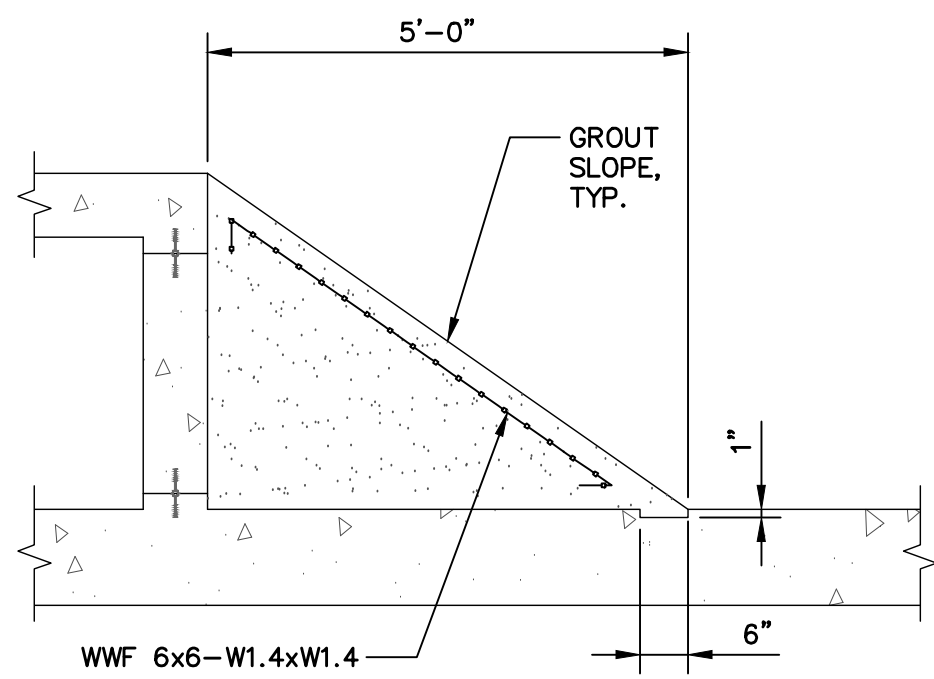


STRUCTURAL ROOF PLAN

DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
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DESIGNED HAH	VERTICAL:	
CHECKED JSL	NA	
PROJ. MGR. PJL		

STATUS: REVISION

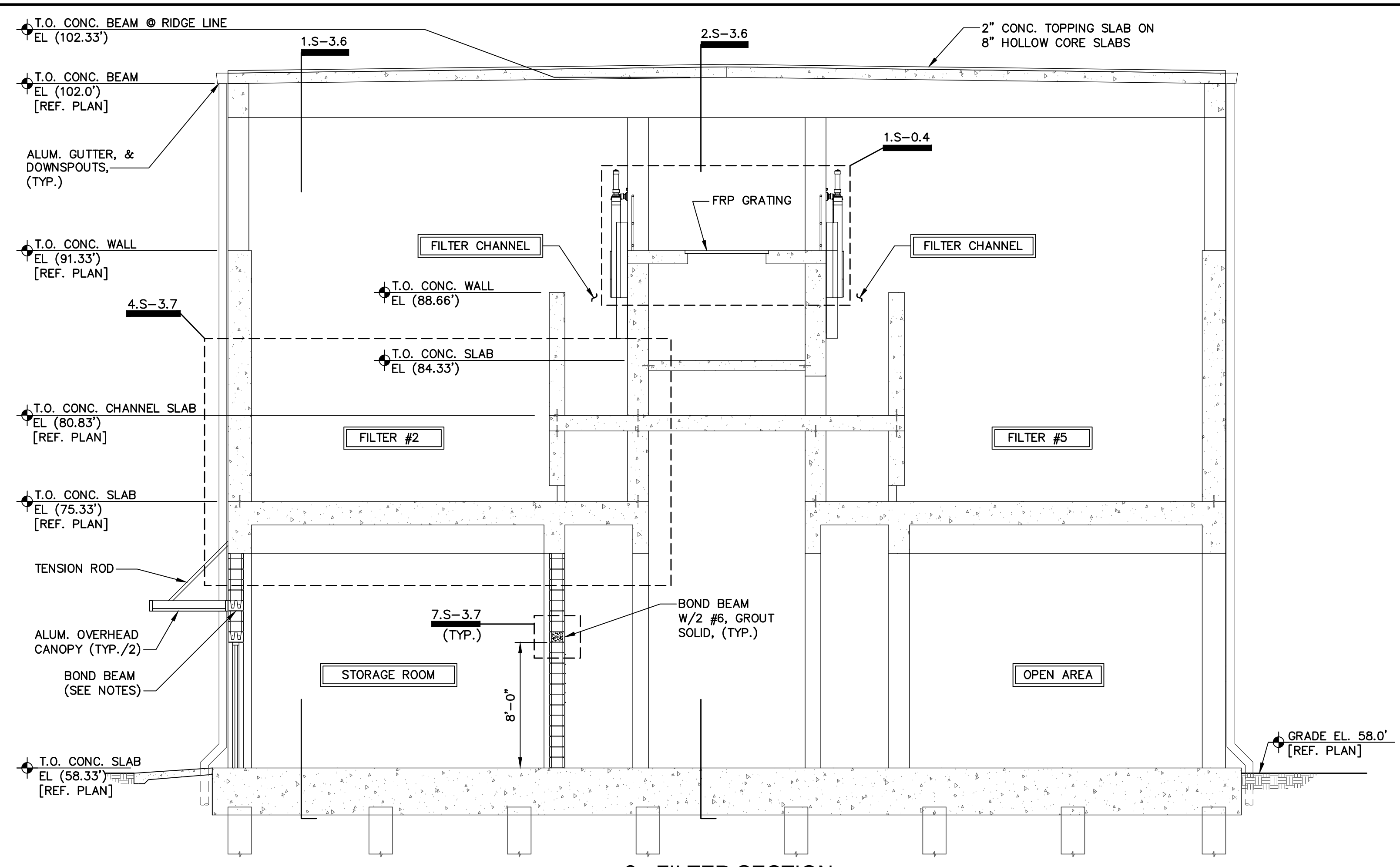
ISSUE FOR BID



DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
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DESIGNED HAH		
CHECKED JSL		
PROJ. MGR. PJL		

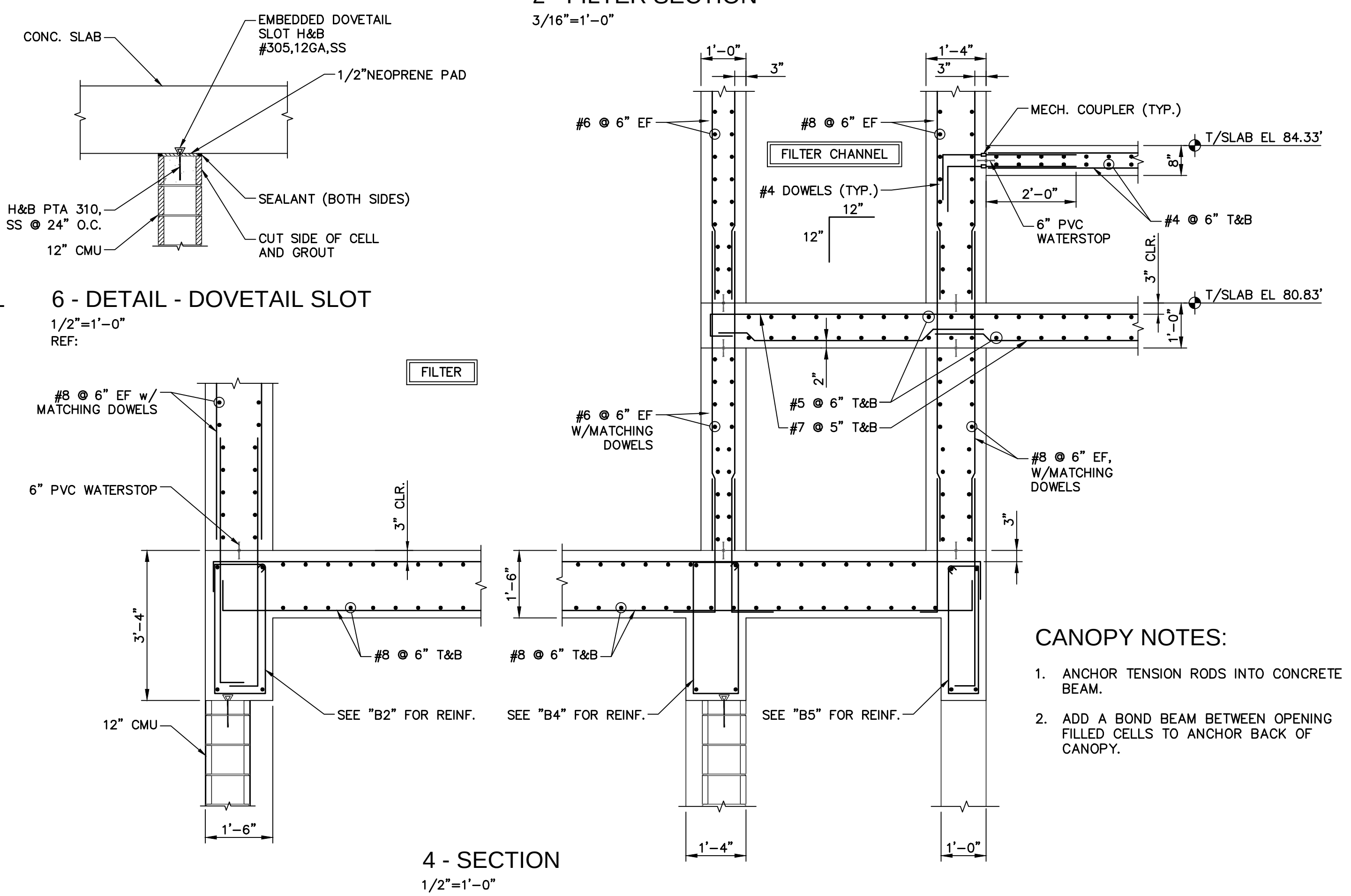
STATUS:
REVISION

ISSUE FOR BID



1 - FILTER SECTION
3/16"=1'-0"

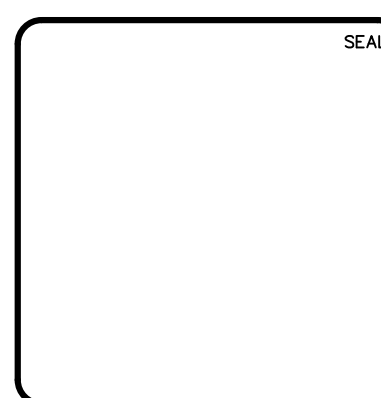
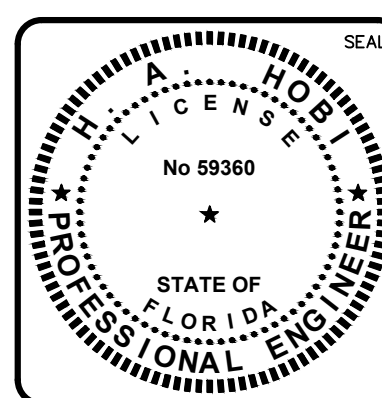
2 - FILTER SECTION
3/16"=1'-0"



3 - FILTER SECTION
3/16"=1'-0"

4 - SECTION
1/2"=1'-0"

1. ANCHOR TENSION RODS INTO CONCRETE BEAM.
2. ADD A BOND BEAM BETWEEN OPENING FILLED CELLS TO ANCHOR BACK OF CANOPY.

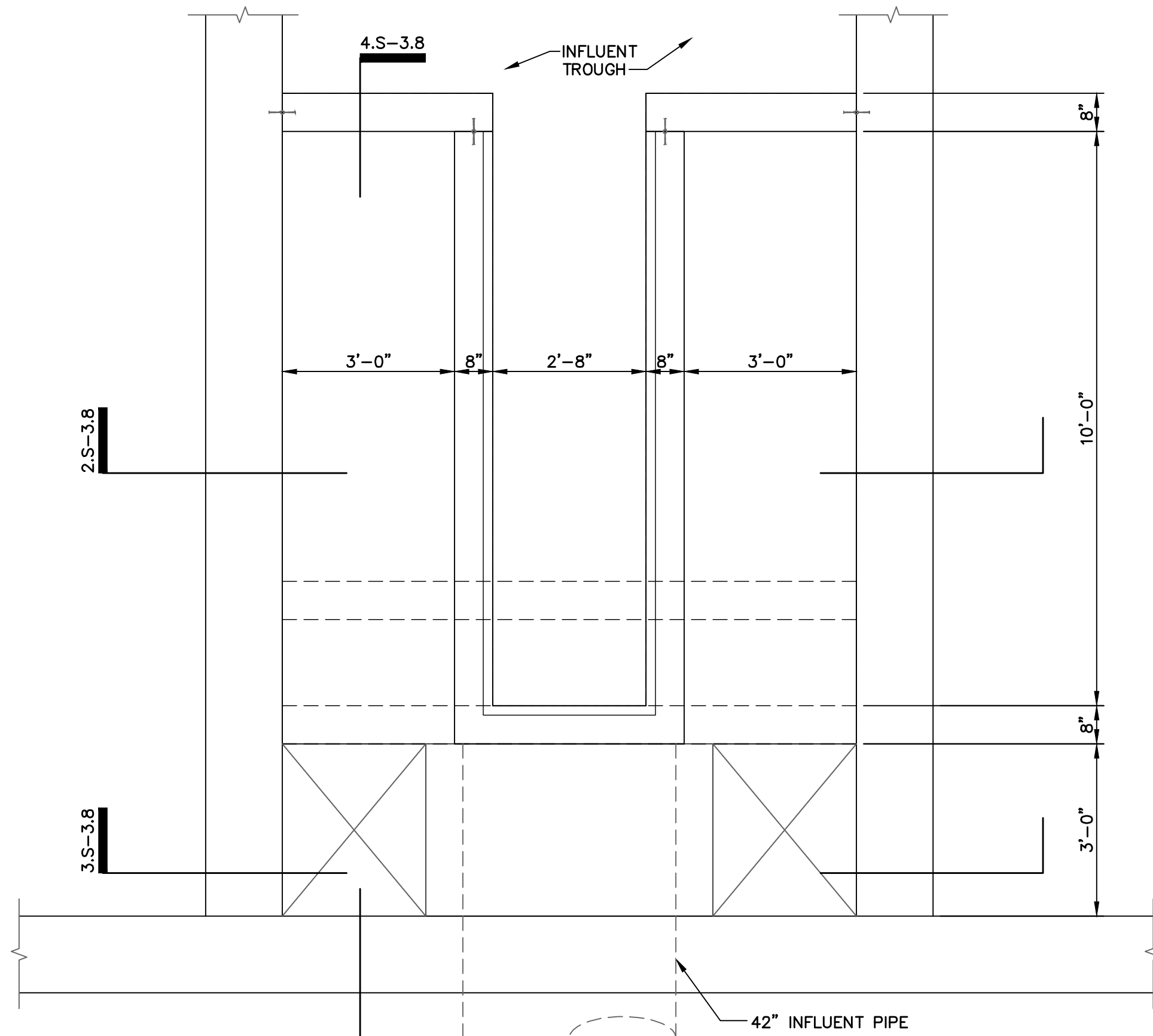
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MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

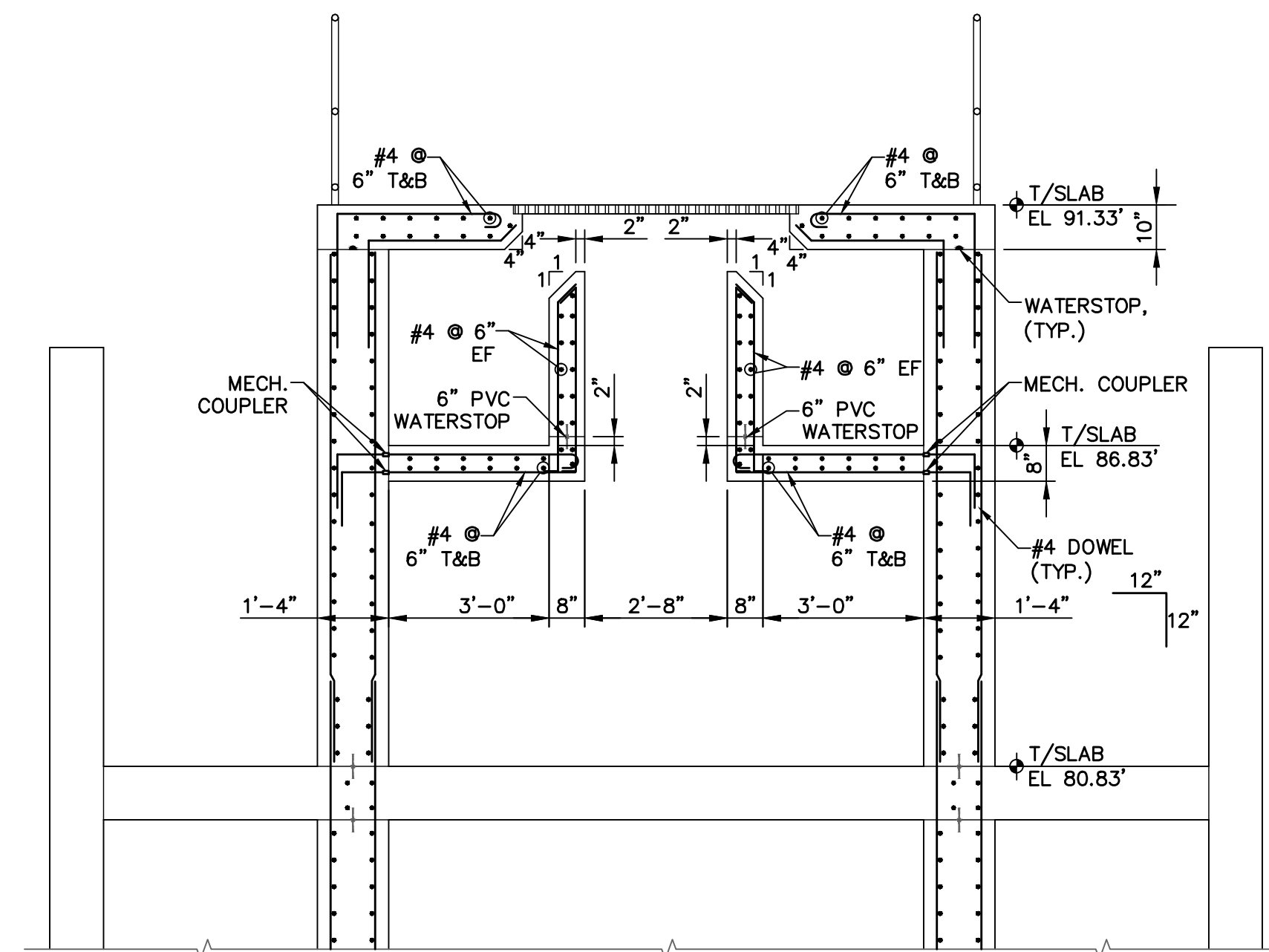
STRUCTURAL SECTIONS
2 OF 4

DATE: OCTOBER 2015		DRAWING NUMBER	
MCE PROJ. # 1024-0167		SCALE	
DRAWN JZM		HORIZONTAL:	
DESIGNED HAH		AS SHOWN	
CHECKED JSL		VERTICAL:	
PROJ. MGR. PJL		NA	
STATUS:		REVISION	

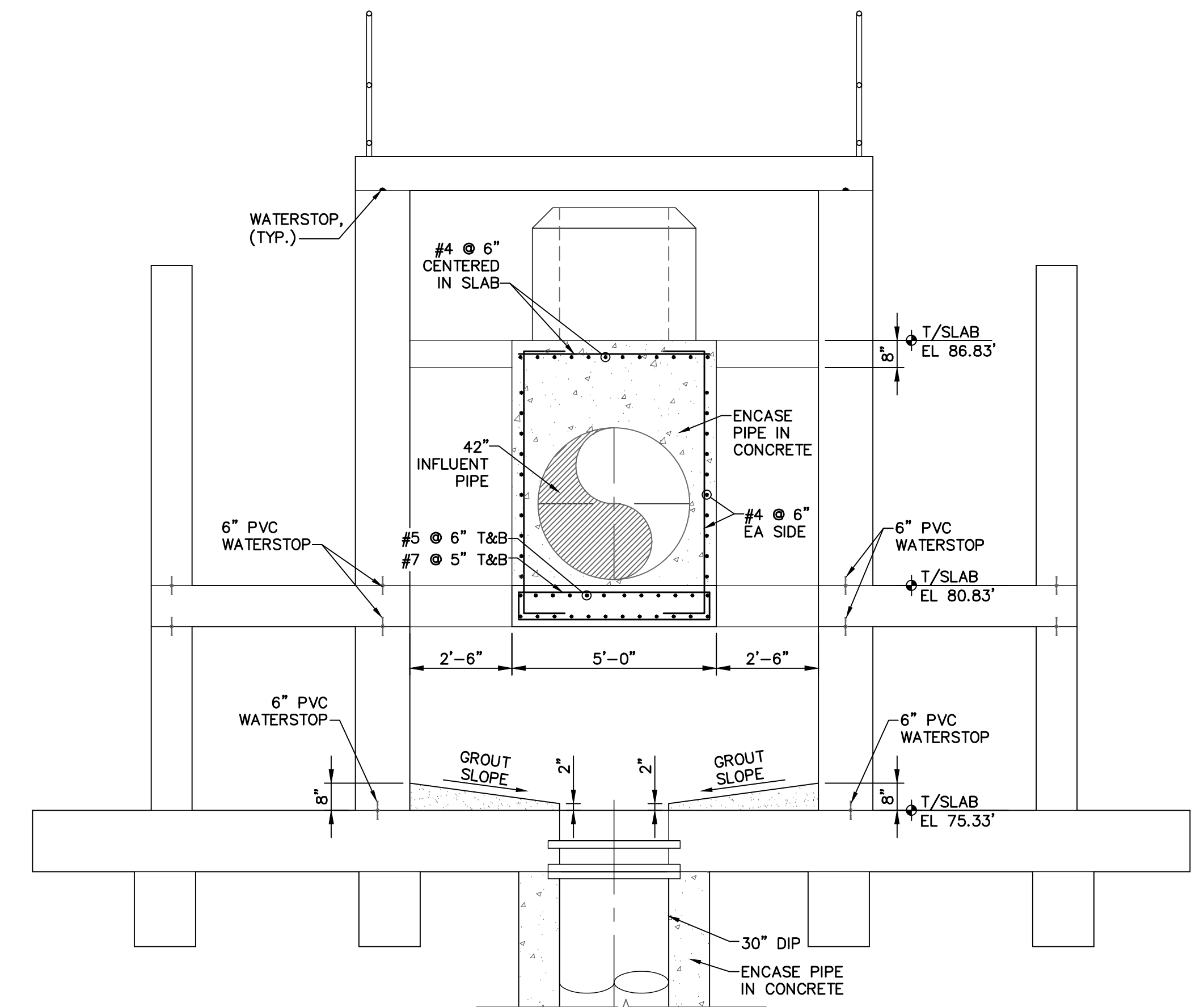
ISSUE FOR BID



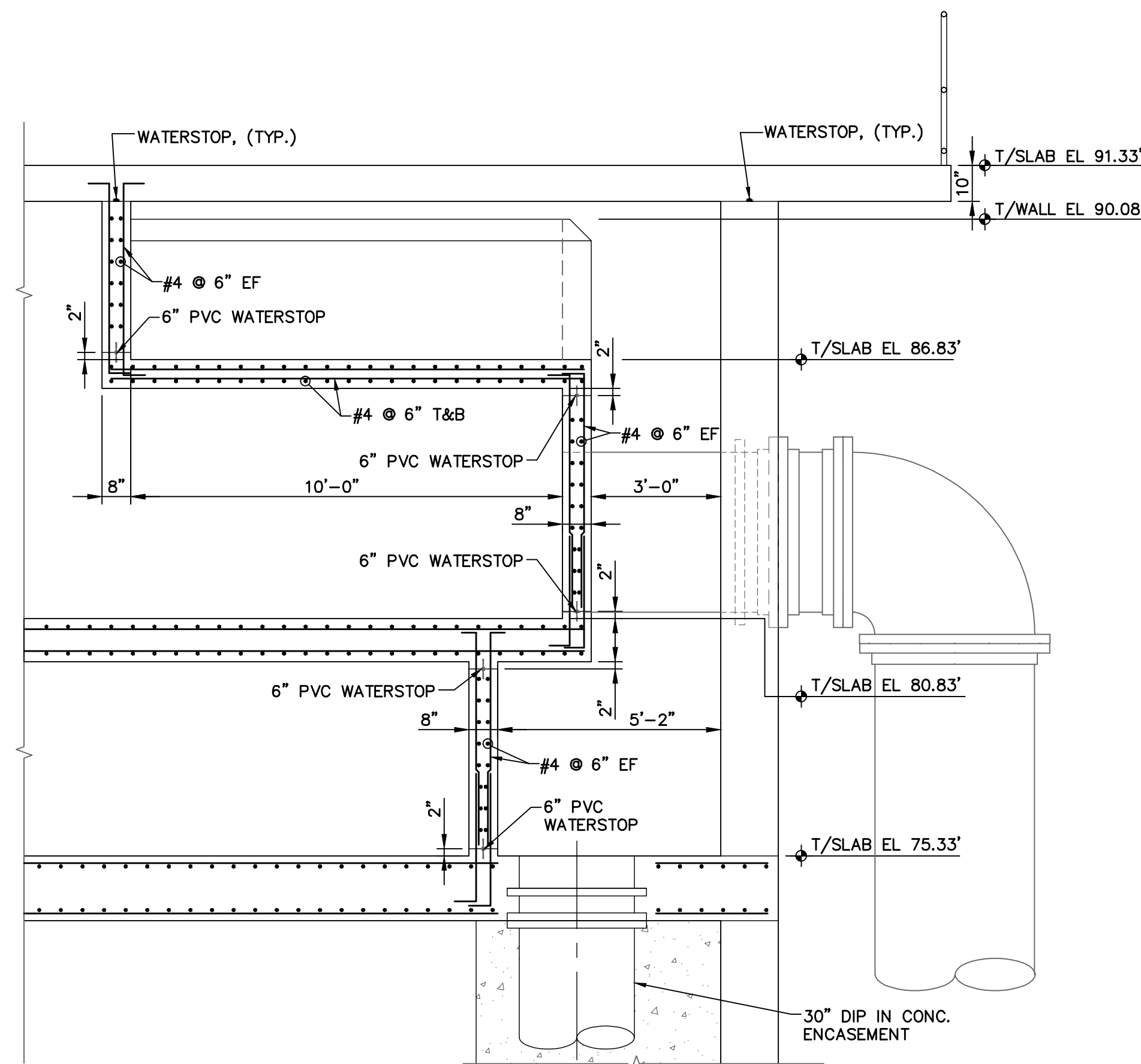
1 - OVERFLOW PLAN @ EL. 90.08'



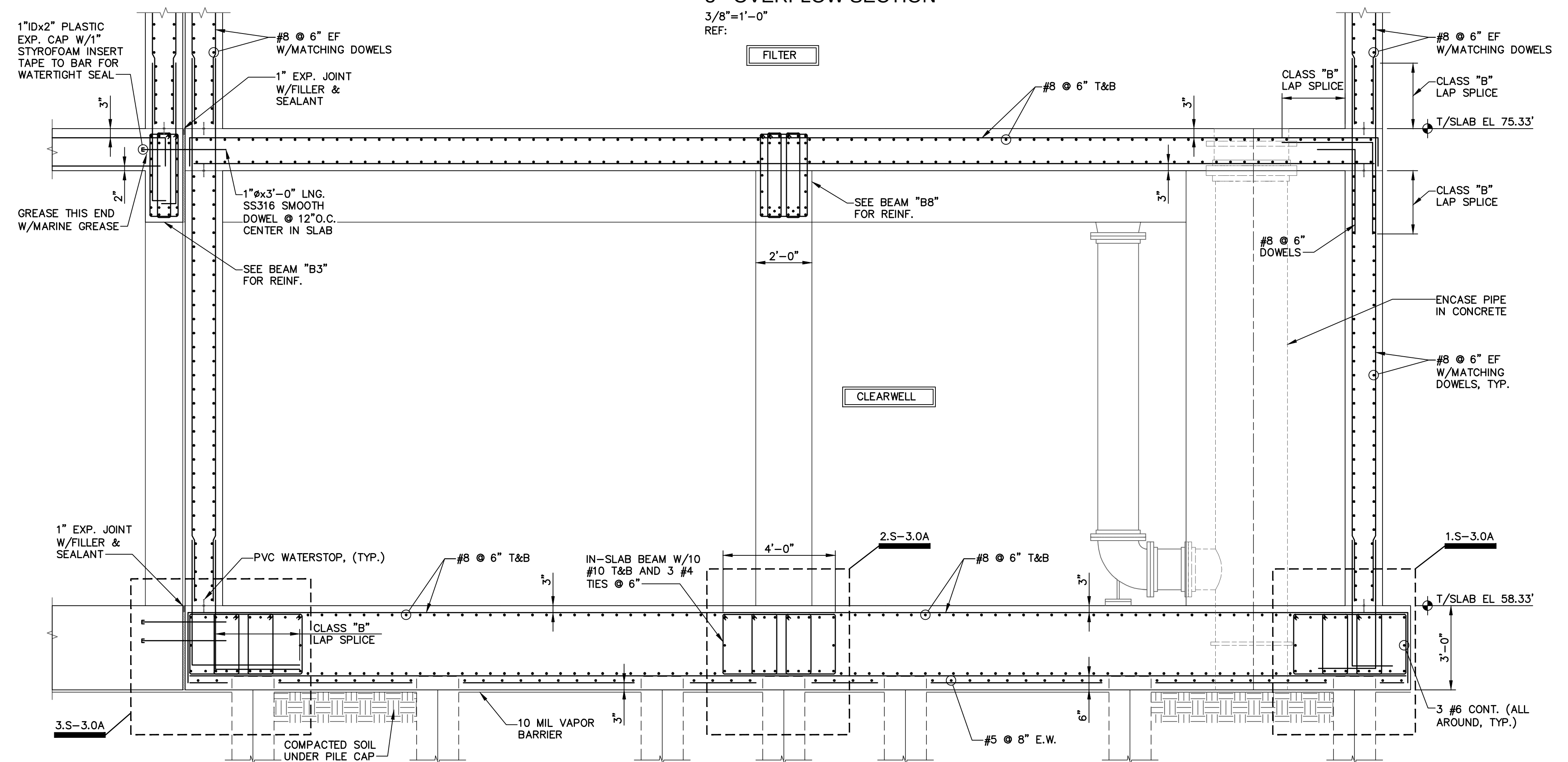
2 - OVERFLOW SECTION



3 - OVERFLOW SECTION

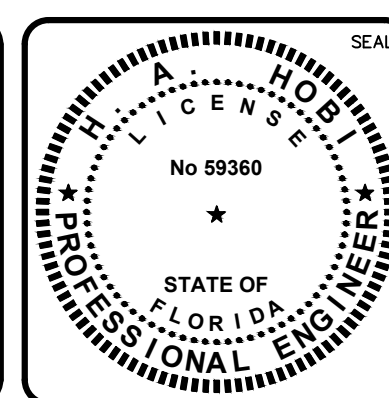


4 - OVERFLOW SECTION



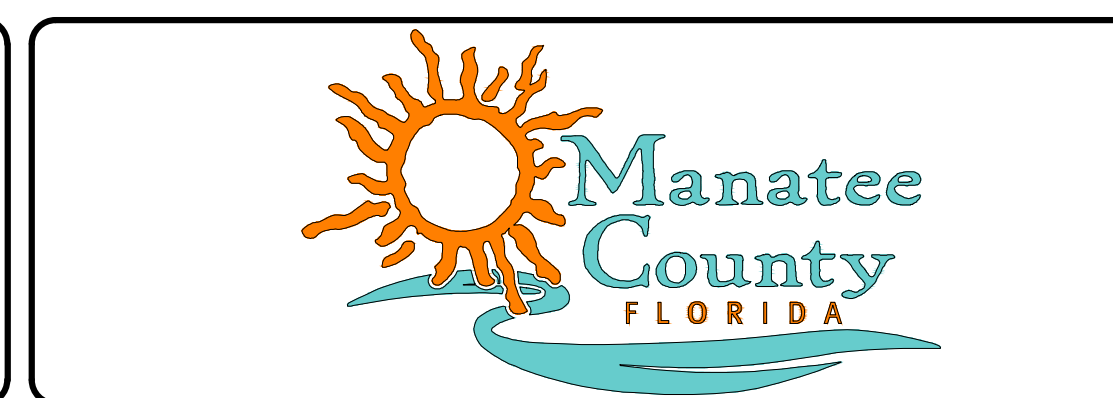
5 - CLEARWELL SECTION

REV. NO.	DESCRIPTION	DATE



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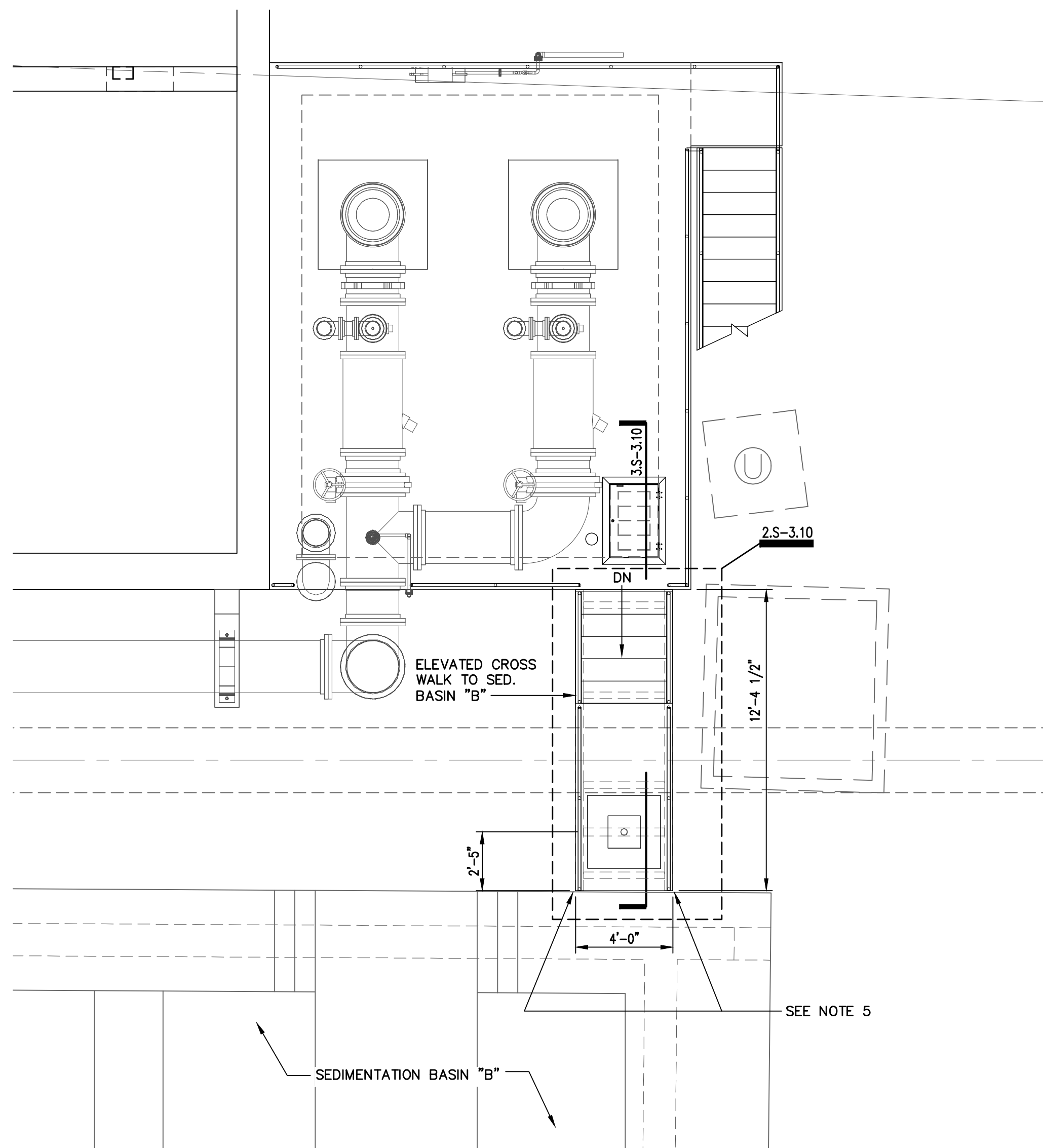


MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

STRUCTURAL SECTIONS
3 OF 4

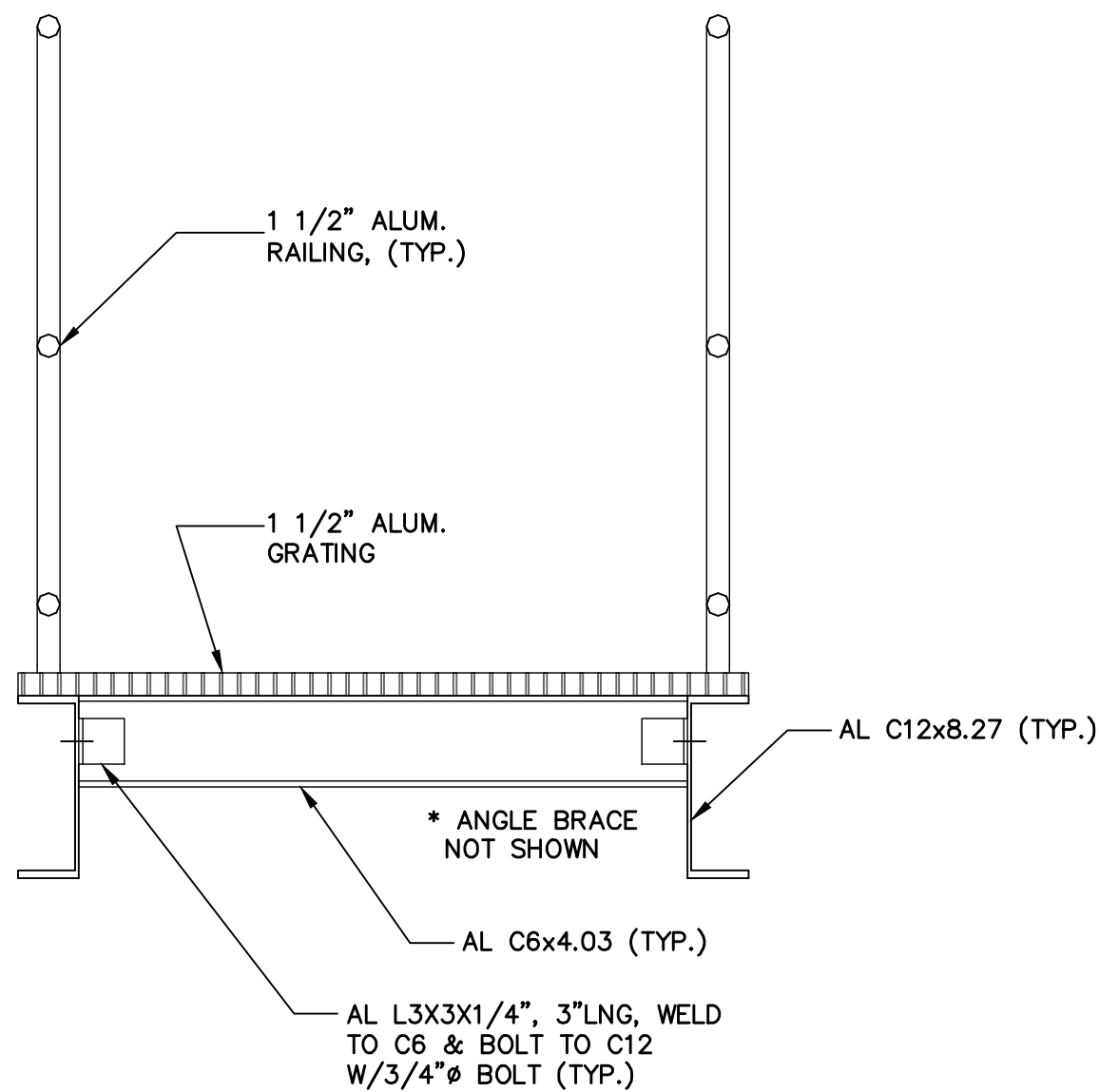
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MCE PROJ. # 1024-0167	DESIGNED: JZM	REVISION:
CHECKED: HAH	PROJECT MGR: PUL	
STATUS: ISSUE FOR BID		

DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0167	HORIZONTAL: AS SHOWN VERTICAL: NA	S-3.9
DRAWN JZM		
DESIGNED HAH		
CHECKED JSL		
PROJ. MGR. PJL		
STATUS:		REVISION



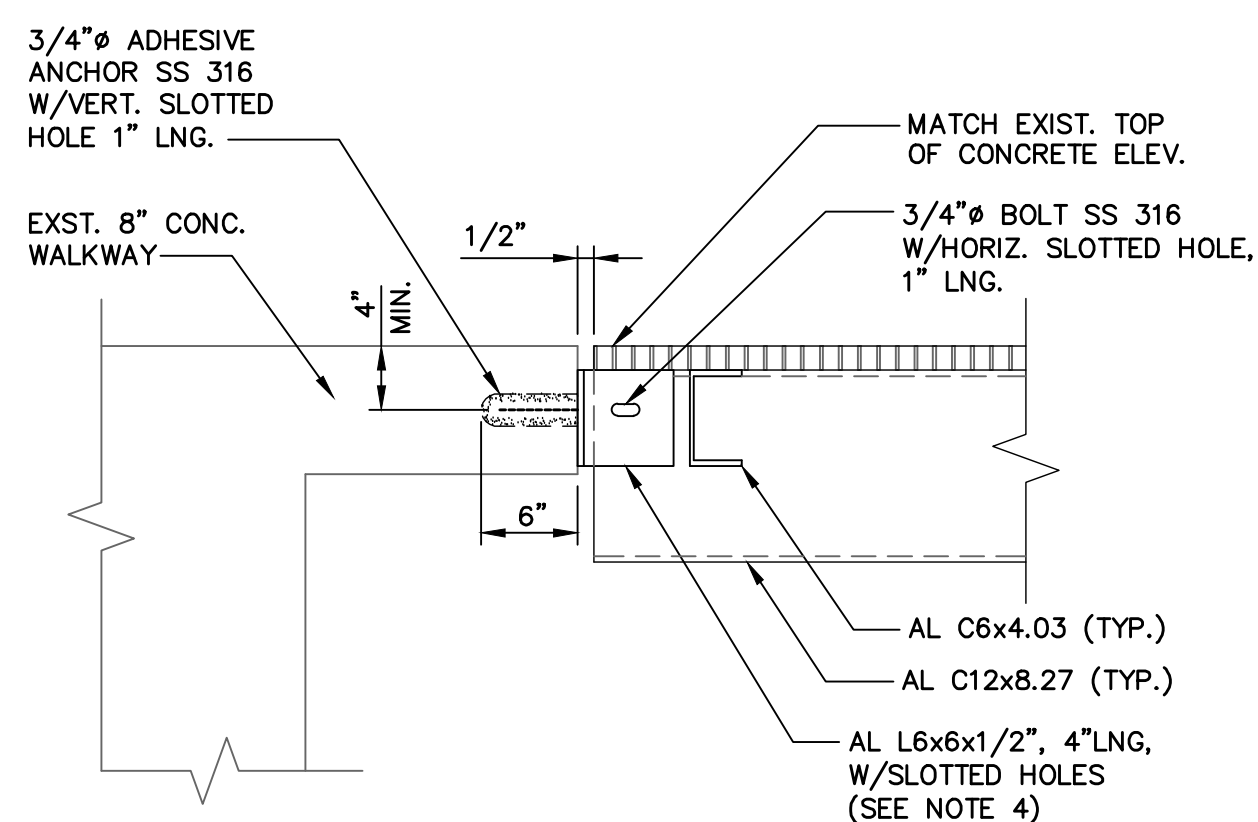
1 - CLEARWELL / SEDIMENTATION BASIN "B" CROSSWALK SITE PLAN

1/4"=1'-0"
REF:



4 - SECTION

1"=1'-0"
REF:

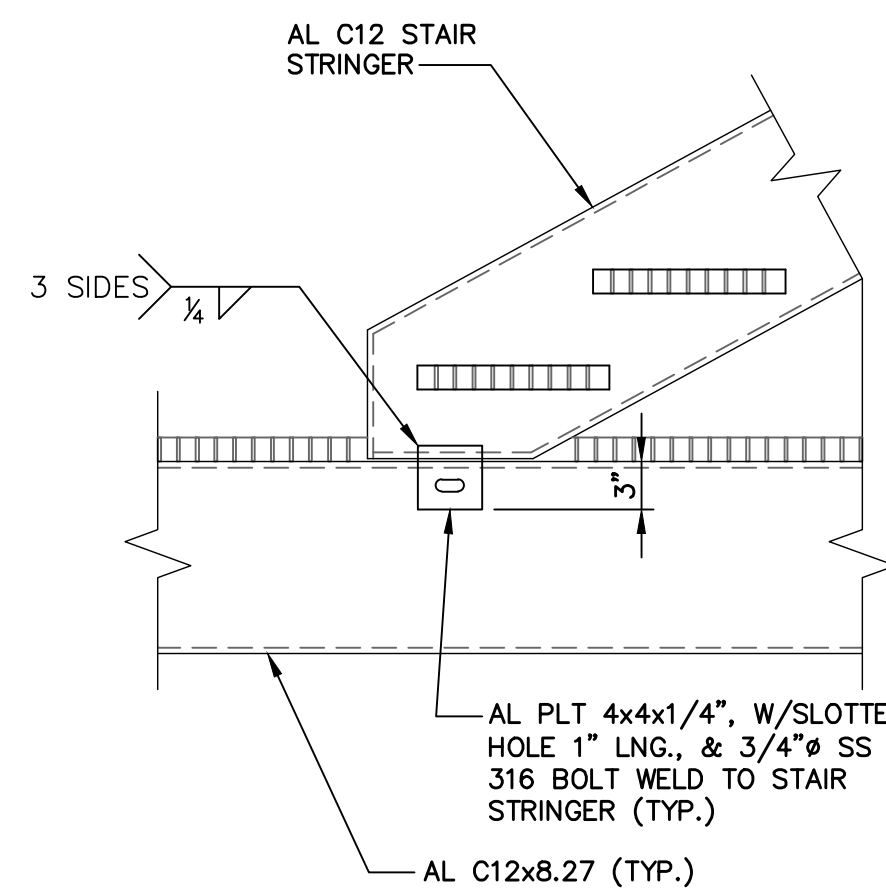


6 - SECTION

1"=1'-0"
REF:

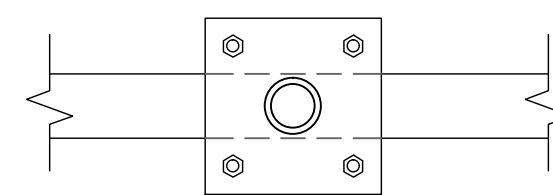
8 - SECTION

1"=1'-0"
REF:



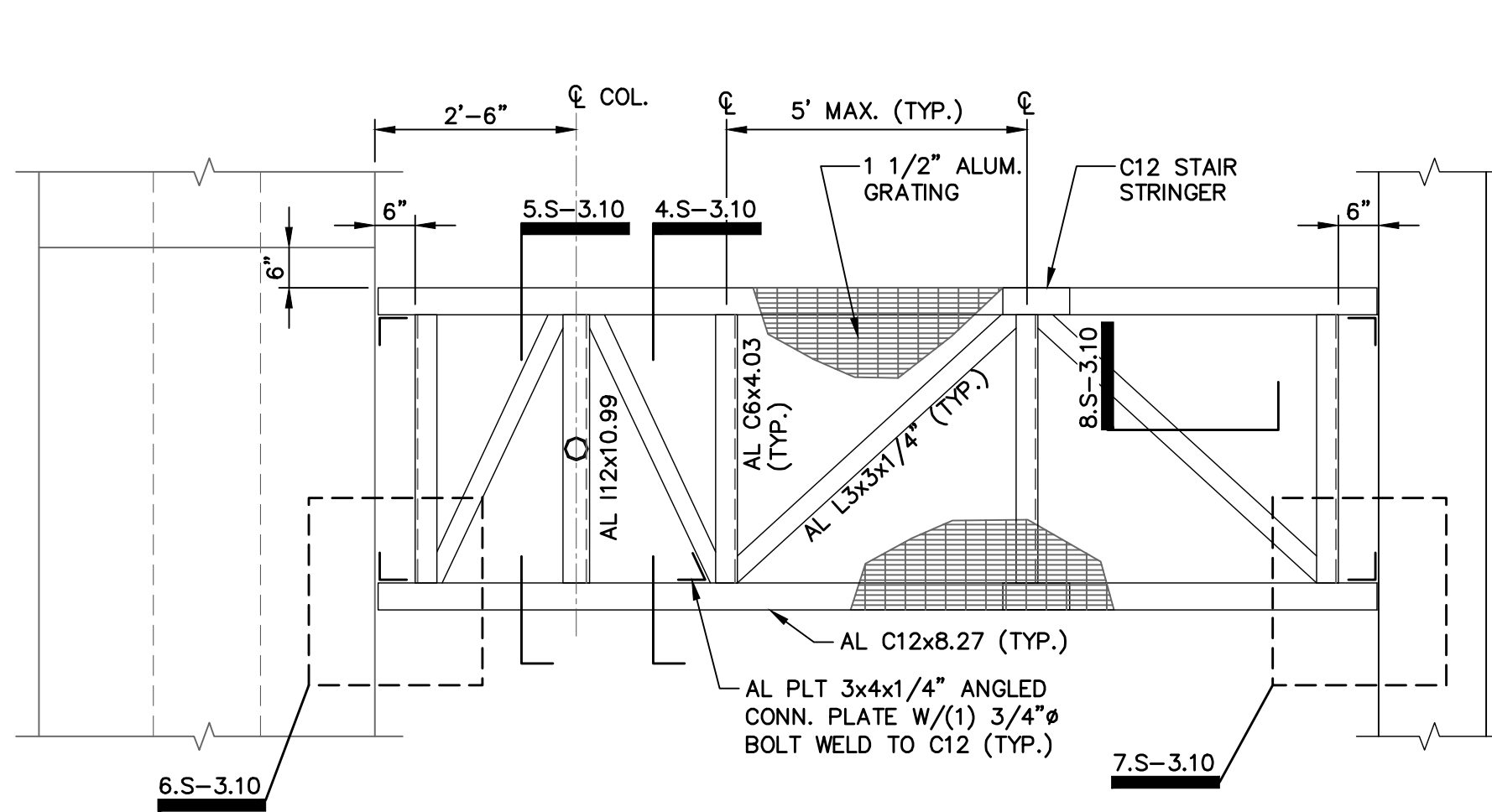
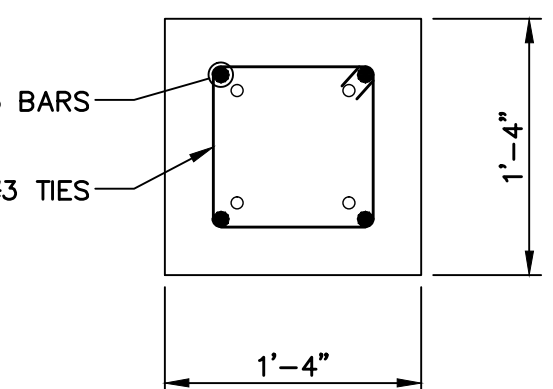
9 - SECTION

1"=1'-0"
REF:



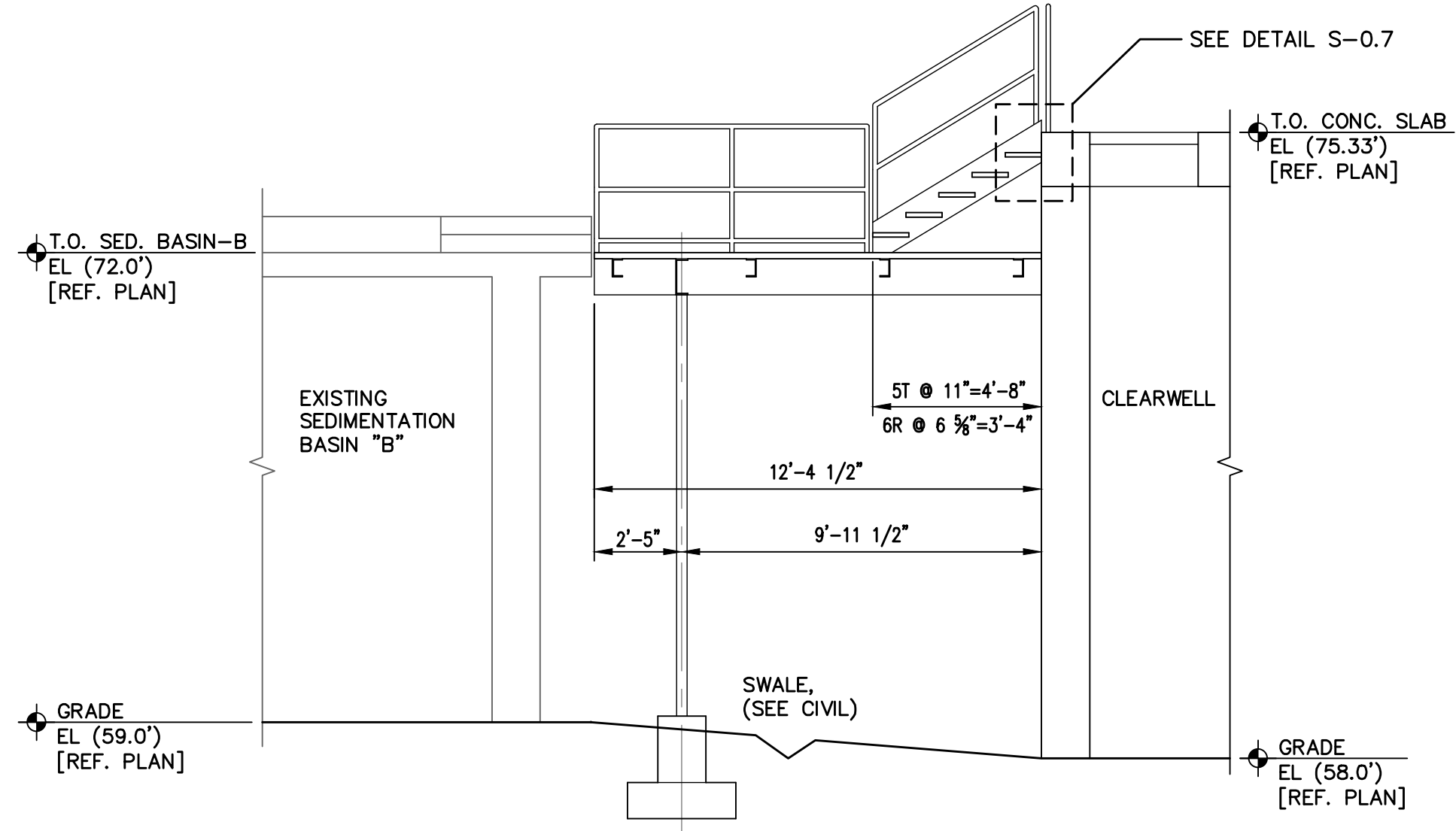
10 - SECTION

1"=1'-0"
REF:



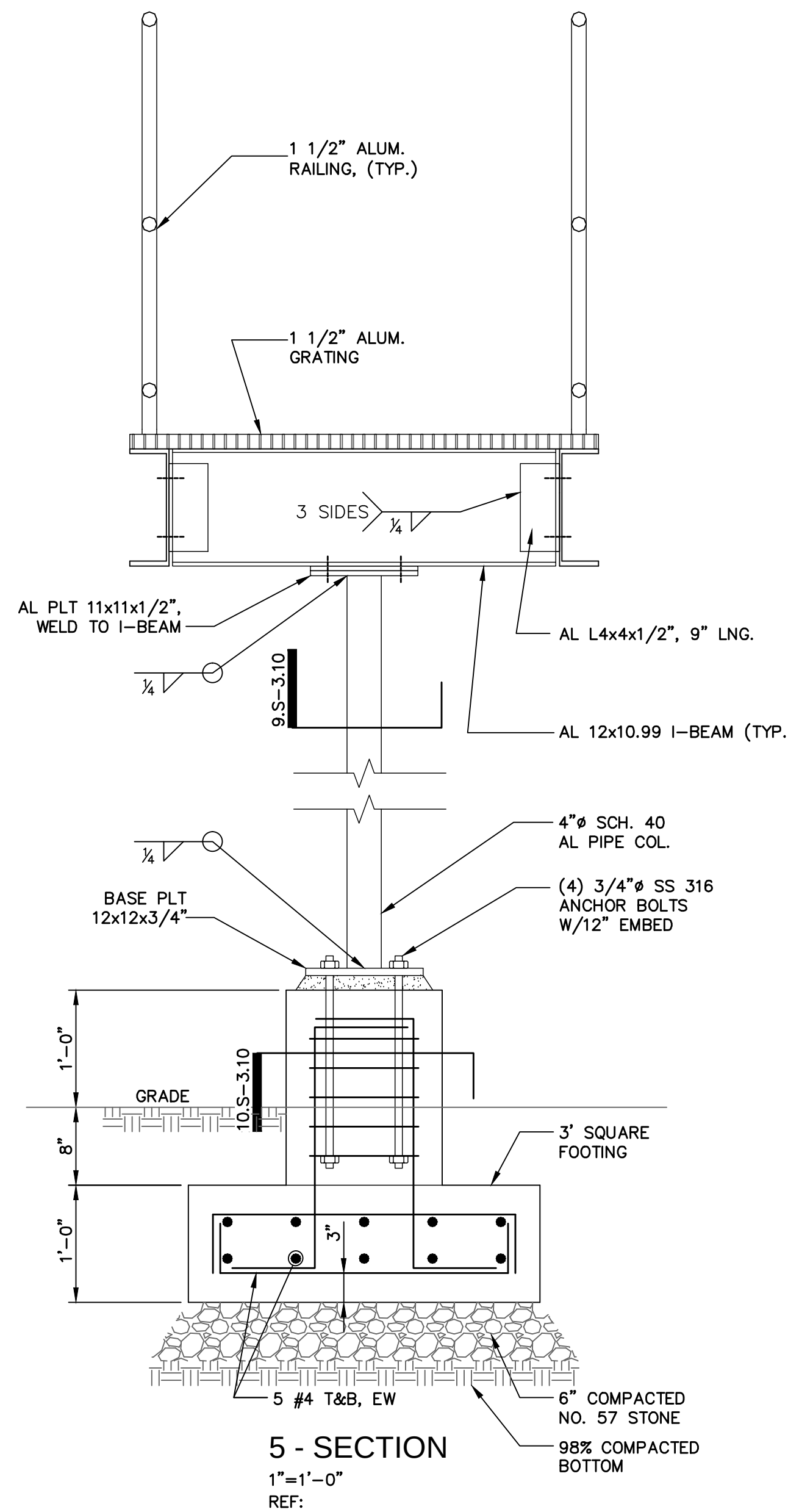
2 - CROSSWALK FRAMING PLAN

1/2"=1'-0"
REF:



3 - CLEARWELL / SEDIMENTATION BASIN "B" CROSSWALK SECTION

1/4"=1'-0"
REF:



5 - SECTION

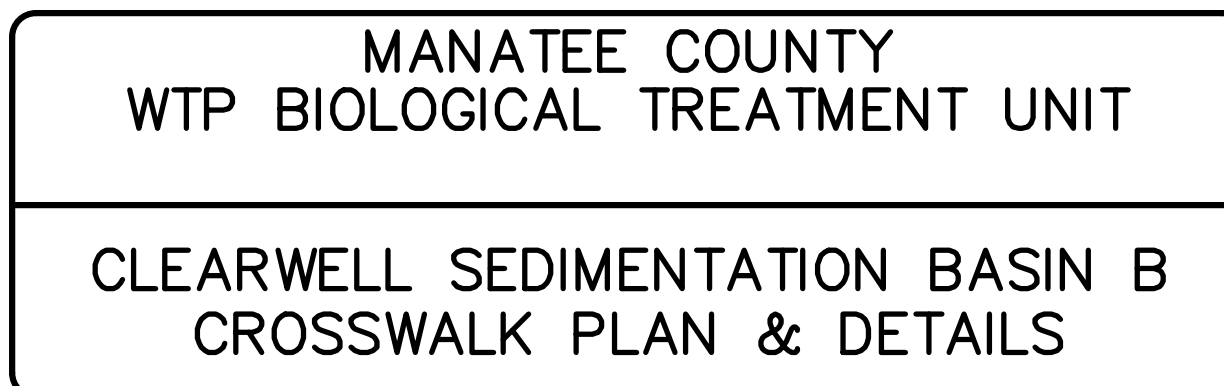
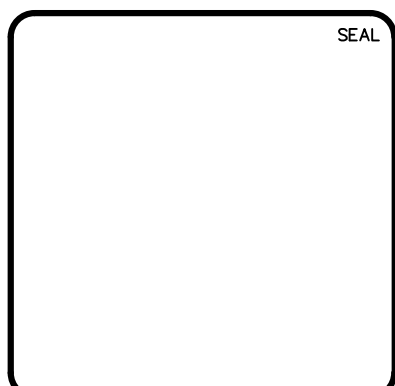
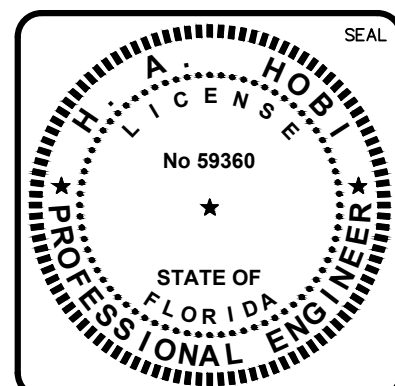
1"=1'-0"
REF:

PLAN NOTES:

1. ISOLATE DISSIMILAR MATERIALS.
2. ALL CONNECTION HARDWARE SHALL BE SS 316.
3. USE HILTI HIT-RE 500-SD EPOXY ADHESIVE FOR ALL ADHESIVE ANCHORS.
4. RELOCATE ALL UTILITIES THAT MAY INTERFERE WITH THE CONNECTION TO EXISTING CONCRETE WALKWAY.
5. CUT EXISTING RAILING AND TRANSITION TO NEW RAILING.

S:\1024\0187\0187-Drawings\Structure\Structure-S-1-10-1024\0187.dwg, 9/29/2015 2:56:23 PM, Joe Mackey

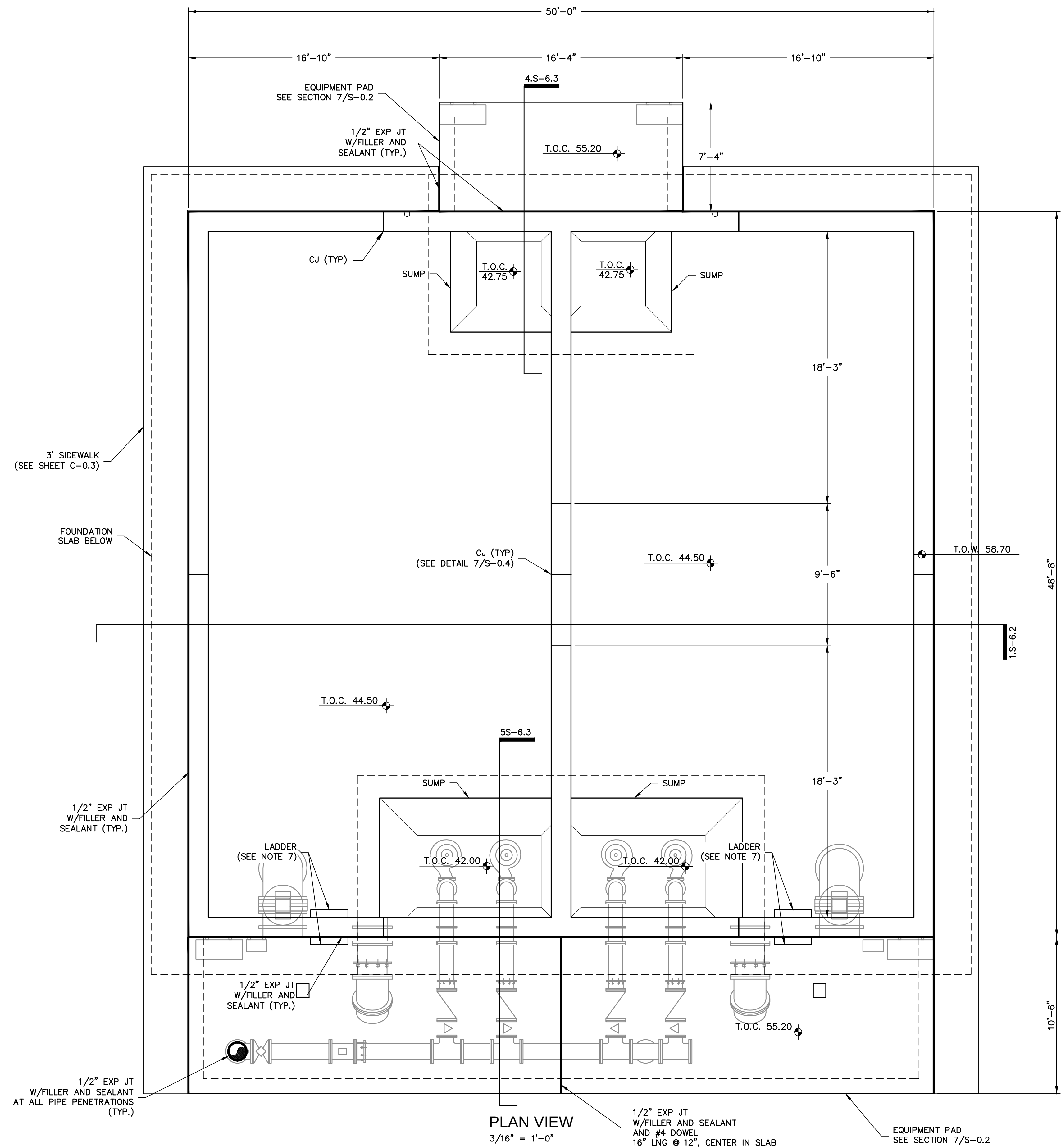
REV. NO.	DESCRIPTION	DATE



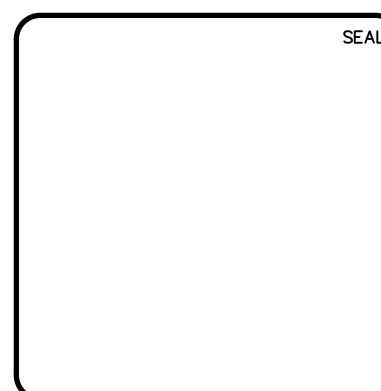
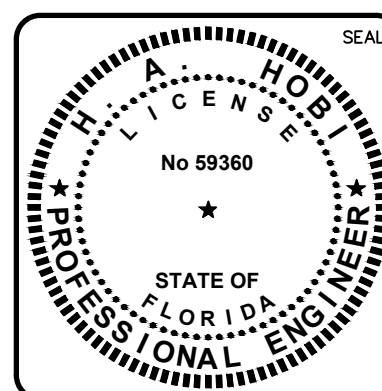
DATE:	OCTOBER 2015
MCE PROJ. #	1024-0187
DRAWN:	JJM
DESIGNED:	HAH
CHECKED:	JSL
PROJ. MGR.	PJL

SCALE	DRAWING NUMBER
HORIZONTAL: 1" = 10'	S-3.10
VERTICAL: NA	REVISION

STATUS: ISSUE FOR BID

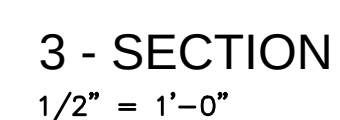
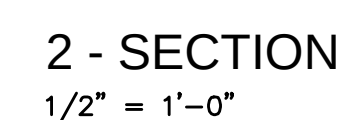
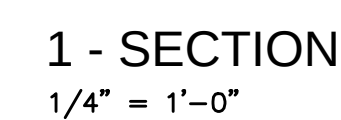


1. PIPE & EQUIPMENT LAYOUTS ARE SHOWN FOR GENERAL INFORMATION ONLY. REFERENCE CIVIL, MECHANICAL & EQUIPMENT VENDOR DRAWINGS FOR SIZES, LOCATIONS & INFO REGARDING SLAB & WALL PENETRATIONS, PIPING & MISCELLANEOUS EQUIPMENT EITHER SHOWN OR NOT SHOWN.
2. REFERENCE EQUIPMENT VENDOR DRAWINGS FOR COORDINATION & INSTALLATION OF ANCHORING EQUIPMENT TO THE SLAB.
3. C.I.P. REINF. CONC. SIDEWALKS (REF. CIVIL DWG's)
4. ALL PIPE PENETRATIONS SHALL HAVE ADDITIONAL REINFORCEMENTS PER DETAIL 1/S-0.6.
5. ALL INTERIOR CONCRETE SURFACES AND TOP OF WALLS SHALL BE COATED WITH PROTECTIVE COATING IN ACCORDANCE WITH SPECIFICATION SECTION 09900.
6. SLOPE SIDEWALKS AND SLABS AWAY FROM BASIN AT 1%.
7. LADDER INSIDE TANK SHALL HAVE HANDRAIL OPTION.

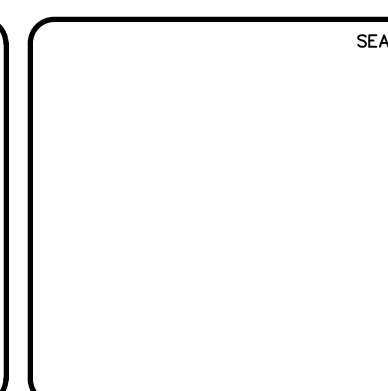
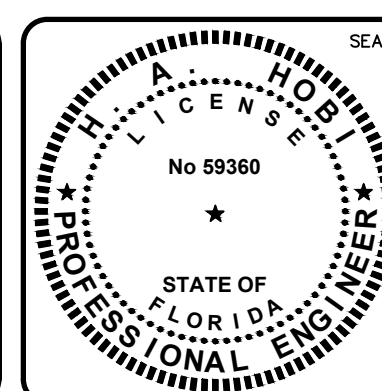
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MANATEE COUNTY WTP BIOLOGICAL TREATMENT UNIT
EQUALIZATION TANK PLAN

DATE: OCTOBER 2015		DRAWING NUMBER	
MCE PROJ. # 1024-0167	SCALE		S-6.1
DRAWN BFN	HORIZONTAL:		
DESIGNED HAH	AS SHOWN		
CHECKED JSL	VERTICAL:		
PROJ. MGR. PJL	NA		
STATUS:		REVISION	
ISSUE FOR BID			



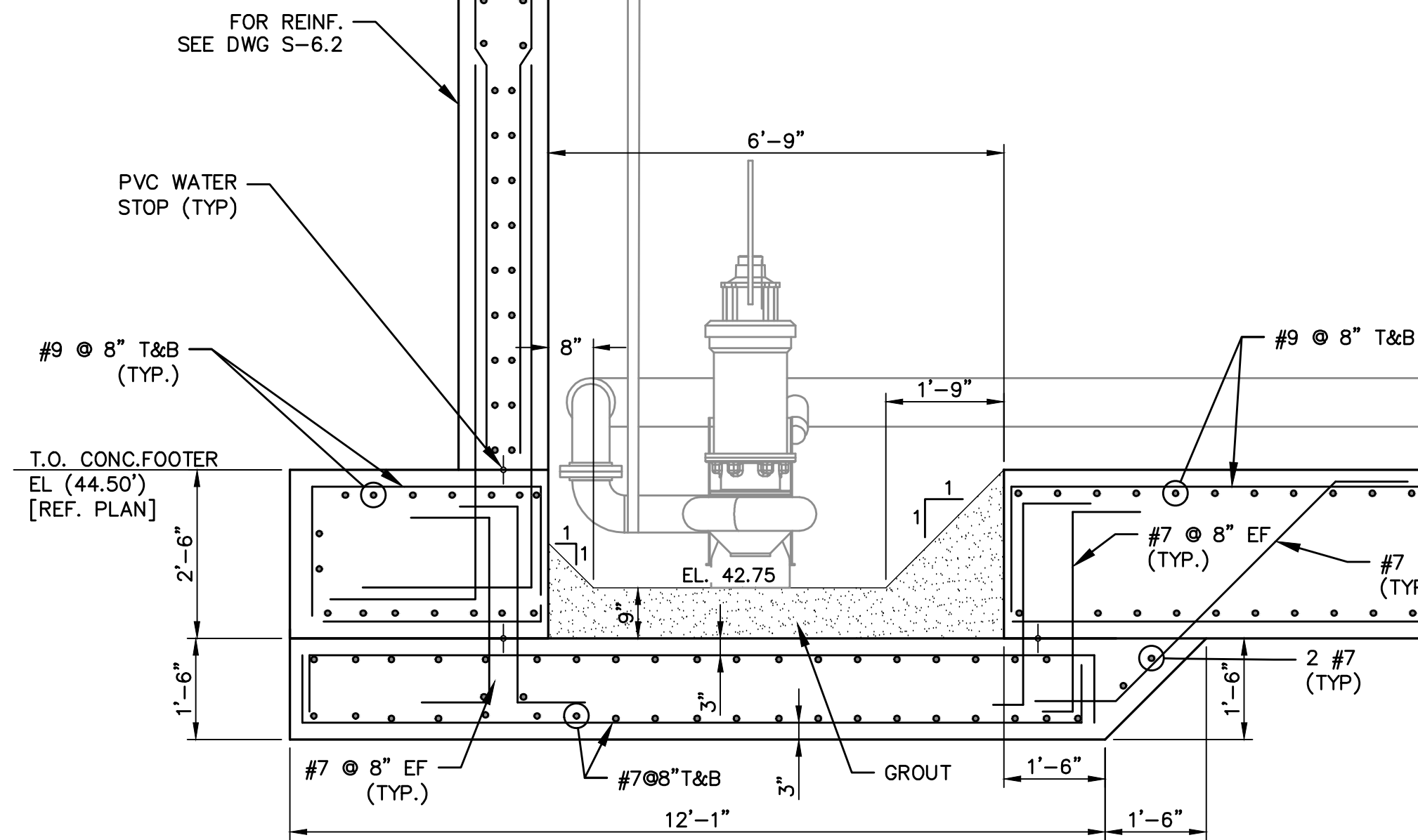
1. REFERENCE DRAWING S-0.1 FOR ADDITIONAL GENERAL NOTES, MATERIAL SPECIFICATIONS, DESIGN CRITERIA & INFORMATION.
2. REFERENCE ELEVATION FOR THE EQ TANK IS TOP OF CONCRETE WALL EL. 58.70.
3. REFERENCE CIVIL DRAWING FOR GRADING INFORMATION AROUND THE STRUCTURE.
4. PREPARE THE SUBGRADE MATERIAL BELOW THE EQ TANK FOUNDATION SLAB PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, LISTED IN NOTE 5, & PROJECT SPECIFICATIONS.
5. REFERENCE GEOTECHNICAL REPORT, PREPARED BY DRIGOERS ENGINEERING SERVICES, INC. (PROJECT NO. DES147525, DATED SEPT. 4, 2015), FOR SUBGRADE PREPARATION AND FOUNDATION RECOMMENDATIONS.
6. ALL PIPING CONNECTIONS ADJACENT TO THE STRUCTURE SHALL ACCOMMODATE TANK SETTLEMENT, REFERENCE GEOTECHNICAL REPORT, LISTED IN NOTE 5.

[illegible]

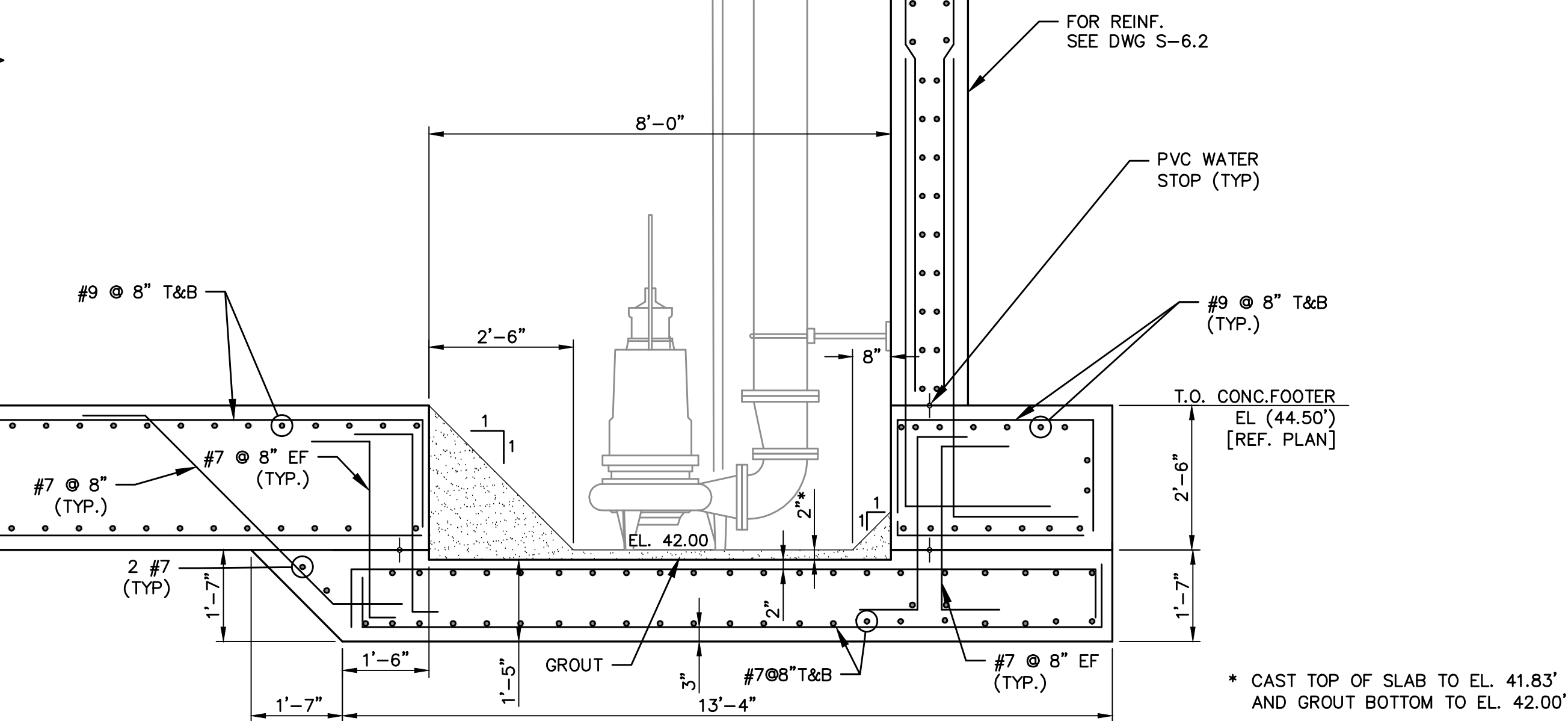
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

EQUALIZATION TANK
FOUNDATION PLAN AND
SECTIONS

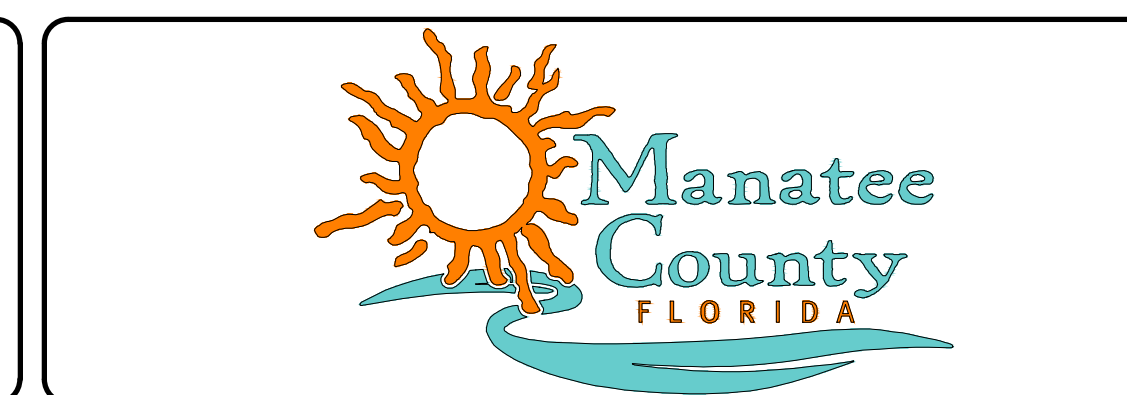
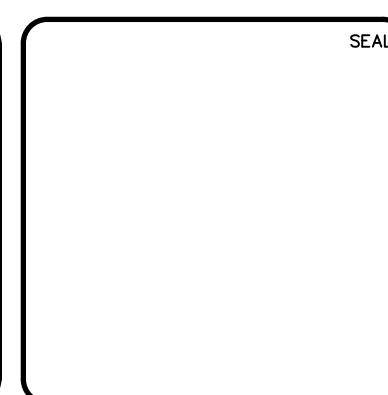
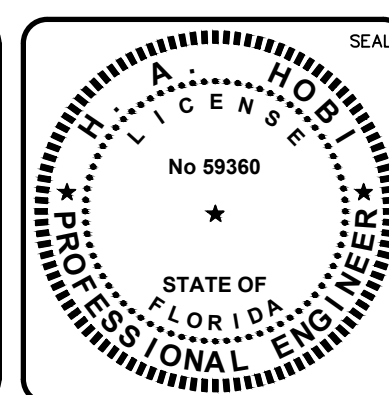
DATE: OCTOBER 2015		SCALE		DRAWING NUMBER	
MCE PROJ. # 1024-0167		HORIZONTAL: AS SHOWN VERTICAL: NA		S-6.2	
DRAWN BFN					
DESIGNED HAH					
CHECKED JSL					
PROJ. MGR. PUL					



4 - SECTION
1/2" = 1'-0"



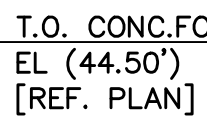
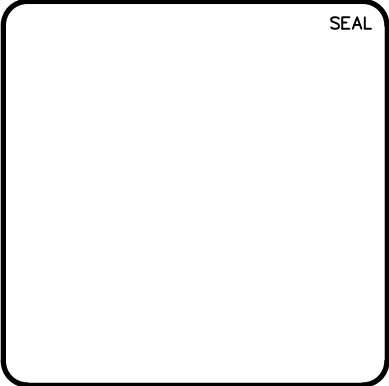
5 - SECTION
1/2" = 1'-0"

[illegible]

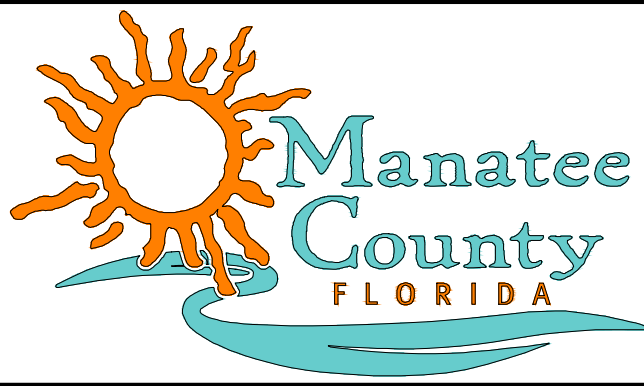
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

EQUALIZATION TANK SECTIONS

DATE: OCTOBER 2015		SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0167		HORIZONTAL: AS SHOWN VERTICAL: NA	S-6.3
DRAWN BFN			
DESIGNED HAH			
CHECKED JSL			
PROJ. MGR. PJL			
STATUS:		REVISION	


$$1/2'' = 1'-0''$$

$$1/2'' = 1'-0''$$


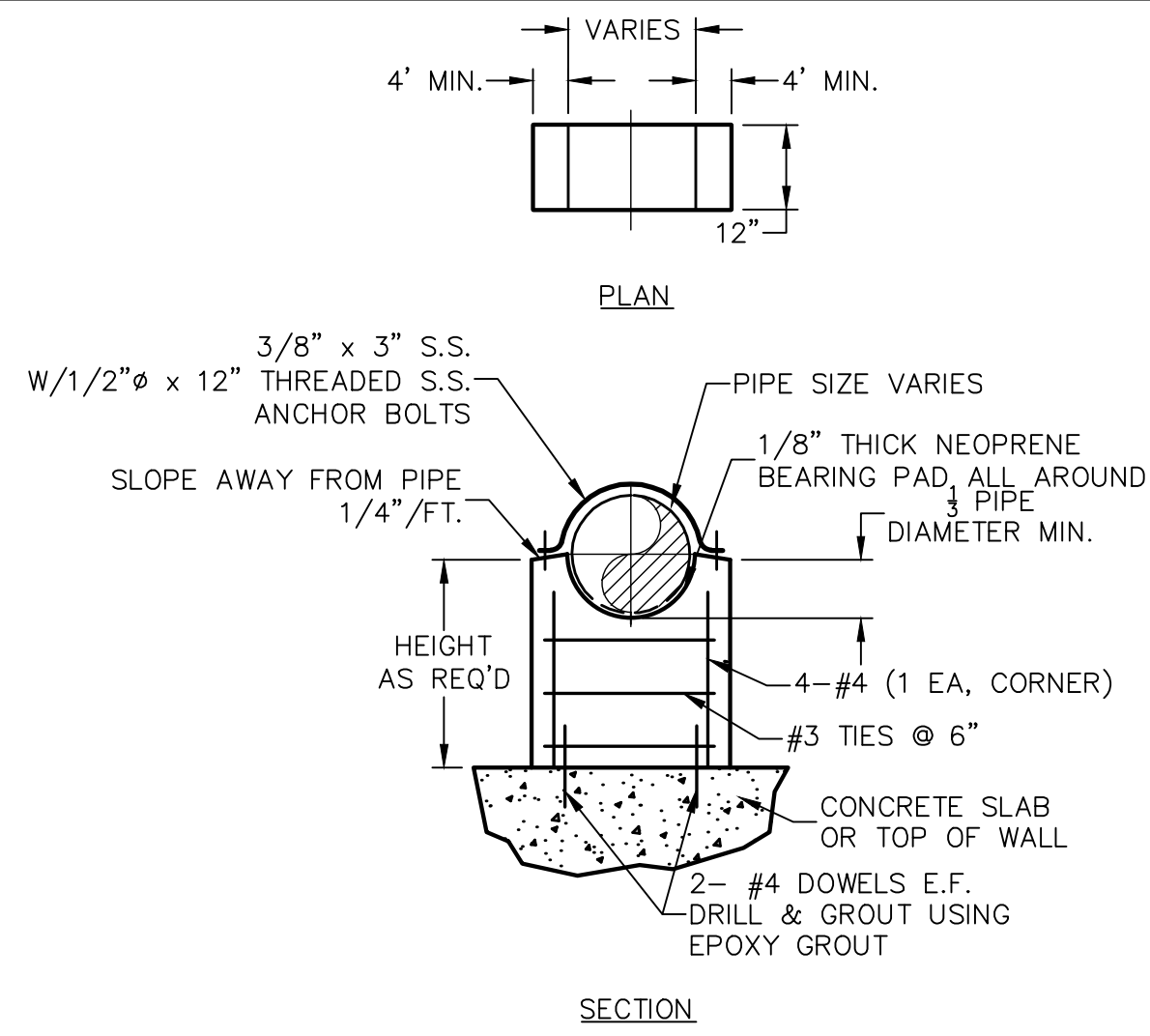
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www.mckimcreed.com



MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

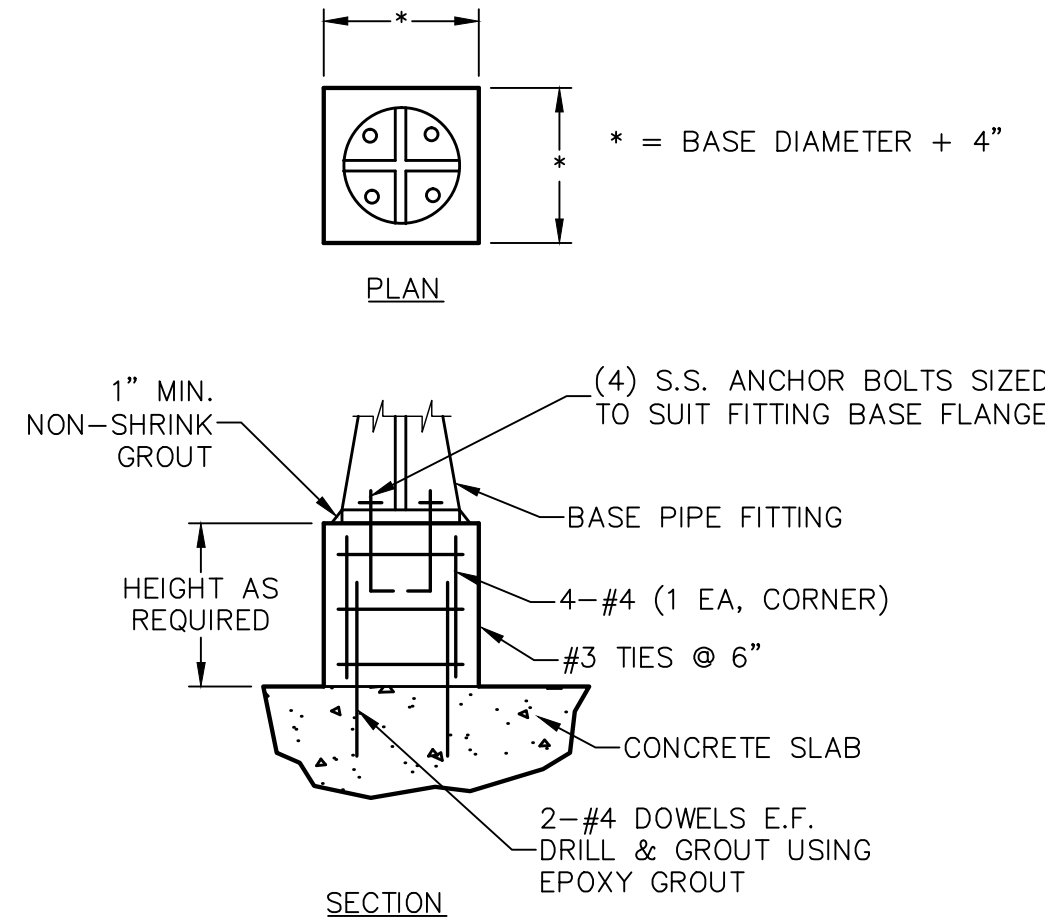
EQUALIZATION TANK SECTIONS

DATE: OCTOBER 2015 MCE PROJ. # 1024-0167 DRAWN BFN DESIGNED HAH CHECKED JSL PROJ. MGR. PJL	SCALE HORIZONTAL: AS SHOWN VERTICAL: NA	DRAWING NUMBER S-6.4
STATUS:		REVISION
ISSUE FOR BID		



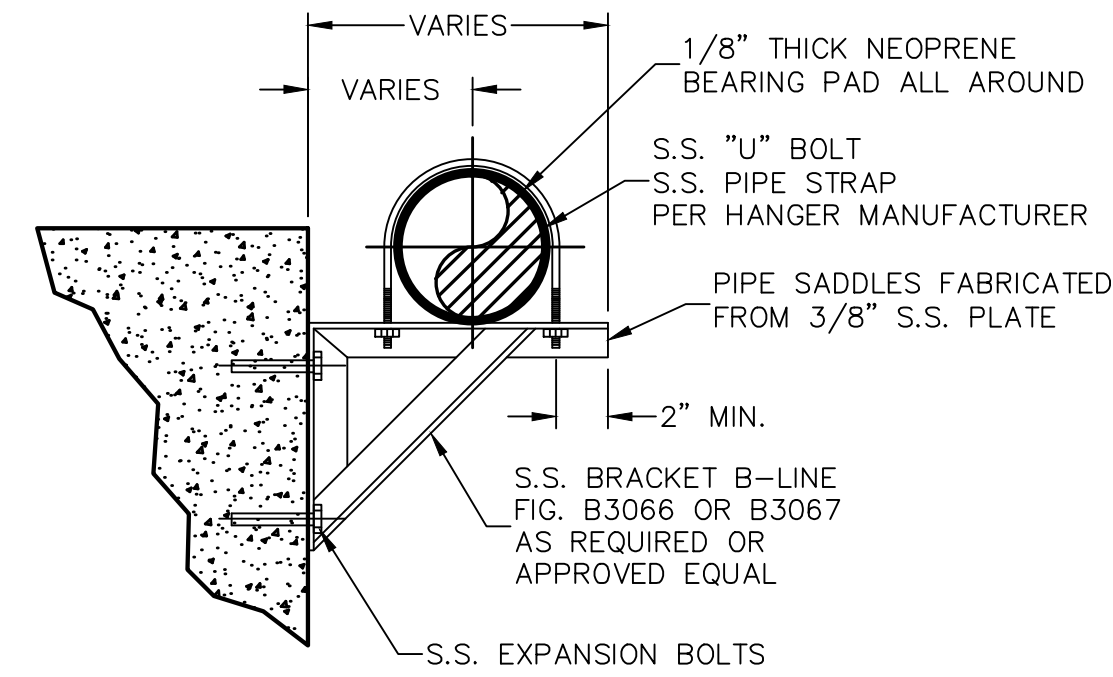
PIPE SUPPORT TYPE 1

NOT TO SCALE



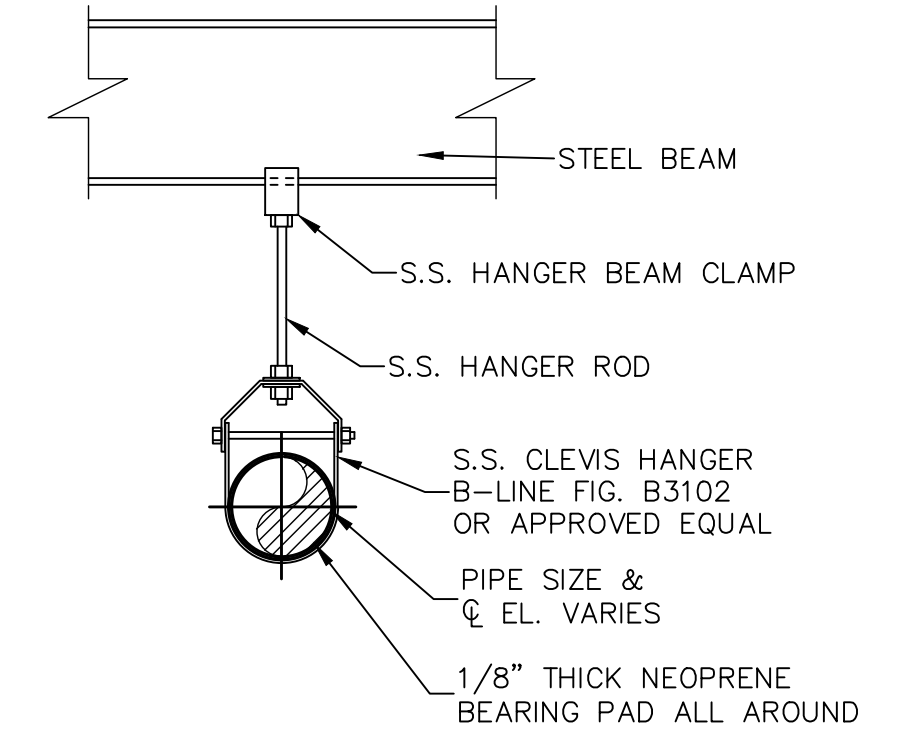
PIPE SUPPORT TYPE 2

NOT TO SCALE



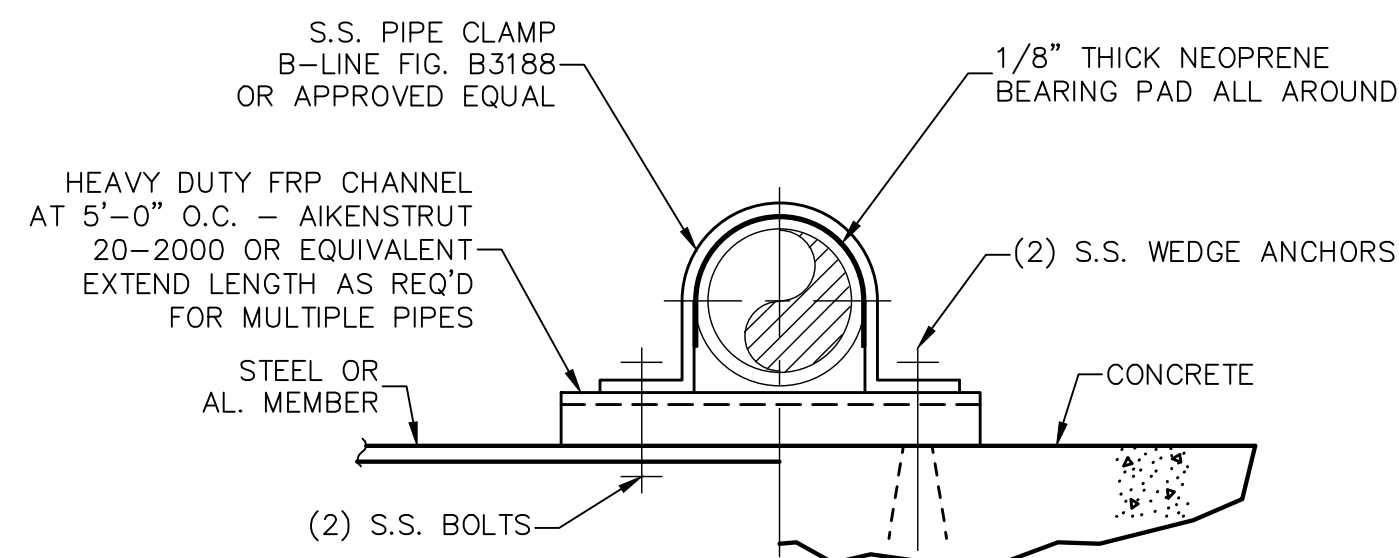
PIPE SUPPORT TYPE 3

NOT TO SCALE



PIPE SUPPORT TYPE 4

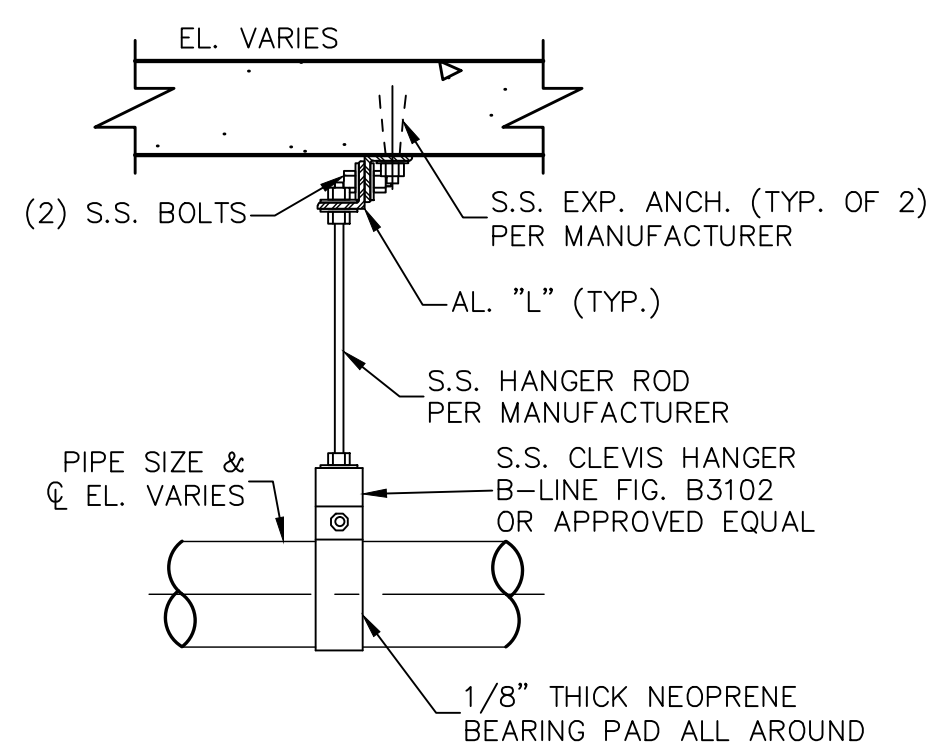
NOT TO SCALE



NOTE:
USE THIS DETAIL FOR SMALL DIA. PIPING OR CONDUIT ATTACHED TO CONCRETE SLAB, WALL, CEILING, METAL FRAMING MEMBERS OR EQUIPMENT MOUNTING BOARDS.

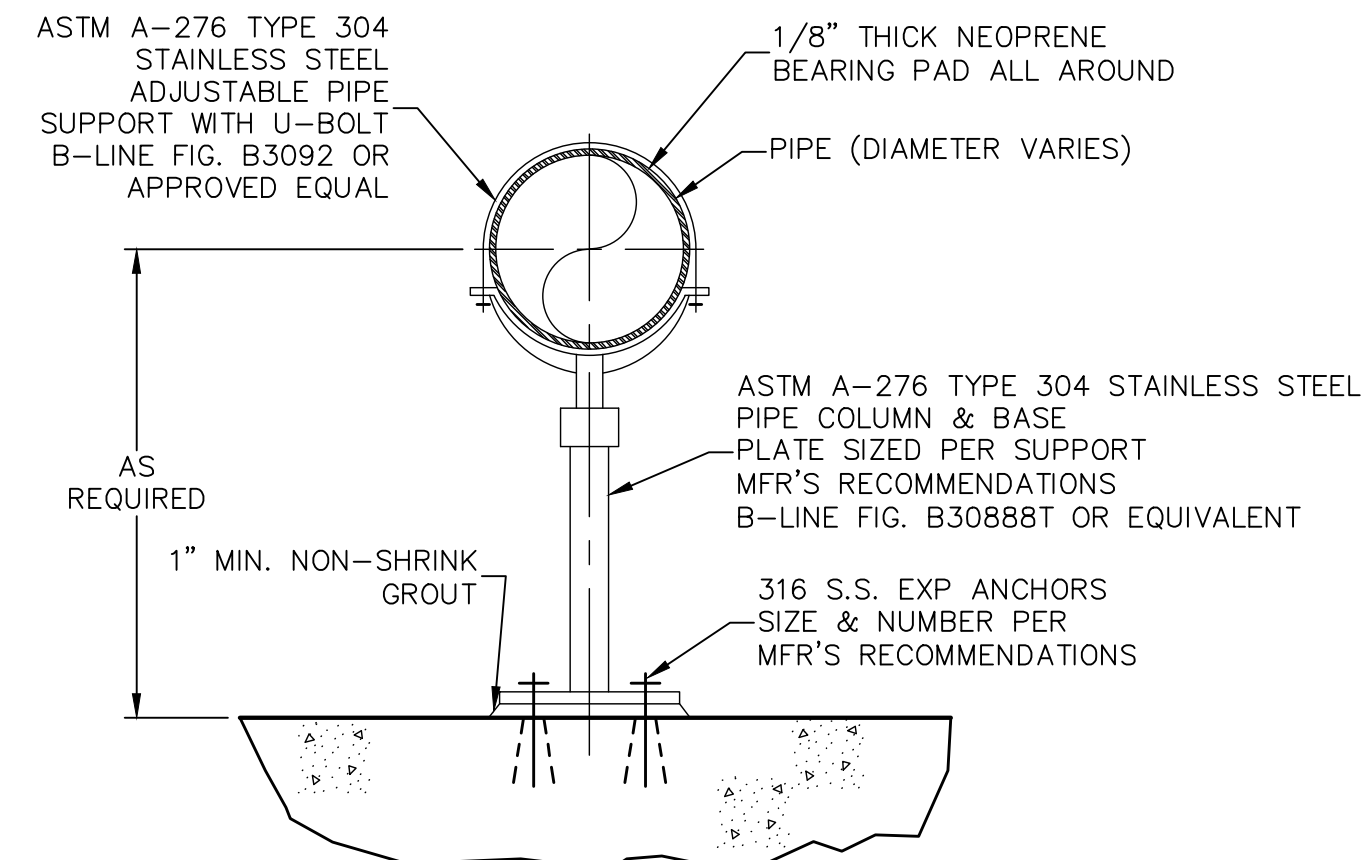
PIPE SUPPORT TYPE 5

NOT TO SCALE



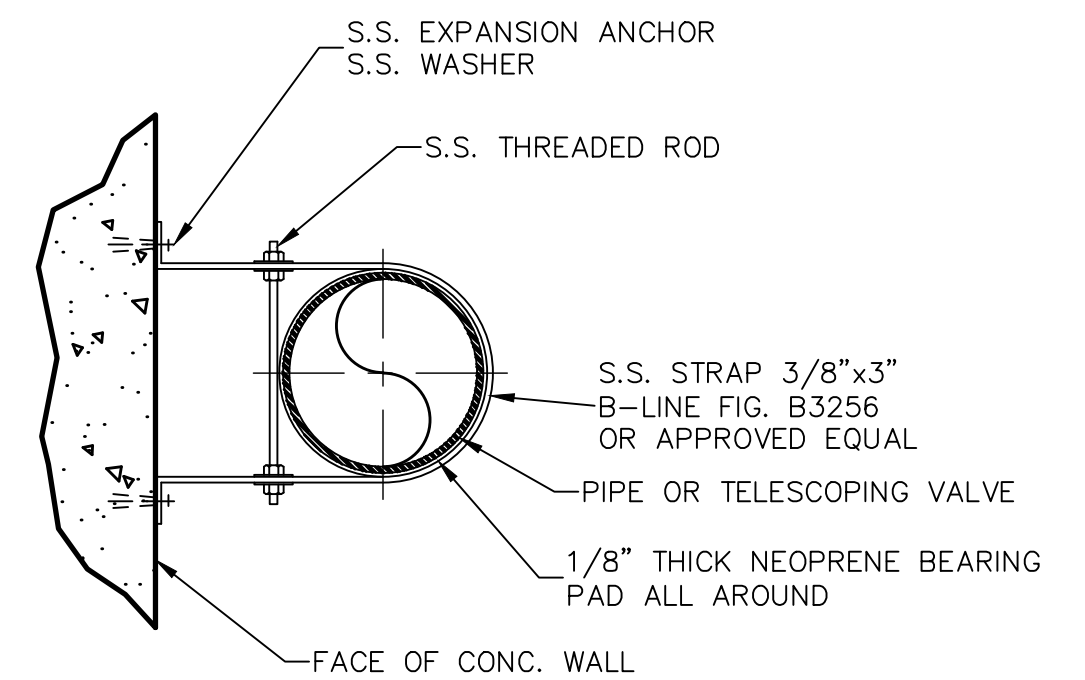
PIPE SUPPORT TYPE 6

NOT TO SCALE



PIPE SUPPORT TYPE 7

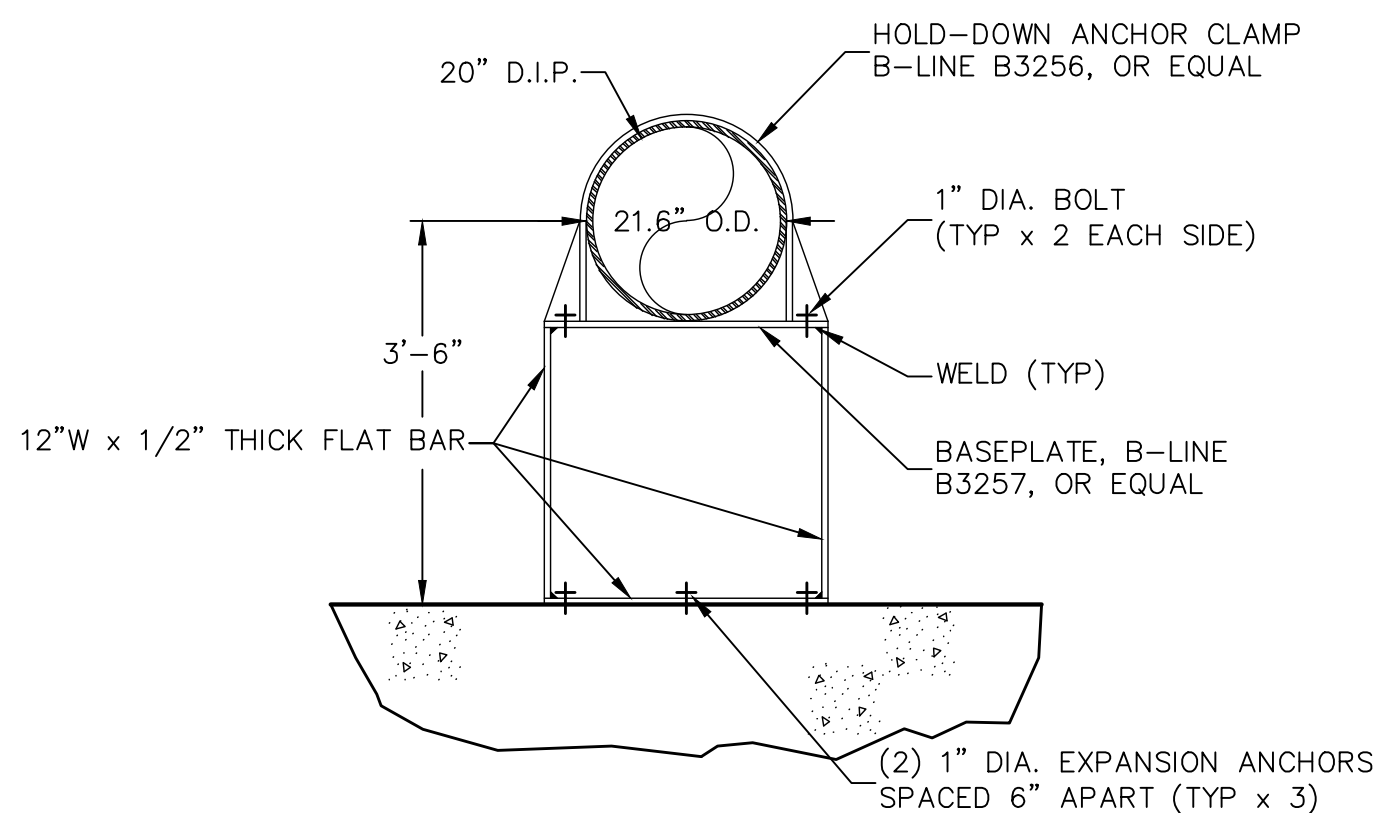
NOT TO SCALE



PIPE STAND-OFF BRACKET TYPE 8

NOT TO SCALE

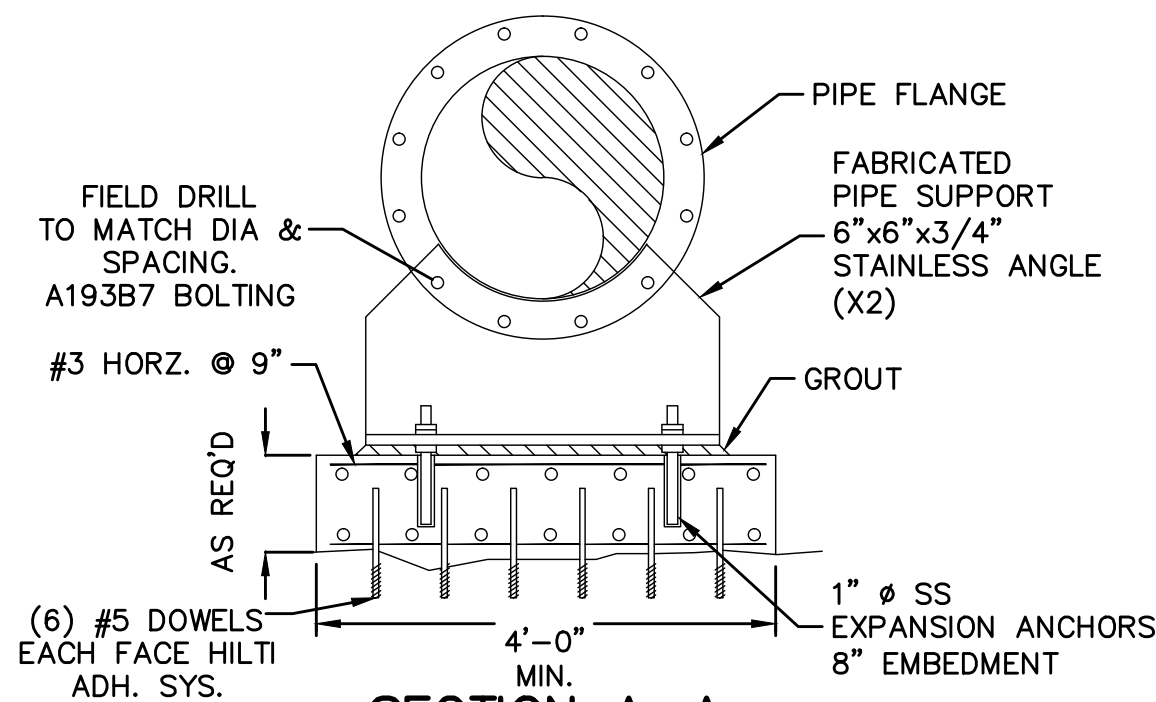
NOTE:
1. ALL PIPE SUPPORTS AND ASSOCIATED HARDWARE SHALL BE 316 SS.



NOTE:
ALL MATERIALS SHALL BE 316 SS

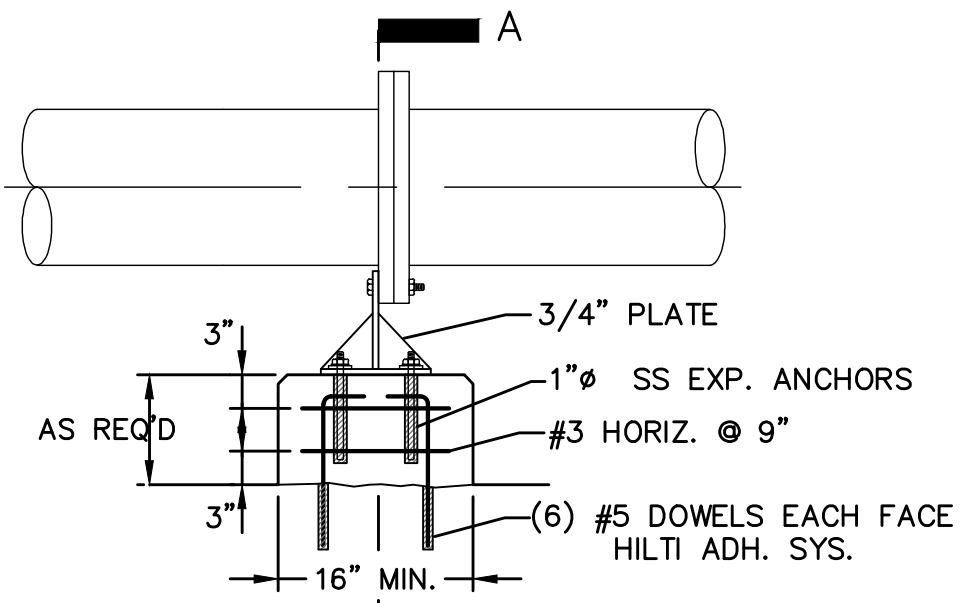
PIPE SUPPORT TYPE 9

NOT TO SCALE



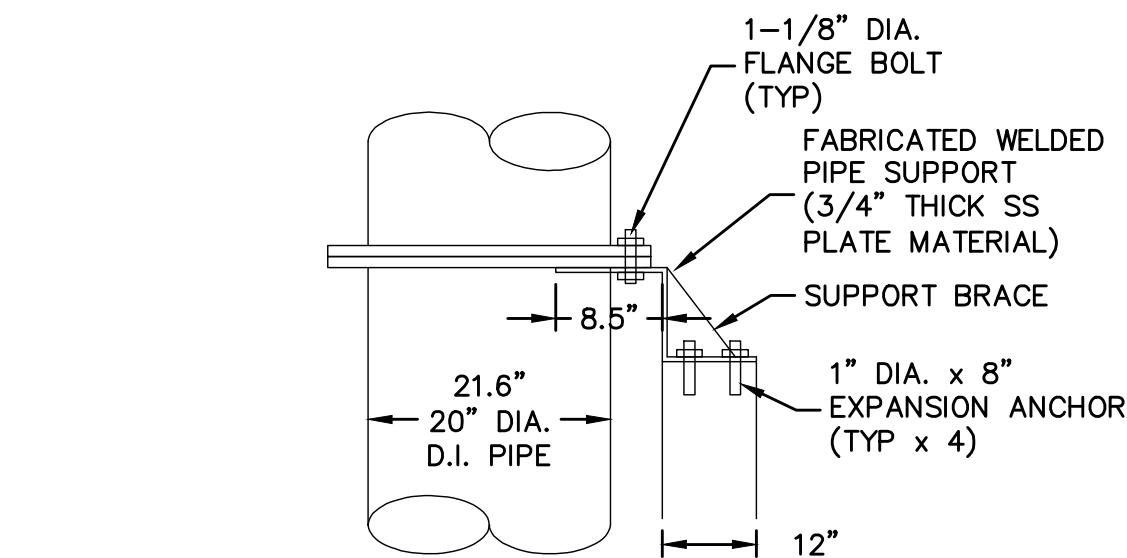
SECTION A-A

NOT TO SCALE



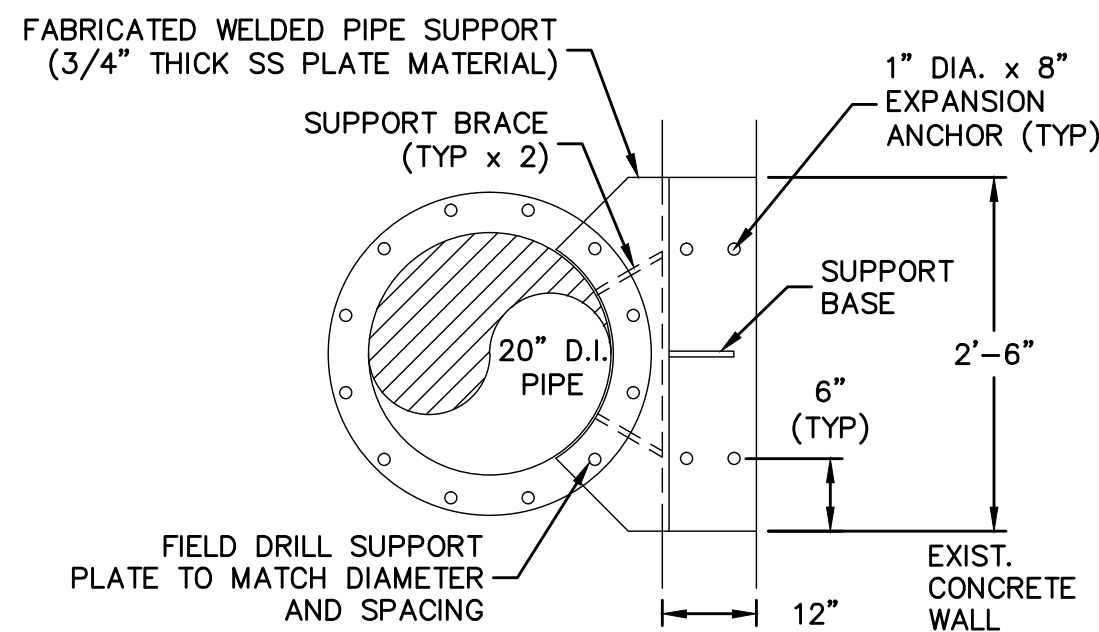
PIPE SUPPORT TYPE 10

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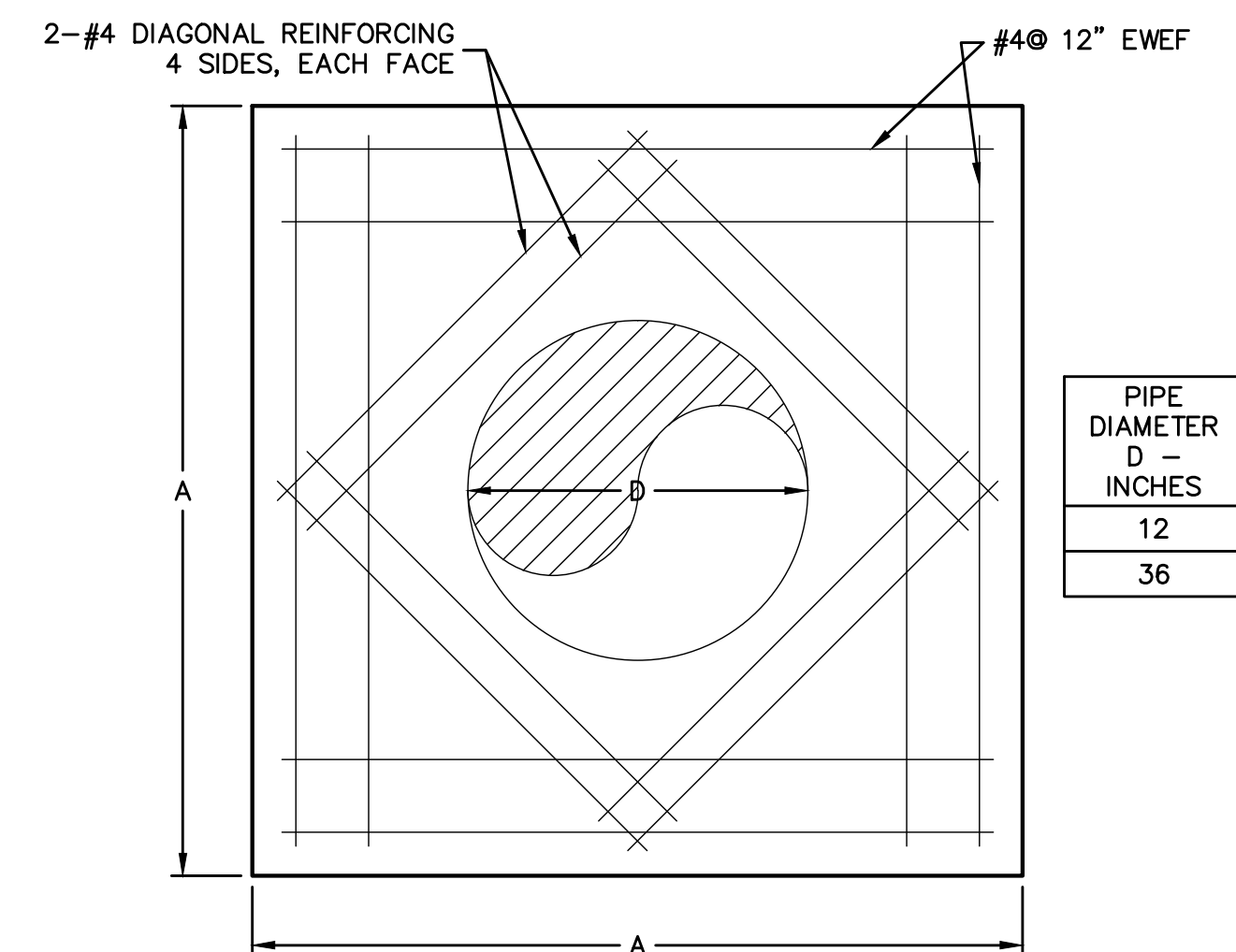
SECTION B-B

NOT TO SCALE



PIPE SUPPORT TYPE 11

NOT TO SCALE



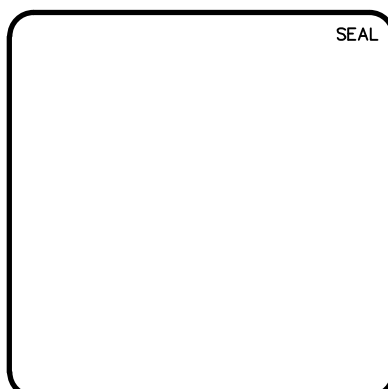
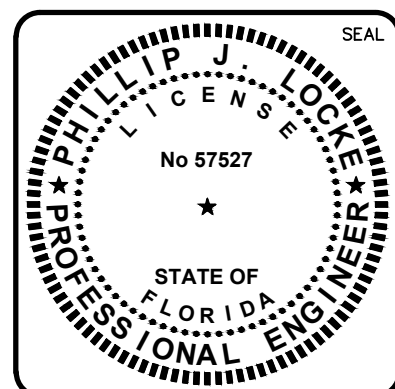
CONCRETE COLLAR DETAIL

NOT TO SCALE

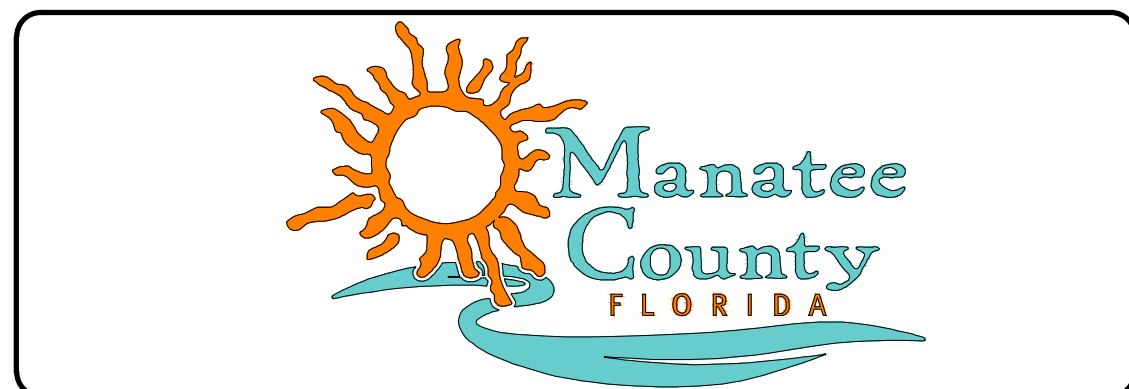
PIPE DIAMETER D - INCHES	SIDE LENGTH A - FEET	CONCRETE COLLAR THICKNESS INCHES
12	4	24
36	7	24

A:\1024\0167\1024-Drawings\Mechanical\MD-501-10240167.dwg, 9/20/2015, 10:42:03 PM, Brian Naught

REV.	NO.	DESCRIPTION	DATE



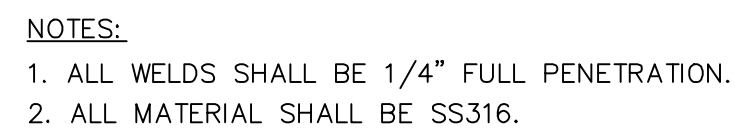
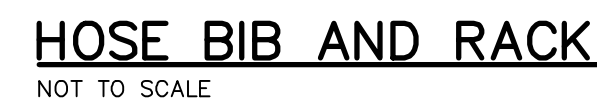
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 Clearwater, Florida 33756
 Phone: (727)442-7196, Fax: (727)461-3827
 CA Lic. No. 29588
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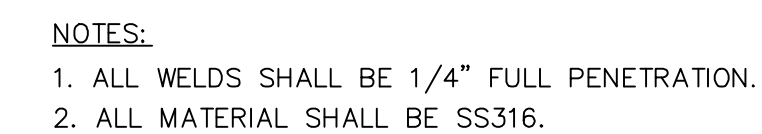
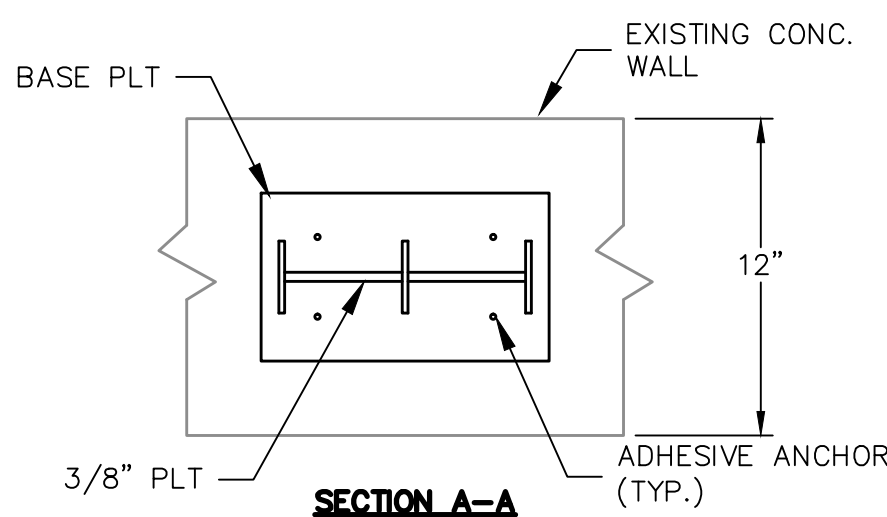
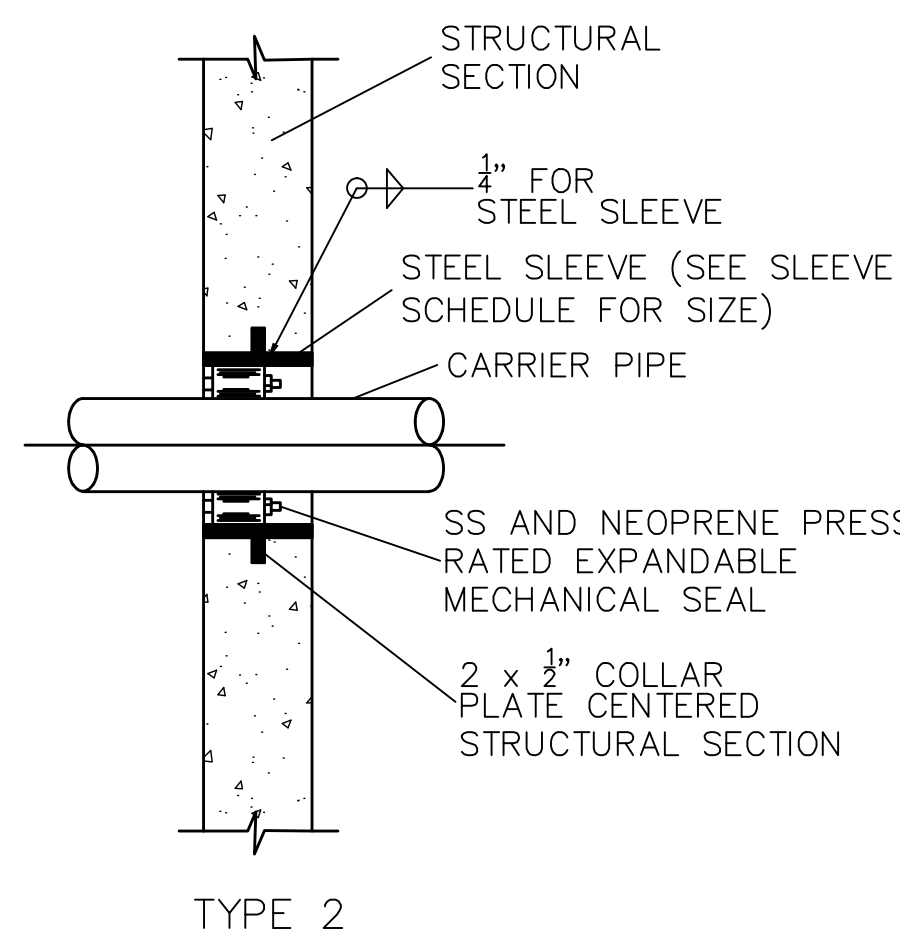
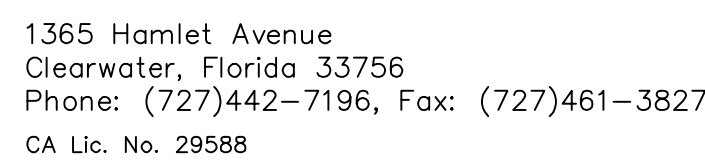
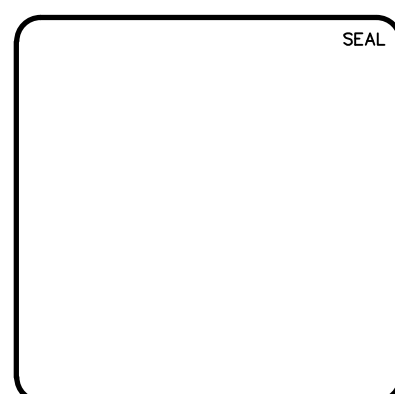
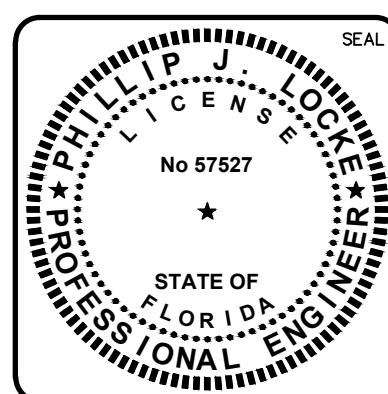
MECHANICAL DETAILS
1 OF 2

DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
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DRAWN: BFN	VERTICAL: NA	REVISION
DESIGNED: P.J.L.		
CHECKED: JSL		
PROJ. MGR.: P.J.L.		
STATUS: ISSUE FOR BID		



NOTES:

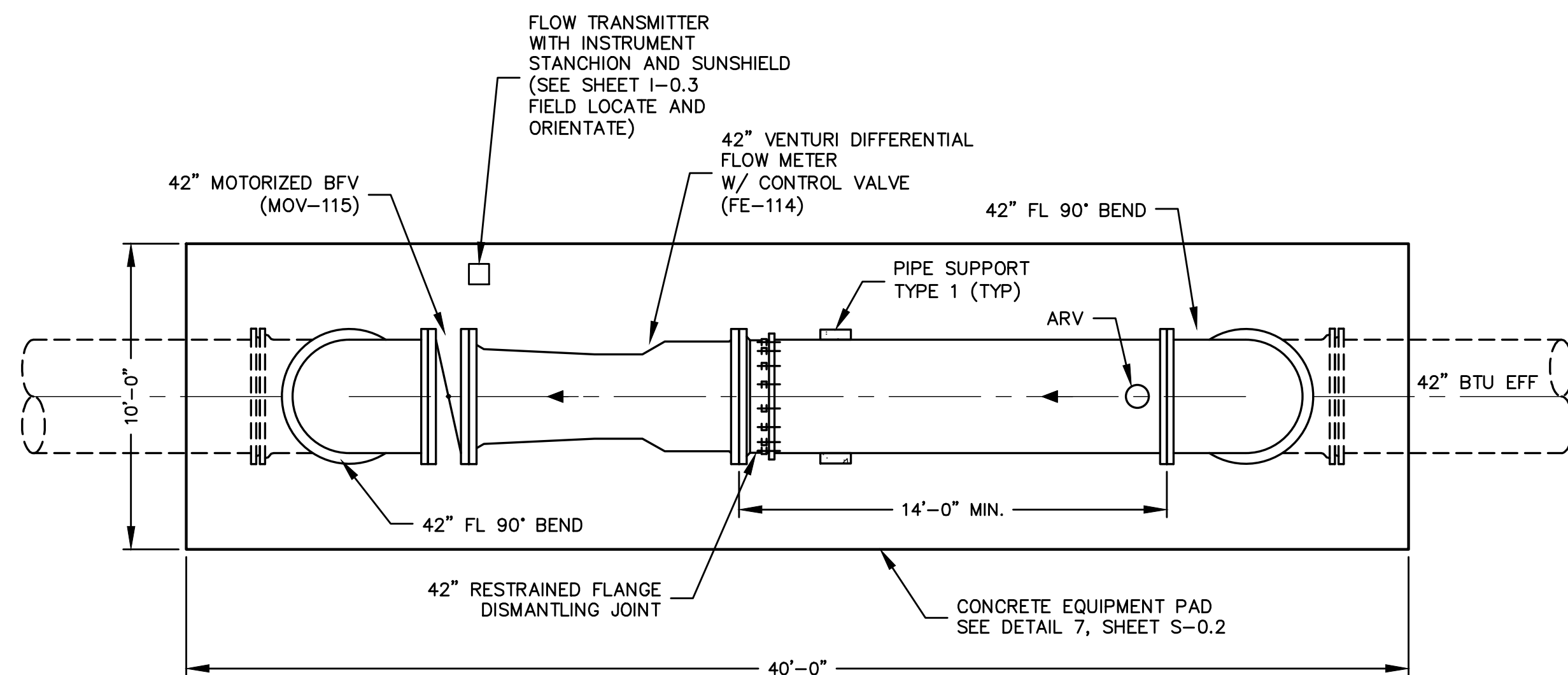
1. INSTALL SEALS FROM DRY SIDE OF PENETRATION. WET SIDE FILLED WITH WATERPROOF NON-SHRINK GROUT.
2. LINK SEAL SHALL HAVE EPDM SEAL ELEMENTS REINFORCED NYLON POLYMER PRESSURE PLATES AND 316 SS BOLTS AND NUTS AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC. (PSI).

[illegible]

MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

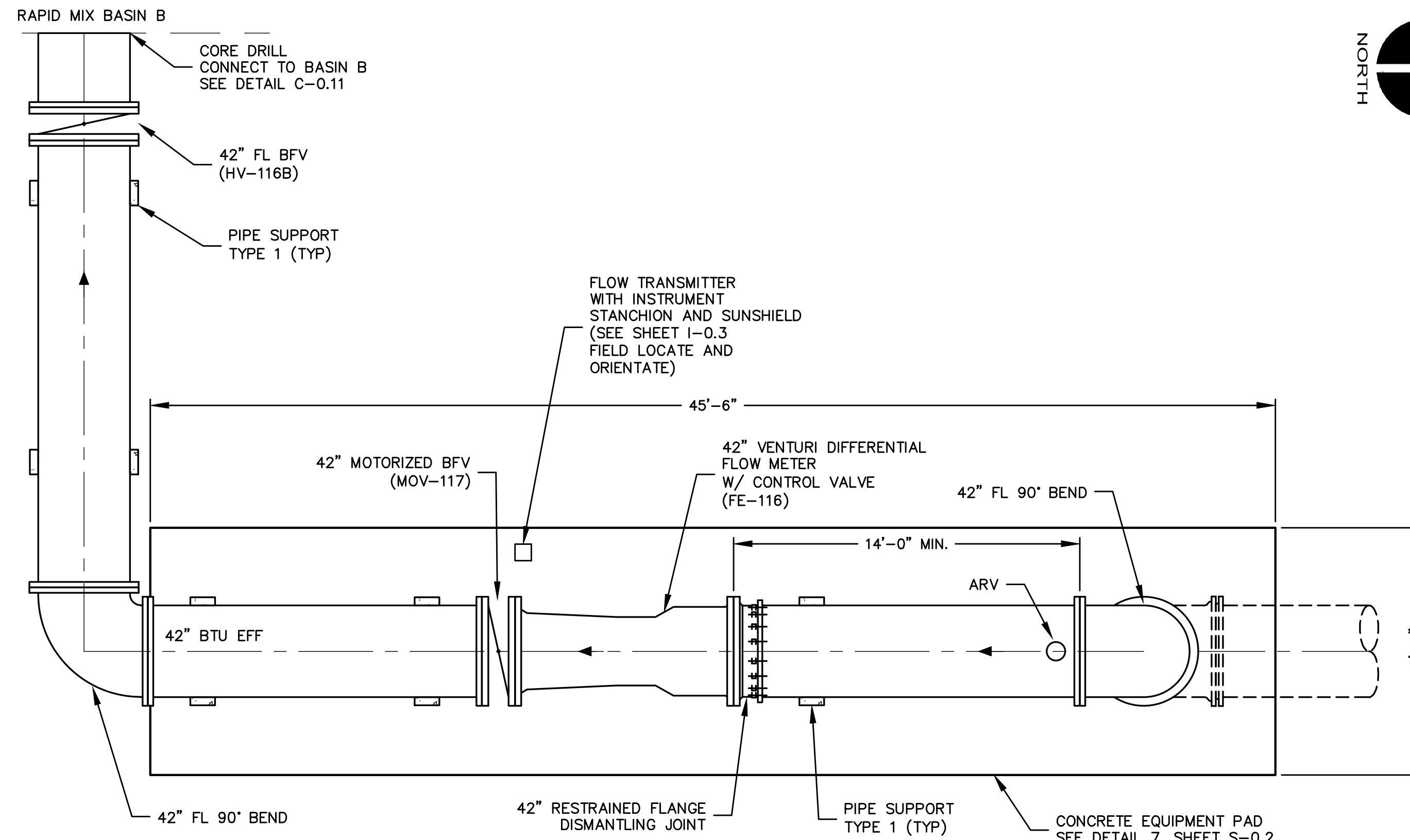
MECHANICAL DETAILS
2 OF 2

DATE: OCTOBER 2015		SCALE		DRAWING NUMBER	
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DRAWN PJL					
DESIGNED BFL					
CHECKED JSL					
PROJ. MGR. PJL		STATUS:			



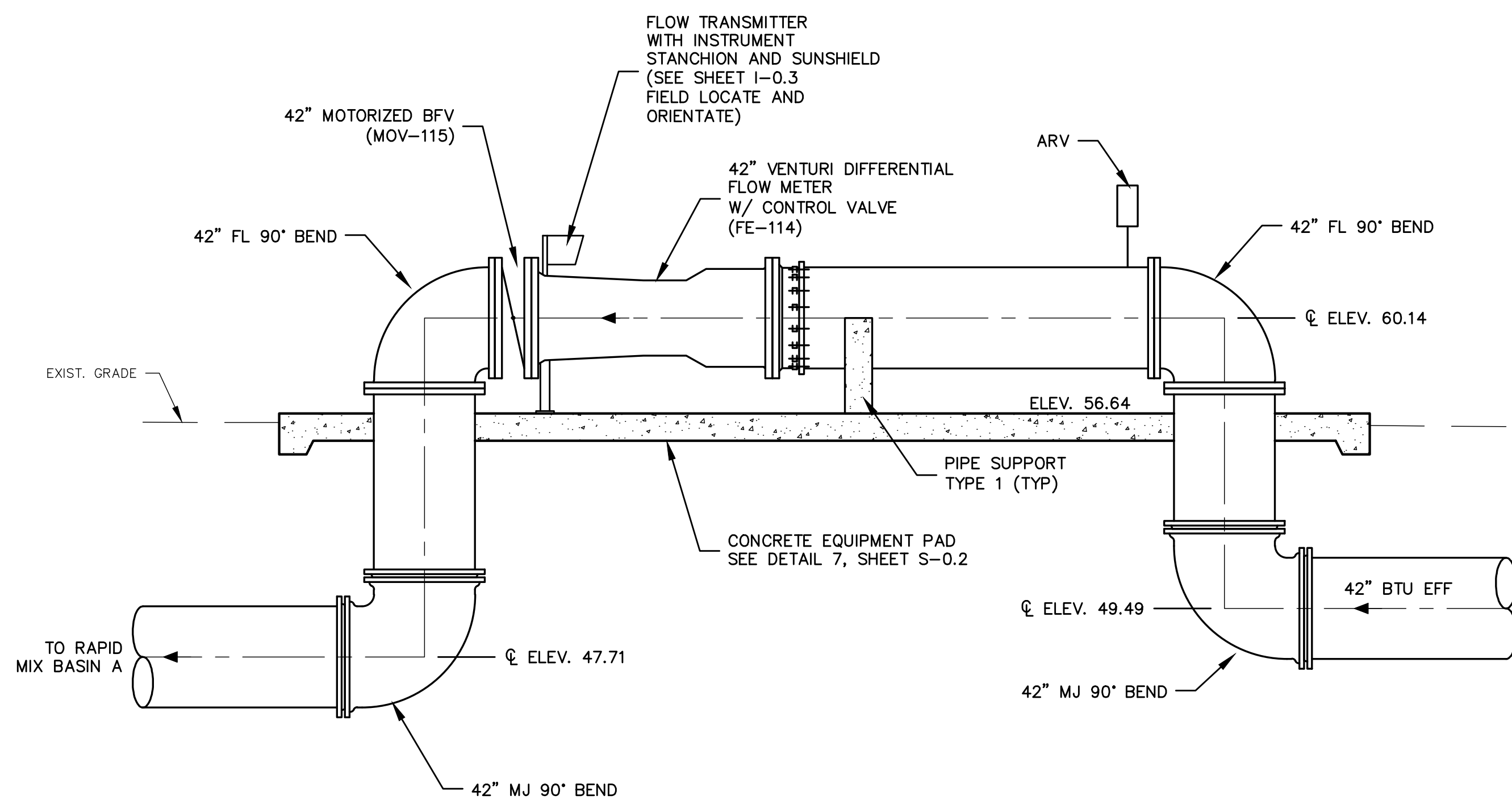
BASIN A PLAN

SCALE: 1/4" = 1'-0"



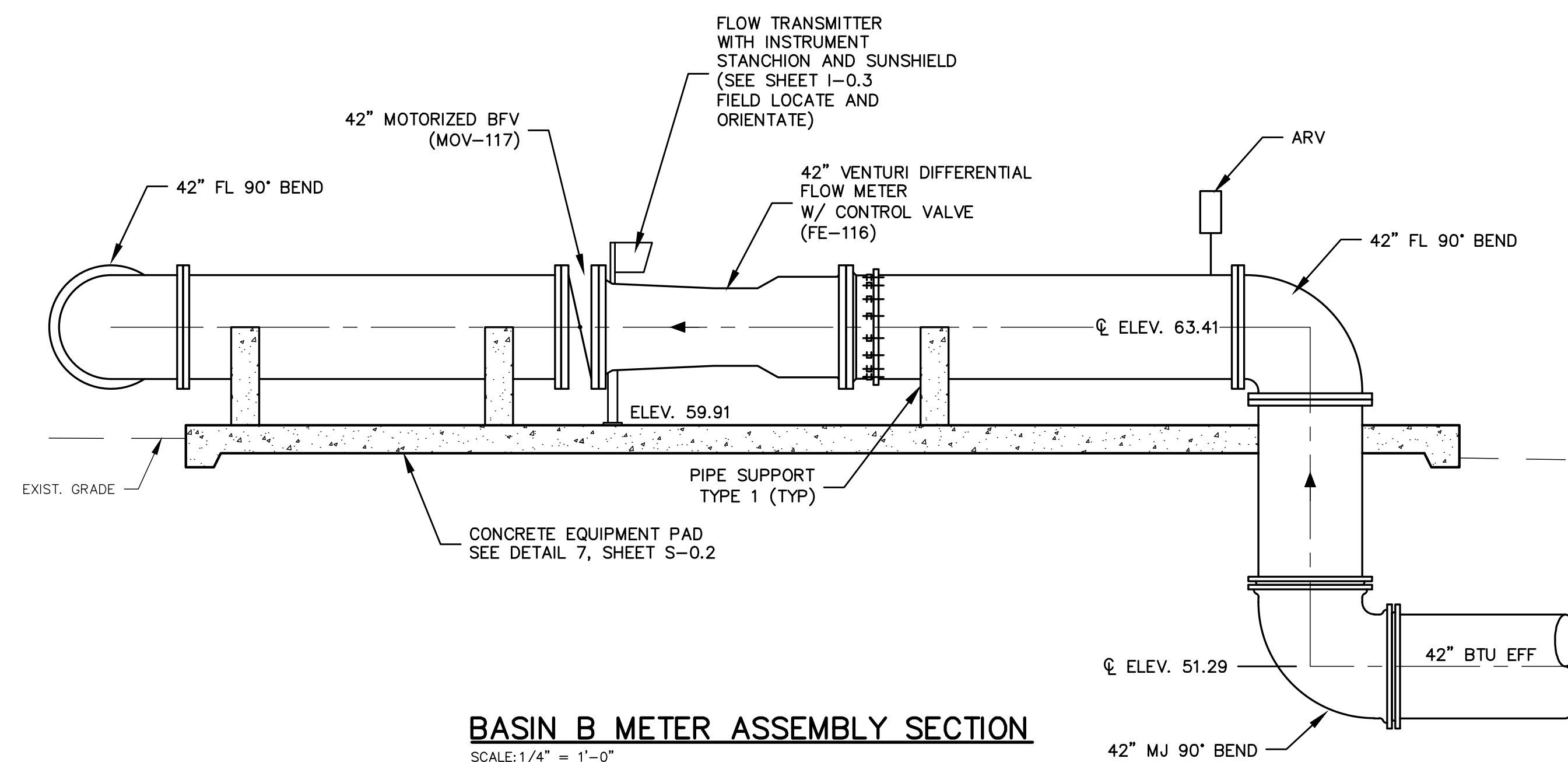
BASIN B METER ASSEMBLY PLAN

SCALE: 1/4" = 1'-0"



BASIN A SECTION

SCALE: 1/4" = 1'-0"

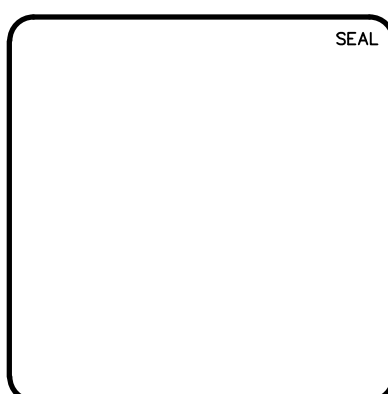
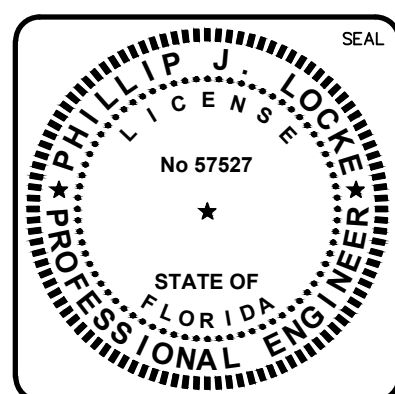


BASIN B METER ASSEMBLY SECTION

SCALE: 1/4" = 1'-0"

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REV. NO.	DESCRIPTIONS	DATE



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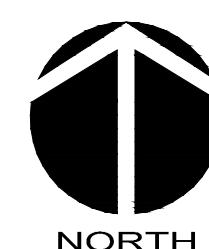
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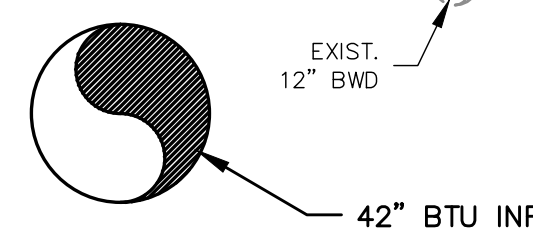
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

BIOLOGICAL TREATMENT
UNIT EFFLUENT METER
ASSEMBLY DETAILS

DATE: OCTOBER 2015	SCALE	DRAWING NUMBER
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DESIGNED: BP		
CHECKED: JSL		
PROJ. MGR. P.J.L.		
STATUS: ISSUE FOR BID	REVISION	



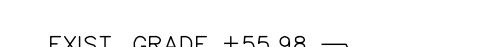
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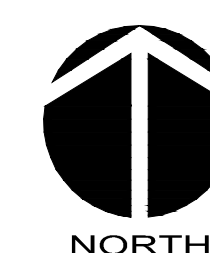
SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"



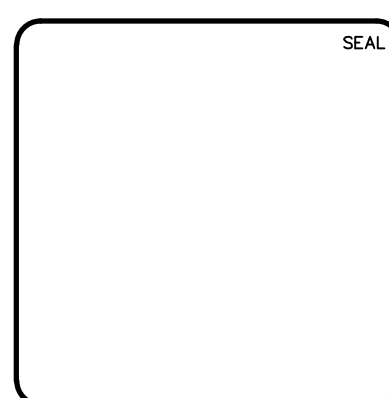
SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"

SEAL

PHILLIP J. LOCKER
 LICENSE
 No 57527
 ★
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER



DATE:	OCTOBER 2015
MCE PROJ. #	1024-0167
DRAWN	BFN
DESIGNED	BP
CHECKED	JSL
PROJ. MGR.	PJL

STATUS:

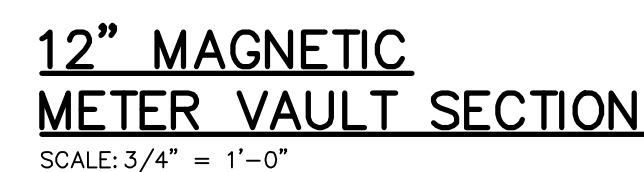
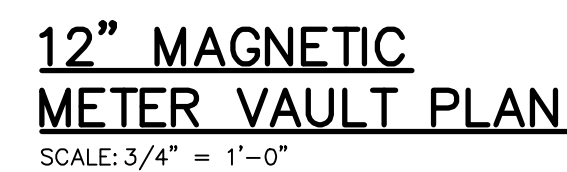
ISSUE FOR BID

SCALE
HORIZONTAL:
AS SHOWN
VERTICAL:
NA

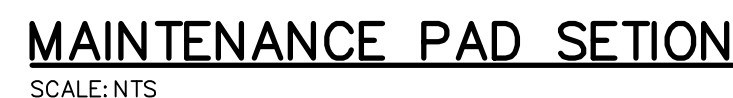
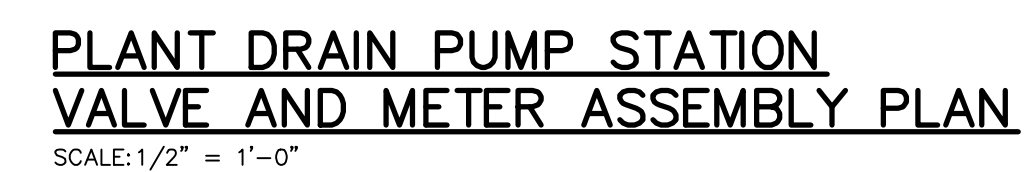
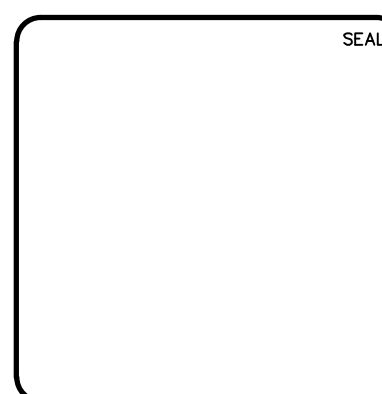
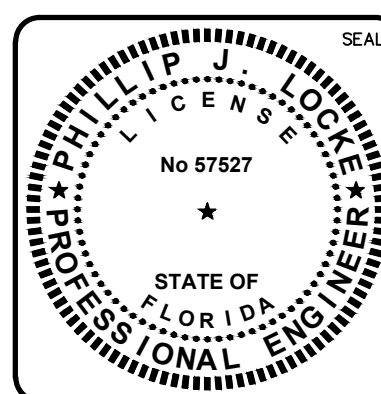
DRAWING NUMBER

M-0.4

REVISION



1. METER VAULT SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE DESIGNED FOR H2O LOADING. THE CONTRACTOR SHALL SUBMIT STEEL REINFORCING STRUCTURAL DESIGN CALCULATIONS SIGNED AND SEALED BY A FLORIDA PROFESSIONAL ENGINEER FOR APPROVAL.
2. ACCESS HATCH SHALL BE DESIGNED FOR H-20 LOADING, SINGLE LEAF WITH LOCKING DEVICE SUITABLE FOR A PADLOCK.
3. A REGISTERED FLORIDA PROFESSIONAL ENGINEER, PROVIDED BY CONTRACTOR, SHALL PROVIDE SIGNED AND SEALED DISPLACEMENT CALCULATIONS SHOWING THAT THE METER VAULT WILL NOT FLOAT WHEN THE GROUNDWATER IS AT THE SURFACE OF THE GROUND.
4. THE EXTERIOR OF THE WALLS SHALL BE COATED WITH A MINIMUM OF 9 MILS OF COAL TAR EPOXY.

[illegible]

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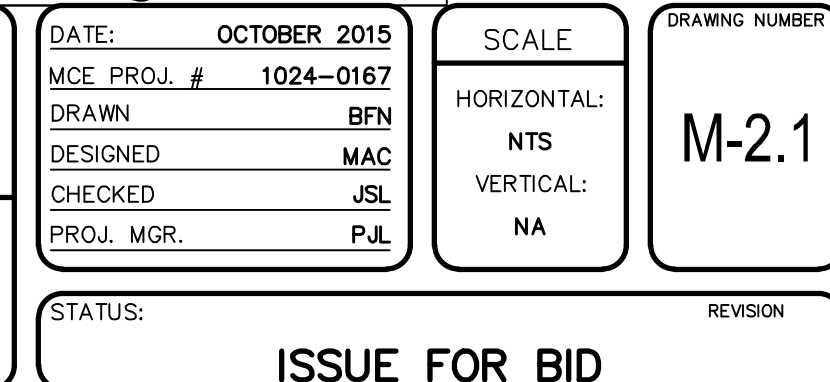
MAGNETIC FLOW METER DETAILS

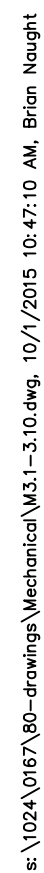
DATE: OCTOBER 2015	SCALE:
MCE PROJ. # 1024-0167	HORIZONTAL:
DRAWN BFN	AS SHOWN
DESIGNED BP	VERTICAL:
CHECKED JSL	NA
PROJ. MGR. PJL	M-0.5

STATUS:

REVISION

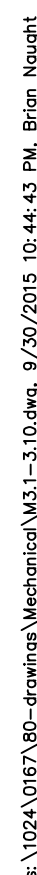
ISSUE FOR BID



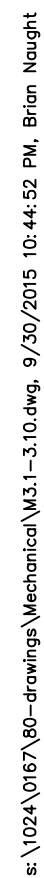


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ISSUE FOR BID

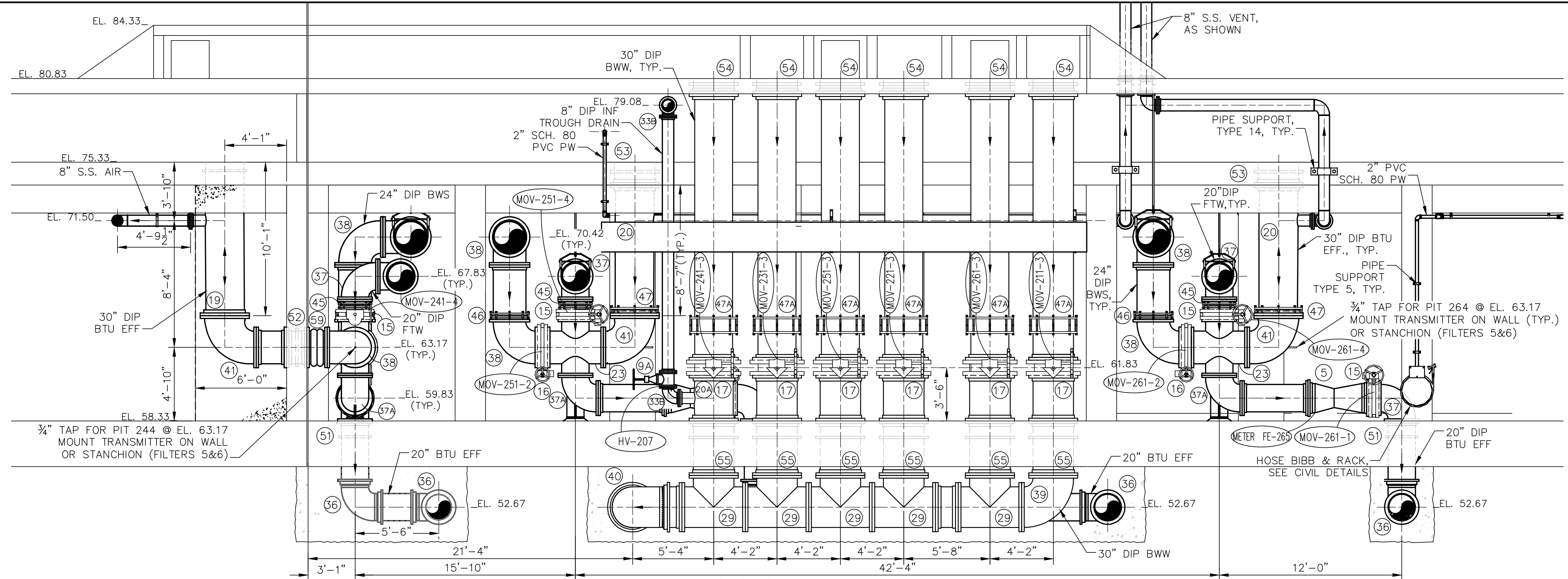
A circular professional engineer seal for Phillip J. Locke. The outer ring contains the text "PHILLIP J. LOCKE" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside this ring, the word "LICENSE" is at the top and "STATE OF FLORIDA" is at the bottom, also separated by two stars. In the center of the seal, the license number "No 57527" is displayed above a single star. The word "SEAL" is printed in the top right corner of the page.

DATE: OCTOBER 2015		SCALE		DRAWING NUMBER	
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DESIGNED SRH & PY					
CHECKED JSL					
PROJ. MGR. PJL		STATUS: ISSUE FOR BID			
		REVISION			

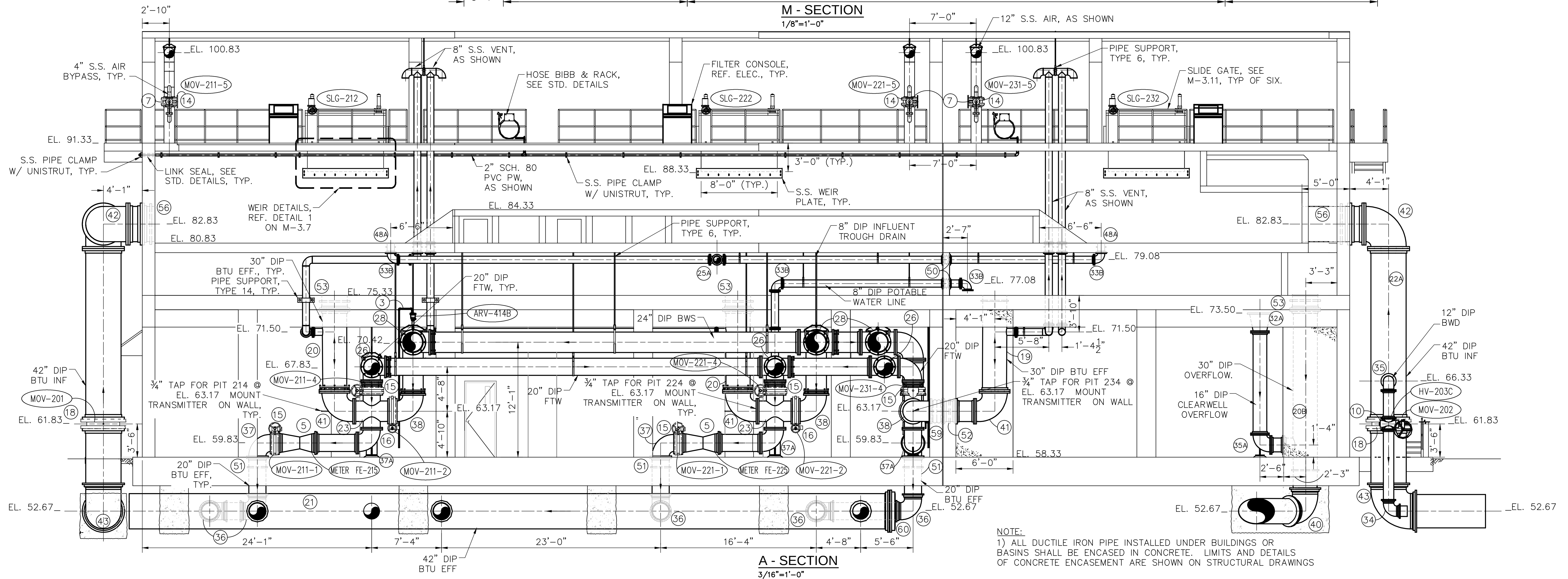


SCALE HORIZONTAL: AS NOTED VERTICAL: NA	DRAWING NUMBER M-3.4
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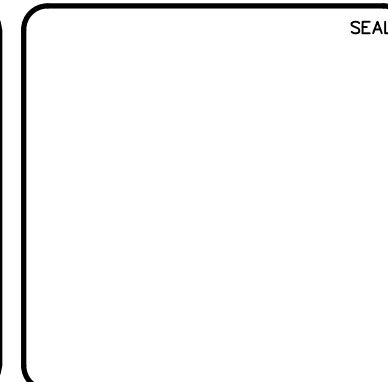
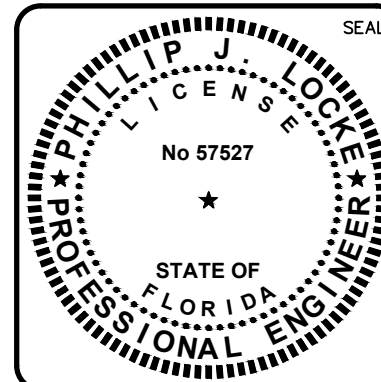


M - SECTION
1/8"=1'-0"

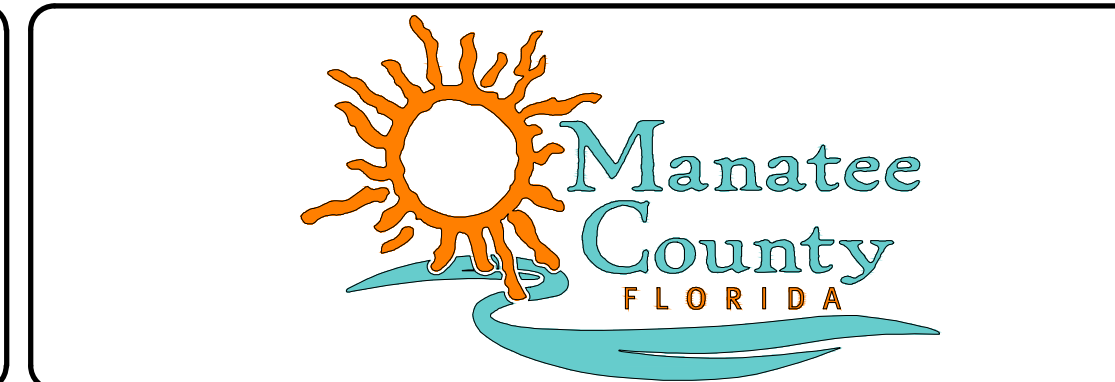


NOTE:
1) ALL DUCTILE IRON PIPE INSTALLED UNDER BUILDINGS OR BASINS SHALL BE ENCASED IN CONCRETE. LIMITS AND DETAILS OF CONCRETE ENCASEMENT ARE SHOWN ON STRUCTURAL DRAWINGS

REV.	DESCRIPTION	DATE



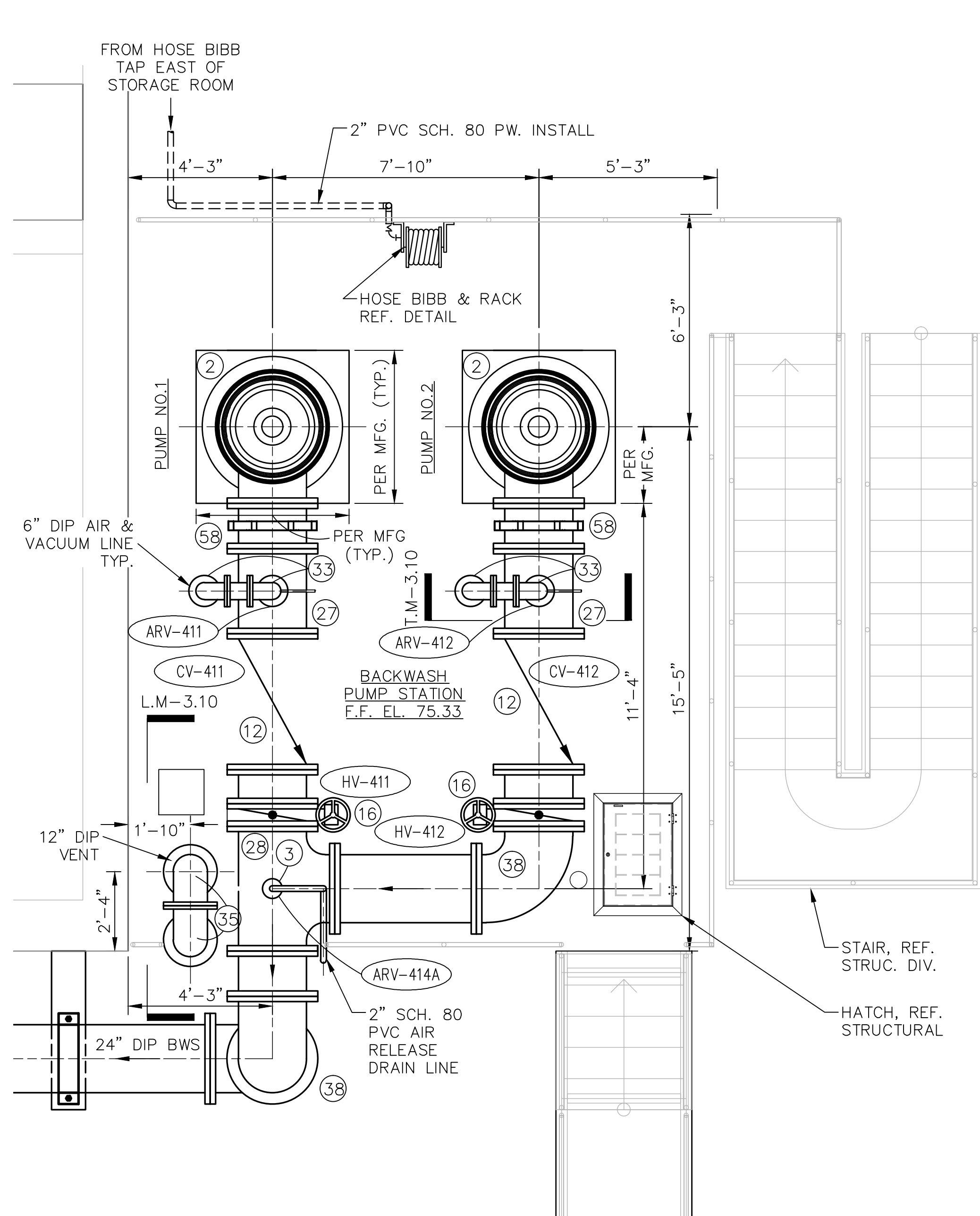
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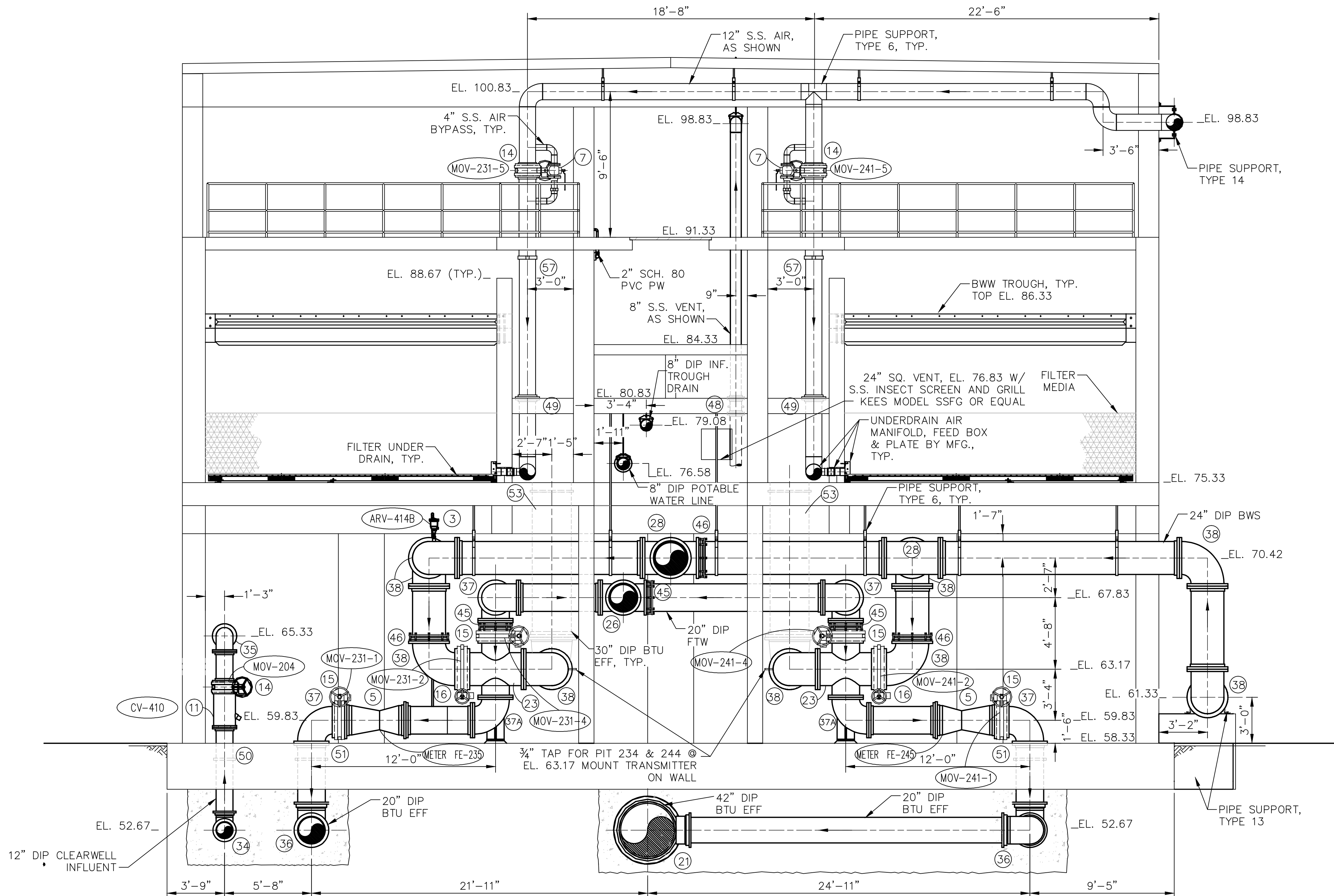
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

MECHANICAL
BIOLOGICAL TREATMENT UNIT
SECTIONS 1 OF 5

DATE: OCTOBER 2015	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0167	HORIZONTAL: AS NOTED	M-3.5
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DESIGNED: SRH & PY		
CHECKED: JSL		
PROJ. MGR. PJL		
STATUS: ISSUE FOR BID		



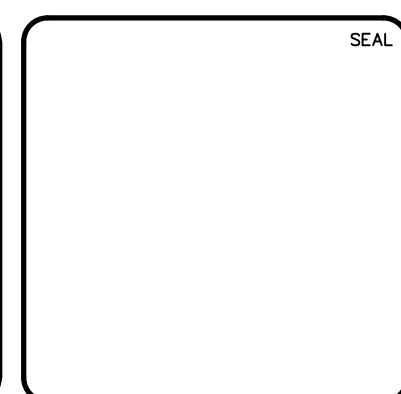
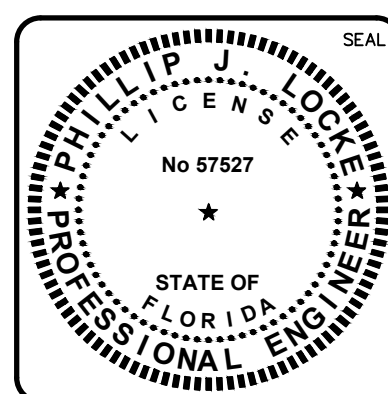
ENLARGED PUMP STATION PLAN
3/8"=1'-0"



NOTE:
1) ALL DUCTILE IRON PIPE INSTALLED UNDER BUILDINGS OR BASINS SHALL BE ENCASED IN CONCRETE. LIMITS AND DETAILS OF CONCRETE ENCASEMENT ARE SHOWN ON STRUCTURAL DRAWINGS

B - SECTION
1/4"=1'-0"

REV.	DATE	DESCRIPTION



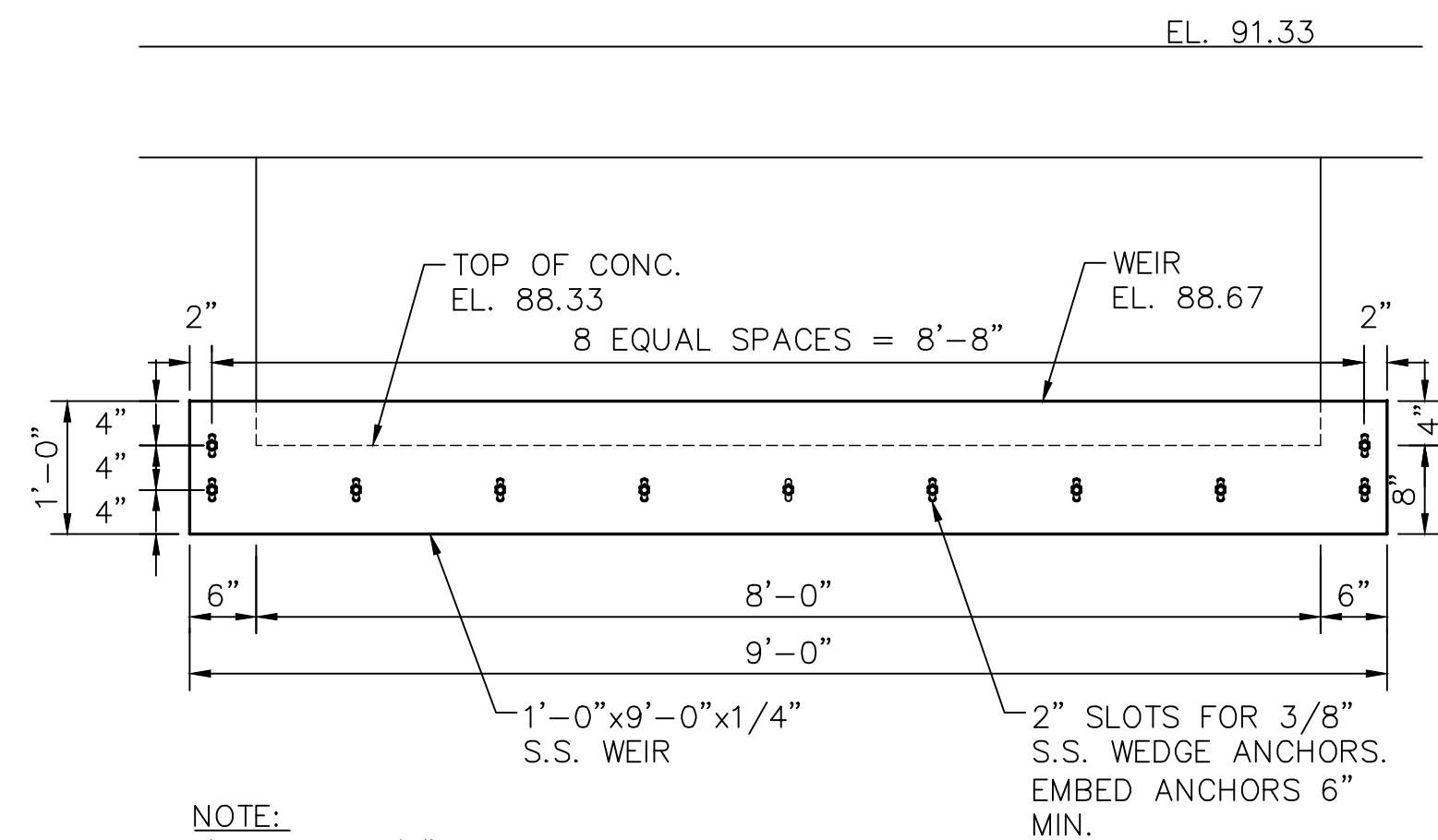
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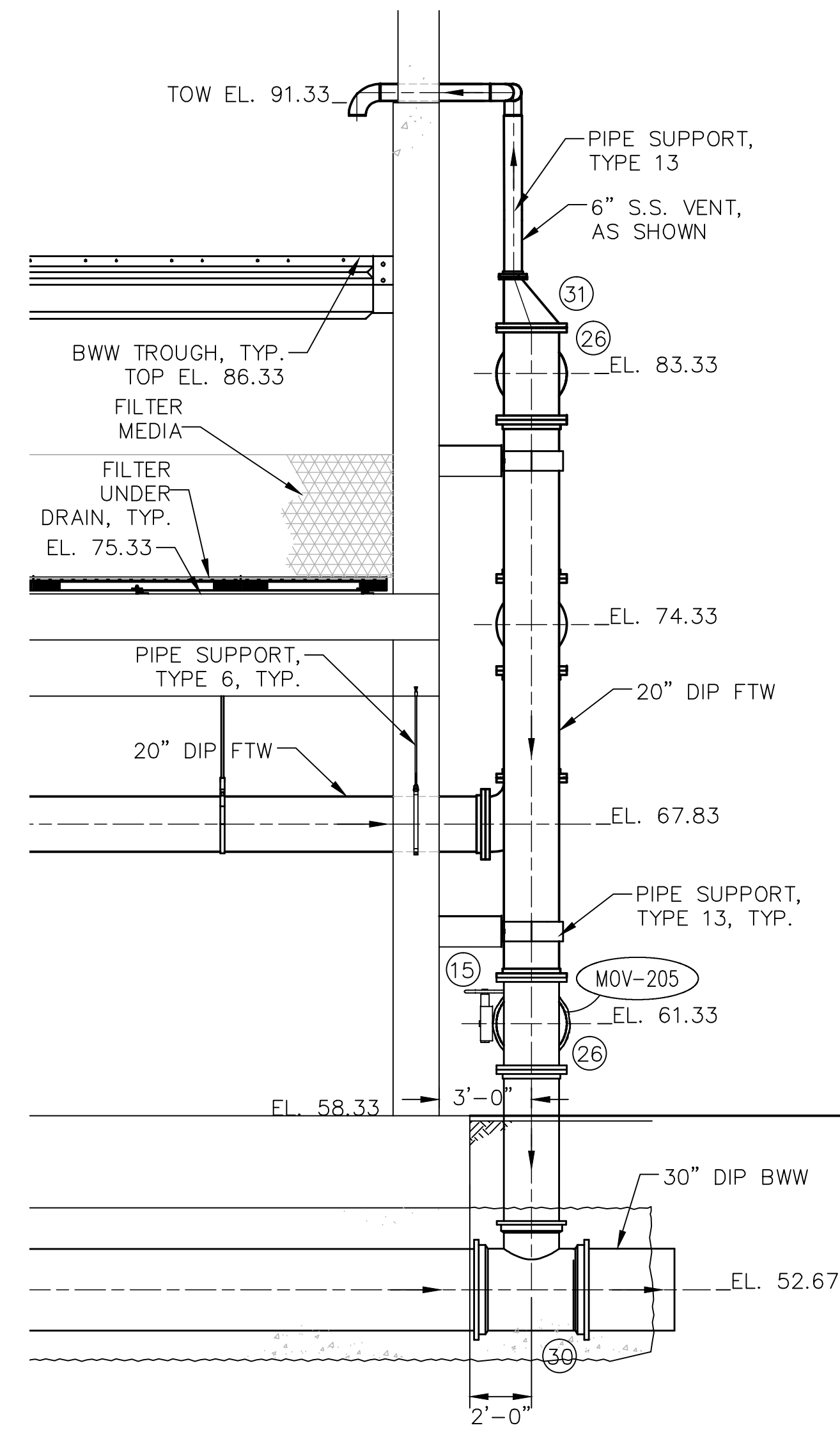
MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

MECHANICAL
BIOLOGICAL TREATMENT UNIT
SECTIONS 2 OF 5

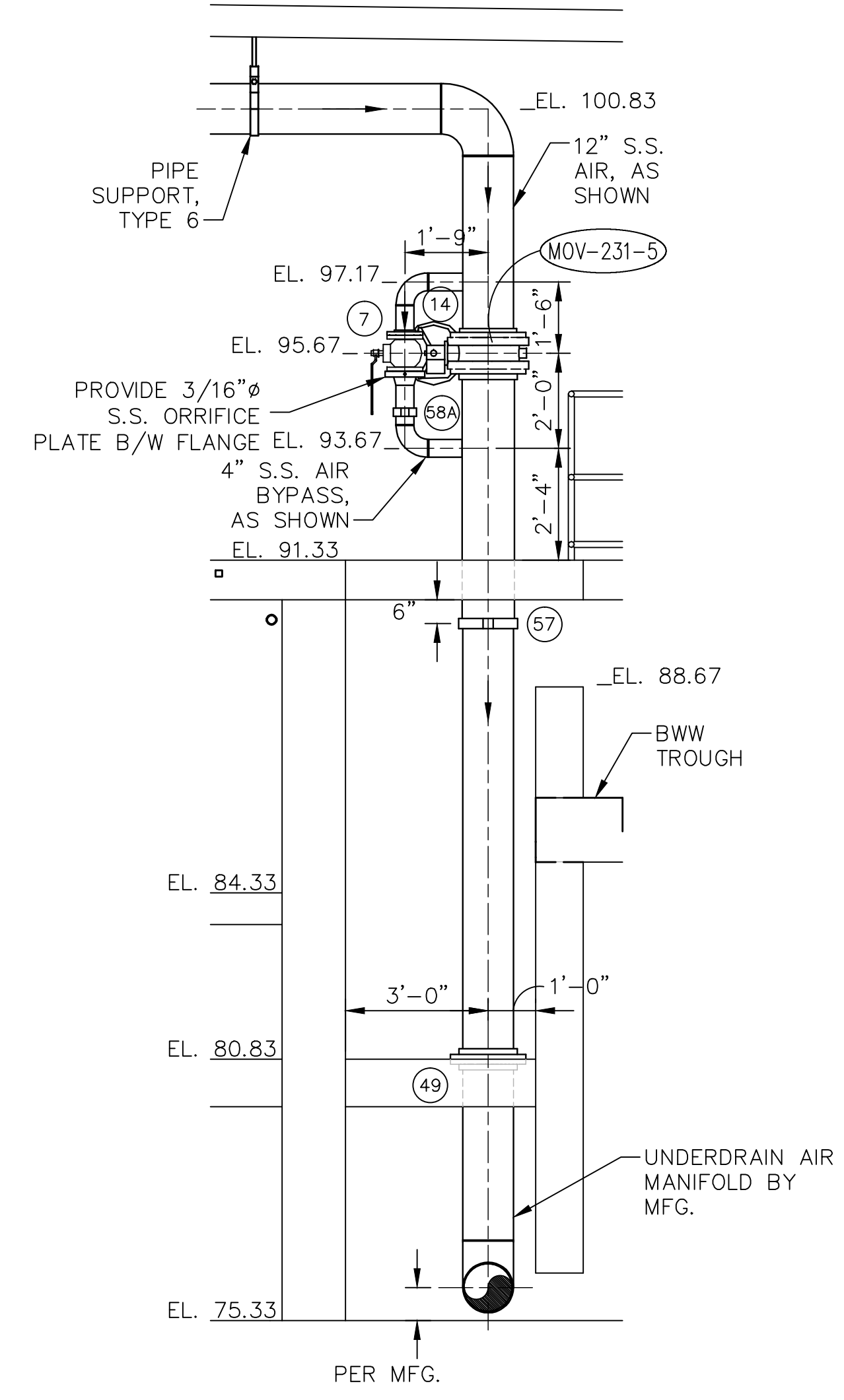
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DESIGNED: SRH & PY		
CHECKED: JSL		
PROJ. MGR: PdJ		
STATUS: ISSUE FOR BID		



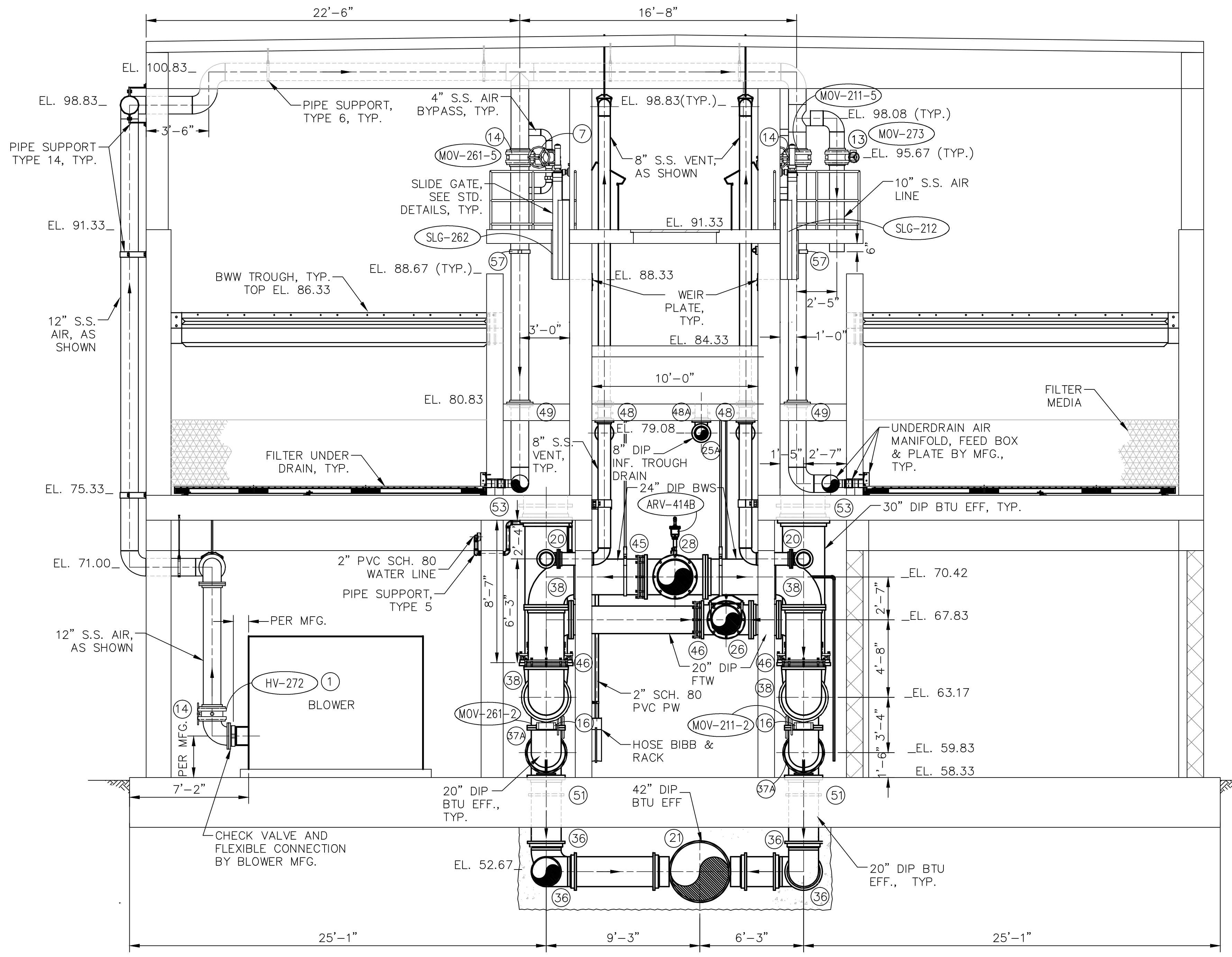
1 - DETAIL
3/4"=1'-0"



H - SECTION
1/4"=1'-0"



N - SECTION
3/8"=1'-0"

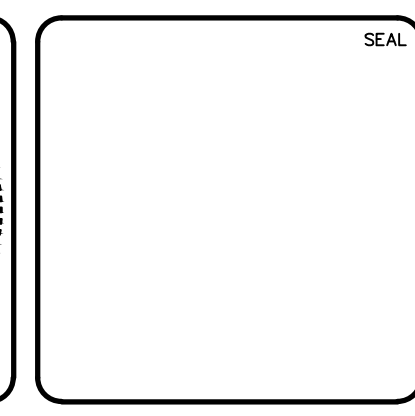
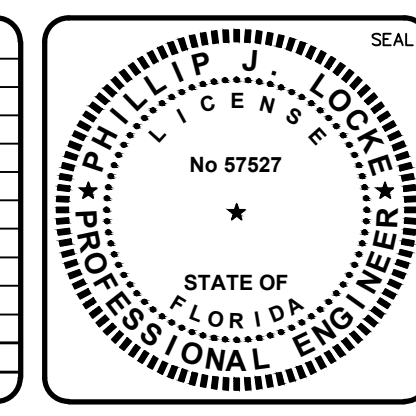


C - SECTION
1/4"=1'-0"

NOTE:
1) ALL DUCTILE IRON PIPE INSTALLED UNDER BUILDINGS OR BASINS SHALL BE ENCASED IN CONCRETE. LIMITS AND DETAILS OF CONCRETE ENCASEMENT ARE SHOWN ON STRUCTURAL DRAWINGS

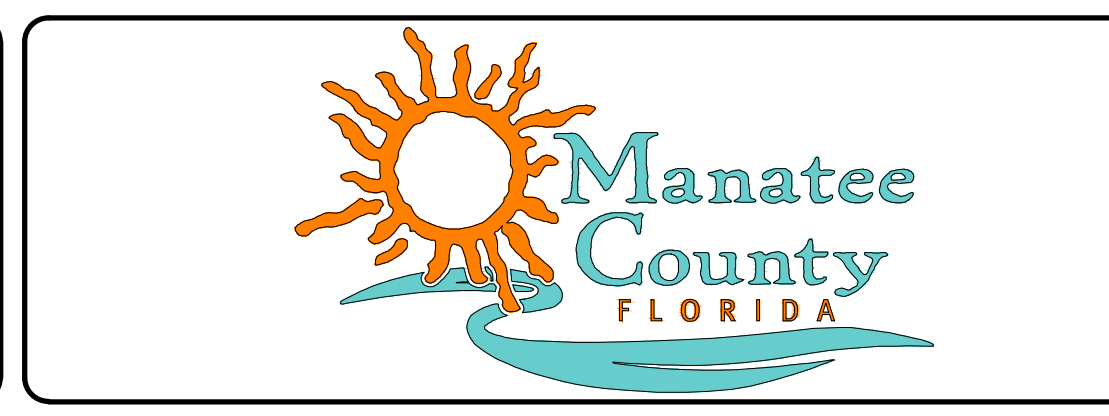
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REV.	DESCRIPTION	DATE



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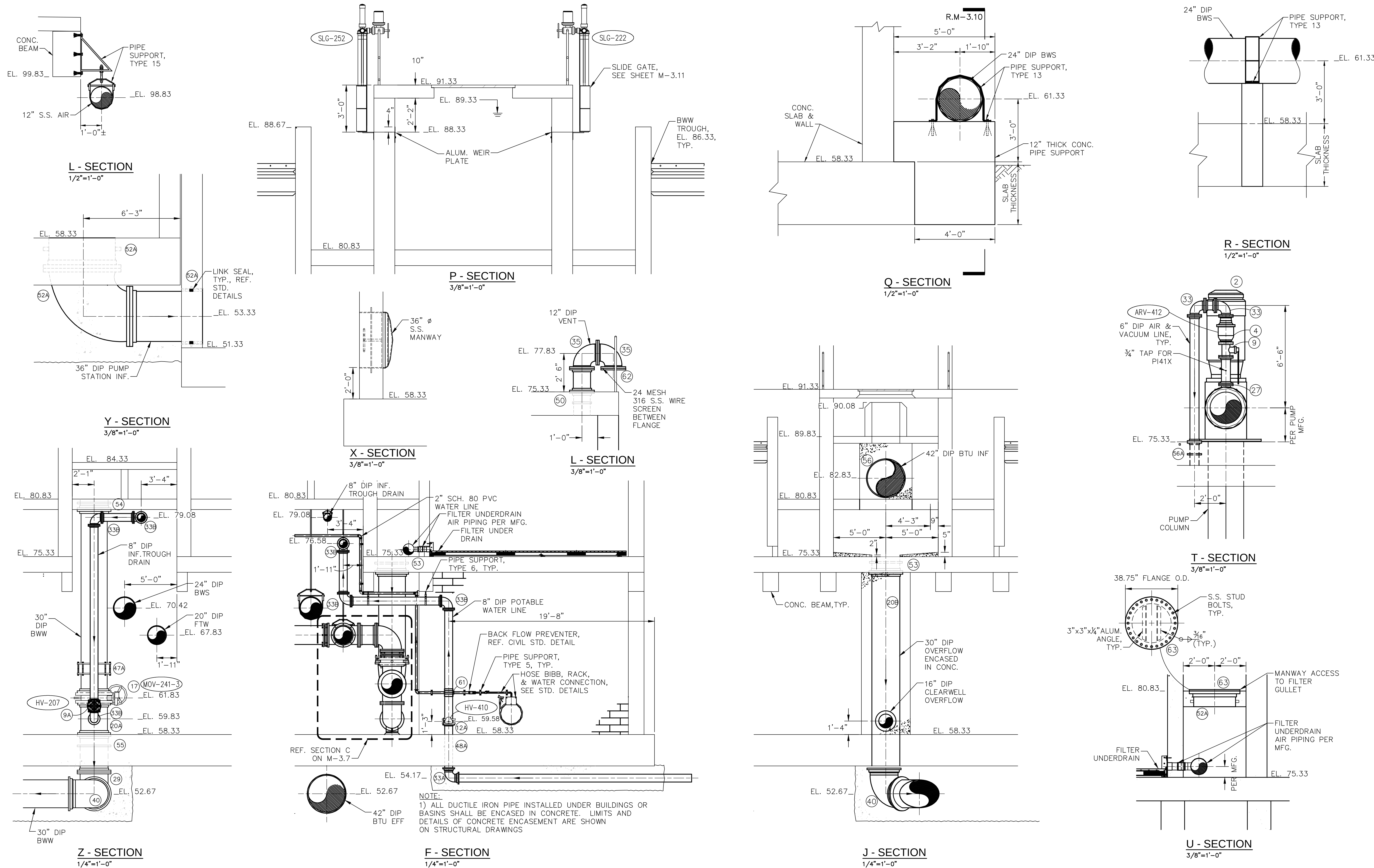
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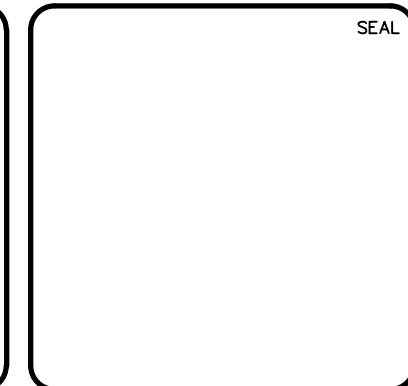
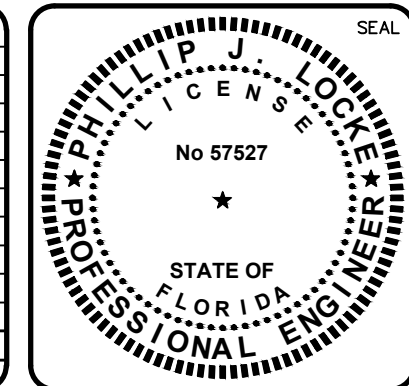
MECHANICAL
BIOLOGICAL TREATMENT UNIT
SECTIONS 3 OF 5

DATE: OCTOBER 2015	SCALE: AS NOTED	DRAWING NUMBER: M-3.7
MCE PROJ. # 1024-0167	HORIZONTAL: AS NOTED	REVISION: ISSUE FOR BID
DRAWN: PY	VERTICAL: NA	
DESIGNED: SRH & PY		
CHECKED: JSL		
PROJ. MGR.: PJL		



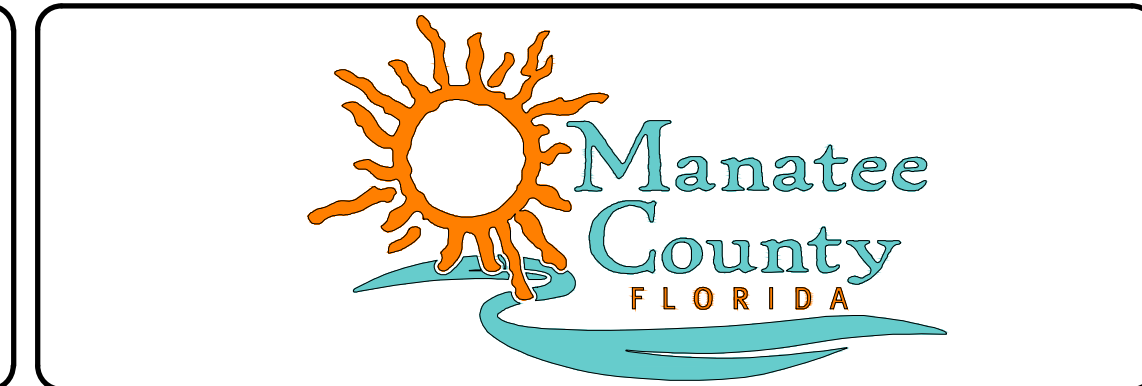
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REV.	DESCRIPTION	DATE



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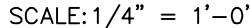
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MECHANICAL
BIOLOGICAL TREATMENT UNIT
SECTIONS & DETAILS

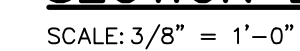
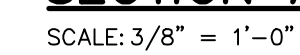
DATE: OCTOBER 2015	SCALE: AS NOTED	DRAWING NUMBER M-3.10
MCE PROJ. # 1024-0167	HORIZONTAL: AS NOTED	
DRAWN: SRH	VERTICAL: NA	
DESIGNED: SRH		
CHECKED: JSL		
PROJ. MGR. PJL		
STATUS: ISSUE FOR BID		



DATE: OCTOBER 2015 MCE PROJ. # 1024-0167 DRAWN BFN DESIGNED PJL CHECKED JSL PROJ. MGR. PJL	SCALE HORIZONTAL: AS SHOWN VERTICAL: NA	DRAWING NUMBER M-6.1
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STATUS: _____ REVISION: _____

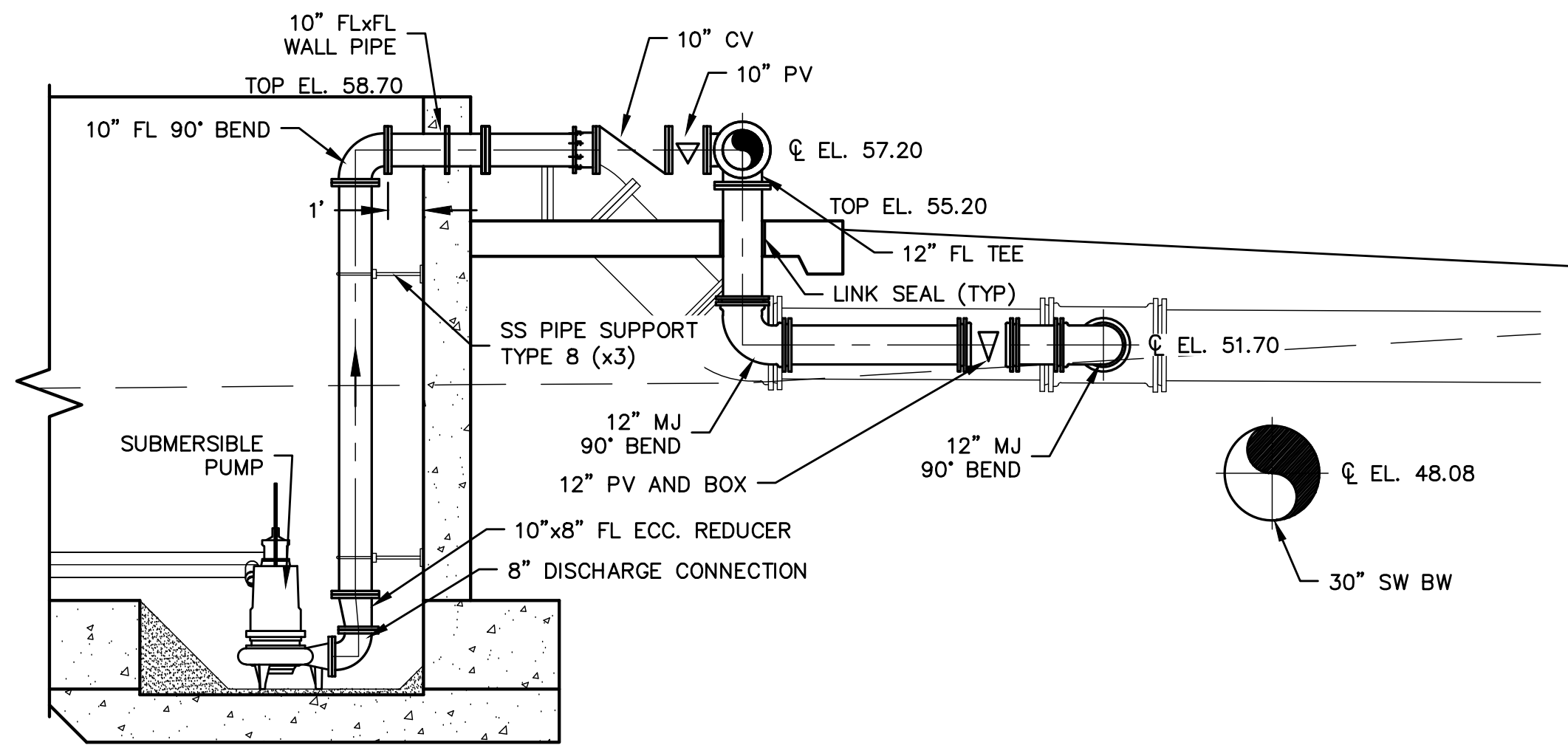
ISSUE FOR BID



DATE: OCTOBER 2015		SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0167			
DRAWN _____		HORIZONTAL:	M-6.2
DESIGNED _____			
CHECKED JSL		VERTICAL:	
PROJ. MGR. PJL			

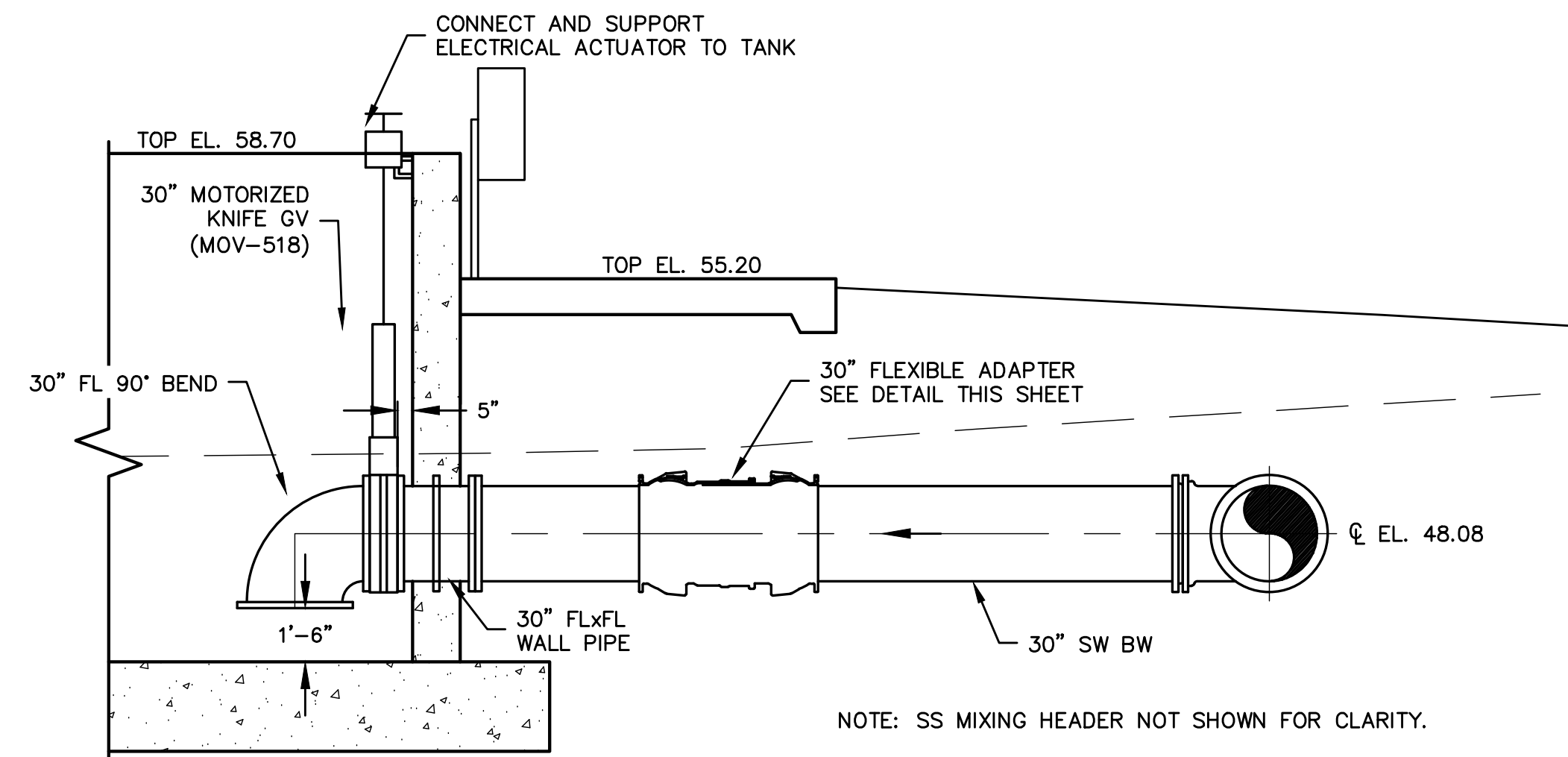
STATUS: _____

ISSUE FOR BID



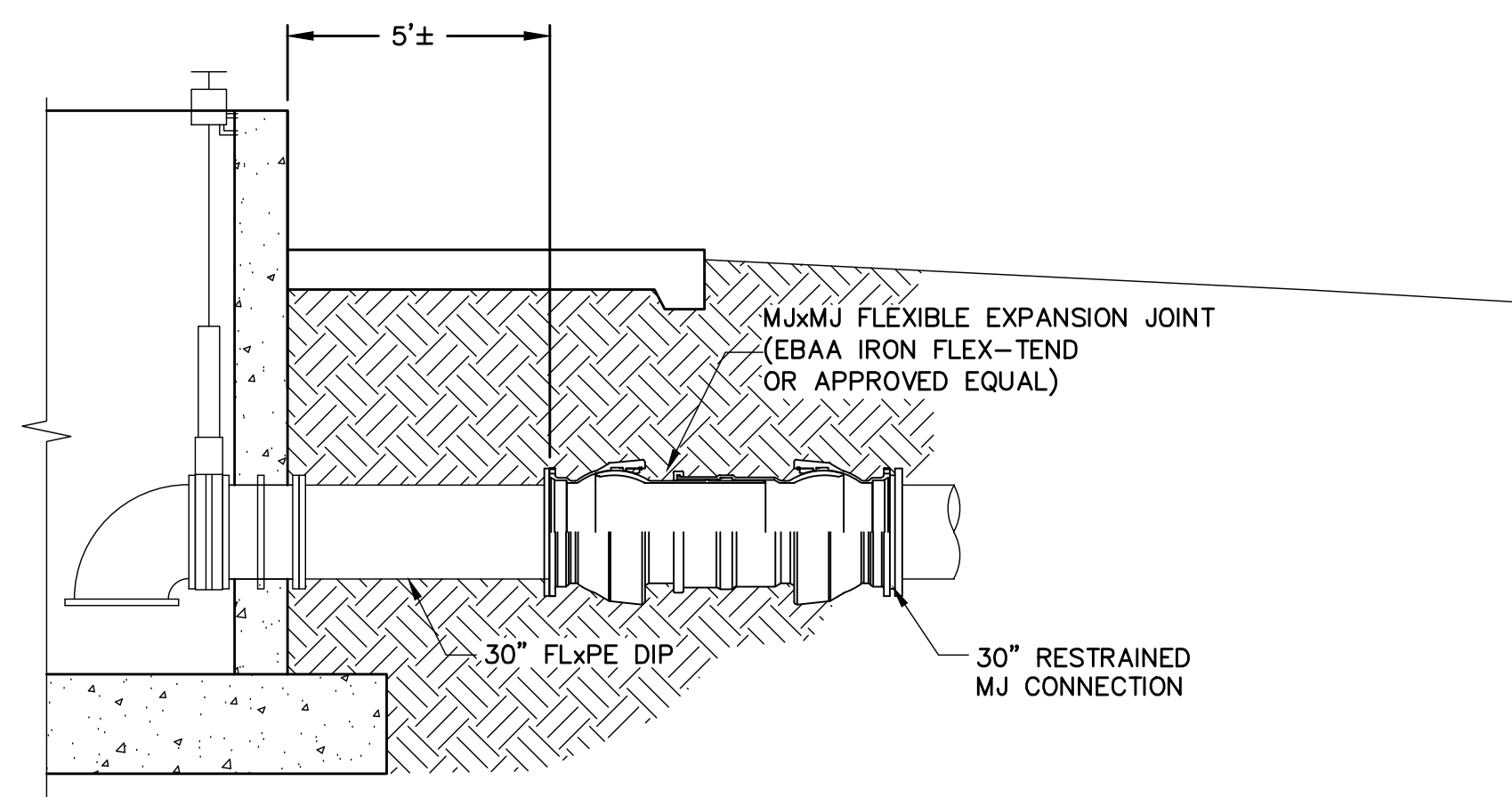
SECTION C/M-6.1

SCALE: 1/4" = 1'-0"



SECTION D/M-6.1

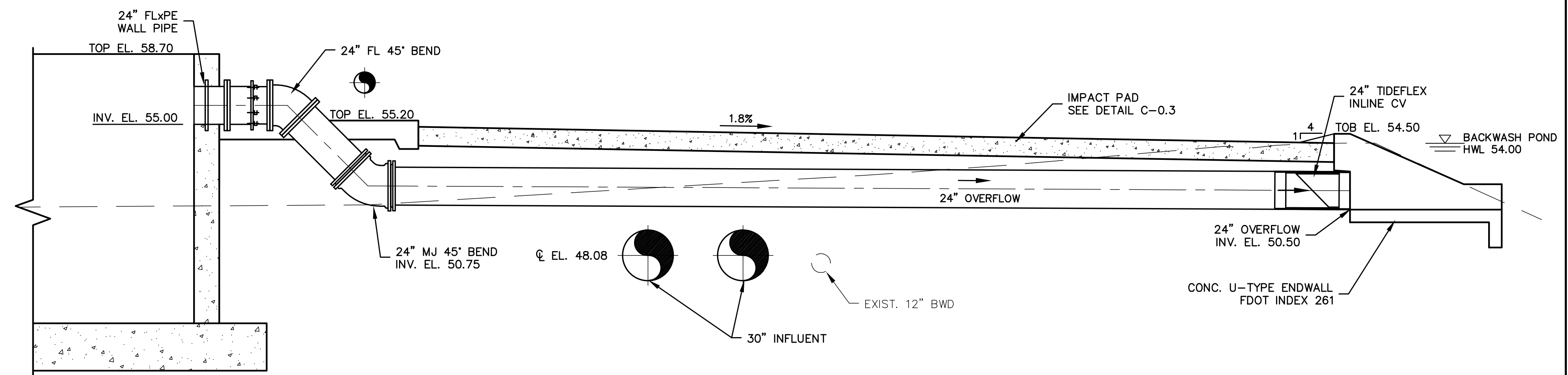
SCALE: 1/4" = 1'-0"



NOTES:
1. FLEXIBLE EXPANSION JOINT SIZE TO MATCH PIPE DIAMETER.

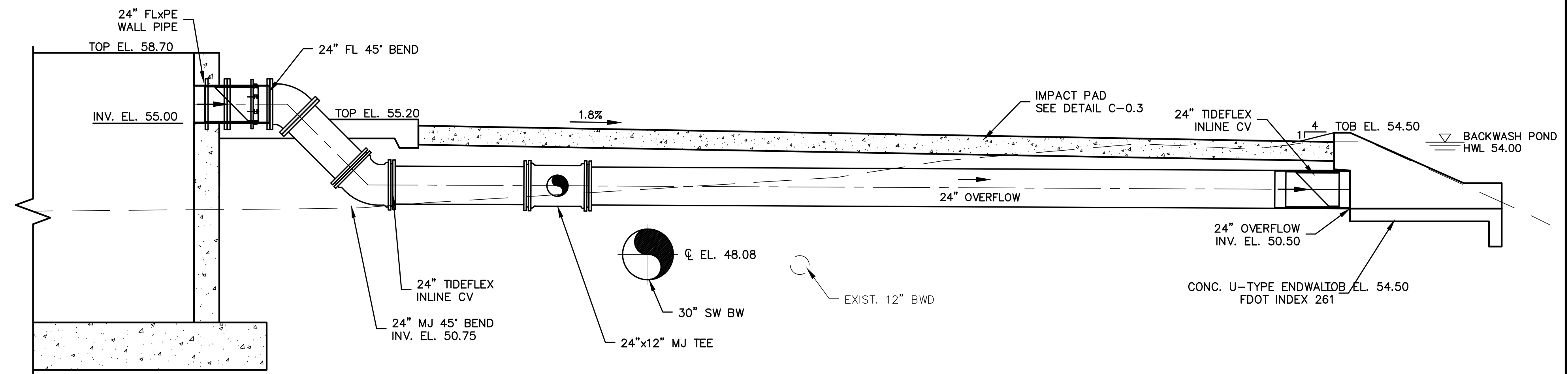
EXPANSION JOINT DETAIL

NTS



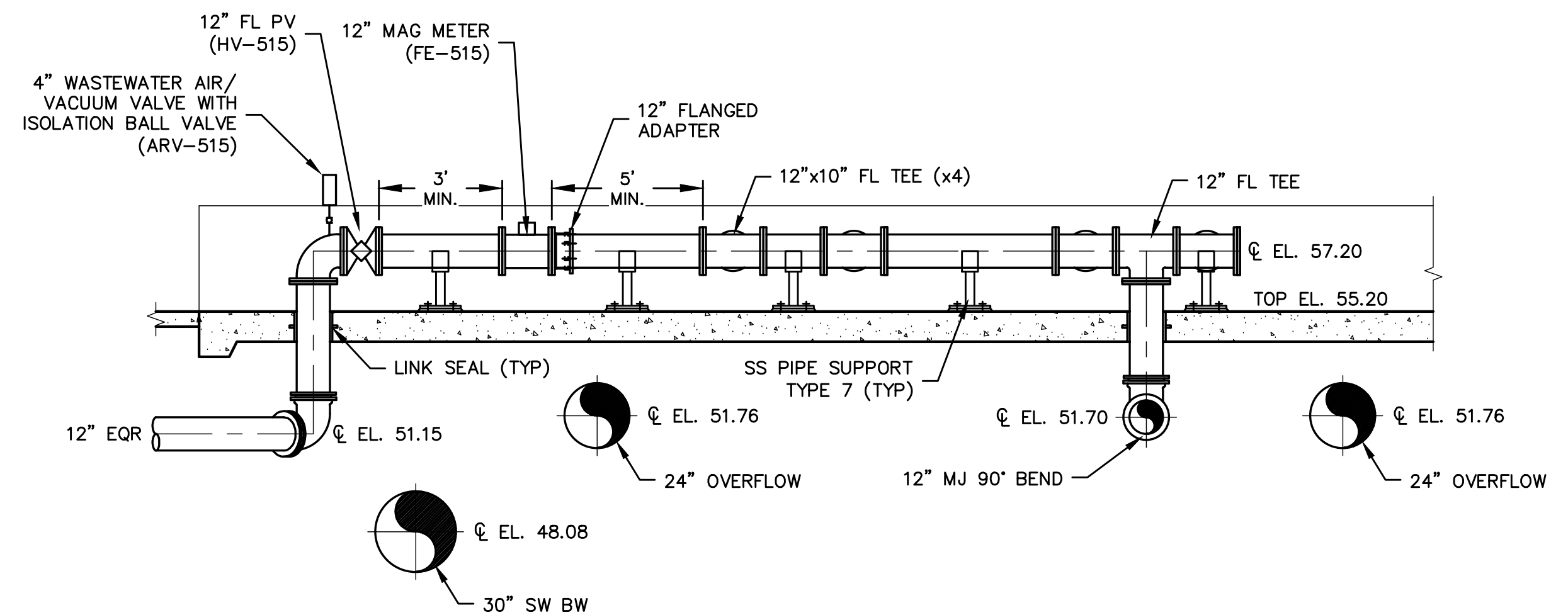
SECTION E/M-6.1

SCALE: 1/4" = 1'-0"



SECTION F/M-6.1

SCALE: 1/4" = 1'-0"



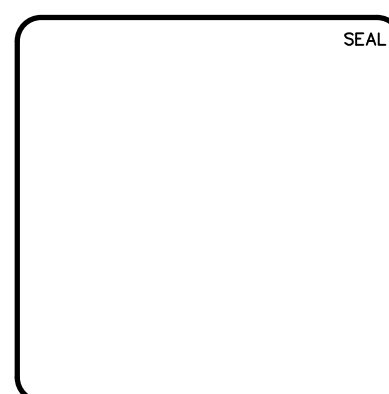
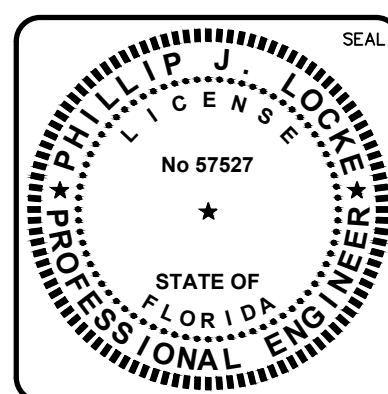
SECTION G/M-6.1

SCALE: 1/4" = 1'-0"

NOTES:
1. 18" MIN. CLEARANCE BETWEEN ALL PIPING.

P:\1024\0167\30-drawings\Mechanical\MEC-601-10240167.dwg, 9/20/2015, 10:50:21 PM, Brian Naught

REV. NO.	DESCRIPTION	DATE



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 www.mckimcreed.com



MANATEE COUNTY
WTP BIOLOGICAL TREATMENT UNIT

EQUALIZATION TANK
SECTIONS AND DETAIL

DATE: OCTOBER 2015	SCALE: HORIZONTAL: 1" = 100'	DRAWING NUMBER: M-6.3
MCE PROJ. # 1024-0167	VERTICAL: 1" = 10'	REVISION: ISSUE FOR BID
DRAWN: JSL		
DESIGNED: JSL		
CHECKED: JSL		
PROJ. MGR. P.J.L.		
STATUS: ISSUE FOR BID		