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PROJECT

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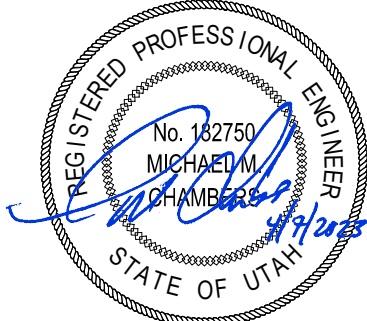
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

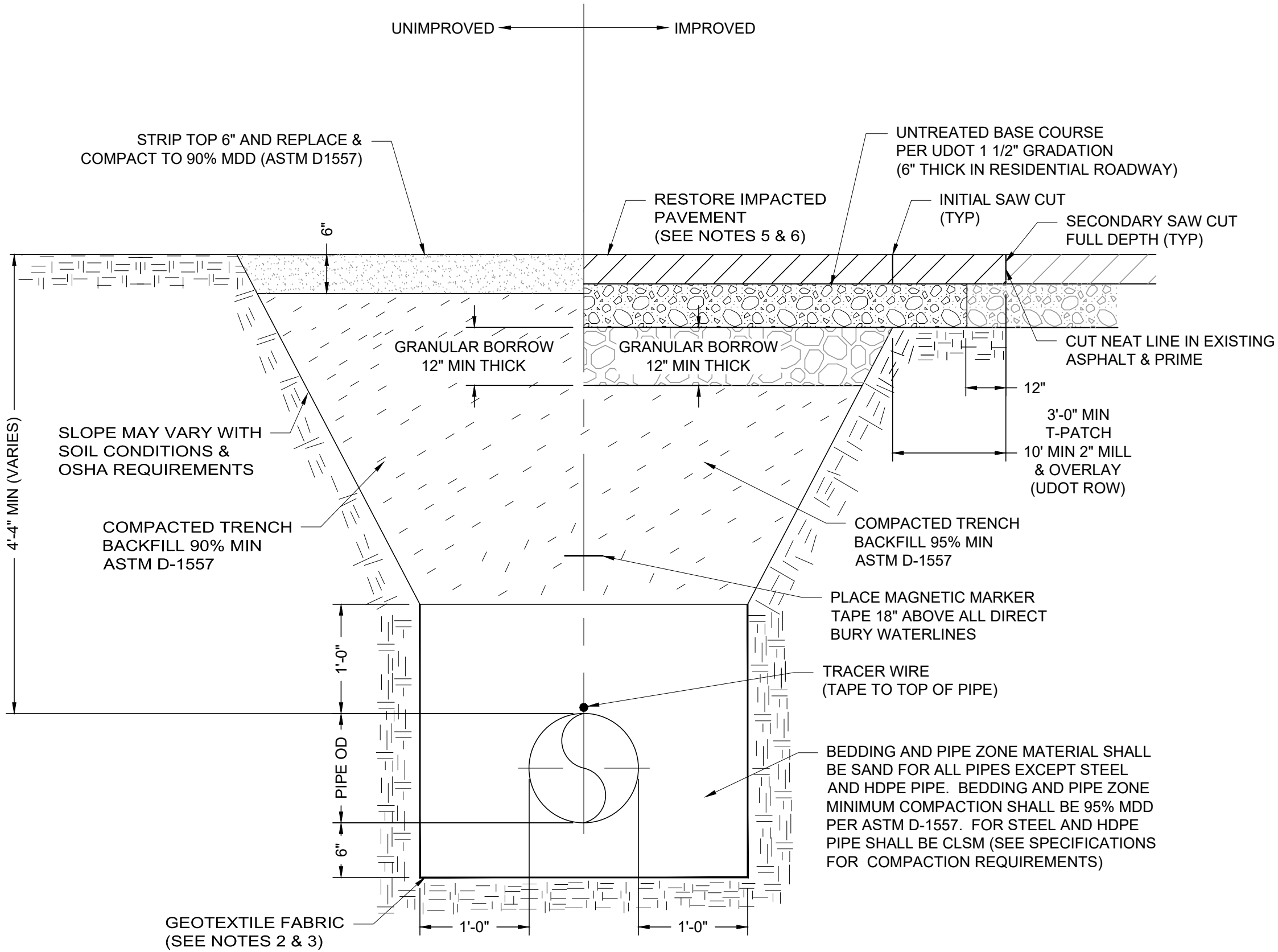
SHEET TITLE

DETAILS
CIVIL
TYPICAL DETAILS
INDEX

DRAWING NUMBER

99-C700

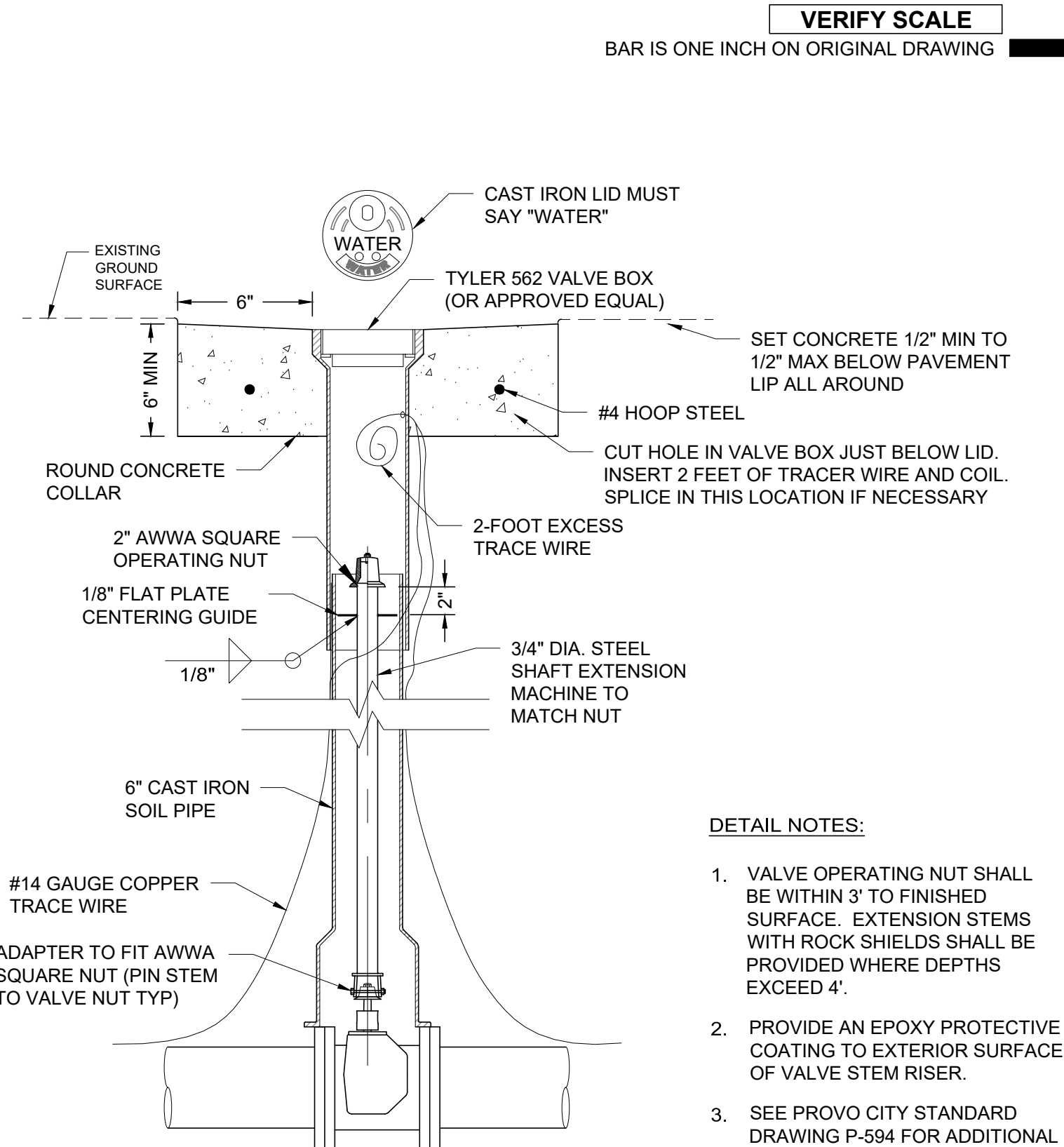
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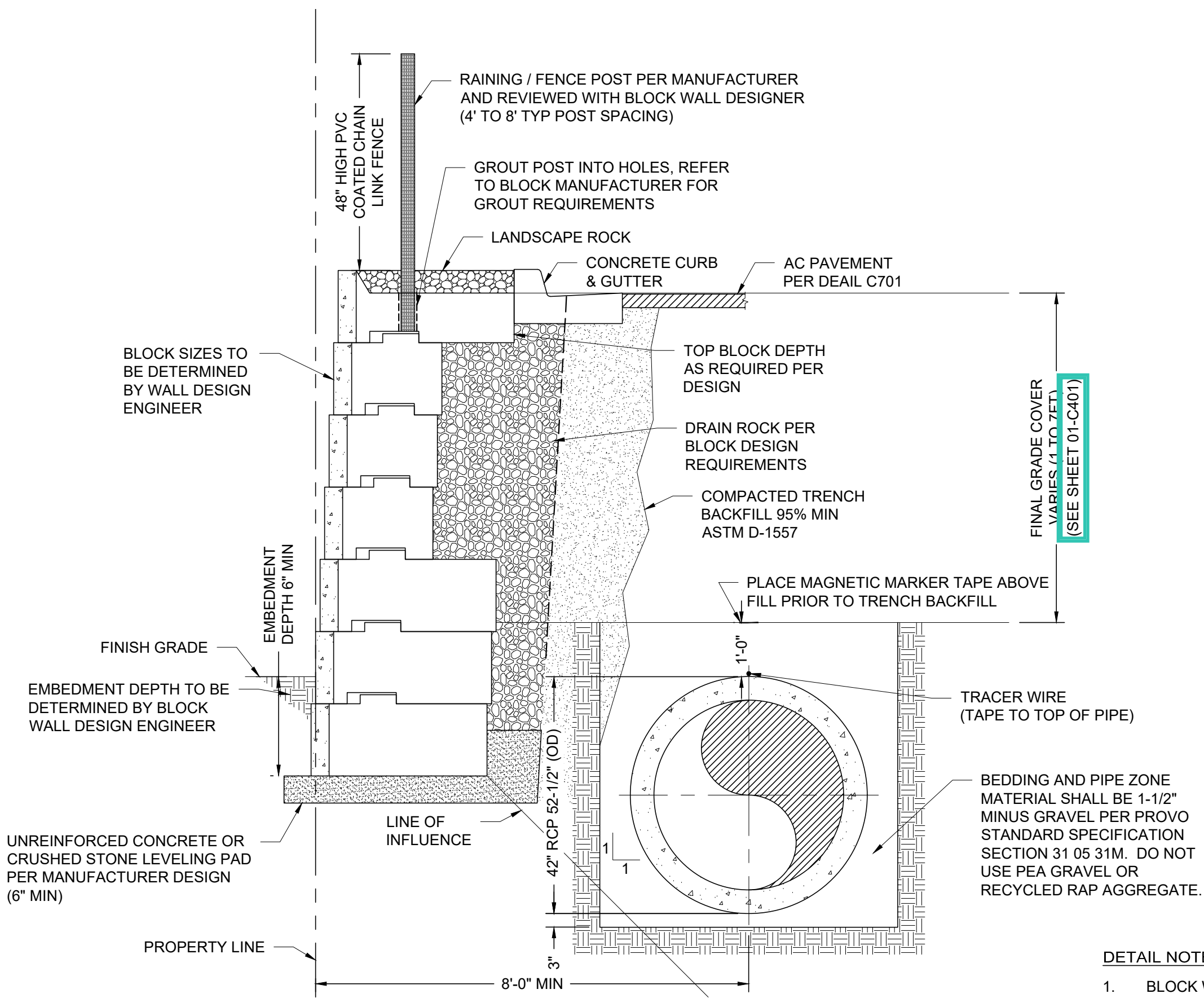
C001 TYPICAL PIPELINE TRENCH DETAIL
NOT TO SCALE

DETAIL NOTES:

- POLYWRAP AND TRACER WIRE SHALL BE INSTALLED IN ACCORDANCE WITH PROVO CITY DETAIL P-594. POLYWRAP ONLY REQUIRED ON BURIED DUCTILE IRON PIPE AND DUCTILE IRON FITTINGS.
- IF THE SOILS AT THE BASE OF THE PIPELINE EXCAVATIONS CONSIST OF HIGHER CLAY CONTENT OR LOOSER SANDS, THEN IT MAY BE NECESSARY TO INCREASE THE THICKNESS OF THE BEDDING LAYER TO APPROXIMATELY 18 TO 24 INCHES WITH A NON-WOVEN GEOTEXTILE PLACED ON THE BASE OF THE TRENCH AND EXTENDING UP TO THE TOP OF THE PIPE ZONE, DEPENDING ON THE STABILITY OF THE SOIL AT THE TIME OF CONSTRUCTION.
- ALONG THE TRANSMISSION MAIN TO STA. 11+75, INSTALL A NON WOVEN GEOTEXTILE THAT EXTENDS ALONG THE BOTTOM OF THE TRENCH AND EXTENDS VERTICALLY ALONG THE SIDES TO THE TOP OF THE PIPE ZONE.
- IF T-PATCH WIDTH LEAVES 2' OR LESS ASPHALT REMAINING TO CURB OR GUTTER, THEN REMAINING ASPHALT SHALL BE INCLUDED IN T-PATCH SECONDARY SAW CUT.
- RESTORE IMPACTED PAVEMENT, MATCH EXISTING PAVEMENT THICKNESS PLUS 1":
 - 4" MIN IN RESIDENTIAL ROADWAY (8" MAX)
 - 5" MIN IN COLLECTOR ROADWAY (8" MAX)
 - 7" MIN IN UDOT ROW
- ASPHALT SHALL BE:
 - AC-10 (1/2") IN RESIDENTIAL ROADWAYS
 - AC-10 (3/4") IN COLLECTOR ROADWAY
 - SMA OR HMA WITH MICRO-SURFACING IN UDOT ROW
- UDOT REQUIREMENTS:
 - BEDDING, PIPE ZONE AND TRENCH BACKFILLS WITHIN UDOT ROW.
 - OUTSIDE OF INITIAL SAWCUT FOR TRENCH.



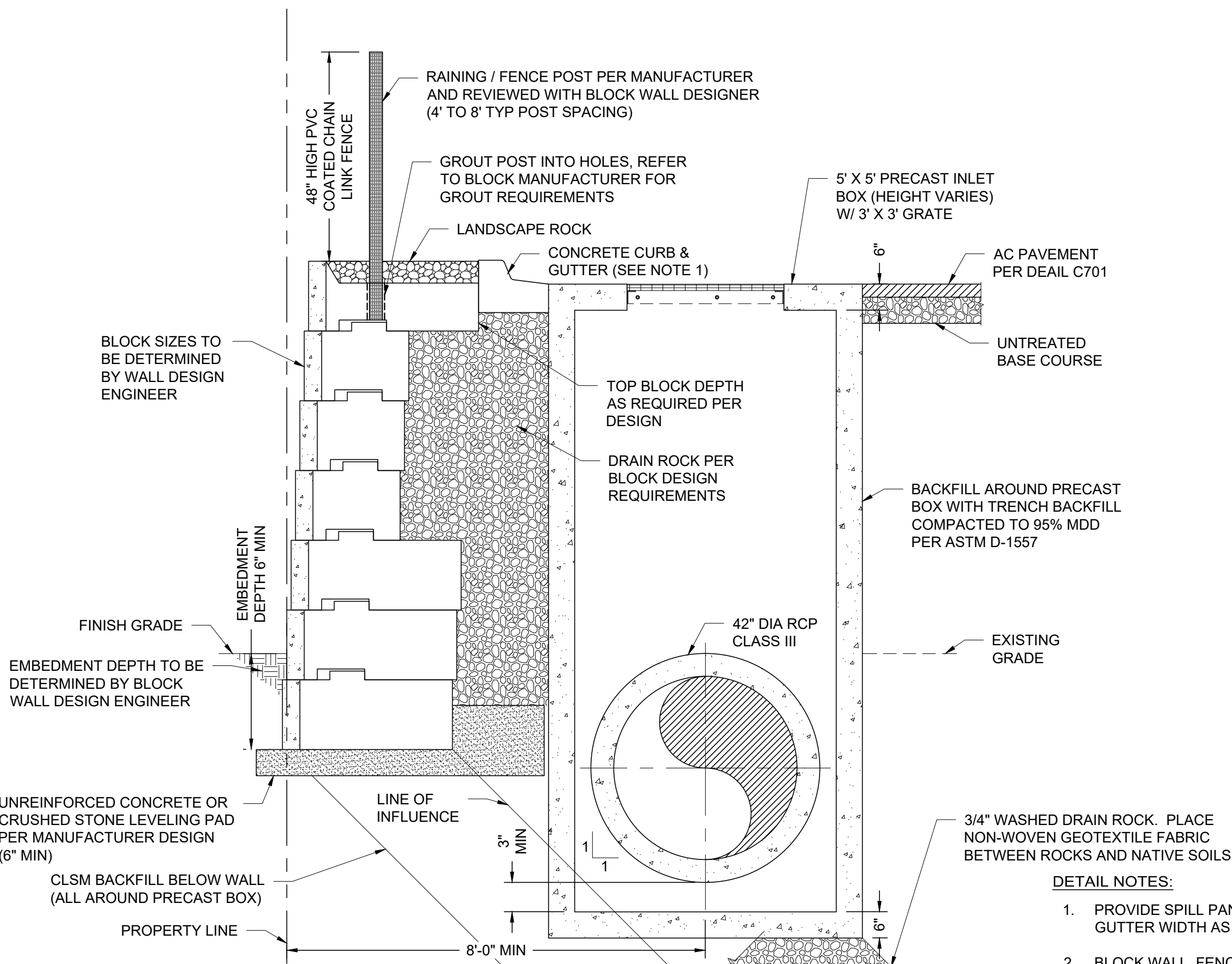
C002 TYPICAL VALVE BOX DETAIL
NOT TO SCALE



C003 TYPICAL 42" RCP PIPE W/ RETAINING WALL SECTION
SCALE: 1" = 2'

DETAIL NOTES:

- BLOCK WALL, FENCE, CONCRETE CURB & GUTTER, AND AC PAVEMENT BY OTHERS.
- SEE ALSO 2/01-S501 FOR ADDITIONAL WALL REQUIREMENTS.



C004 TYPICAL 5' X 5' PRECAST BOX AT RETAINING WALL SECTION
SCALE: 1" = 2'

DETAIL NOTES:

- PROVIDE SPILL PAN AND MODIFY GUTTER WIDTH AS REQUIRED.
- BLOCK WALL, FENCE, CONCRETE CURB & GUTTER, AND AC PAVEMENT BY OTHERS.
- SEE ALSO 2/01-S501 FOR ADDITIONAL WALL REQUIREMENTS.

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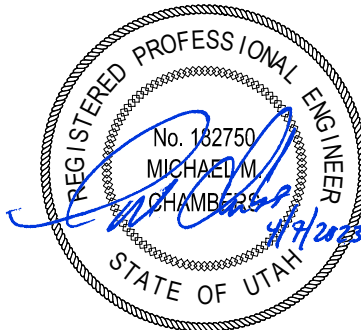
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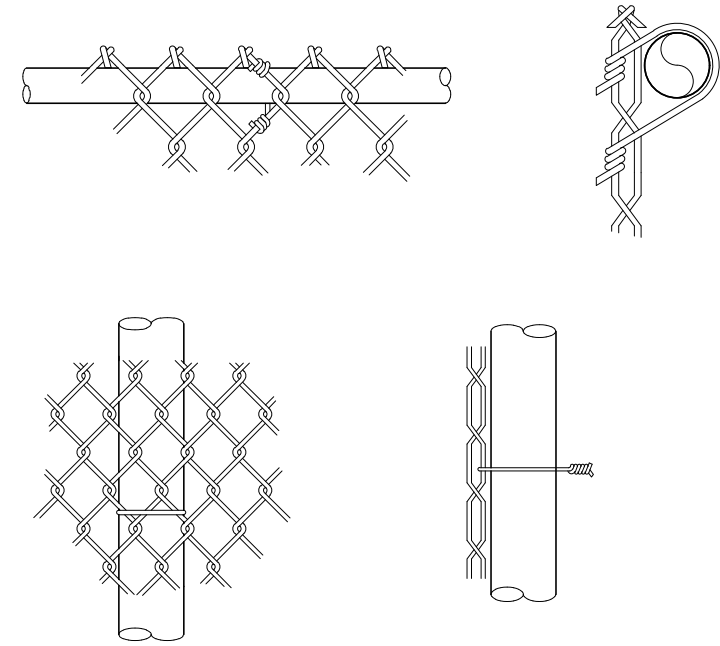
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CIVIL
TYPICAL DETAILS
SHEET 1

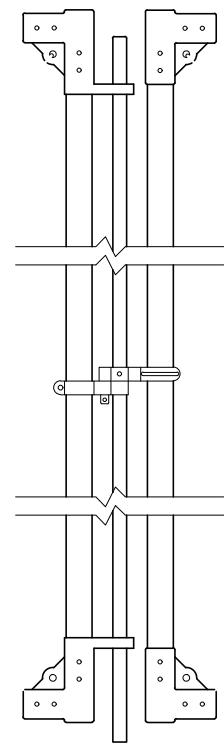
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99-C701

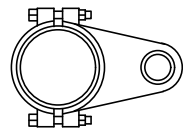
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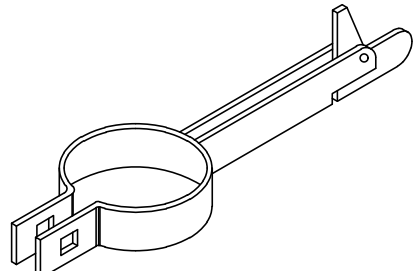
PIPE POST TIE
SCALE: NTS



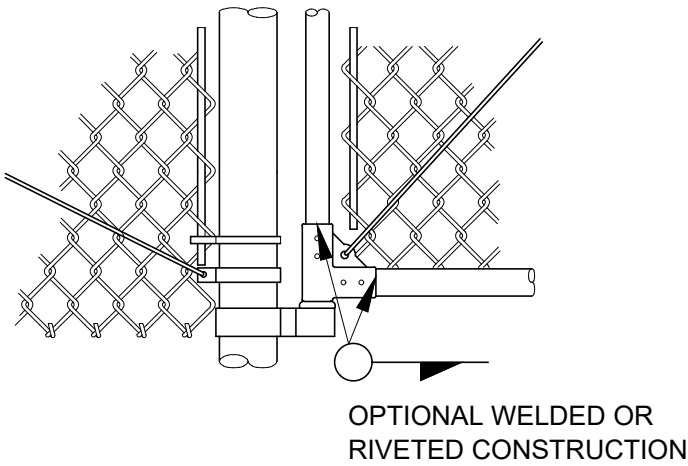
DROP ROD ASSEMBLY
SCALE: NTS



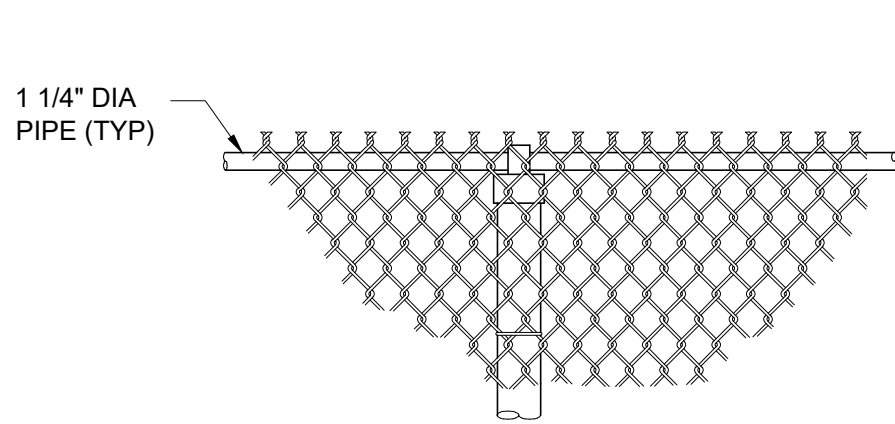
TOP GATE HINGE
SCALE: NTS



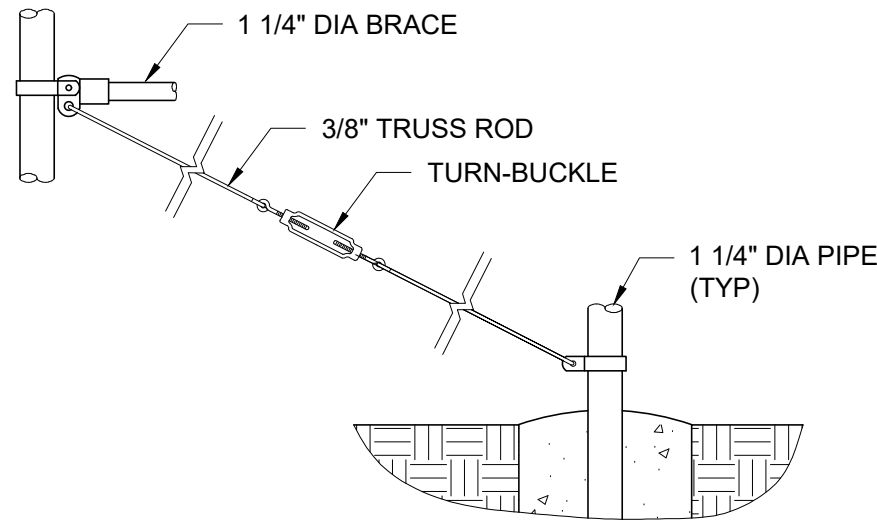
GATE KEEPER POST
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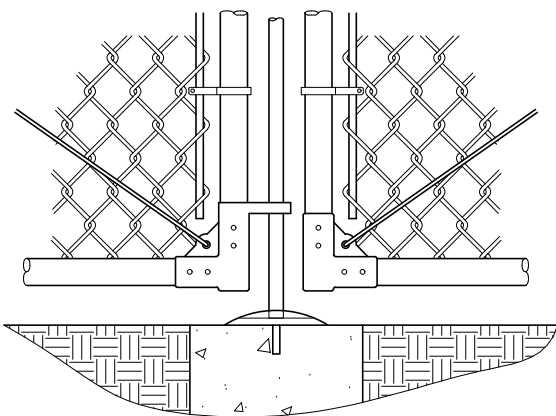
BOTTOM GATE HINGE AND GATE DETAIL
SCALE: NTS



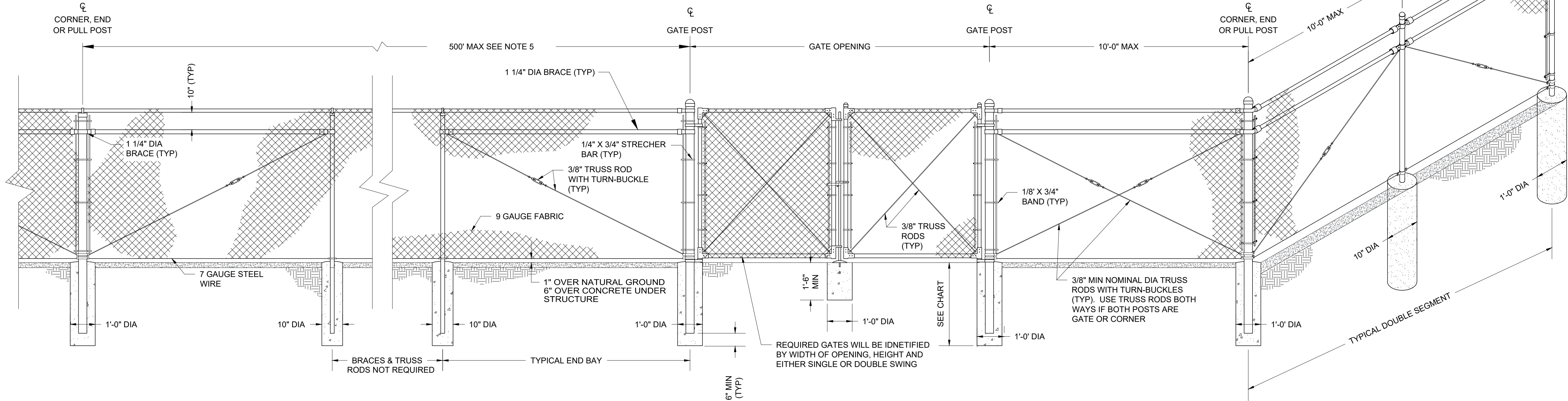
TWISTED & BARBED SELVAGE (TYPE II)
SCALE: NTS



BRACE AND TRUSS CONNECTIONS
SCALE: NTS



CENTER GATE STOP AND GATE DETAIL
SCALE: NTS



HEIGHT	GATE OPENING	GATE POST	GATE FRAME
UNDER 6 FEET	SINGLE TO 6' OR DOUBLE TO 12'	2"	1"
	SINGLE OVER 6' TO 8' OR DOUBLE OVER 12' TO 16'	2 1/2"	
	SINGLE OVER 8' TO 12' OR DOUBLE 16' TO 24'	3 1/2"	1 1/2"
6 FEET AND OVER	SINGLE OVER 6' OR DOUBLE TO 12'	2 1/2"	
	SINGLE OVER 6' TO 12' OR DOUBLE OVER 12' TO 24'	3 1/2"	
	SINGLE OVER 12' TO 18' OR DOUBLE OVER 24' TO 36'	6"	1 1/2"
	SINGLE OVER 18' OR DOUBLE OVER 36'	8"	

HEIGHT OF FABRIC	DEPTH OF POSTS	LENGTH OF END, CORNER OR PULL POST	LENGTH OF LINE POST HOLES	SIZE OF POSTS							
				END, CORNER, & PULL POSTS				LINE POST MIN. SIZE			
				NOM. SIZE	OUTSIDE DIA.	PIPE WEIGHT ASTM A-120	TRIPLE COATED	NOM. SIZE	OUTSIDE DIA.	PIPE WEIGHT ASTM A-120	TRIPLE COATED
7'	3'	10'	9'-8"	2 1/2"	2.875"	5.79	4.64	2"	2.375"	3.65	3.11
6'	3'	9'	8'-8"	2 1/2"	2.875"	5.79	4.64	2"	2.375"	3.65	3.11
5'	3'	8'	7'-8"	2"	2.375"	3.65	3.11	1 1/2"	1.900"	2.72	2.23
4'	3'	6'	5'-8"	2"	2.375"	3.65	3.11	1 1/2"	1.900"	2.72	2.23
3'	3'	5'	4'-8"	2"	2.375"	3.65	3.11	1 1/2"	1.900"	2.72	2.23

C005 TYPICAL CHAIN LINK FENCE DETAILS
NOT TO SCALE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

- GENERAL SHEET NOTES:
- MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PROJECT STANDARD SPECIFICATIONS.
 - USE TYPE II TOP SUPPORT (TWISTED & BARBED SELVAGE).
 - ALL STEEL PIPE MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 120 SCHEDULE 40 HOT DIPPED ZINC COATED HIGH TENSILE STEEL PIPE OR TRIPLE COATED PIPE MADE FROM STEEL CONFORMING TO ASTM 569.
 - POSTS SHALL BE STEEL SCHEDULE 40 PIPE OR TRIPLE COATED HIGH TENSILE STEEL PIPE OF THE SIZE SHOWN IN THE CHART. WEIGHT IN POUNDS PER FOOT WITH A TOLERANCE OF 5%.
 - LINE POSTS SHALL BE LOCATED AT EQUAL SPACING FOR EACH SEGMENT WITH A MAXIMUM SPACING AS FOLLOWS:
 - TANGENT SECTIONS TO 500-FOOT RADIUS NOT MORE THAN 10-FEET.
 - UNDER 500-FOOT RADIUS TO 200-FOOT RADIUS NOT MORE THAN 8-FEET.
 - UNDER 200-FOOT RADIUS TO 100-FOOT RADIUS NOT MORE THAN 6-FEET.
 - UNDER 100-FOOT RADIUS NOT MORE THAN 5-FEET.
 - TRUSS RODS AND BRACES SHALL NOT BE REQUIRED FOR FABRIC HEIGHT LESS THAN 5-FEET.
 - TENSION WIRE SHALL BE 7 GAUGE ZINC- OR ALUMINUM-COATED COIL SPRING STEEL TENSION WIRE.
 - ALL PIPES, WIRES AND FABRICS TO BE BLACK VINYL COATED PVC.
 - SEE DETAIL (S707) FOR FENCE TO CONCRETE WALL DETAIL.

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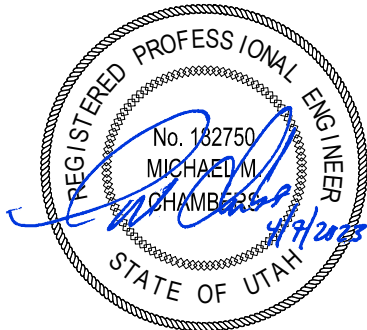
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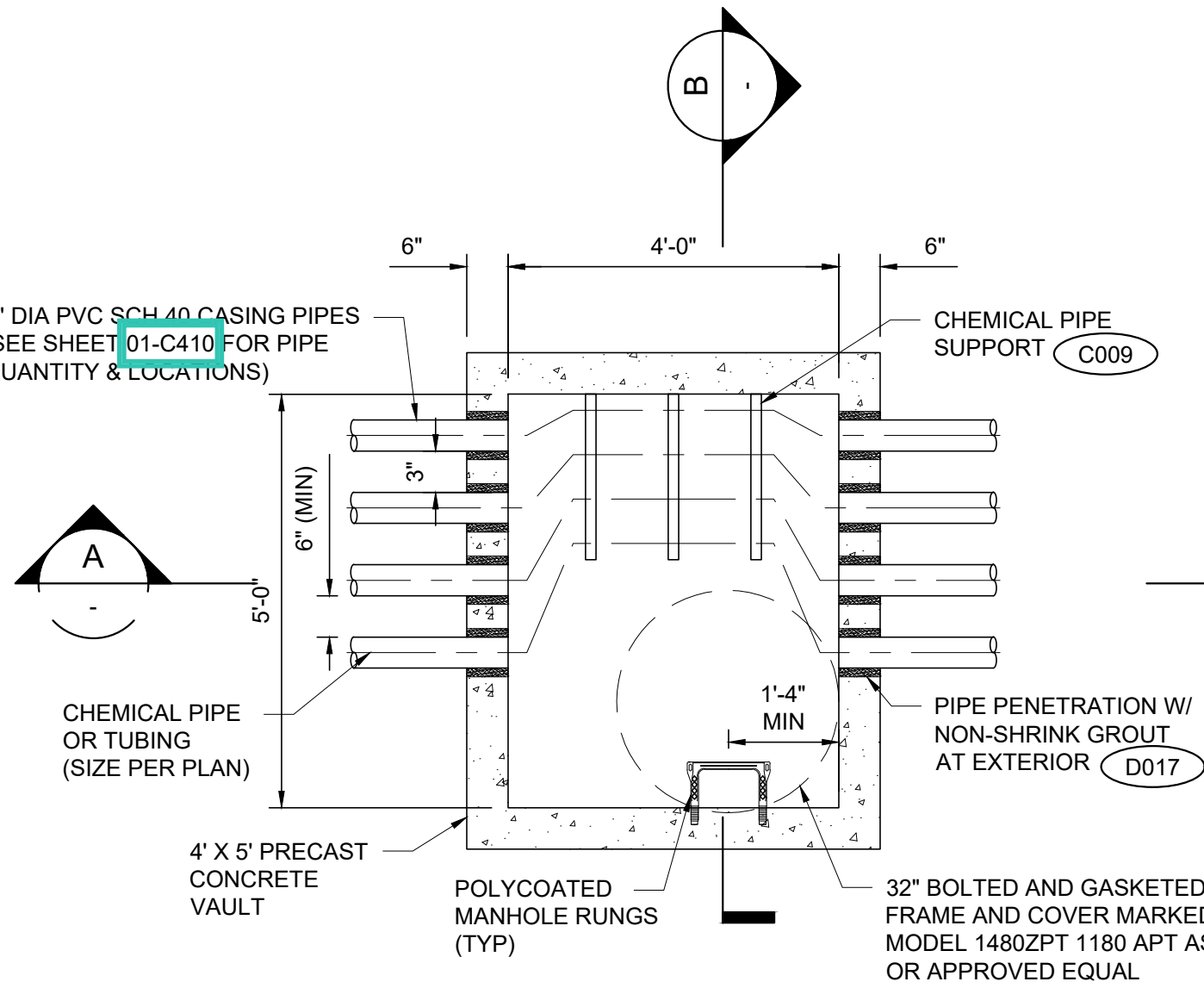
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SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 2

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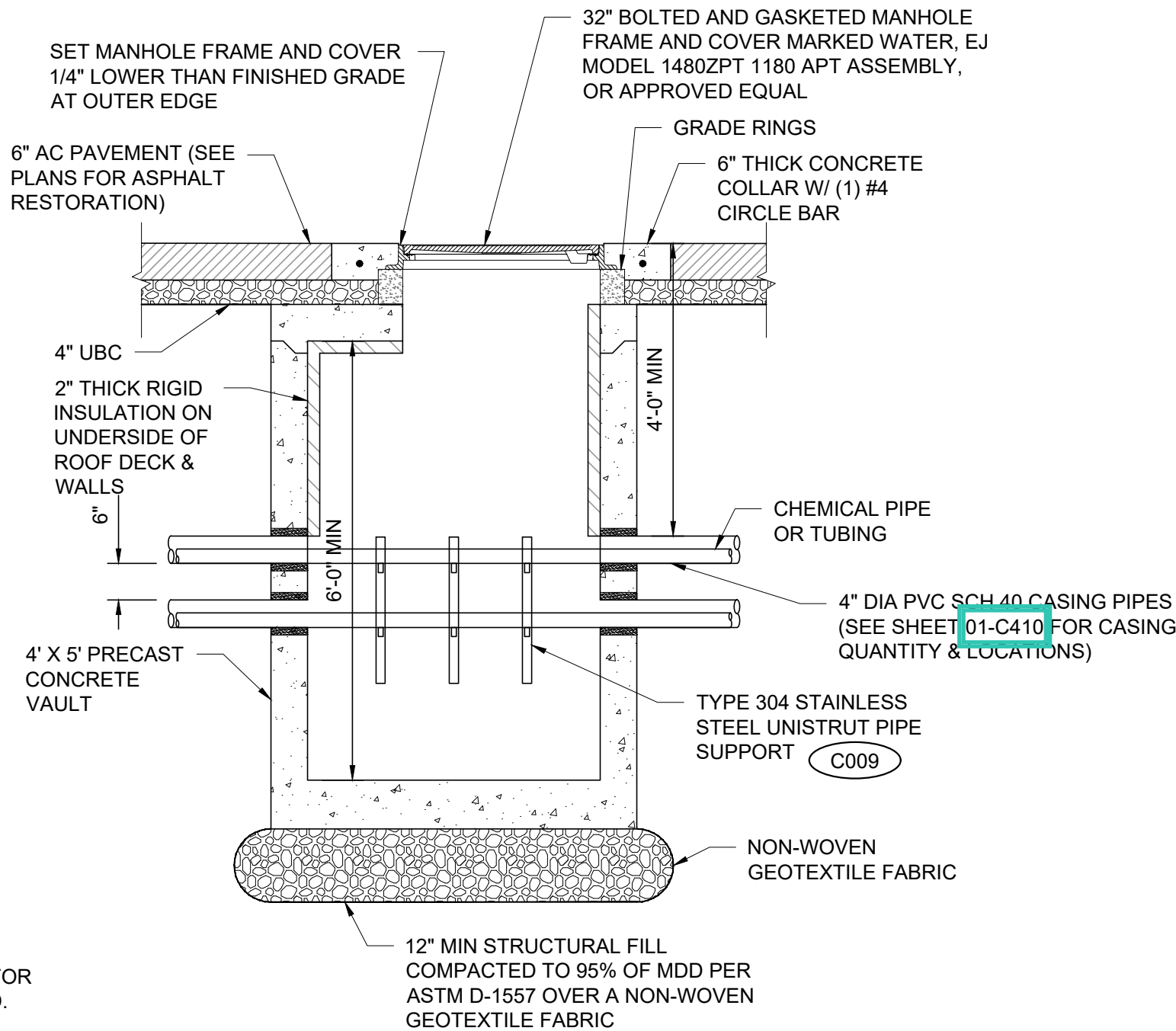
99-C702



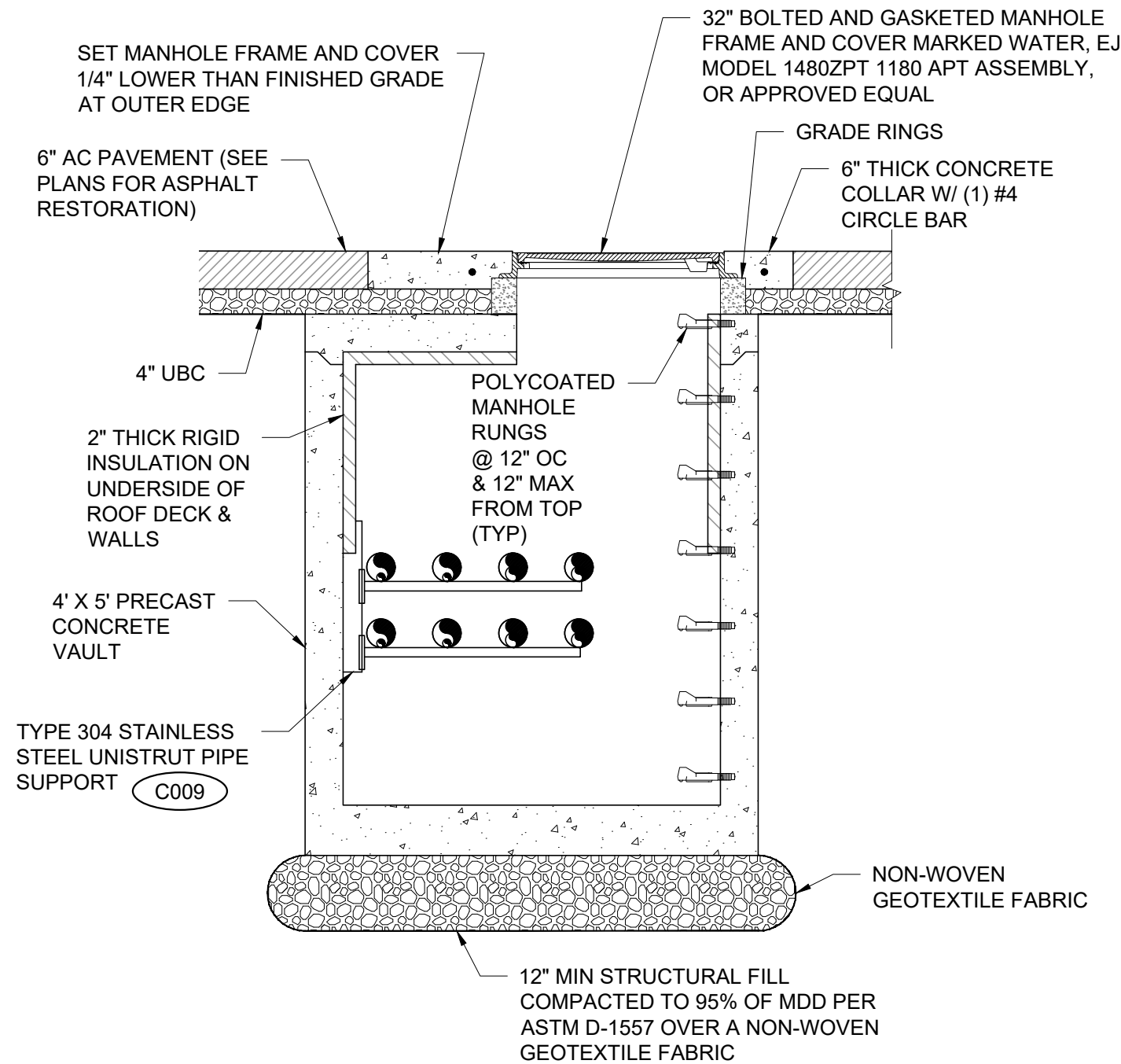
C006 CHEMICAL PIPING VAULT
SCALE: 1" = 2'

DETAIL NOTES:

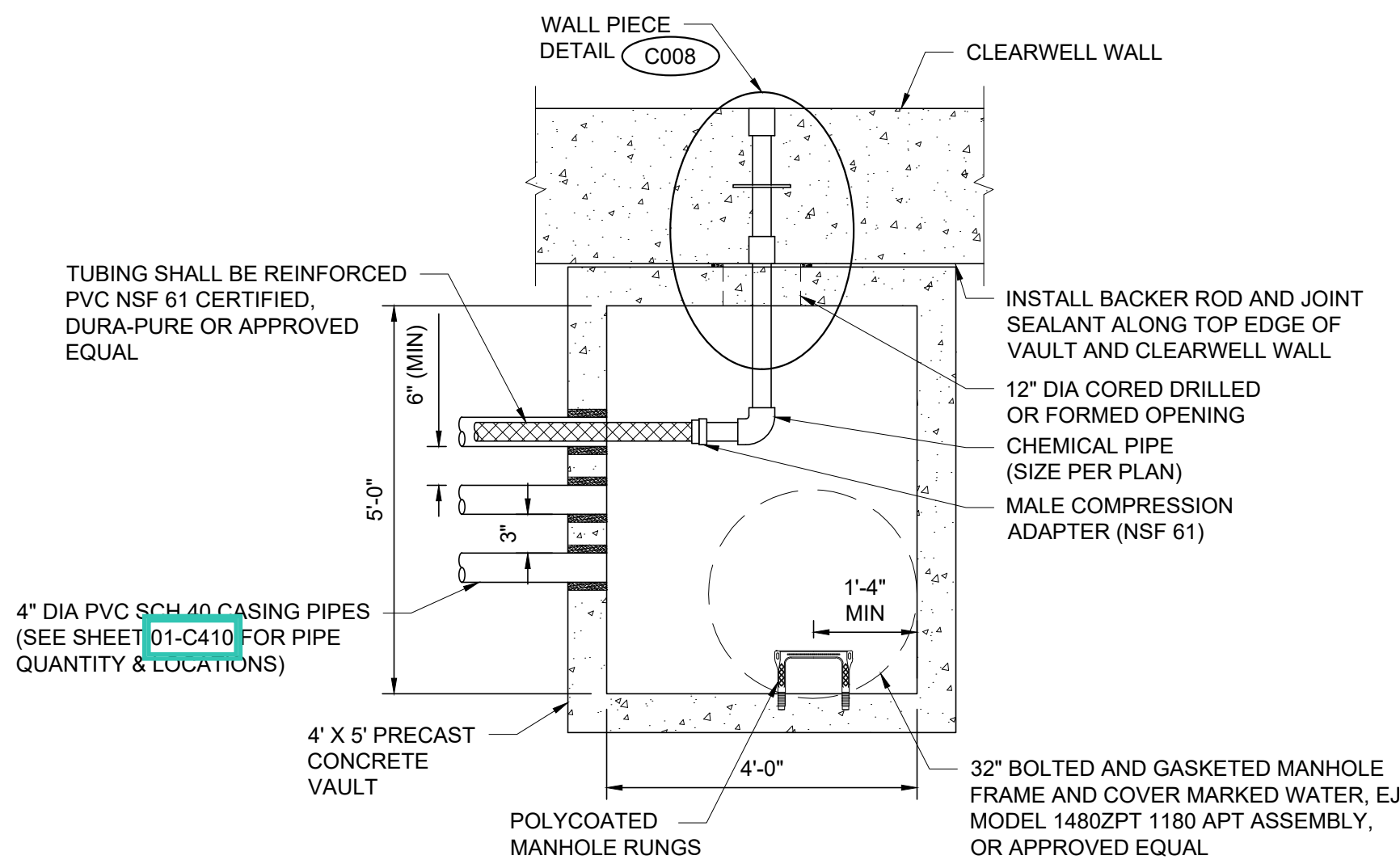
1. SIZE, QUANTITY AND ORIENTATION OF PIPE SUPPORTS SHALL BE PROVIDED AS REQUIRED TO ADEQUATELY SUPPORT THE CHEMICAL PIPING OR TUBING IN EACH VAULT.
2. CHEMICAL PIPING IS SHOWN SCHEMATICALLY ONLY. CONTRACTOR SHALL BE PROVIDED WITH BENDS AND / OR FITTINGS REQUIRED.
3. LOCATION OF MANHOLE RING AND COVER SHALL BE ADJUSTED TO AVOID CHEMICAL PIPING AS MUCH AS POSSIBLE.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWING SUBMITTAL SHOWING PROPOSED LOCATION OF CASING PIPES, CHEMICAL PIPE LAYOUT, PIPE SUPPORTS, ELEVATIONS AND MANHOLE RING AND COVER LOCATION FOR EACH CHEMICAL PIPING VAULT FOR APPROVAL BY ENGINEER.
5. HARDWARE FOR LINK SEAL SHALL BE STAINLESS STEEL.



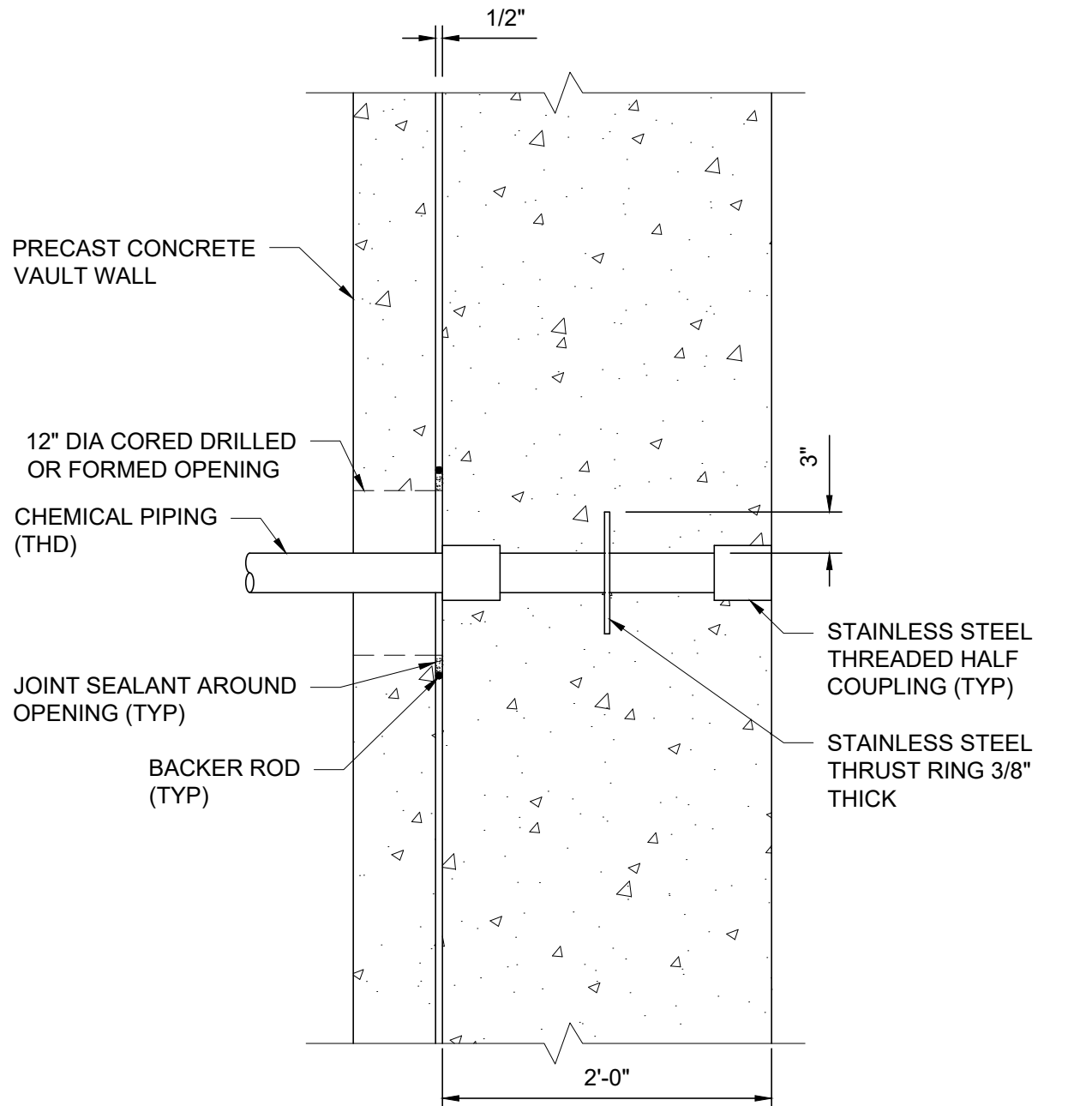
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SCALE: 1" = 2'



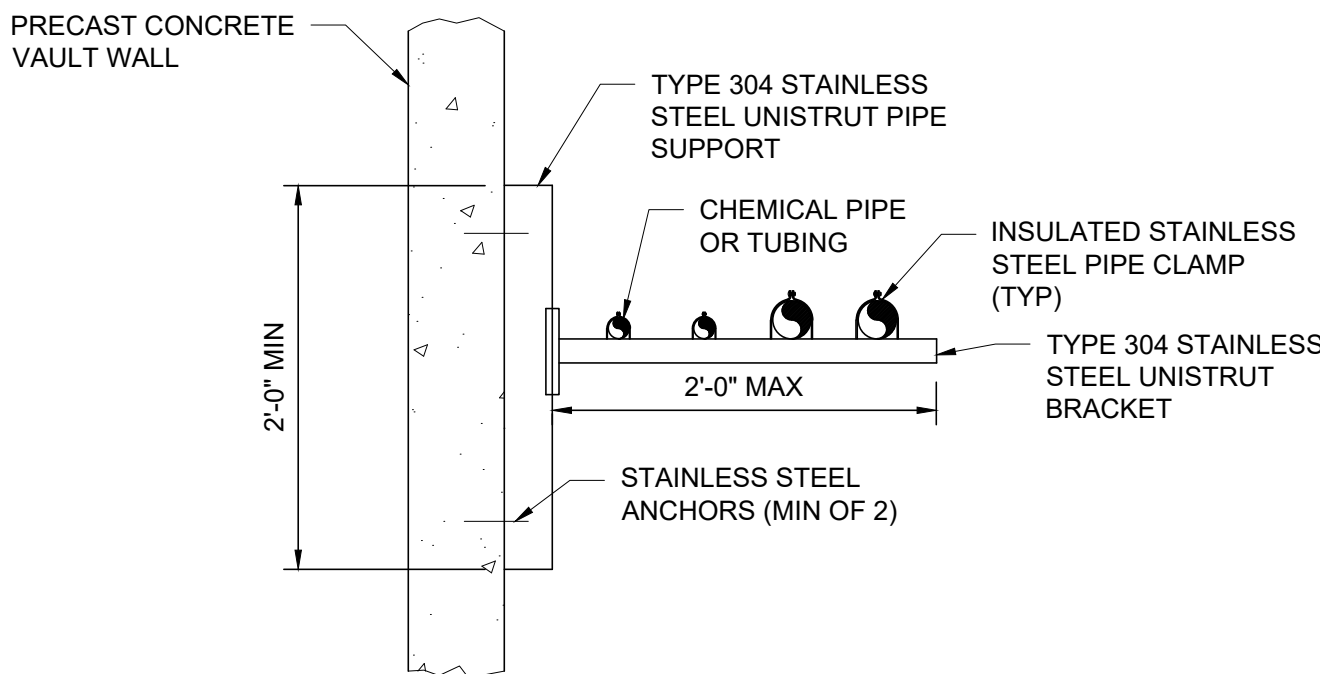
B | SECTION
SCALE: 1" = 2'



C007 CHEMICAL VAULT TO CLEARWELL CONNECTION
SCALE: 1" = 2'



C008 WALL PIECE DETAIL
SCALE: NTS



C009 CHEMICAL PIPE SUPPORT DETAIL
SCALE: 1" = 1'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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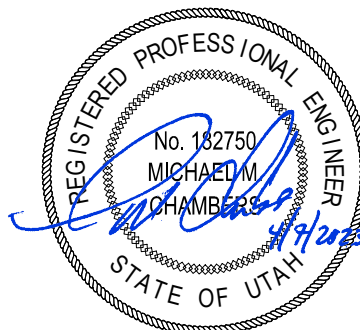
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SHEET TITLE

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TYPICAL DETAILS
SHEET 3

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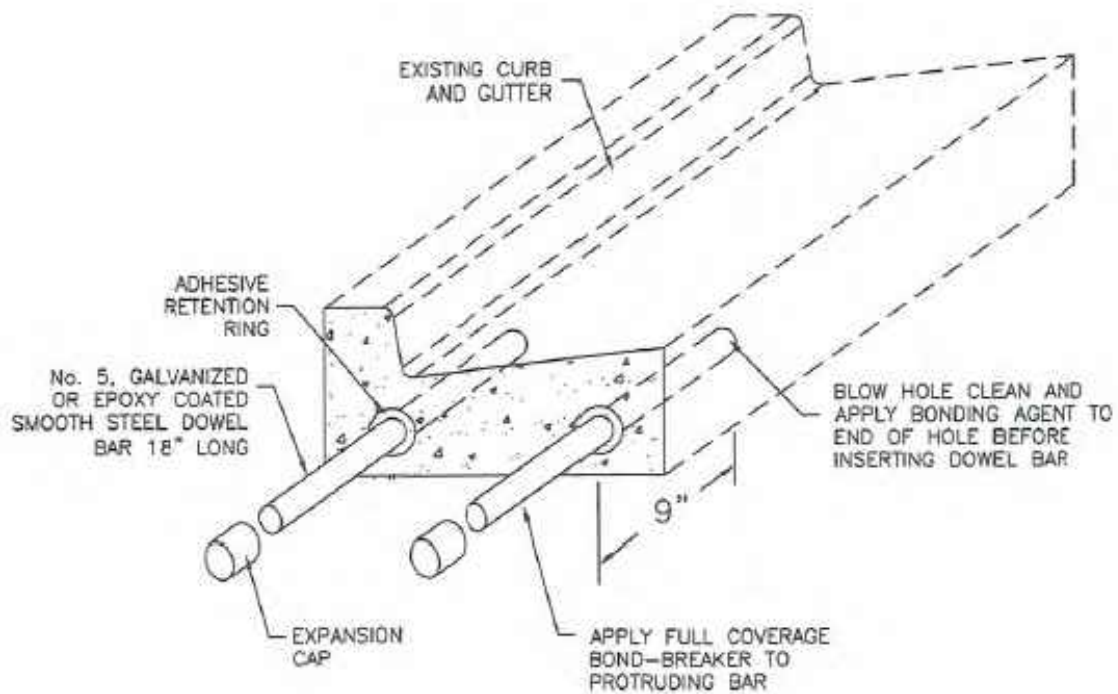
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Curb and gutter connection

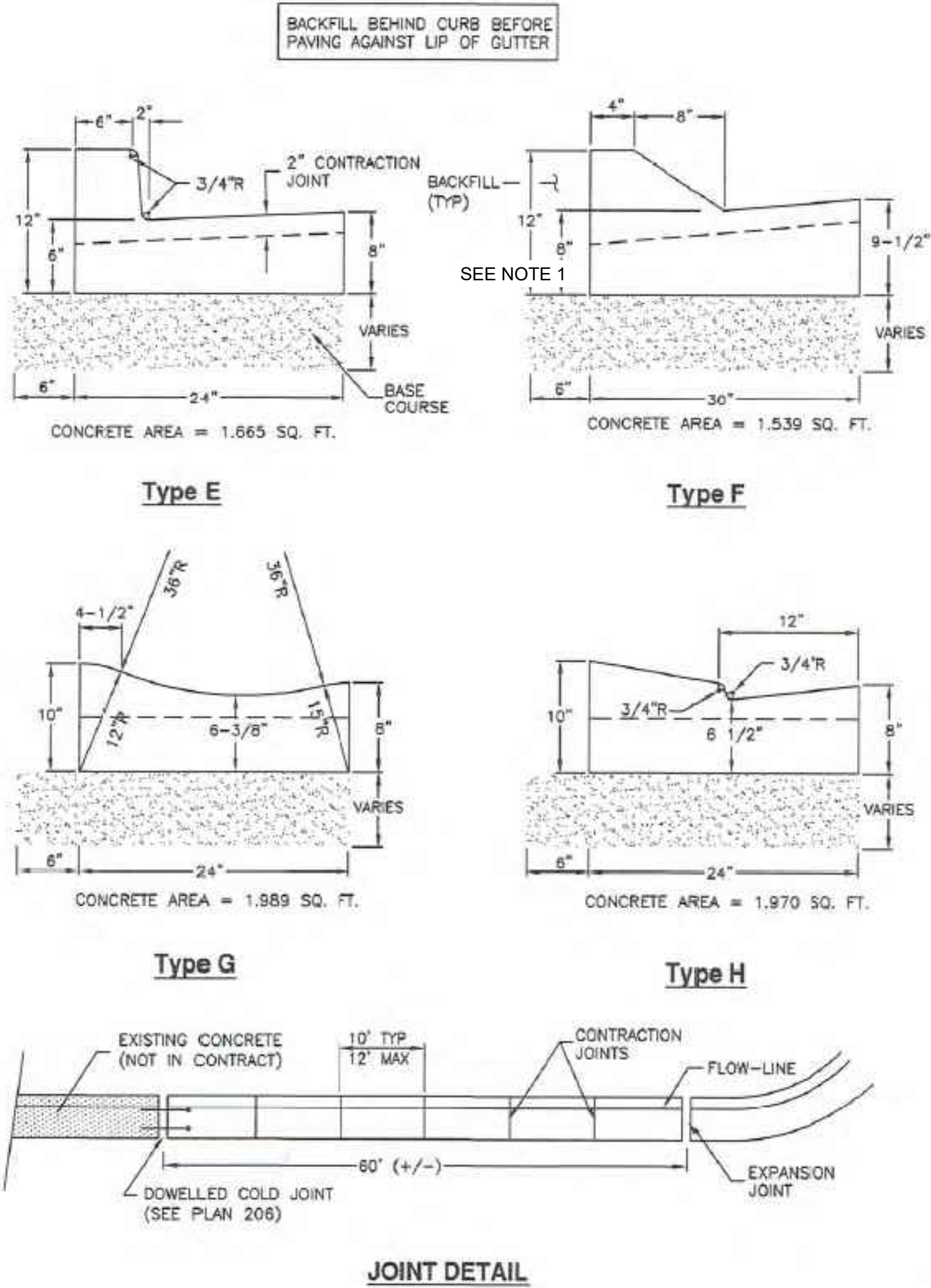
1. GENERAL
- A. Connect new curb and gutter to existing curb and gutter that has not been placed by CONTRACTOR.
2. PRODUCTS
- A. Reinforcement: Galvanized or epoxy coated, 60 ksi yield grade steel, ASTM A615.
- B. Adhesive: Epoxy adhesive grout, APWA Section 03 61 00.
- C. Bond Breaker: Paraffin wax, lithium grease, or other semi-solid, inert lubricant.
- D. Expansion Cap: Plastic, with bar movement allowance of 1/2-inch.
3. EXECUTION
- A. Ensure drill rigs (or jigs) are set at mid-depth of the gutter and horizontal to the surface. Make hole size large enough to account for dowel bar and adhesive.
- B. Clean holes and dowel bars of dirt, dust and particles. Ensure coating on bars have no surface defects.
- C. Place bonding agent in the back of each hole so adhesive flows out around each bar fully encasing it. DO NOT apply adhesive to end of the bar and then insert the bar into the hole.
- D. Insert dowels with at least one full turning motion and if necessary, place a grout retention disk on the dowel after insertion to contain adhesive.
- E. Apply complete coverage of bond-breaker on the protruding end of each dowel.
- F. Install expansion caps on protruding dowel bar ends.



C014 APWA PLAN 206 CURB AND GUTTER CONNECTION
NTS

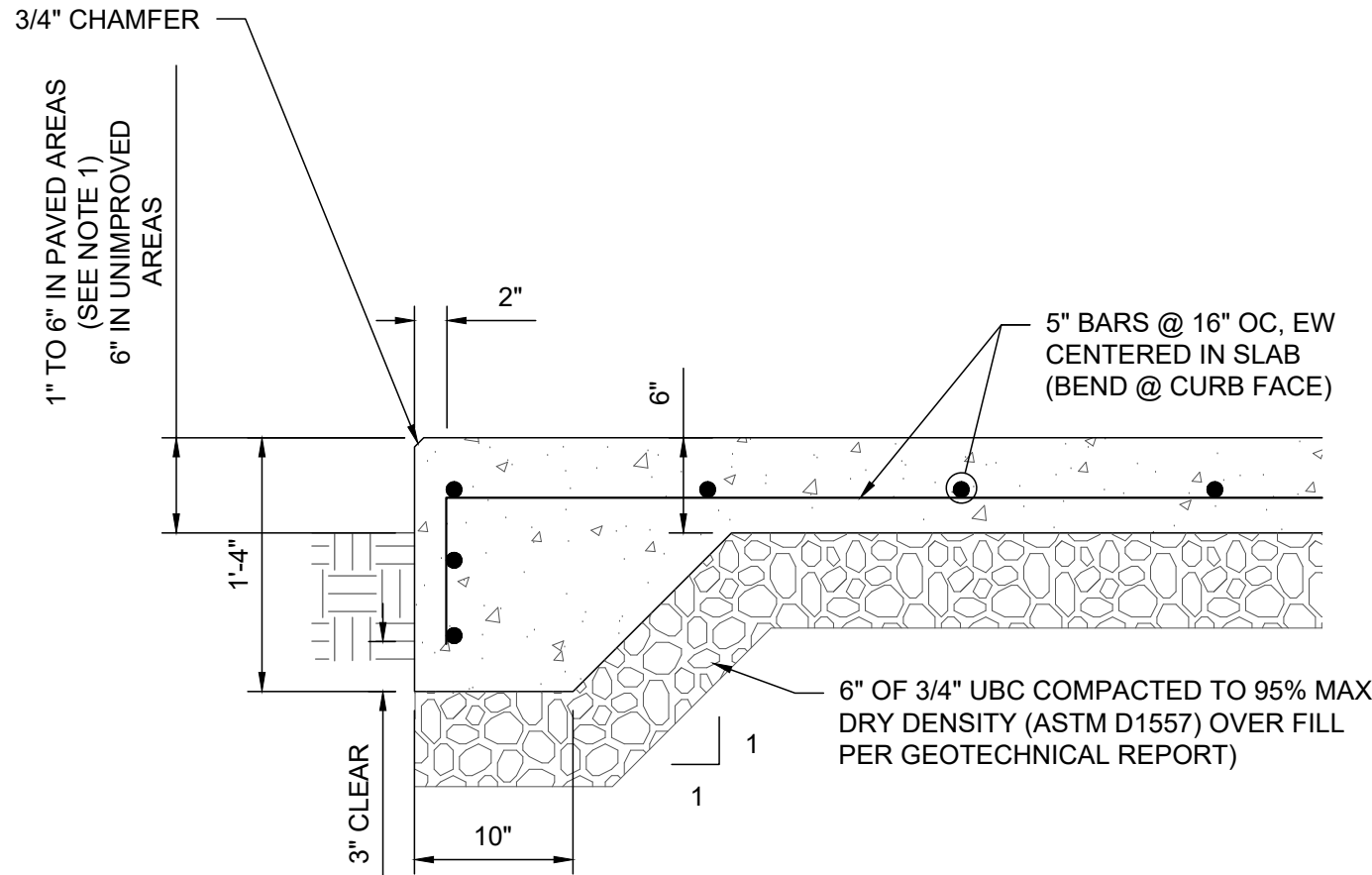
CURB AND GUTTER

1. GENERAL
- A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
- B. Additional requirements are specified in APWA Section 32 16 13.
2. PRODUCTS
- A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
- B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
- C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
- D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
3. EXECUTION
- A. Base Course Placement: APWA Section 32 05 10. Thickness is 6-inches if flow-line grade is 0.5 percent (s=0.005) or greater. If slope is less, provide 8-inches. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
- B. Concrete Placement: APWA Section 03 30 10.
- 1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install at the start or end of a street intersection curb return. Expansion joints are not required in concrete placement using slip-form construction.
- 2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
- 3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
- C. Protection and Repair: Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



C016 APWA PLAN 205.2 CURB & GUTTER
NTS

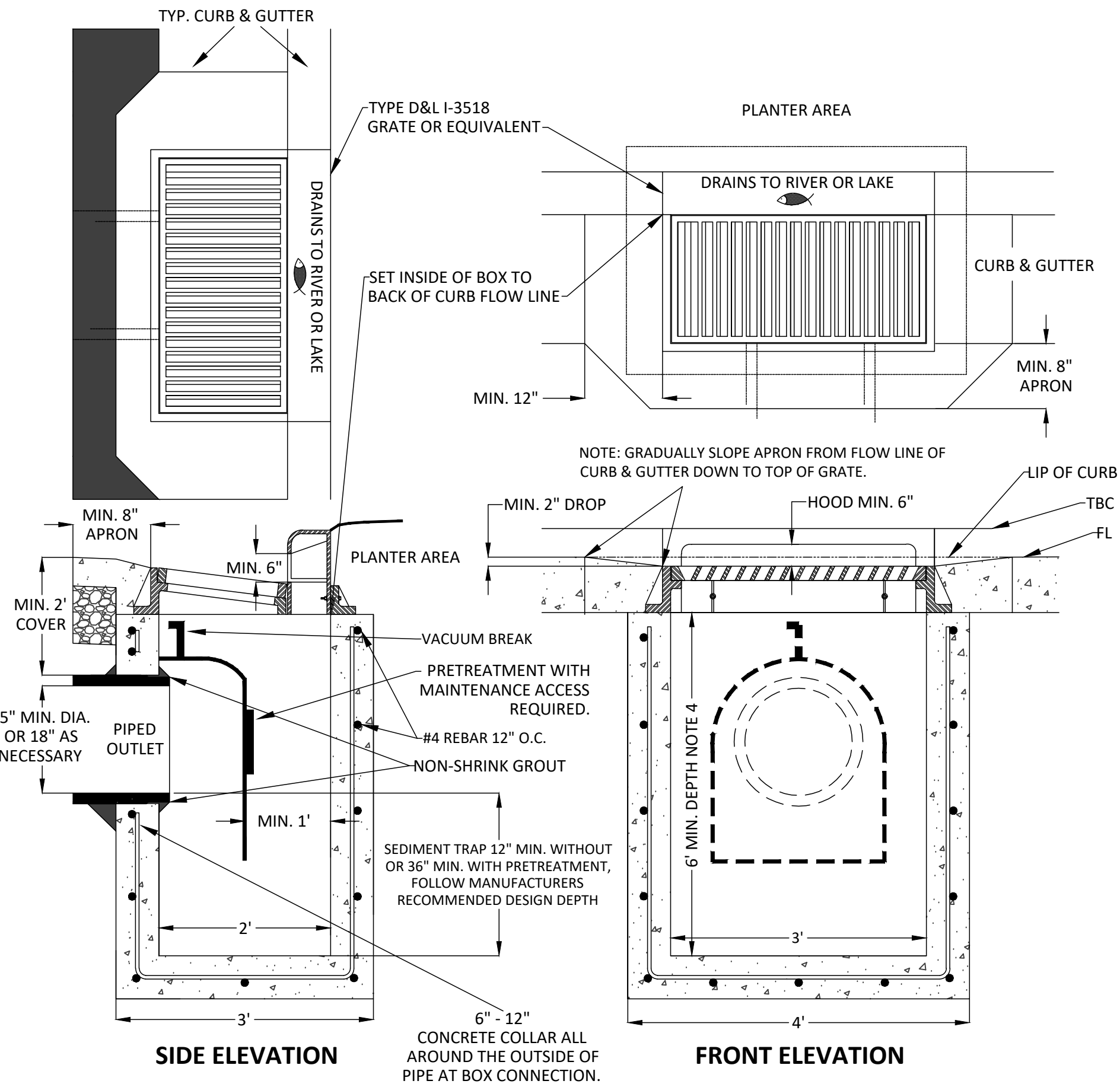
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



- DETAIL NOTE:
1. REVEAL EDGE OF CONCRETE SLAB IN PAVED AREAS MAY VARY BASED ON PAVEMENT SLOPE REQUIREMENTS FOR DRAINAGE.
2. INSTALL 1/2" EXPANSION BOARD WHERE SLAB ABUTS AGAINST ANOTHER CONCRETE STRUCTURE.

C015 EXTERIOR SLAB-ON-GRADE DETAIL
NTS

- NOTE:
1. FOR GRATE & FRAME DETAILS SEE D.&L. SUPPLY CATALOG #1-3518 OR EQUIVALENT.
2. REQUIRED STAMPED HOOD, "DRAINS TO RIVER OR LAKE" WITH FISH LOGO.
3. ALL BOXES AND FRAMES MUST SUPPORT A HS-20 LOADING.
4. REFER TO THE APPROVED PROJECT PLANS FOR PIPE SIZE, LOCATION, SEDIMENT DEPTH, PRETREATMENT AND OTHER STRUCTURE DESIGN REQUIREMENTS.
- 4.1 15" DIA. PIPE LATERAL, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 3.75 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS. MIN. BOX INSIDE DEPTH IS 6 FEET.
- 4.2 18" DIA. PIPE AS NECESSARY, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 4.5 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS MIN. BOX INSIDE DEPTH IS 7 FEET.
- 4.3 *24" DIA. SPECIAL APPROVAL IS REQUIRED IN ADDITION TO INLET STRUCTURE DESIGN. THE MINIMUM DEPTH FROM OUT LET PIPE FLOW LINE TO FLOOR OF INLET BOX IS 6.0 FEET. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
5. A SNOOT IS REQUIRED AT EVERY INLET UNLESS AN ALTERNATE PRETREATMENT PLAN HAS BEEN APPROVED.



C017 P315B - CAST-IN-PLACE CURB FACE AND INLET BOX
NTS

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PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

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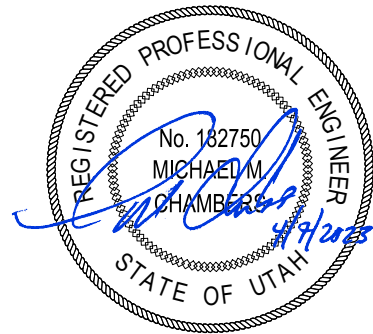
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1377 South 350 East
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CONSULTANTS

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 5

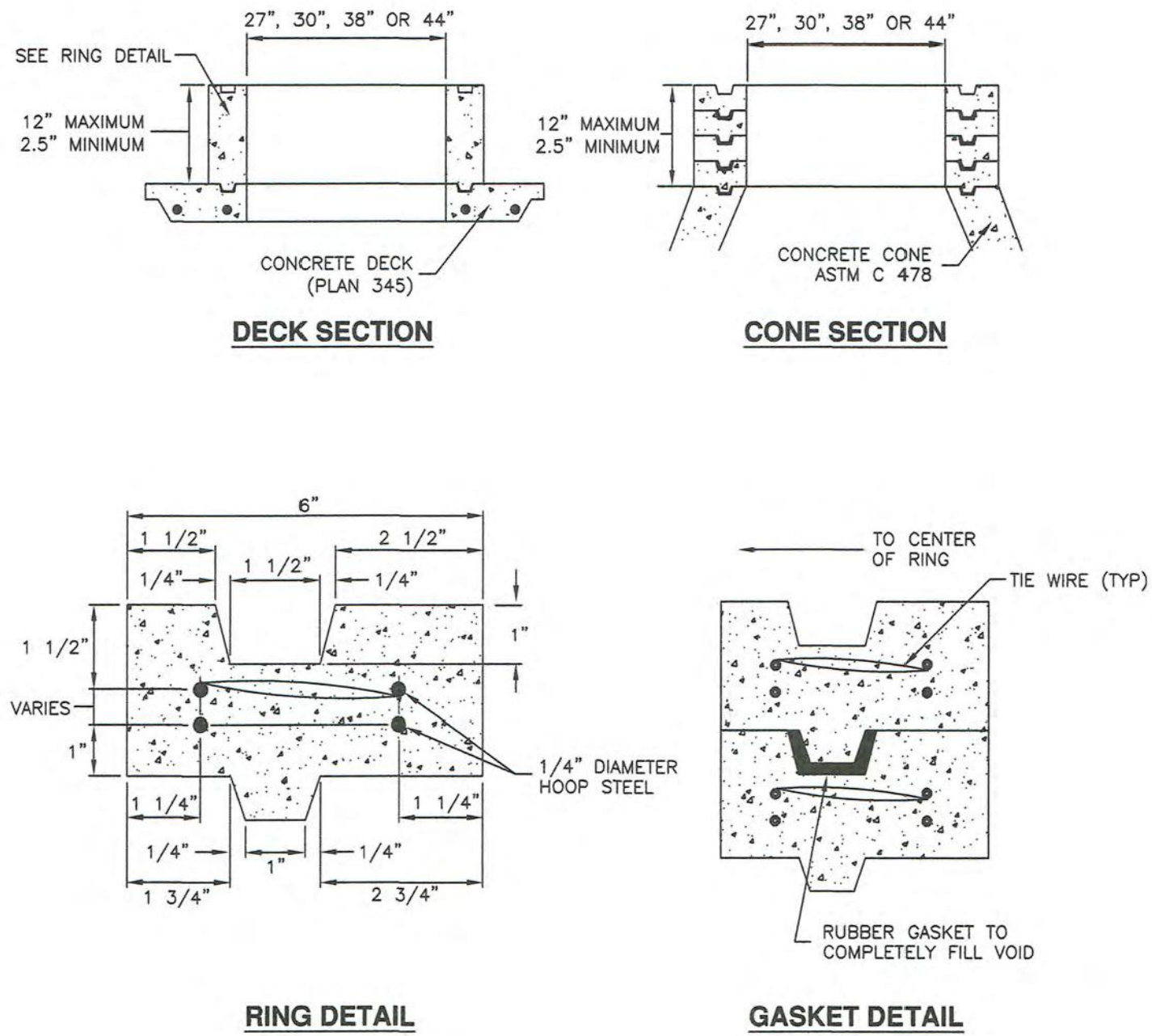
DRAWING NUMBER

99-C705

1. GENERAL
- A. Grade rings are used in non-pressurized applications to adjust frame to grade.

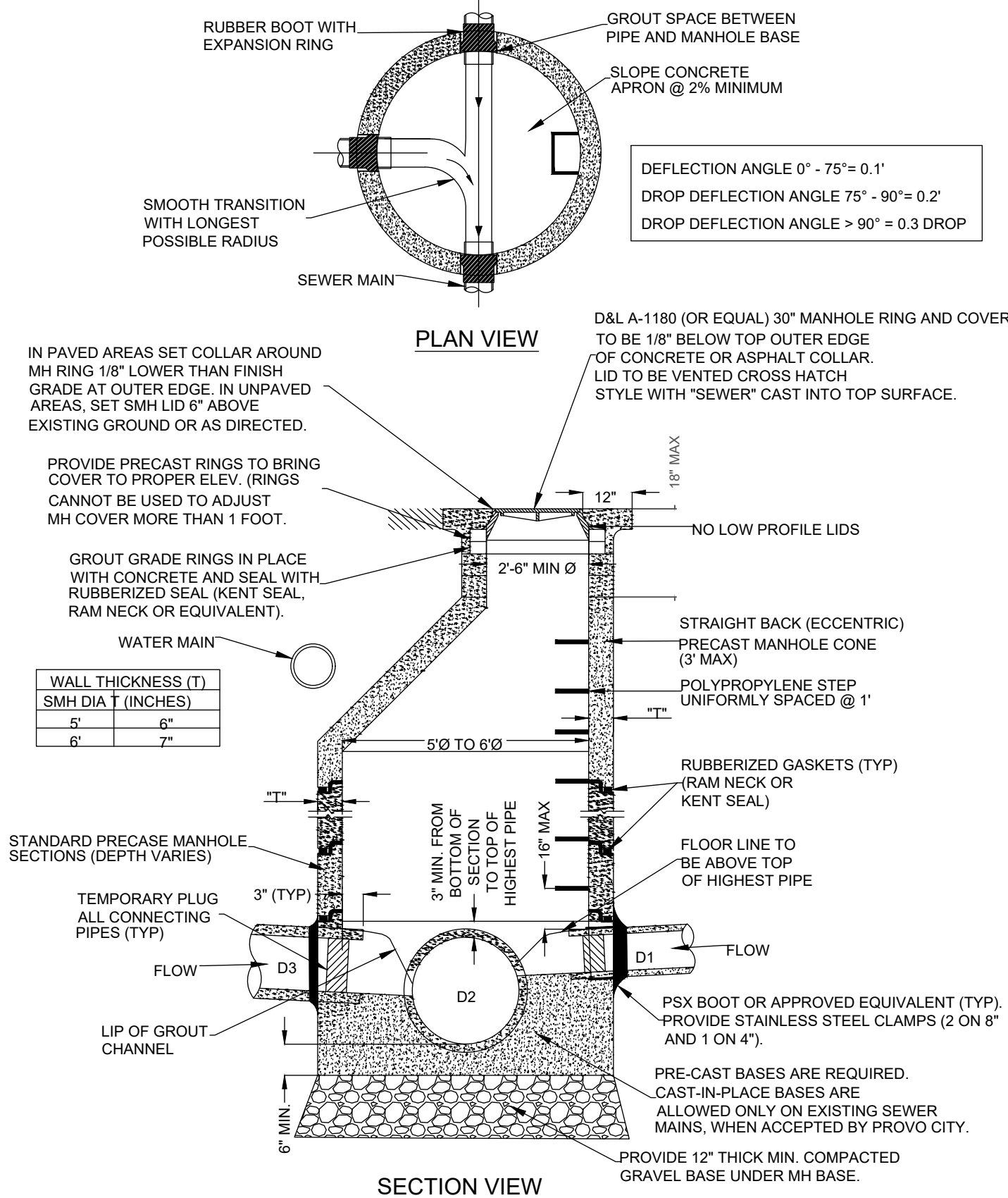
2. PRODUCTS
- A. Concrete: Class 4000, APWA Section 03 30 04.
- B. Reinforcement: Deformed, 60 ksi yield grade hoop steel, ASTM A615.
- 1) 2 1/2" High Rings: Provide two 1/4" diameter steel hoops tied with No. 14 AWS gage wire, 8" on center.
- 2) 6" and 8" High Rings: Provide four 1/4" diameter steel hoops, tied with No. 14 AWS gage wire, 8" on center.
- C. Gasket: Rubber-based, compressible.

3. EXECUTION
- A. Ring Manufacture:
- 1) Fabrication, APWA Section 03 30 10.
- 2) Cure, APWA Section 03 39 00.
- B. Field Installation: Seat rings with a compressible gasket.



NOTE:
APWA PLAN 345 NOT USED.

C022 APWA PLAN 360.1 RAISE FRAME TO GRADE
NTS



- NOTES:
1. SEE DETAIL C022 FOR APWA PLAN 360 GRADE RINGS DETAIL.
2. SEE DETAIL C023 FOR APWA PLAN 413 CONCRETE COLLAR.

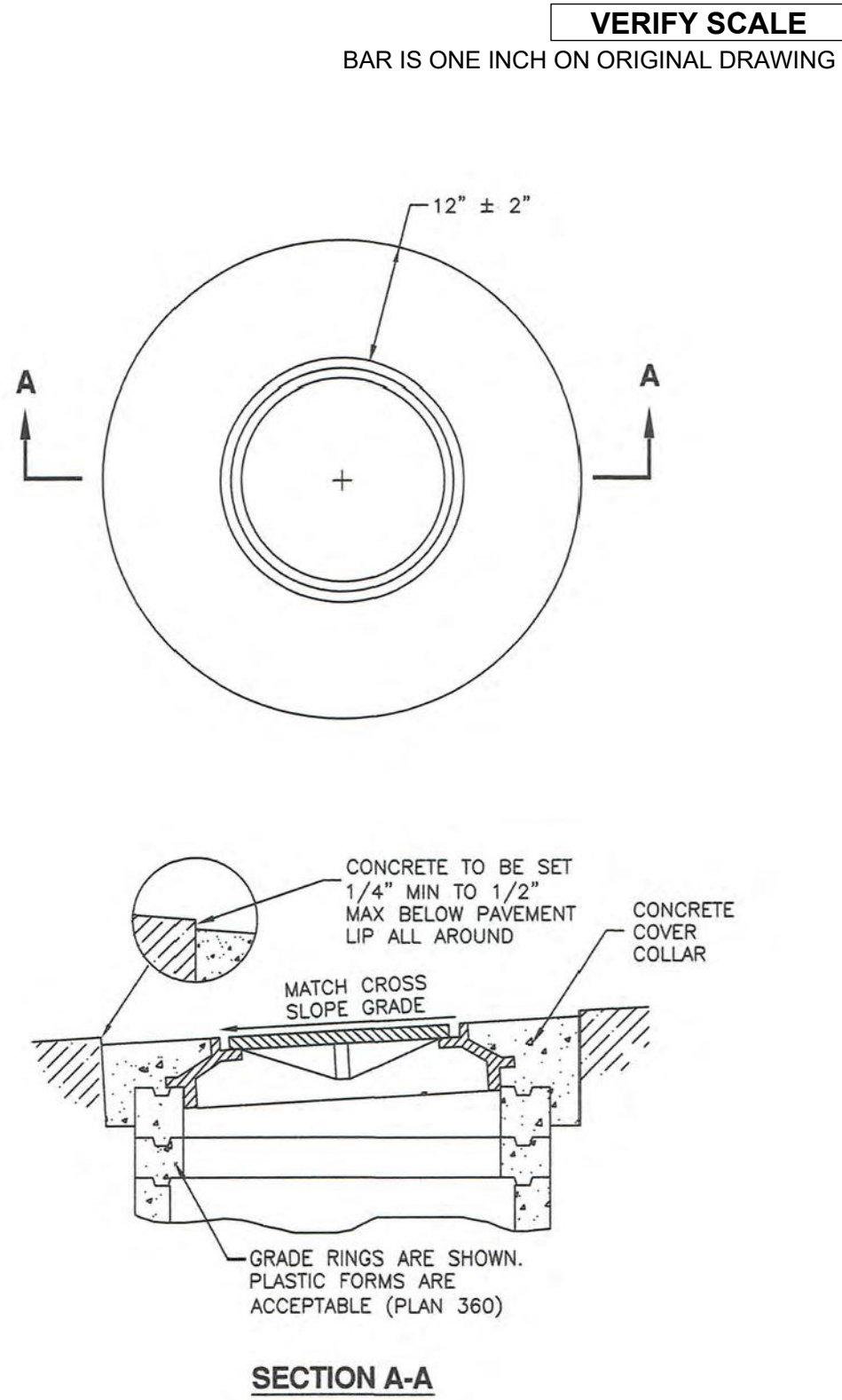
C024 PROVO CITY DETAIL P-411 SANITARY SEWER MANHOLE
NTS

Cover collar for sanitary sewer manhole

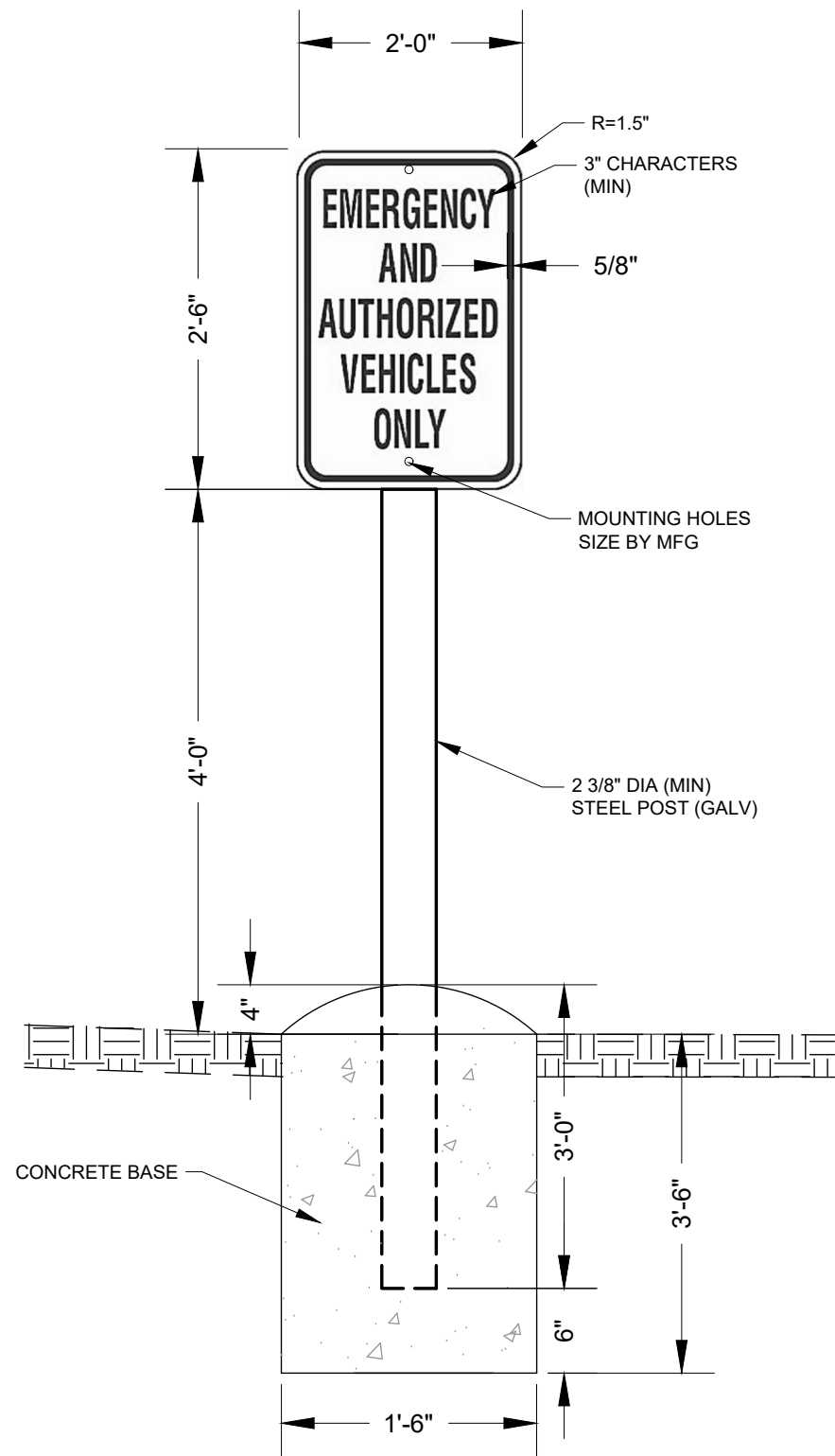
1. GENERAL
- A. In a pavement surface, the concrete will support the frame under traffic loadings.

2. PRODUCTS
- A. Concrete: Class 4000, APWA Section 03 30 04.
- B. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00.

3. EXECUTION
- A. Pavement Preparation: Provide a neat vertical and concentric joint between the concrete collar and the bituminous pavement surface. Clean edges of all dirt, oil, and loose debris.
- B. Concrete Placement: Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.



C023 APWA PLAN 413 COVER COLLAR FOR SANITARY SEWER MANHOLE
NTS



C025 AUTHORIZED VEHICLES ONLY SIGN
NTS

PROJECT

PROVO RIVER
WATER TREATMENT
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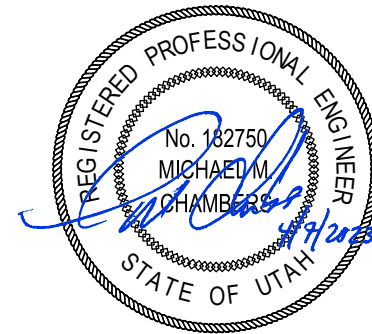


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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 7

DRAWING NUMBER

99-C707

ANSI D 22" x 34"

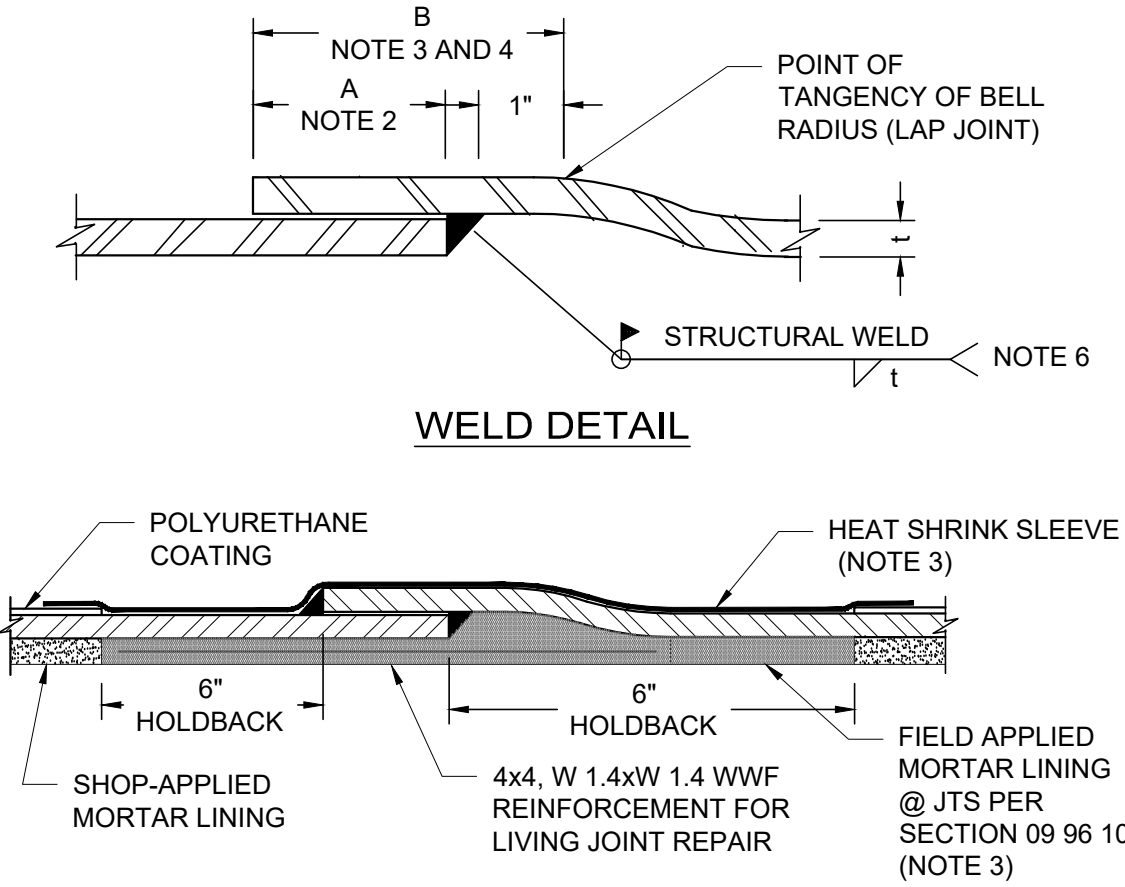
Approved: M. ALLEN

Checked: Z. STEELE

Designer: Z. STEELE

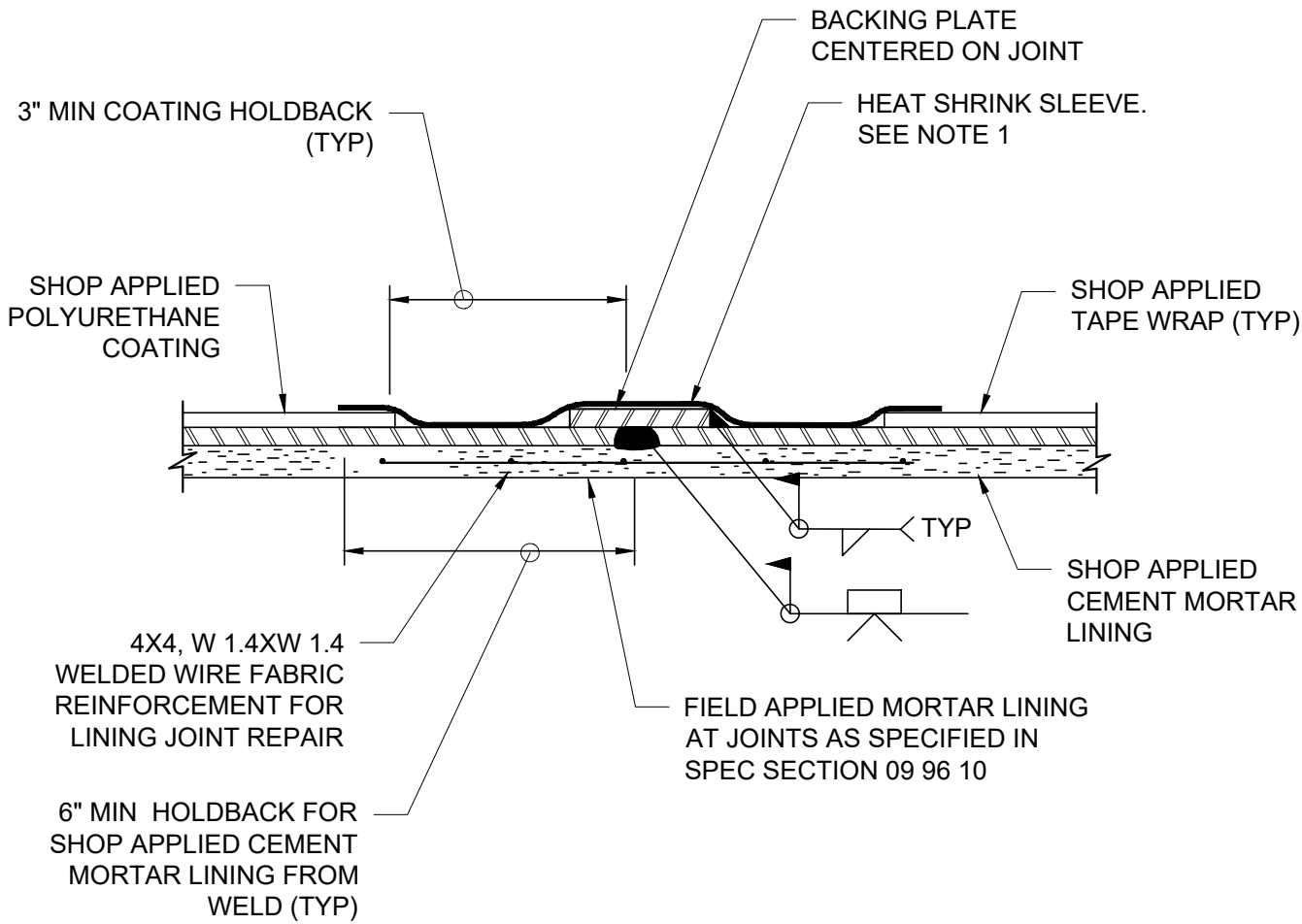
Project Manager: M. CHAMBERS Drafter: D. DOLDER

Last Plotted: 04.04.2023, 8:42 PM
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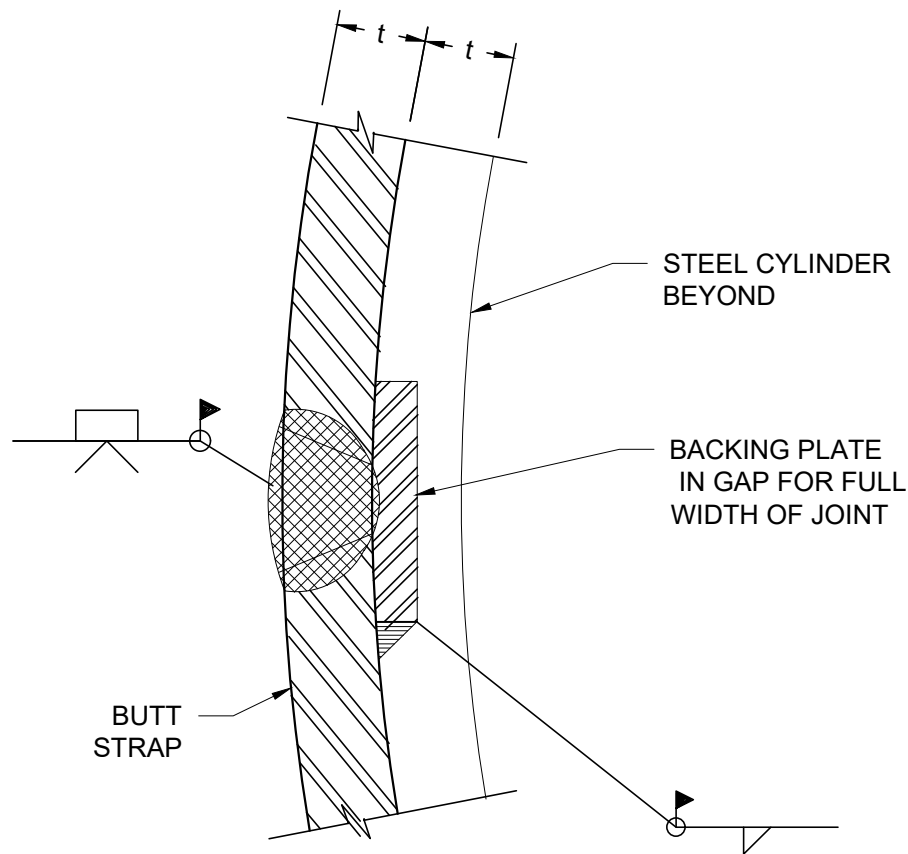
- DETAIL NOTES:**
- SINGLE WELD LAP JOINT TO BE USED FOR ALL BURIED PIPELINE JOINTS.
 - DIMENSION "A" CORRESPONDS TO THE COMPLETED JOINT OVERLAP AFTER FINAL FIELD WELDING. DIMENSION "A" SHALL BE THE GREATER OF 3" OR 5T, MINIMUM.
 - FOR STANDARD JOINTS, THE MINIMUM DIMENSION "B" SHALL BE AS REQUIRED TO PROVIDE THE MINIMUM OVERLAP DIMENSION "A" AND MAINTAIN THE INDICATED HOLDBACK FOR THE WELD.
 - FOR SPECIAL TEMPERATURE CONTROL JOINTS, THE MINIMUM DIMENSION "B" SHALL BE INCREASED BY AT LEAST 3 INCHES. AT THE TIME OF INSTALLATION AND PRIOR TO WELDING, THE SPIGOT SHALL BE INSERTED INTO THE LENGTHENED BELL TO PROVIDE "A" +3 INCHES MINIMUM OVERLAP. SEE SPECIFICATIONS FOR SPECIAL TEMPERATURE CONTROL JOINT WELDING REQUIREMENTS.
 - FILLET WELDS FOR BELL AND SPIGOT LAP JOINTS SHOWN. FILLET WELDS ON OTHER JOINTS ARE SIMILAR.
 - STRUCTURAL WELD MAY BE MADE ON THE INSIDE (AS SHOWN) OR OUTSIDE OF THE PIPE AT THE CONTRACTOR'S OPTION. WELD SIZE ON 1/2" THICK PIPE AT UNIVERSITY AVE CROSSING NEED ONLY BE 1/4".
 - THE JOINTS SHALL BE FABRICATED AND INSTALLED TO BE WITHIN THE TOLERANCES INDICATED IN SPECIFICATION SECTION 33 92 10. THE TOLERANCE REQUIREMENTS SHALL APPLY TO BOTH STRAIGHT AND DEFLECTED JOINTS.
 - HOLIDAY TEST THE HEAT SHRINK SLEEVE AFTER INSTALLATION PER SECTION 09 96 10.
 - INSPECTION OF ALL FIELD APPLIED INTERIOR MORTAR COATINGS MUST BE CONDUCTED PRIOR TO PLACING LINE IN SERVICE.
 - HEAT SHRINK SLEEVE SHALL OVERLAP SHOP APPLIED POLYURETHANE BY A MINIMUM OF 6".

C026 **LAP JOINT**
NOT TO SCALE



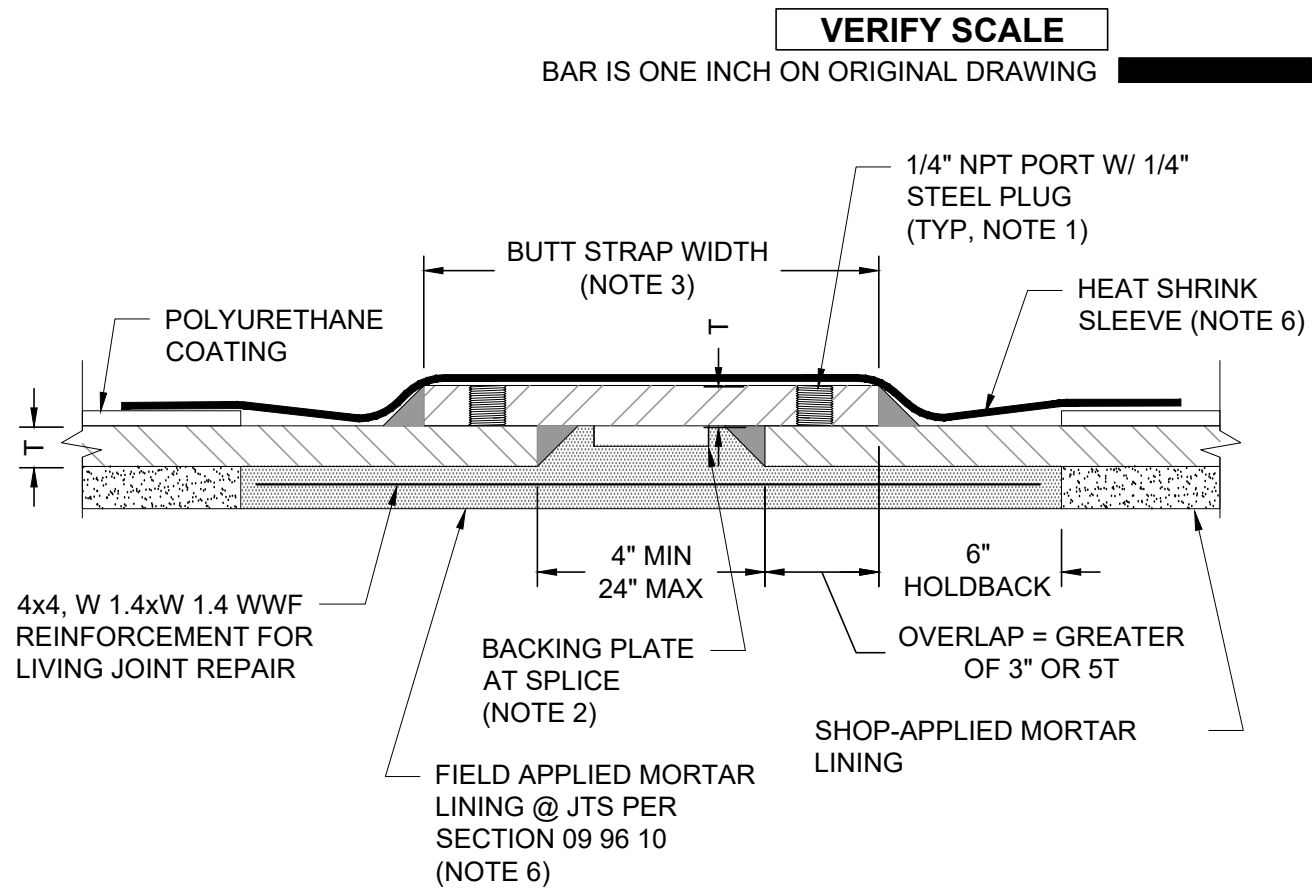
- DETAIL NOTES:**
- HOLIDAY TEST THE HEAT SHRINK SLEEVE AFTER INSTALLATION AS SPECIFIED IN SECTION 09 96 10 OF THE SPECIFICATIONS. SLEEVE SHALL OVERLAP SHOP APPLIED TAPE WRAP A MINIMUM OF 3".
 - INSPECTION OF ALL FIELD APPLIED INTERIOR MORTAR COATINGS MUST BE CONDUCTED PRIOR TO PLACING LINE IN SERVICE.

C027 **BUTT WELD**
NOT TO SCALE



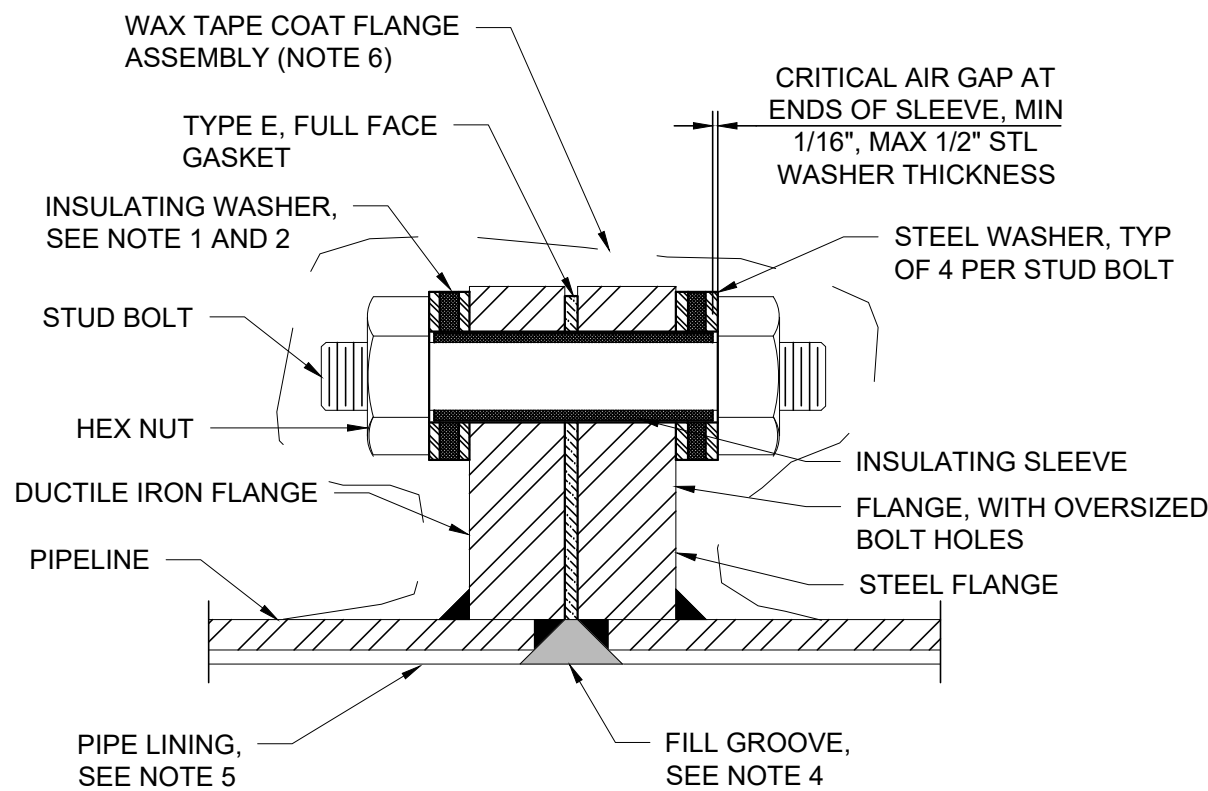
- DETAIL NOTES:**
- LININGS AND COATINGS NOT SHOWN FOR CLARITY.
 - BEVEL ENDS OF BACKING PLATE AT BUTT STRAP PRIOR TO WELDING OR BACK GOUGE AT CONTACT WITH ADJACENT CYLINDER PRIOR TO COMPLETING INSIDE FILLET WELD.

C028 **BUTT STRAP SPLICE**
NOT TO SCALE



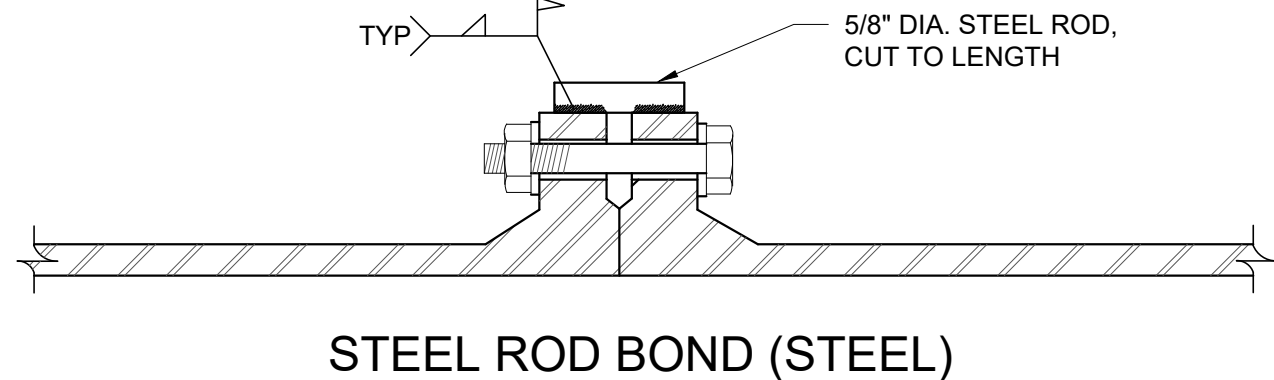
- DETAIL NOTES:**
- JOINT SHALL BE TESTED VIA AIR/SOAP SOLUTION TEST AT 40 PSI AIR PRESSURE IN ACCORDANCE WITH SECTION 33 92 10 IN ADDITION TO DYE PENETRANT OR MAGNETIC PARTICLE TESTING. IF LEAKS ARE DETECTED, REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG HOLES WITH A THREADED OR WELDED PLUG AT COMPLETION OF TEST AND COAT AS SHOWN. TAP HOLES MAY BE ON INSIDE OR OUTSIDE OF JOINT.
 - FOR FIELD WELDING OF INDIVIDUAL BUTT STRAP PIECES TO EACH OTHER, SEE DETAIL F.
 - BUTT STRAP WIDTH SHALL CONFORM TO THE LIMITATIONS SHOWN FOR PIPE END SEPARATION AND STEEL OVERLAP REQUIREMENTS, UNO.
 - HOLIDAY TEST THE HEAT SHRINK SLEEVE AFTER INSTALLATION PER SECTION 09 96 10.
 - INSPECTION OF ALL FIELD APPLIED INTERIOR MORTAR COATINGS MUST BE CONDUCTED PRIOR TO PLACING LINE IN SERVICE.
 - HEAT SHRINK SLEEVE SHALL OVERLAP SHOP APPLIED POLYURETHANE COATING BY A MINIMUM OF 6".

C029 **BUTT STRAP JOINT**
NOT TO SCALE



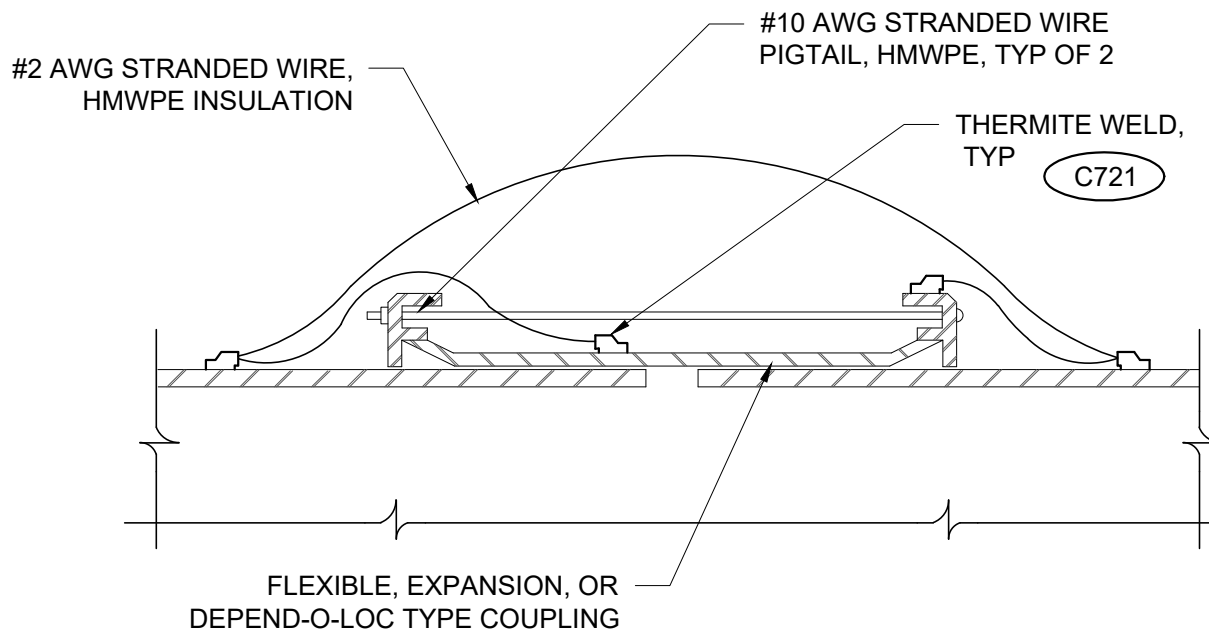
- DETAIL NOTES:**
- DOUBLE INSULATING WASHER SET FOR VAULT OR EXPOSED FLANGES.
 - SINGLE INSULATING WASHER SET FOR BURIED OR SUBMERGED FLANGES, PLACE INSULATORS ON UNPROTECTED SIDE OF FLANGE.
 - TEST COMPLETED JOINT FOR ELECTRICAL ISOLATION AS SPECIFIED AND REPAIR AS REQUIRED.
 - FILL INTERIOR GAP BETWEEN FLANGES WITH NSF-CERTIFIED DIELECTRIC FILLER OR SEALANT COMPATIBLE WITH SPECIFIED PIPE LINING.
 - EXTEND SPECIFIED PIPE LINING TO FACE OF FLANGE AND COAT INTERIOR OF MORTAR LINED PIPE FOR TWO PIPE DIAMETERS WITH NSF APPROVED EPOXY AT 20 MILS DFT.
 - BURIED FLANGE ASSEMBLIES SHALL BE COATED WITH A WAX TAPE COATING SYSTEM AFTER INSTALLATION.

C030 **INSULATING FLANGE**
SCALE: NTS



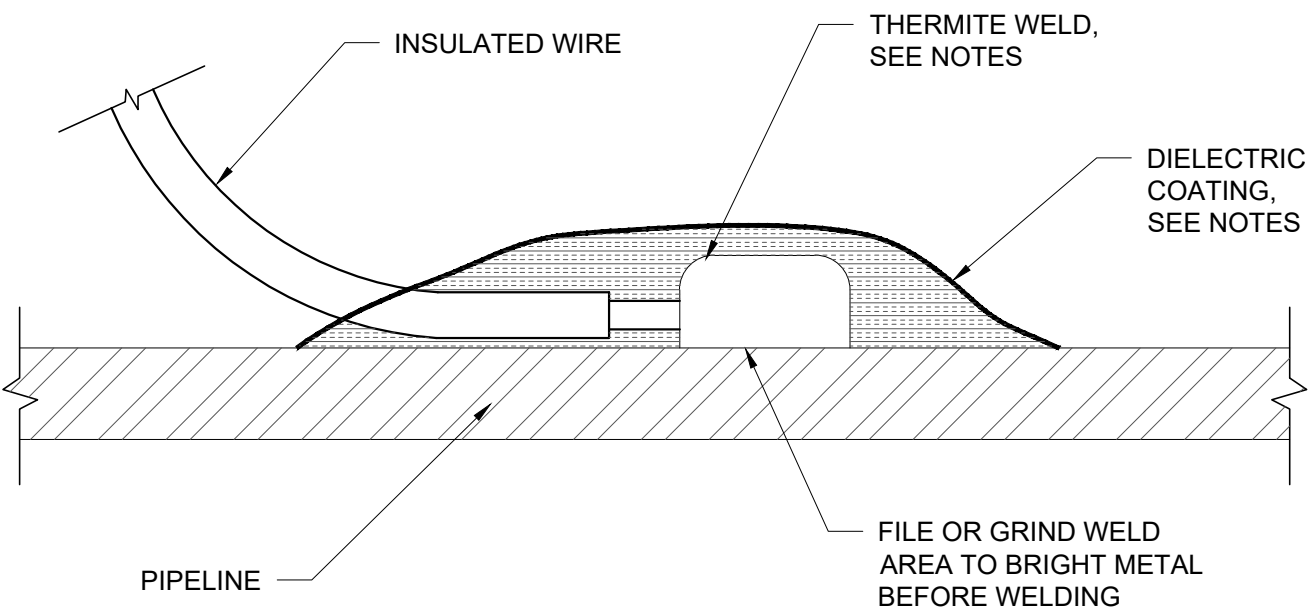
- DETAIL NOTES:**
- ALL FLANGES SHOWN ON PLANS ARE TO BE INSULATED. DETAIL PROVIDED FOR CONVENIENCE IF CONTRACTOR ADDS BURIED STEEL FLANGES, WITH ENGINEERS APPROVAL.
 - INSTALL THREE BOND WIRES AT EACH JOINT, MINIMUM.
 - CLEAN WITH WIRE BRUSH OR SANDER AND COAT STEEL ROD AND WELDS WITH FAST CURE EPOXY.

C031 **FLANGED JOINT BOND**
NOT TO SCALE



- DETAIL NOTES:**
- COUPLING JOINT SHOWN, SIMILAR FOR RESTRAINED JOINTS, DEPEND-O-LOC, FLANGED ADAPTERS, AND OTHER TYPE DISMANTLING JOINTS.
 - INSTALL THREE BOND WIRES AT EACH JOINT, MINIMUM.
 - COAT WELDS WITH FAST CURE EPOXY.
 - AT CONTRACTOR'S OPTION SOLID COPPER STRAP MAY BE USED FOR JOINT BONDING. THE SOLID COPPER STRAP SHALL BE 1-1/4-INCH WIDTH BY 1/16-INCH THICK, EQUIVALENT TO A 1/0 AWG WIRE, WITH FIVE PUNCHED HOLES FOR THERMITE WELDING TO THE COUPLING FOLLOWER RINGS, MIDDLE RING, AND PIPE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C032 **COUPLING JOINT BOND**
NOT TO SCALE



- DETAIL NOTES:**
- COPPER SLEEVE REQUIRED FOR #12 AWG OR SMALLER TEST WIRES..
 - WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO PIPE AND WIRE SIZE AND PIPE MATERIAL, CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE.
 - COAT COMPLETED WELDS, EXPOSED COPPER, AND EXPOSED METAL WITH FAST CURE EPOXY (PROTAL 7125).

C033 **THERMITE WELD CONNECTION**
NOT TO SCALE

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PLANT

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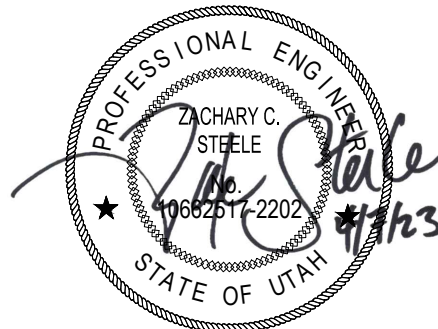
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 8

DRAWING NUMBER

99-C708

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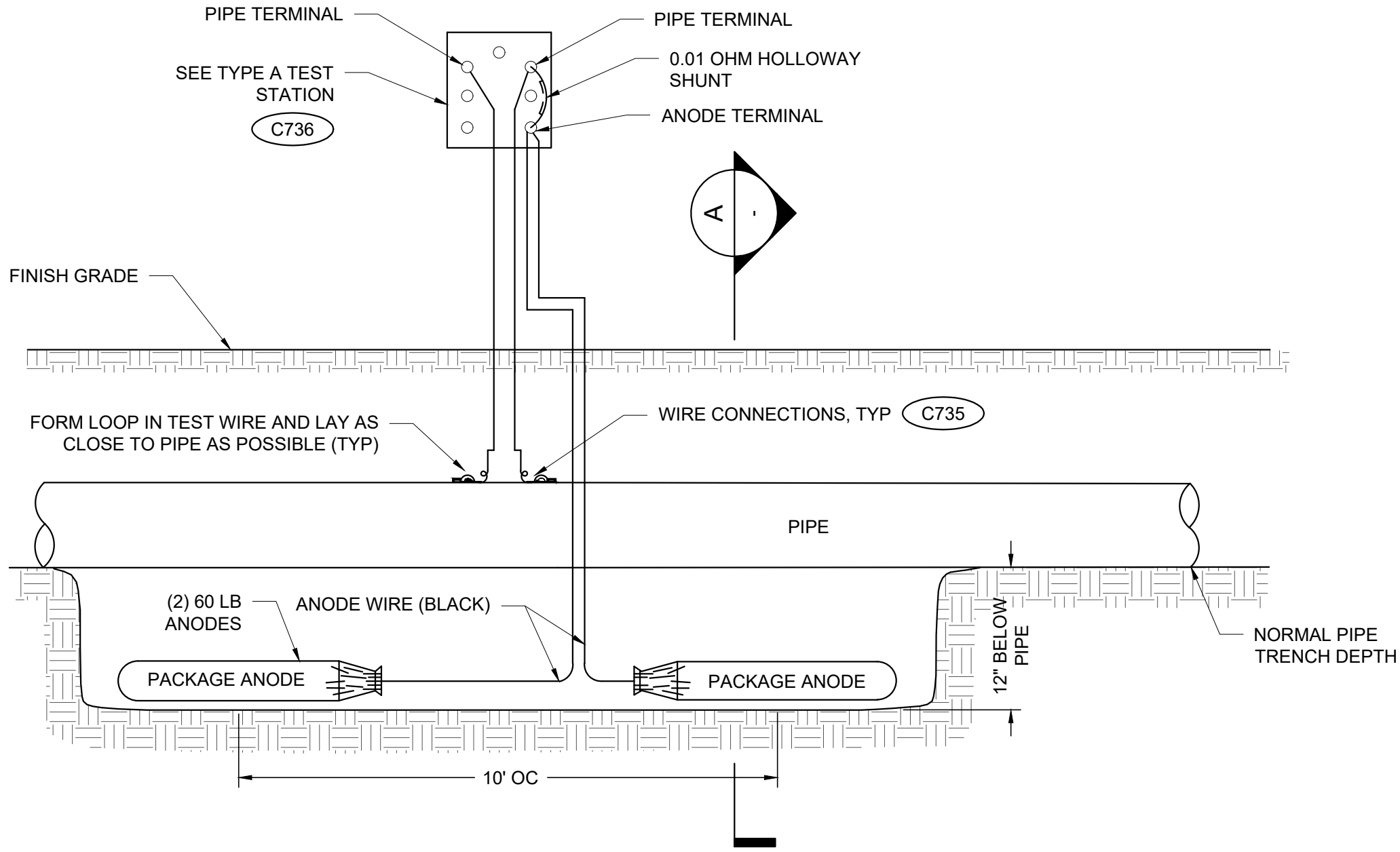
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Checked: Z. STEELE

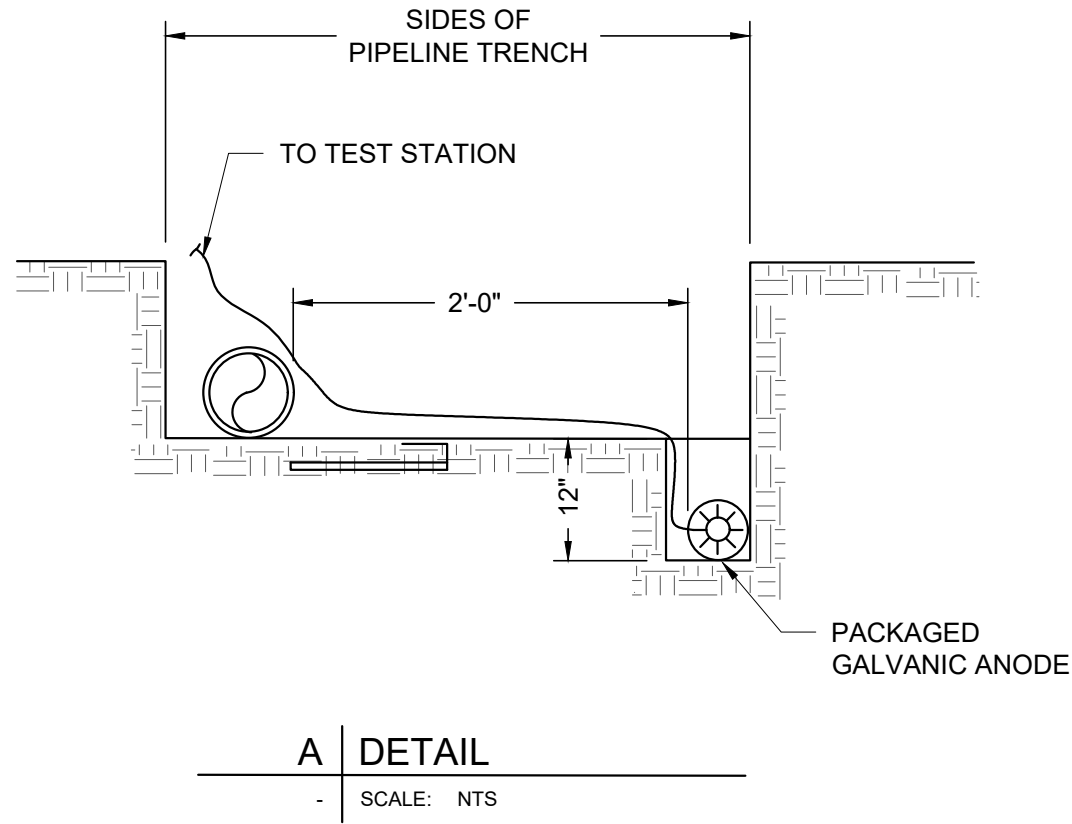
Designer: Z. STEELE

Project Manager: M. CHAMBERS

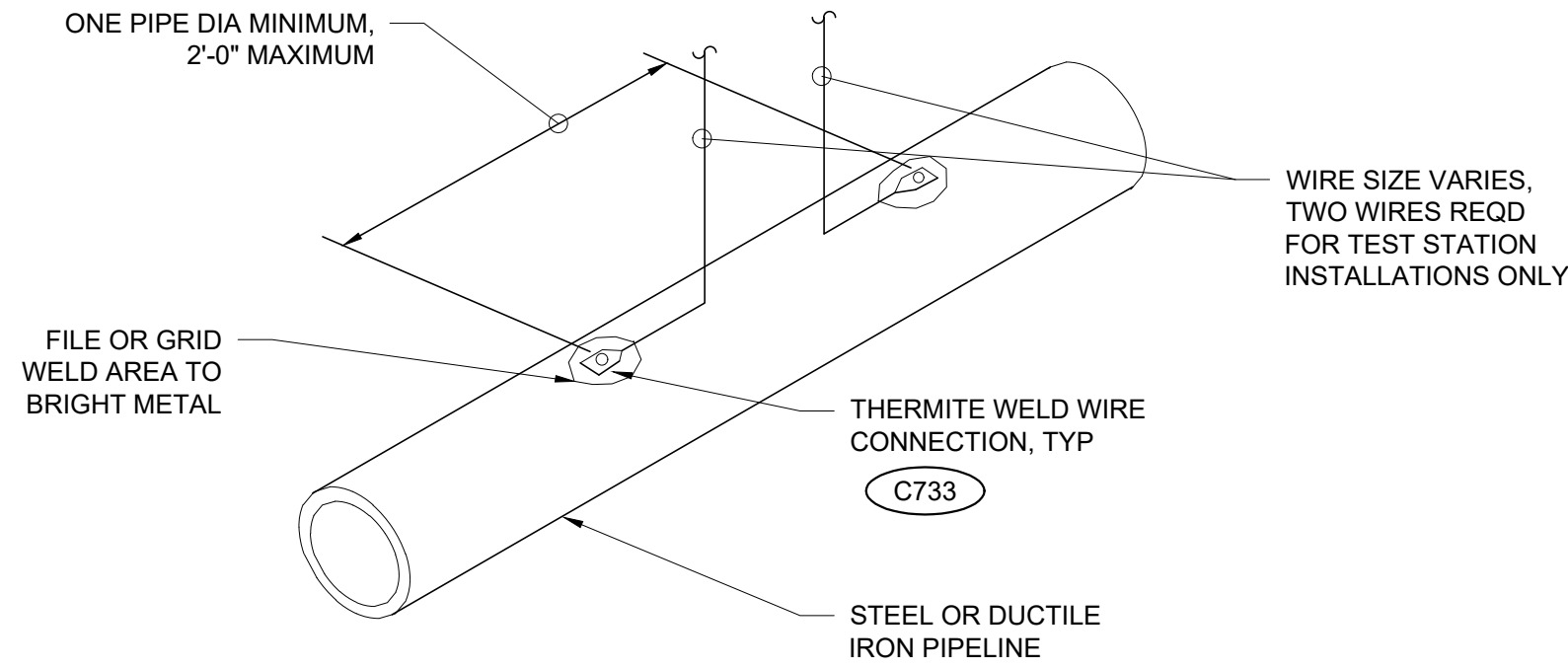
Drafter: D. DOLDER



C034 GALVANIC ANODE INSTALLATION
NOT TO SCALE

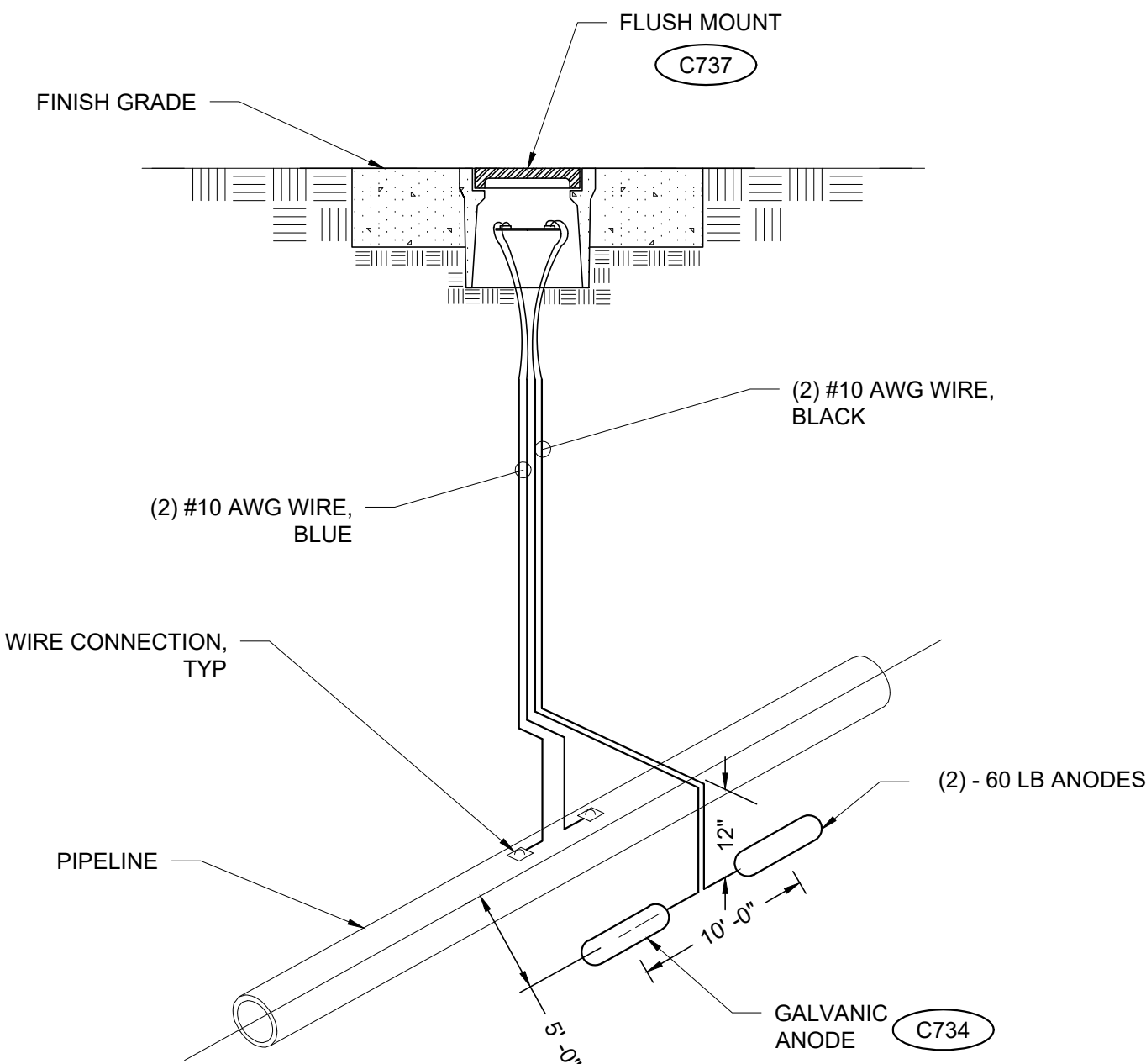


- DETAIL NOTES:
- CADWELD CONNECTION TO BE PRIMED AND COATED AS SPECIFIED.
 - PACKED ANODE SHOULD BE COVERED WITH FINE SOIL CONTAINING NO ROCKS OR DIRT CLUMPS, HAND TAMPED.
 - WET PACKAGED ANODE PRIOR TO BACKFILLING.
 - BACKFILL ANODE IN NATIVE EXCAVATED SOIL. DO NOT ENCASE OR BURY ANODE IN CLSM.

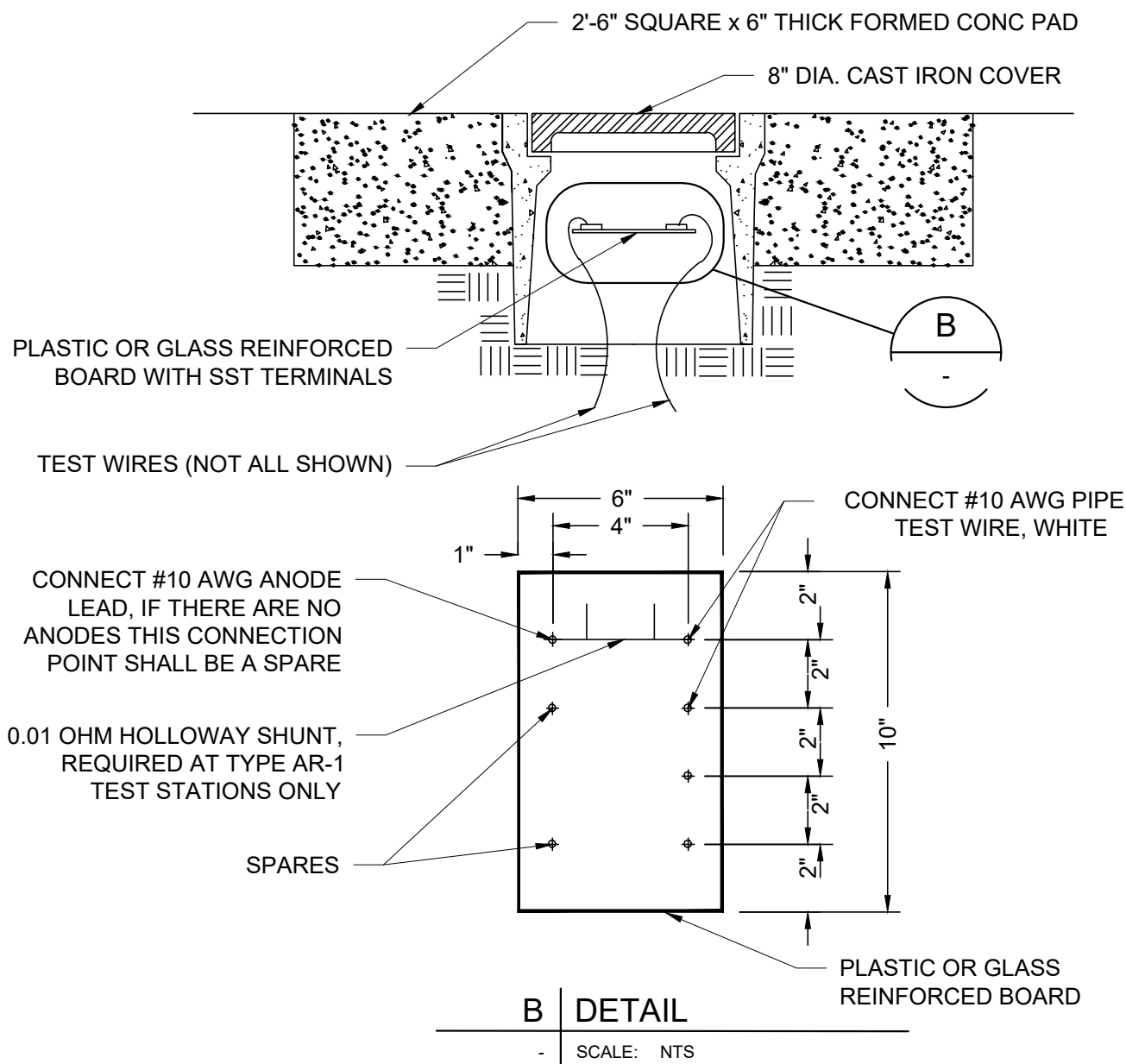


- DETAIL NOTES:
- COPPER SLEEVE REQUIRED FOR THERMITE WELDING OF #10 AWG AND SMALLER WIRE.
 - USE COOPER SLEEVE ON #2 AWG JOINT BONDING WIRES.
 - WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO PIPE SIZE AND PIPE MATERIAL. CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE.
 - COAT COMPLETED THERMITE WELD CONNECTIONS AS SPECIFIED.

C035 WIRE CONNECTION FOR STEEL AND DUCTILE IRON PIPE
NOT TO SCALE



C036 CATHODIC TEST STATION
NOT TO SCALE



- DETAIL NOTES:
- COLOR CODE WIRE INSULATION AS SHOWN IN APPLICABLE TEST STATION DETAILS, CONNECT EACH TEST WIRE TO SEPARATE TERMINAL.
 - WIRE CONFIGURATION FOR FLUSH MOUNTED TEST STATIONS SIMILAR TO POST MOUNTED TEST STATIONS.
 - PROVIDE 18" SLACK IN TEST WIRES, MINIMUM.
 - TERMINALS SHALL BE 1/4" STAINLESS STEEL WITH LOCKING WASHER, TWO FLAT WASHERS, AND DOUBLE NUTS.
 - ALL WIRE CONNECTIONS TO BE WITH RING TONGUE COMPRESSION TERMINALS.

C037 FLUSH MOUNT TEST STATION
NOT TO SCALE

CATHODIC PROTECTION TEST-STATION		
CTS #	SHEET REF	APPROX LOCATION
CTS-1	30-C301/30-D101	STA. 1+42
CTS-2	30-C305	STA. 18+28
CTS-3	30-C305	STA. 20+28

- GENERAL CATHODIC PROTECTION NOTES:
- ALL TEST OR ANODE WIRE CONNECTIONS TO PIPE SHALL BE AN EXOTHERMIC WELDED CONNECTION, SEE SHEET 99-C705.
 - PROVIDE INSULATING JOINT IN PIPE WHERE INDICATED ON THE DRAWINGS.
 - TEST ALL INSULATING JOINTS FOR ELECTRICAL ISOLATION AS SPECIFIED IN SECTION 26 42 00.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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PROJECT

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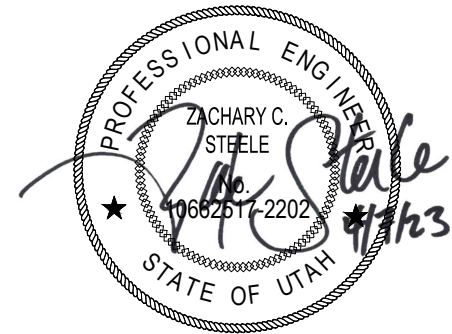
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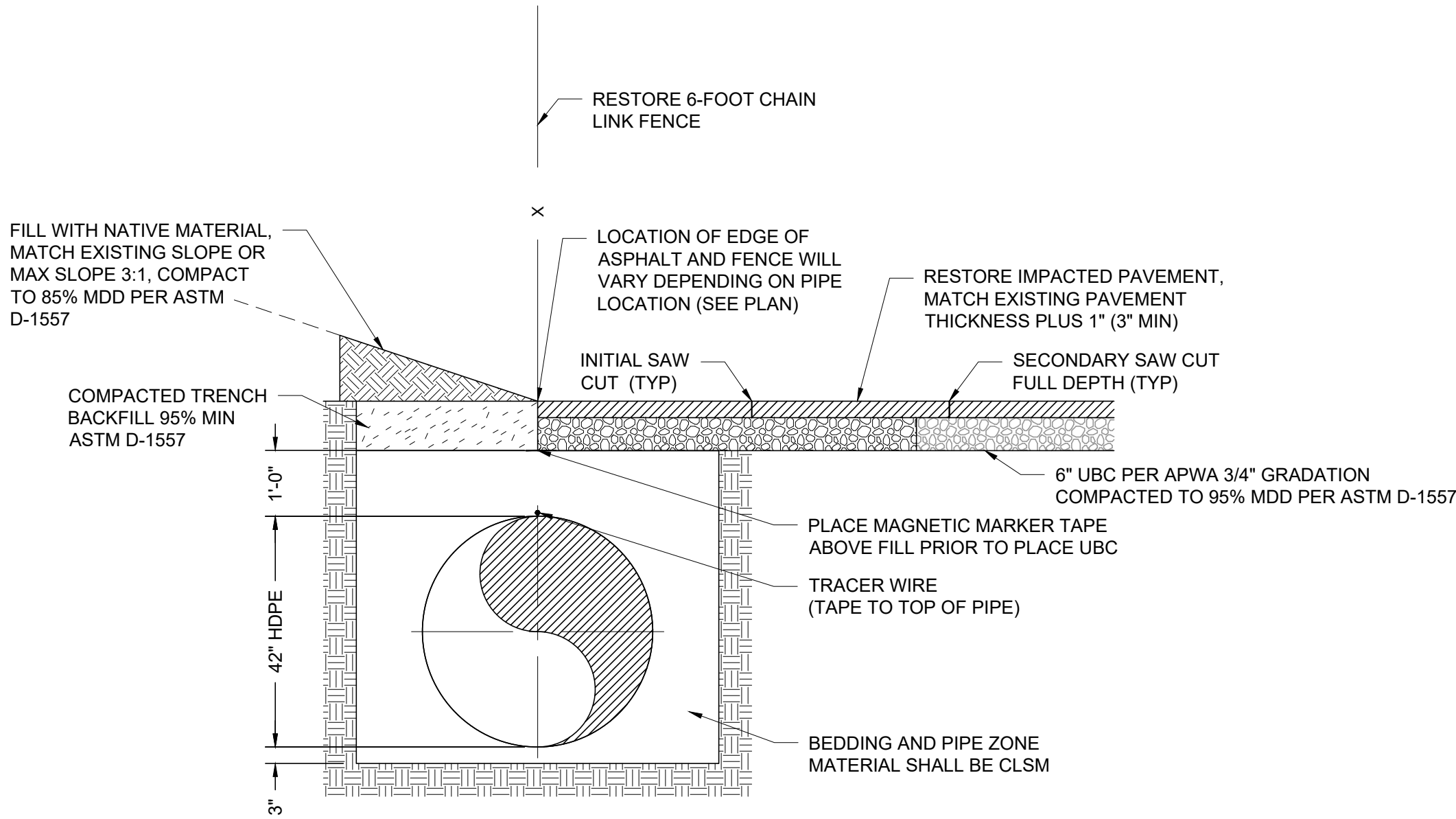
SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 9

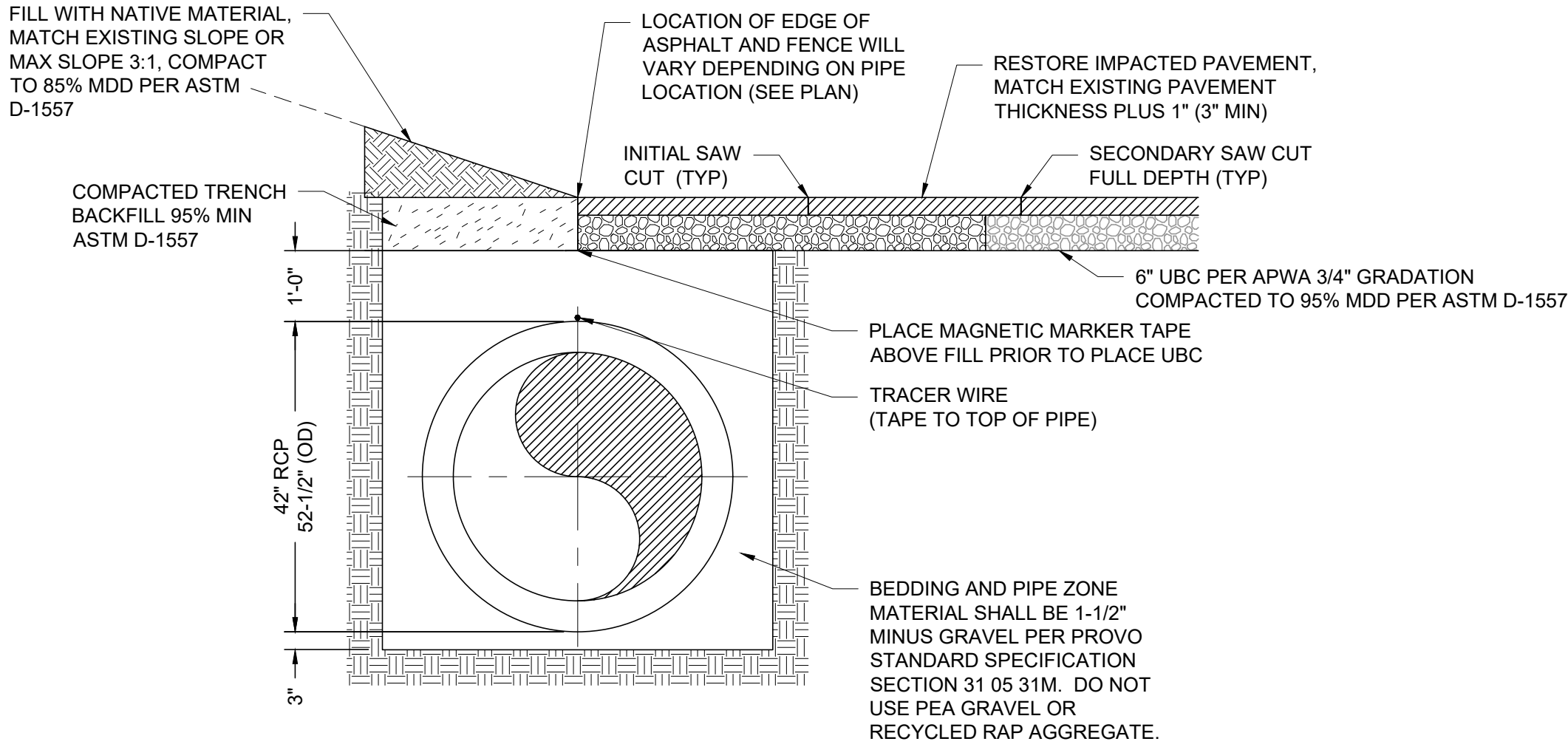
DRAWING NUMBER

99-C709

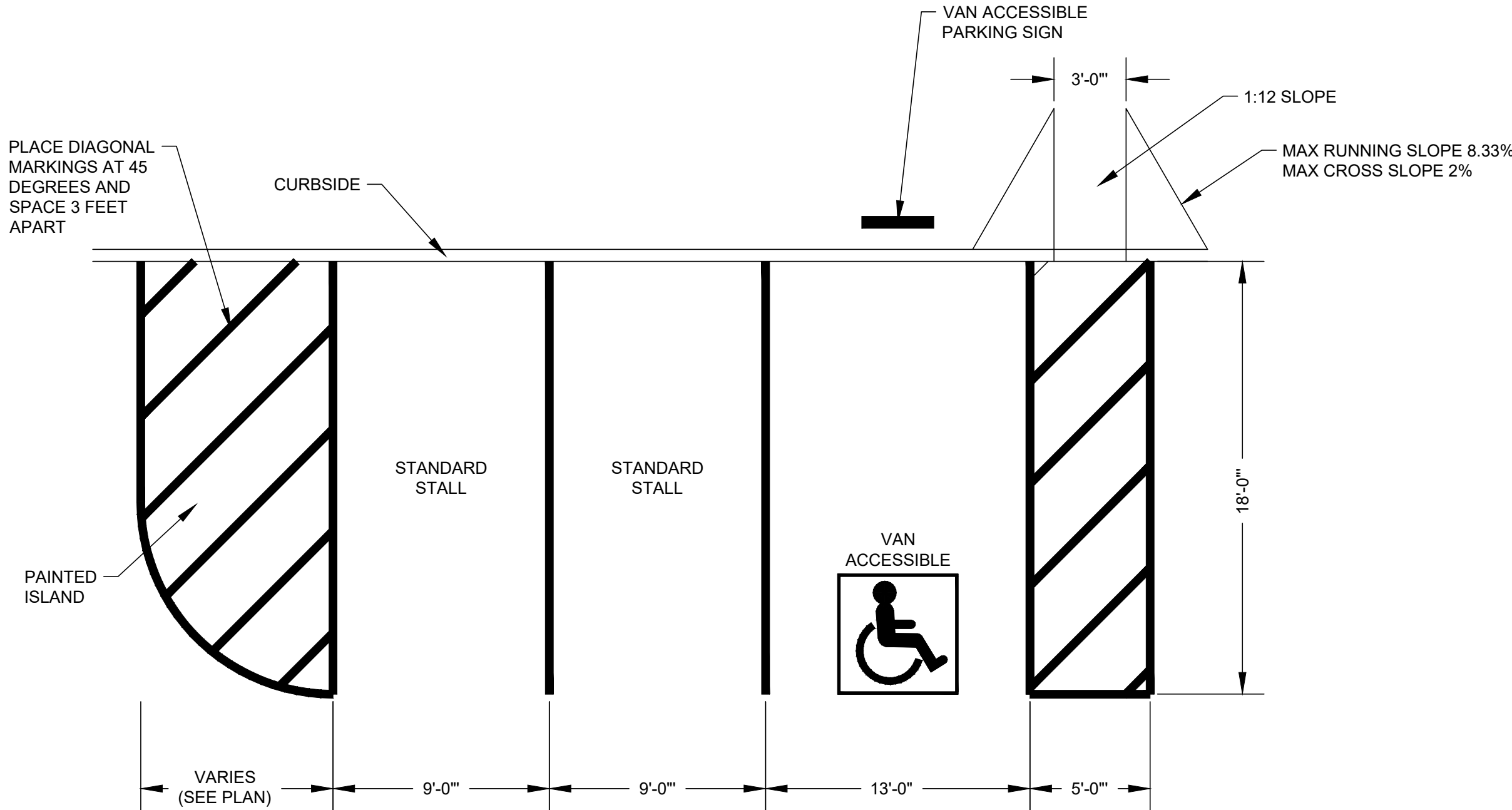
ANSI D 22" x 34" Approved: M. ALLEN Checked: M. CHAMBERS Designer: M. CHAMBERS Drafter: CAIELLO-HARRIS Project Manager: M. CAMBERS
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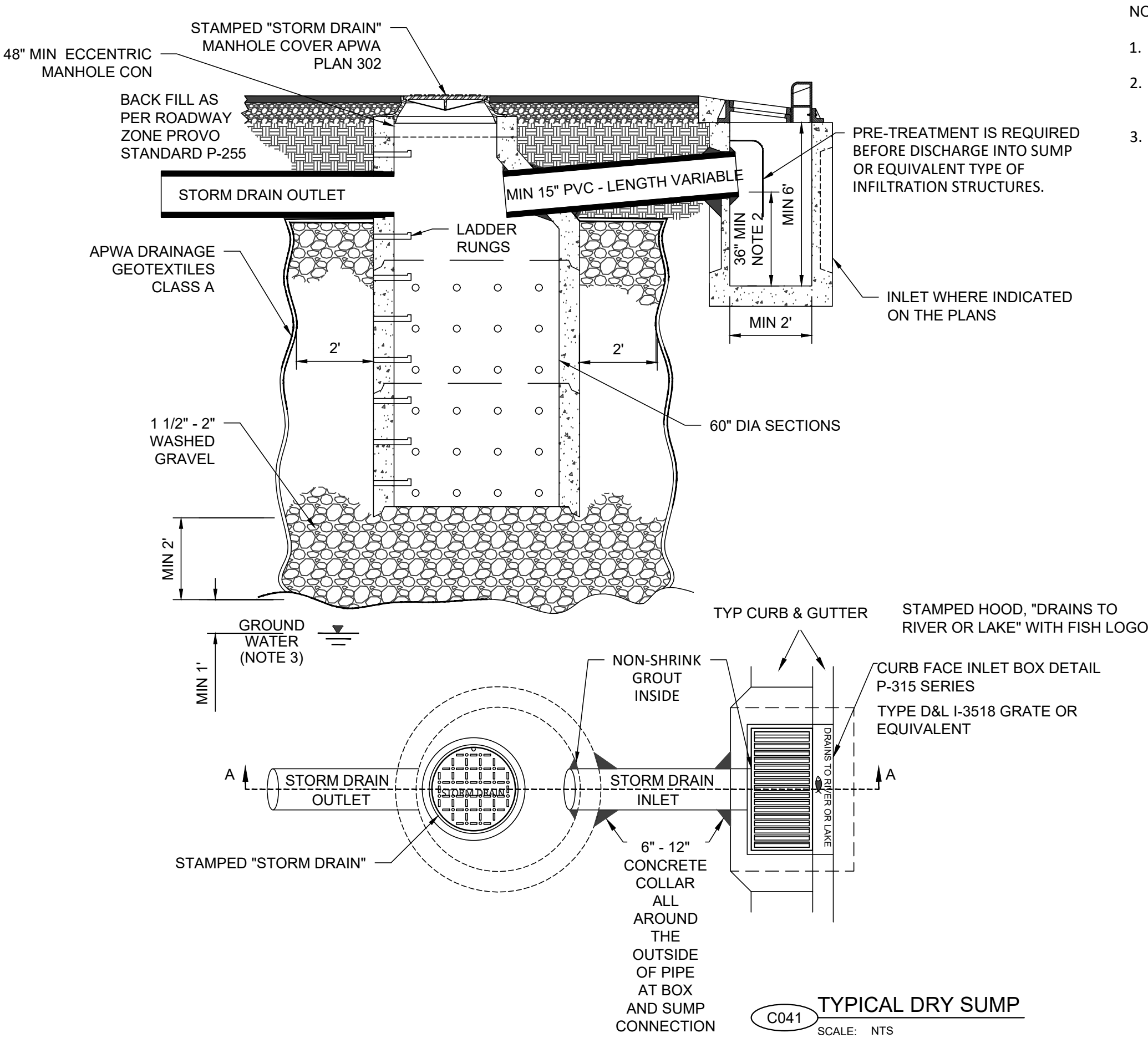
C038 TYPICAL 42" HDPE PIPE SECTION
SCALE: 1" = 2'



C039 TYPICAL 42" RCP PIPE SECTION
SCALE: 1" = 2'



C040 TYPICAL PAVEMENT MARKING
SCALE: NTS



C041 TYPICAL DRY SUMP
SCALE: NTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

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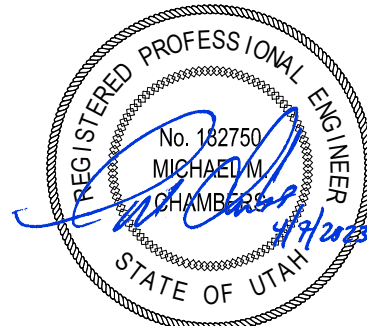
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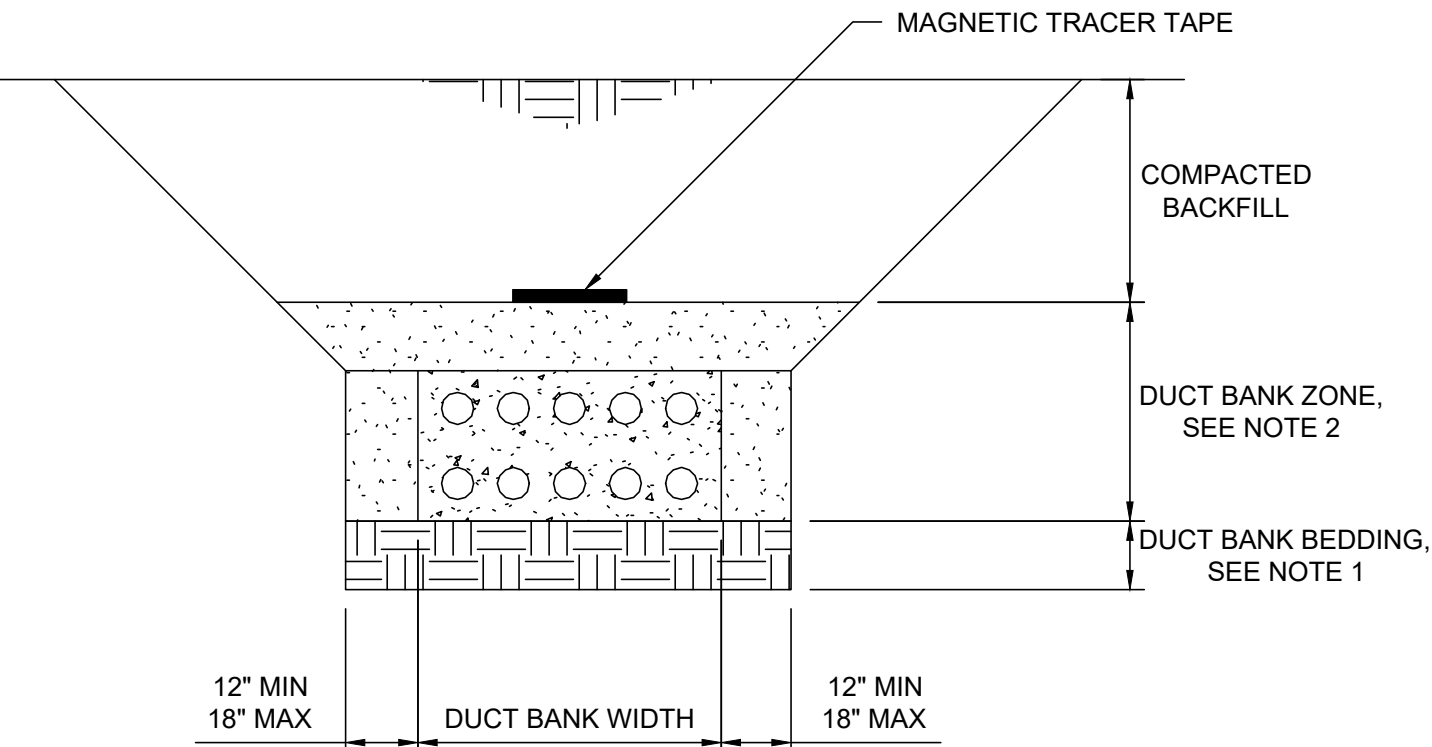
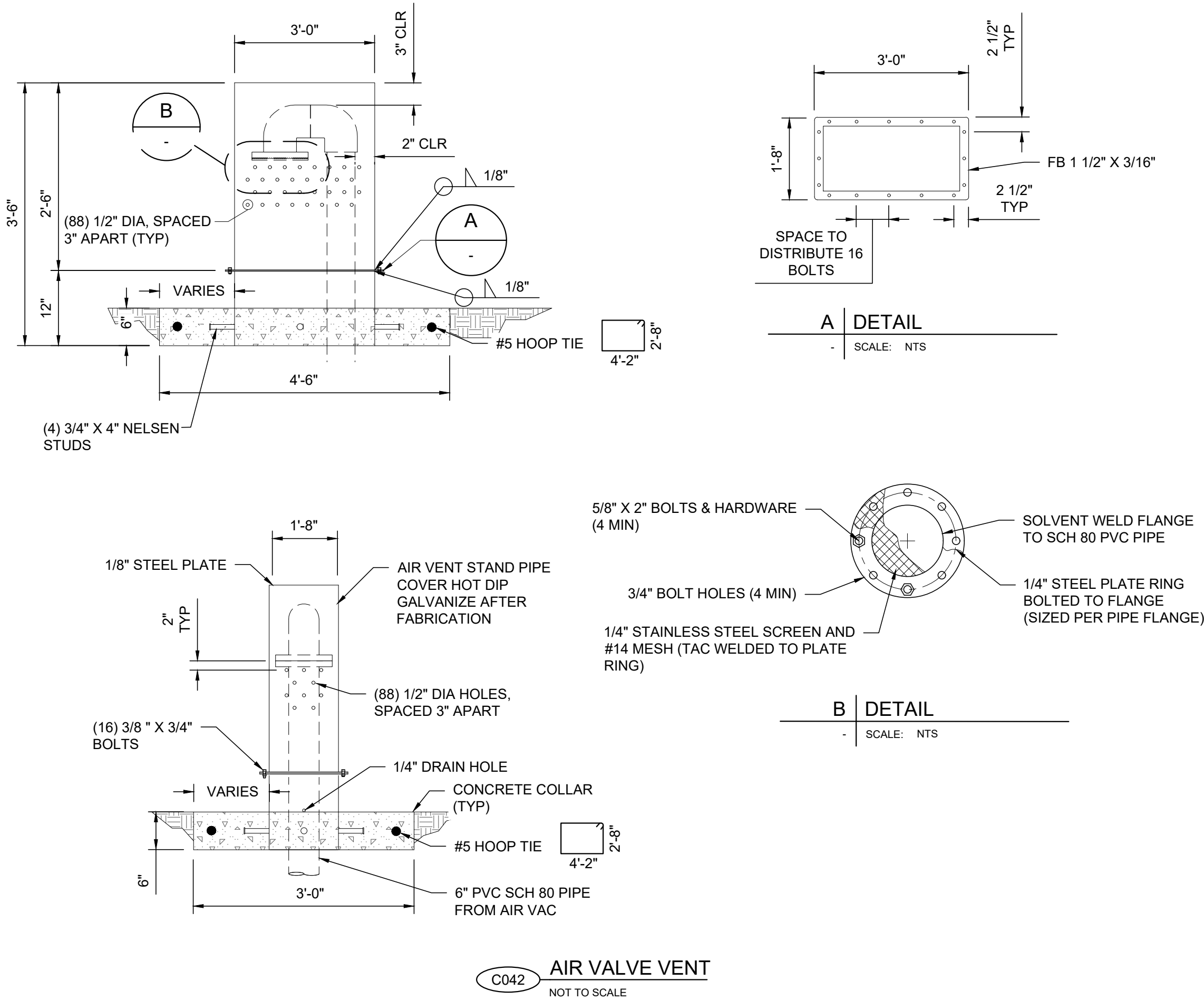
SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 10

DRAWING NUMBER

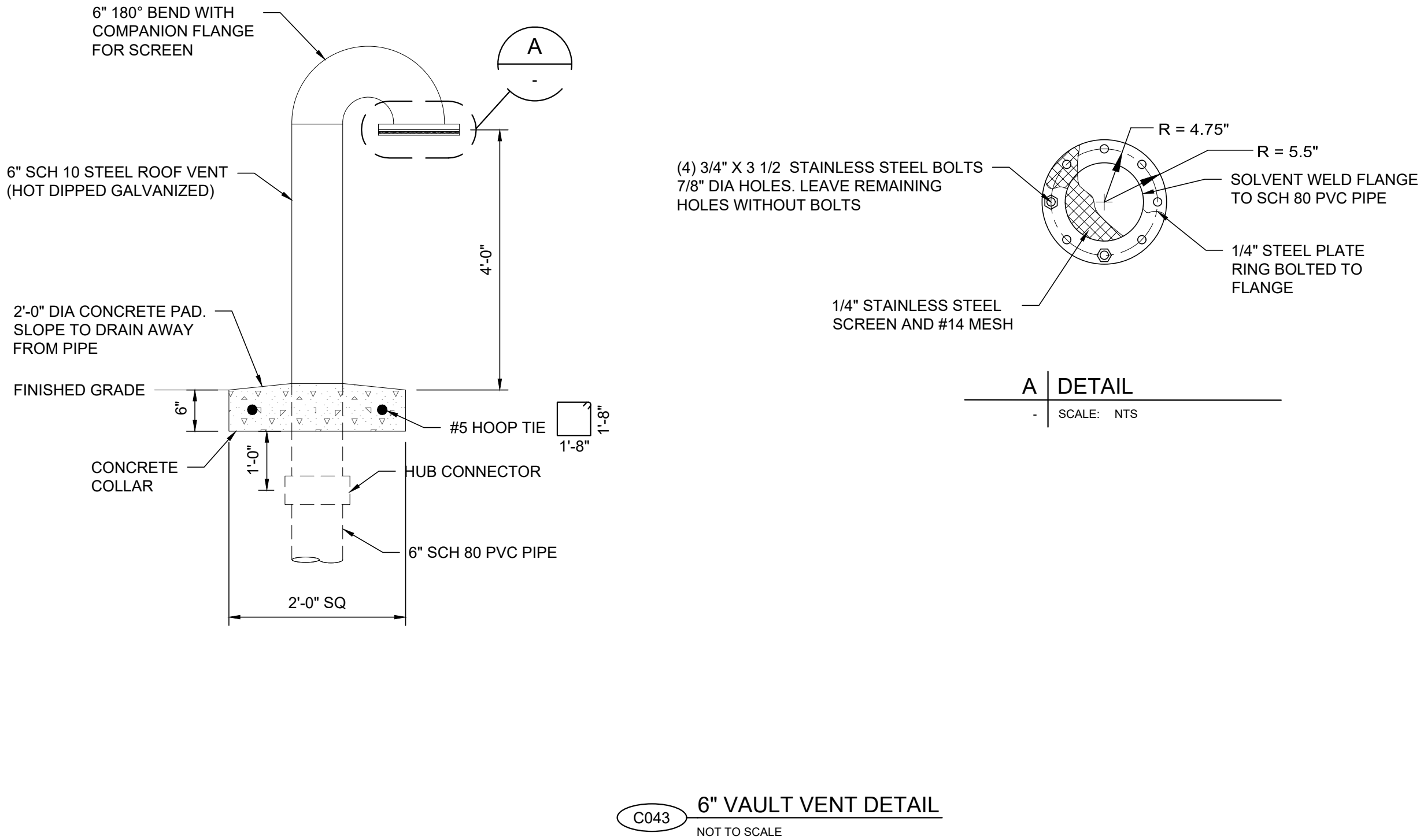
99-C710

ANSI D 22" x 34"
Approved: M. ALLEN
Checked: M. CHAMBERS
Designer: M. CHAMBERS
Project Manager: M. CHAMBERS
Drafter: D. DOLDER



- DETAIL NOTES:
- DUCT BANK BEDDING SHALL BE OVER EXCAVATED BY 12" AND COMPACTED TO 95%.
 - DUCT BANK ZONE SHALL BE CONTROLLED LOW STRENGTH MATERIAL TO TOP OF DUCT BANK. 12-INCHES ABOVE DUCT BANK SHALL BE NATIVE FILL SCREENED TO 3-INCH MINUS.
 - TRENCH MUST CONFORM WITH APPLICATION OSHA REQUIREMENTS.
 - SEE DETAIL C001 FOR ADDITIONAL TRENCH REQUIREMENTS.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



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WATER TREATMENT
PLANT

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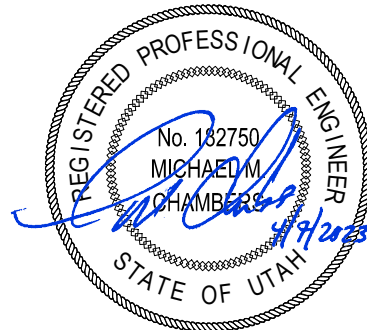
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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

CIVIL
TYPICAL DETAILS
SHEET 11

DRAWING NUMBER

99-C711

DRAWING INDEX

TYPICAL DETAILS INDEX

99-L701

L001	STOP & WASTE VALVE
L002	3/4" - 2" MAINLINE CONNECT
L003	BACKFLOW ENCLOSURE
L004	QUICK COUPLER
L022	TECH LINE FLUSHING VALVE
L023	TECH LINE GRID LAYOUT
L024	CONCRETE MOW STRIP

99-L702

L005	WALL MOUNT CONTROLLER
L006	INTERIOR CONTROLLER MOUNT
L007	TRENCHING DETAILS
L008	TYPICAL SLEEVING
L009	PVC-PE PIPE CONNECTION
L010	EMITTER DIST TUBING
L011	SHRUB DRIP - PLAN VIEW

99-L703

L012	SINGLE DRIP ASSEMBLY - PLAN
L013	DRIP VALVE ASSEMBLY
L014	CONCRETE BLOCK PLACEMENT
L015	MANUAL DRAIN VALVE

99-L704

L016	CONIFER PLANTING
L017	DECIDUOUS PLANTING
L018	SHRUB PLANTING
L019	TREE DRIP PLAN VIEW
L020	FLUSHING CAP
L021	PAVER INSTALL DETAIL



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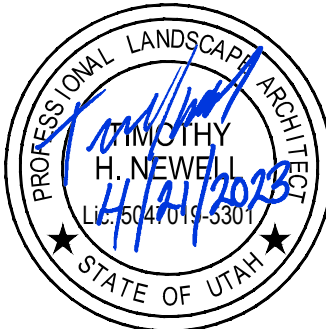


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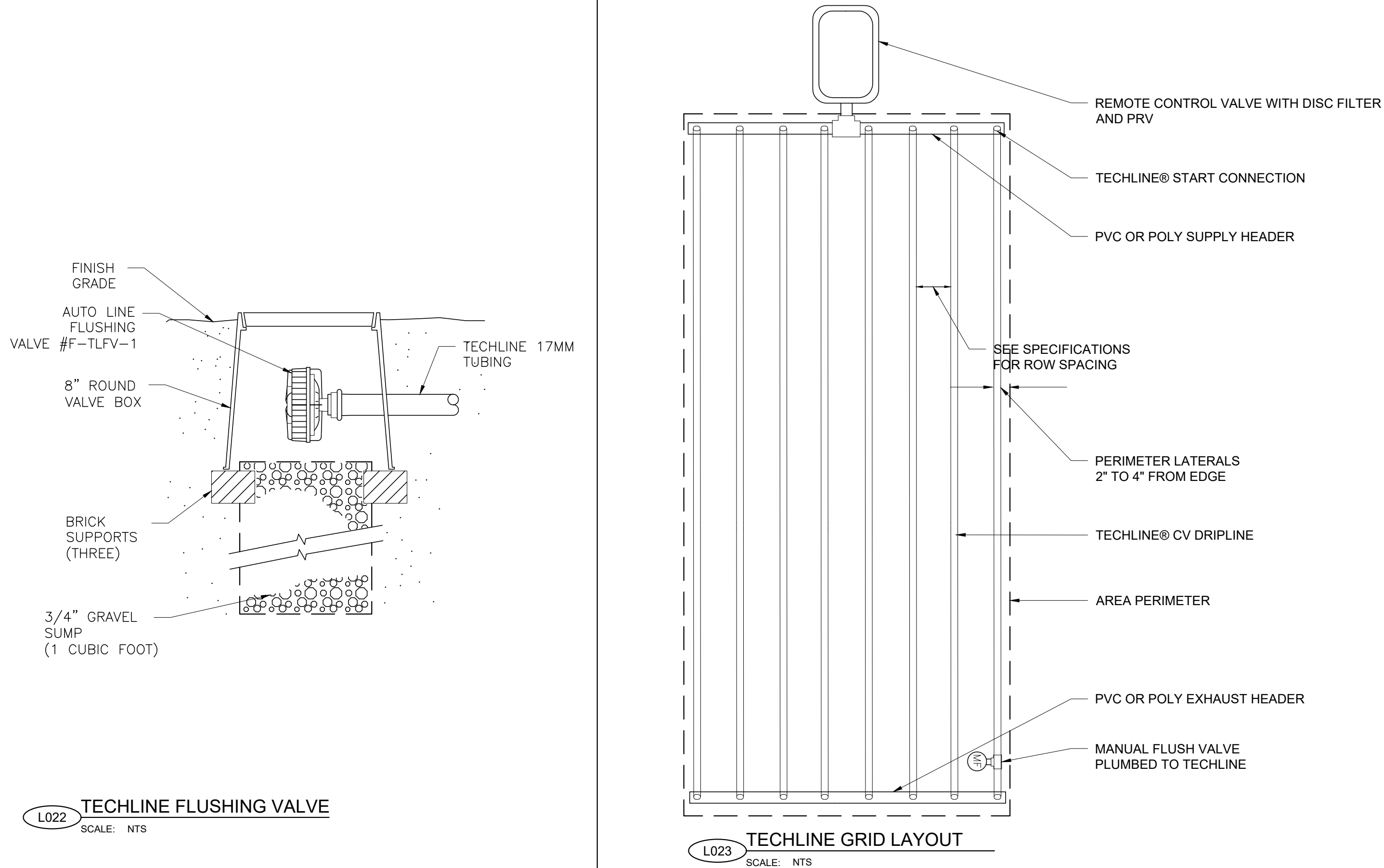
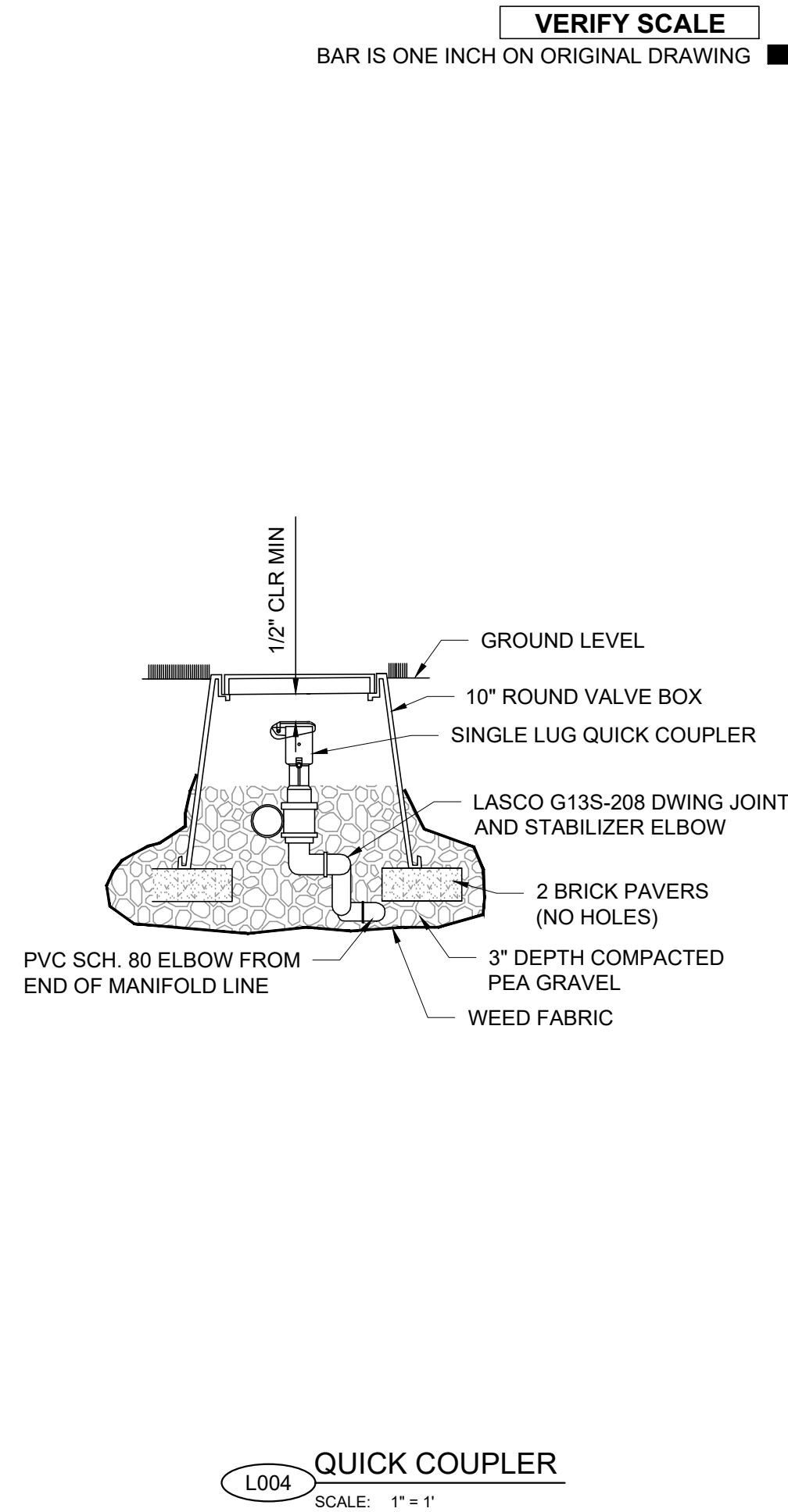
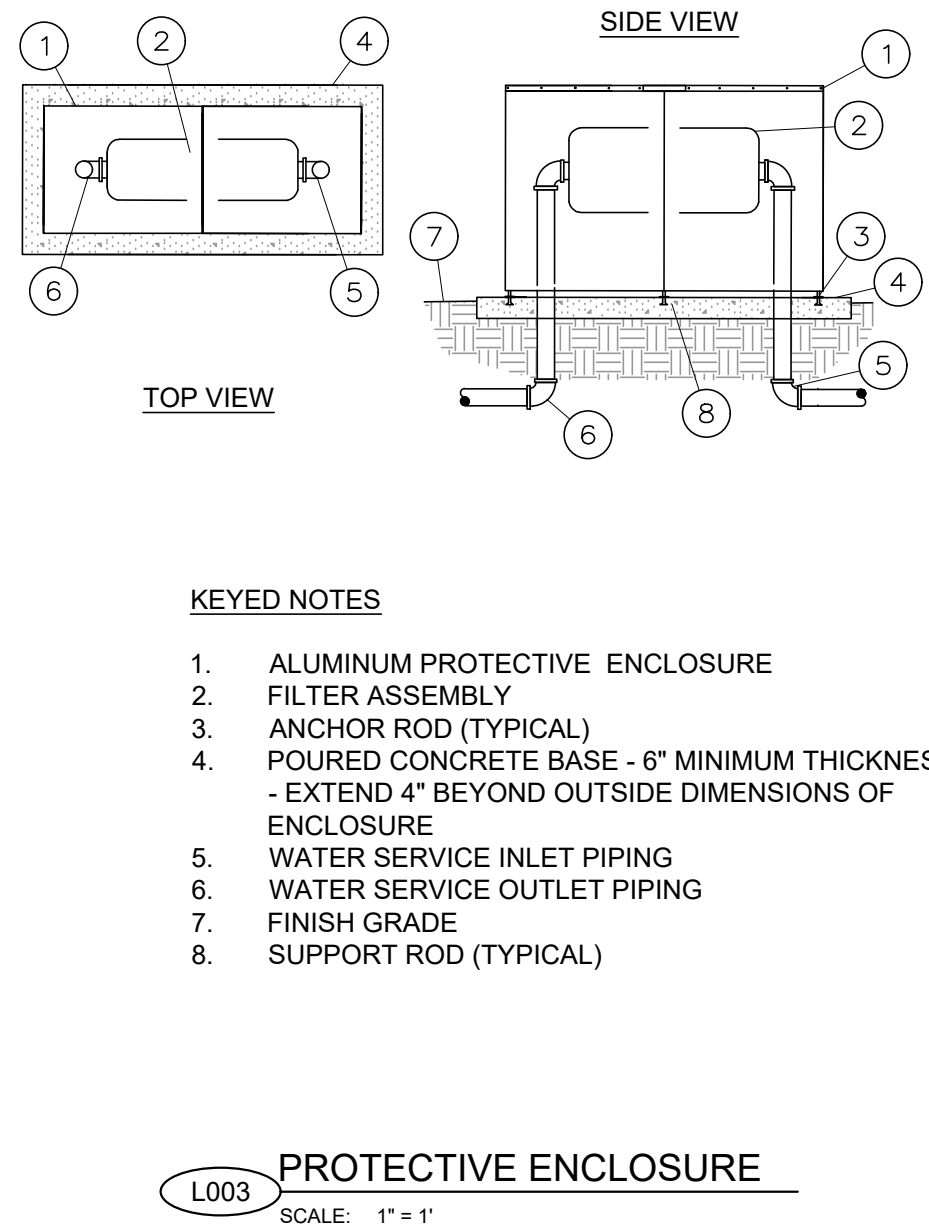
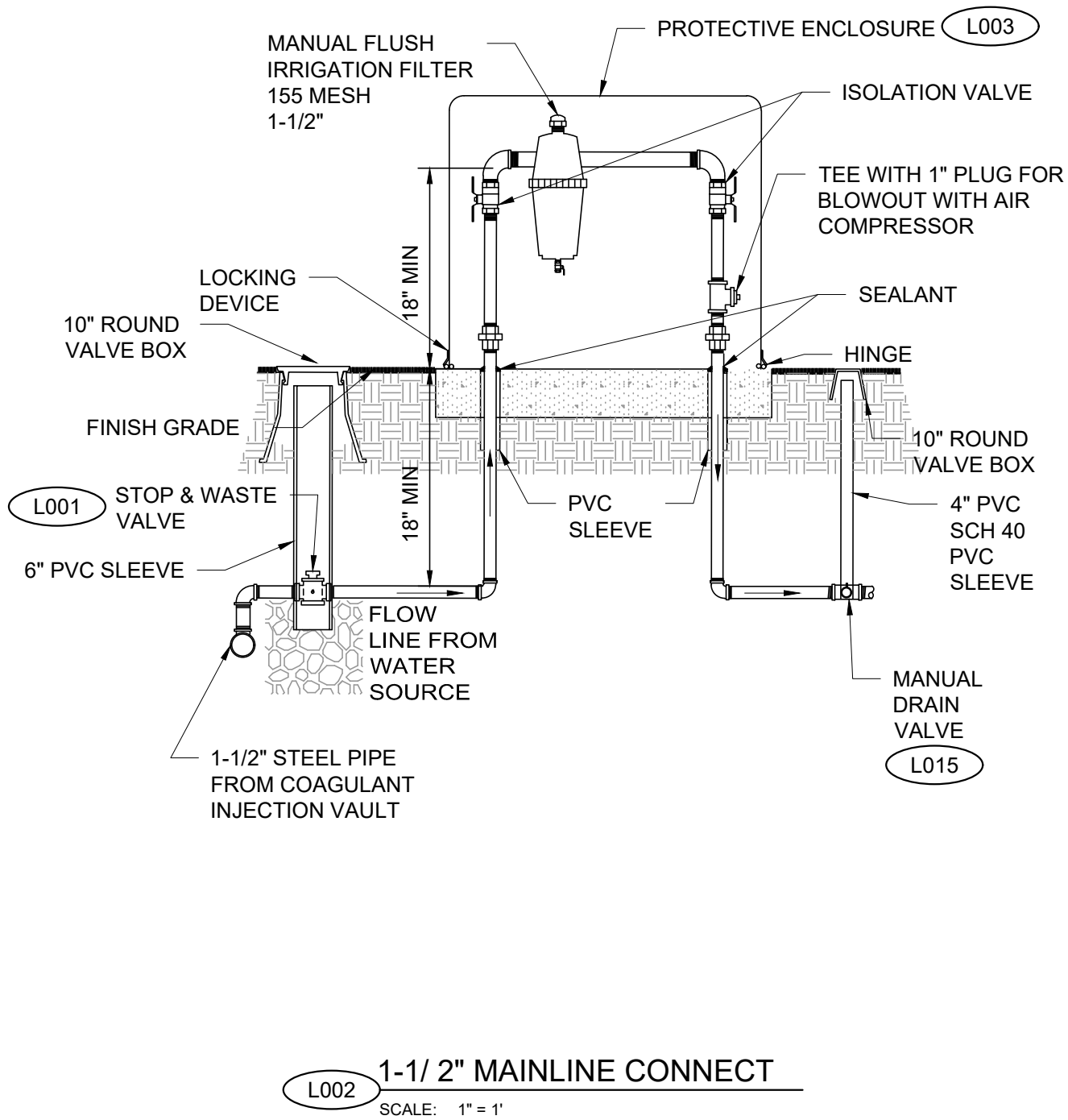
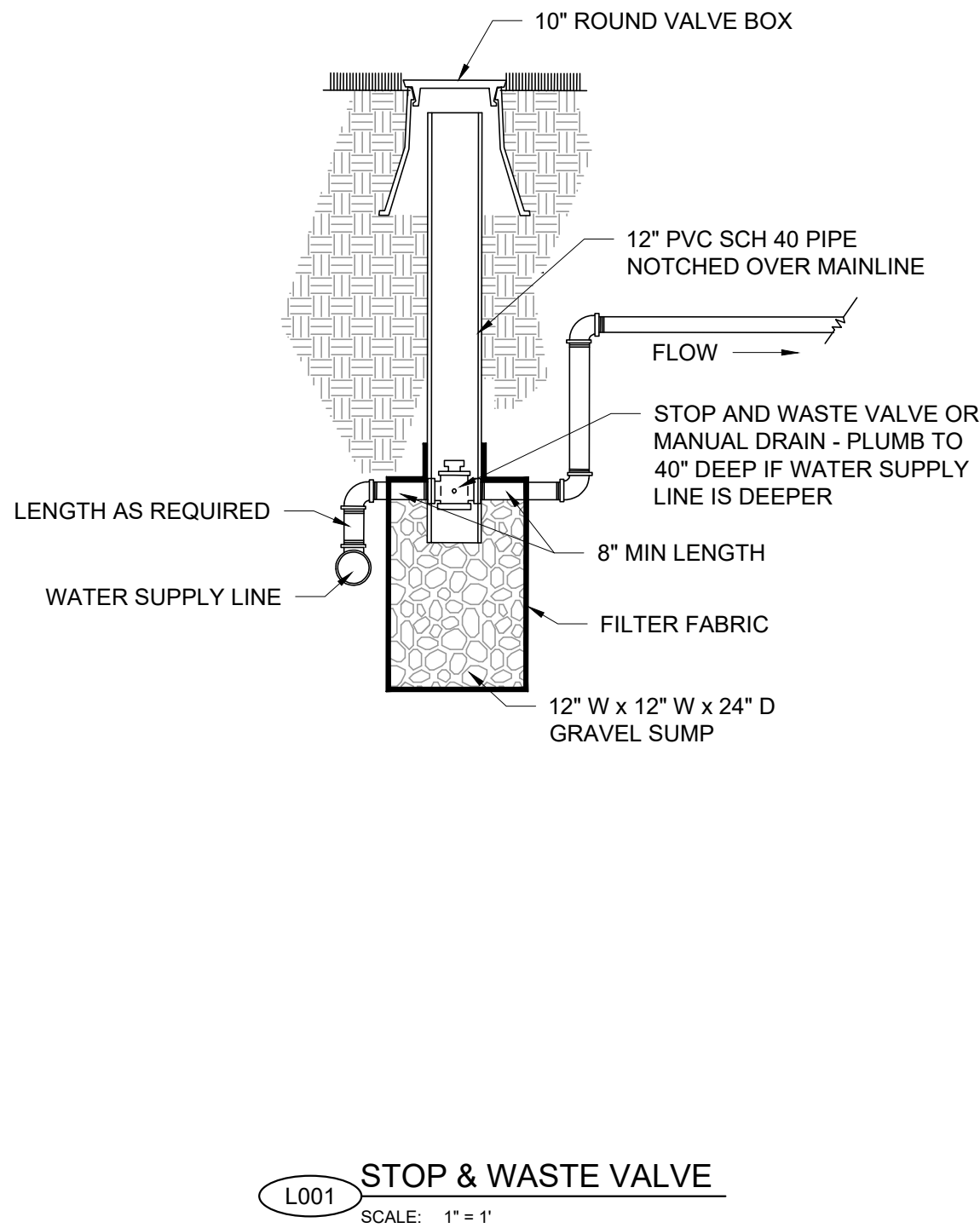
SHEET TITLE

DETAILS
LANDSCAPE
TYPICAL DETAILS
INDEX

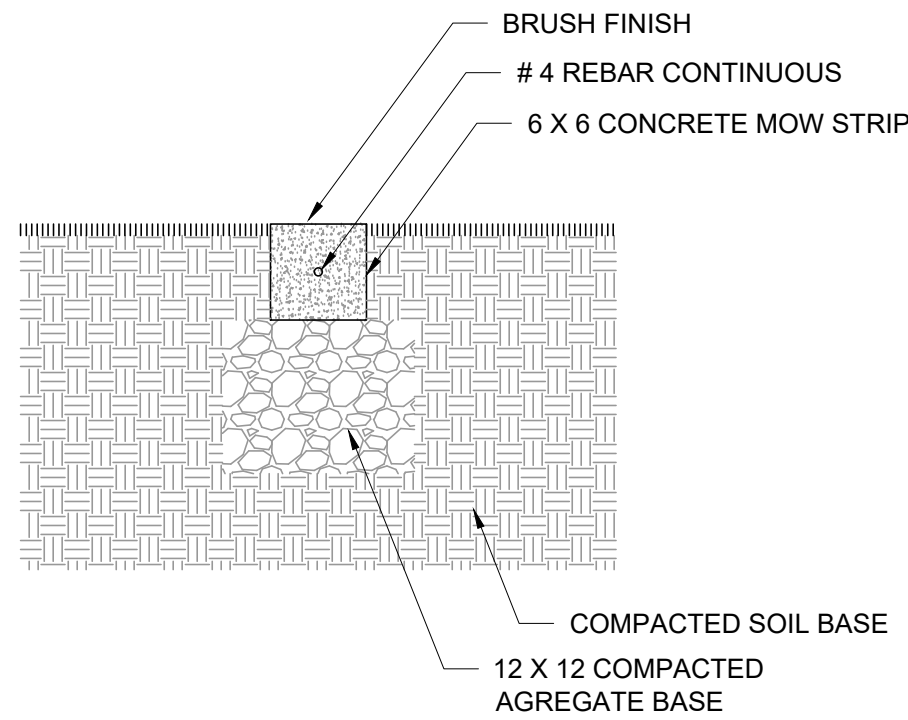
DRAWING NUMBER

99-L700

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Last Plotted: 21.04.2023, 6:37 AM
Filename: H:\Projects\035 - Provo City\15.420 WTP Design\CAD\09-L701 LANDSCAPE TYP DETAILS.dwg



- NOTE:
1. RECOMMENDED MINIMUM FILTRATION: 120 MESH
 2. PRESSURE AT FLUSH VALVE SHALL BE MIN 14.5 PSI



- NOTE:
1. CAST IN PLACE, PROVIDE CONTROL JOINTS AT NO LESS THAN EVERY 4 LINEAR FEET TO AVOID CRACKING

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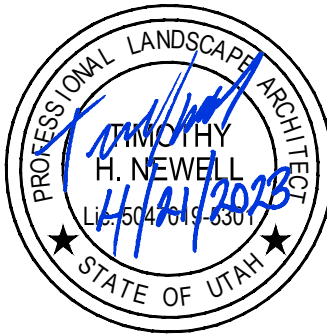
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HAL Project No. - 035.15.420

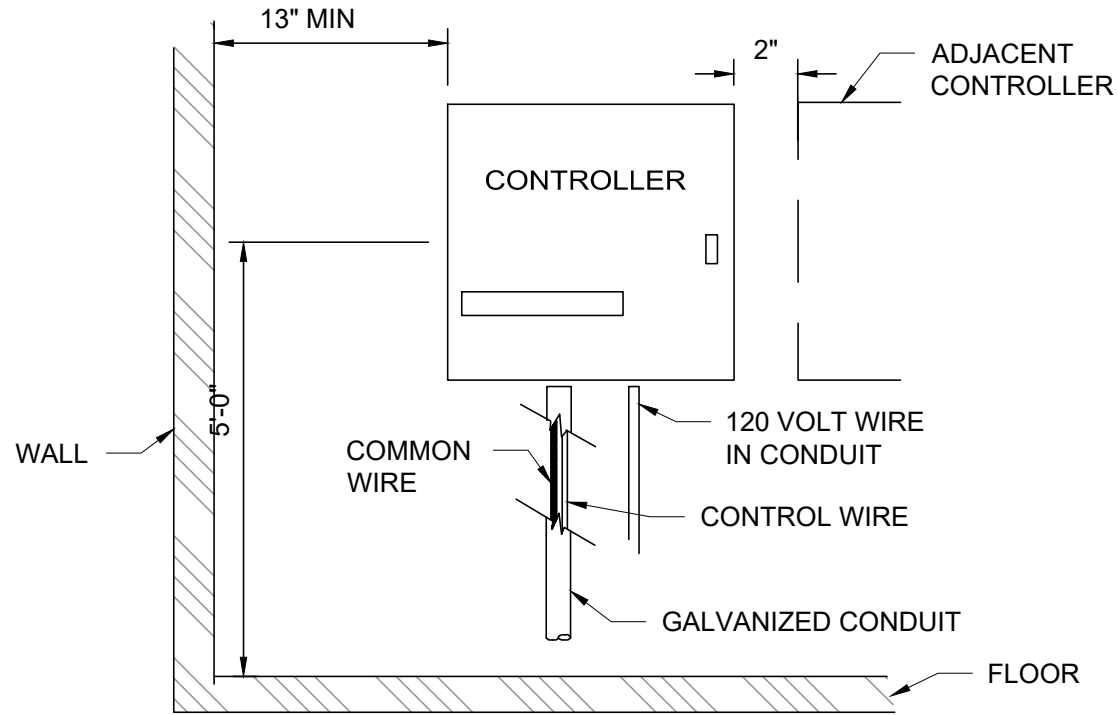
SHEET TITLE

LANDSCAPE
TYPICAL DETAILS
SHEET 1

DRAWING NUMBER

99-L701

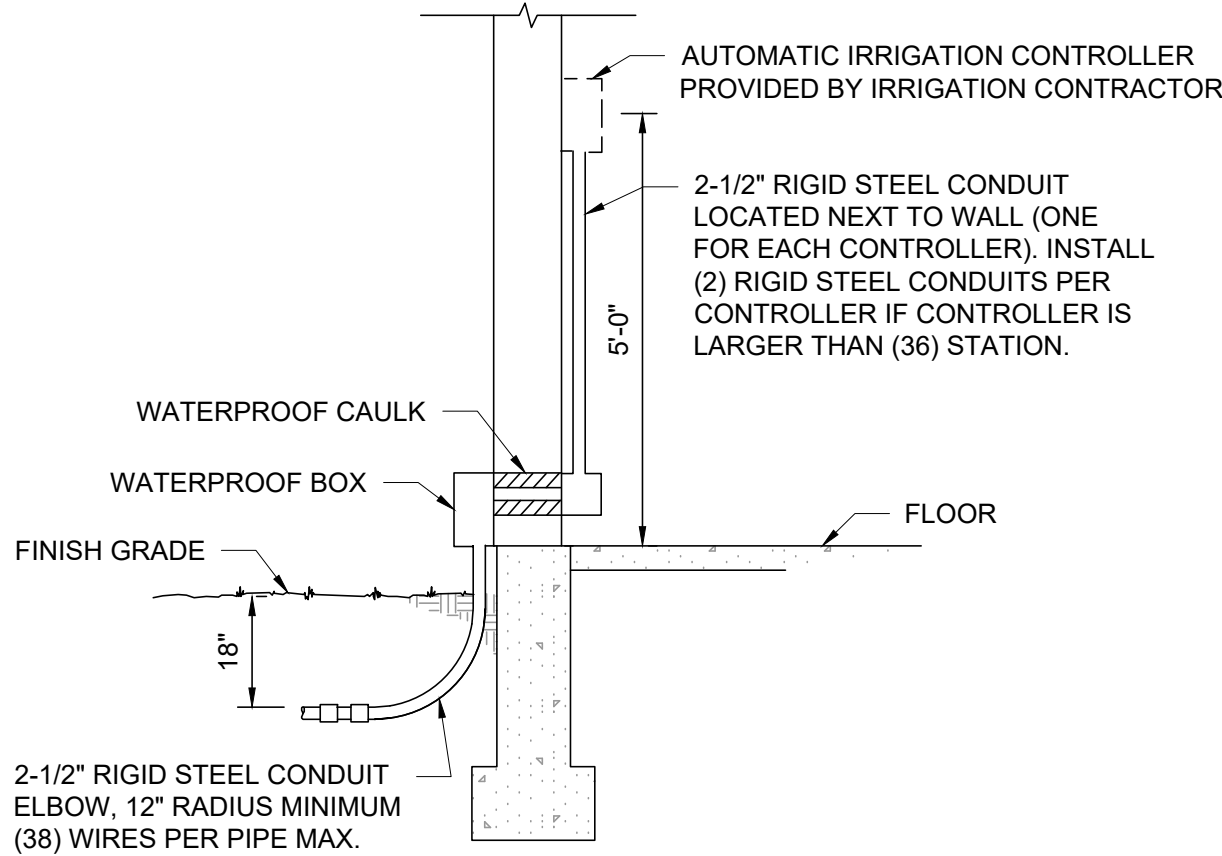
ANSI D 22" x 34" Approver: M. ALLEN Checked: M. CHAMBERS Designer: T. NEWELL Project Manager: M. CHAMBERS Drafter: C. AIELLO-HARRIS Last Plotted: 21.04.2023, 8:12 AM Filename: H:\Projects\003 - Provo City\15.420 WTP Design\CAD\009-L702 LANDSCAPE TYP DETAILS.dwg



DETAIL NOTES:

1. SEE MANUAL FOR MOUNTING INSTRUCTIONS.
2. ALL WIRING TO BE INSTALLED AS PER LOCAL CODE.

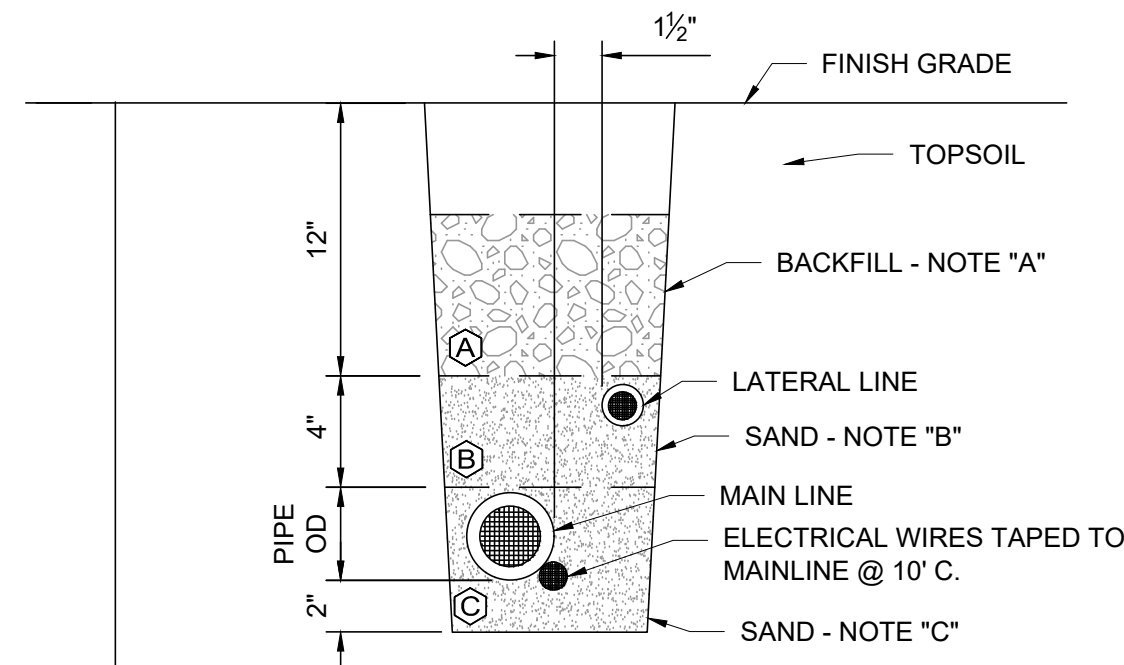
L005 WALL MOUNT CONTROLLER
SCALE: NTS



DETAIL NOTE:

CONTRACTOR TO PROVIDE
HARDWIRE ELECTRICAL
CONNECTION TO CONTROLLER.
PLUG IN WILL NOT BE ALLOWED

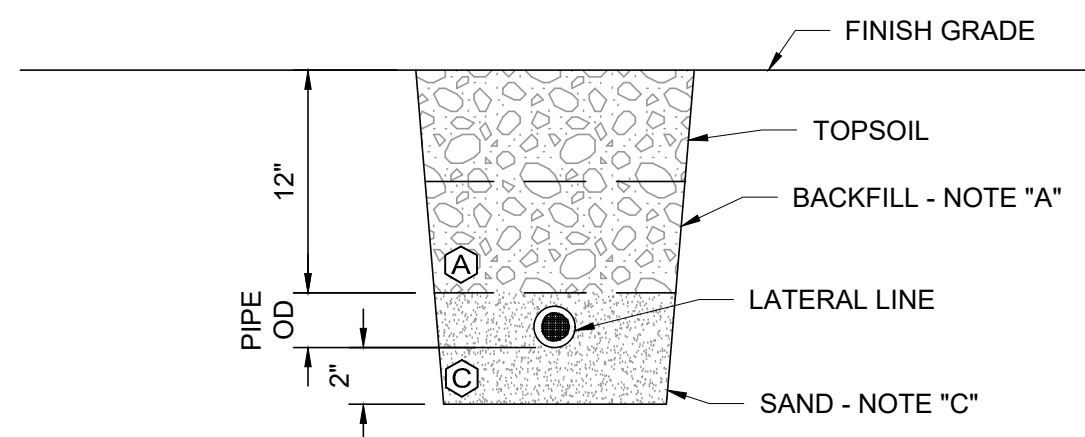
L006 INTERIOR CONTROLLER MOUNT
SCALE: NTS



LEGEND

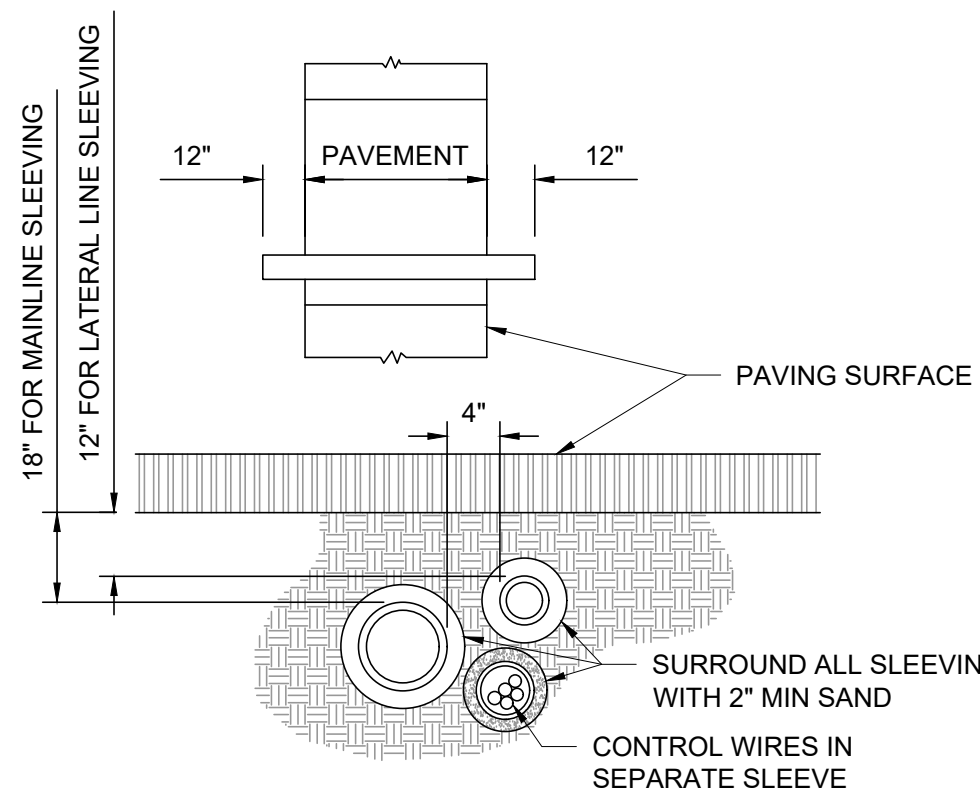
- (A) USE EXCAVATED TRENCH MATERIAL NOT TO EXCEED 2" DIAMETER ROCKS.
- (B) IN CASES WHERE LATERAL LINE IS INSTALLED IN MAIN LINE TRENCH, USE SAND TO BACKFILL TRENCH SO THAT LATERAL LINE IS 12" MIN. BELOW FINISH GRADE.
- (C) USE SAND TO A DEPTH OF 2" TO BED ALL PVC PIPES AND ELECTRICAL WIRES.

L007 TRENCHING DETAILS
SCALE: NTS



DETAIL NOTES:

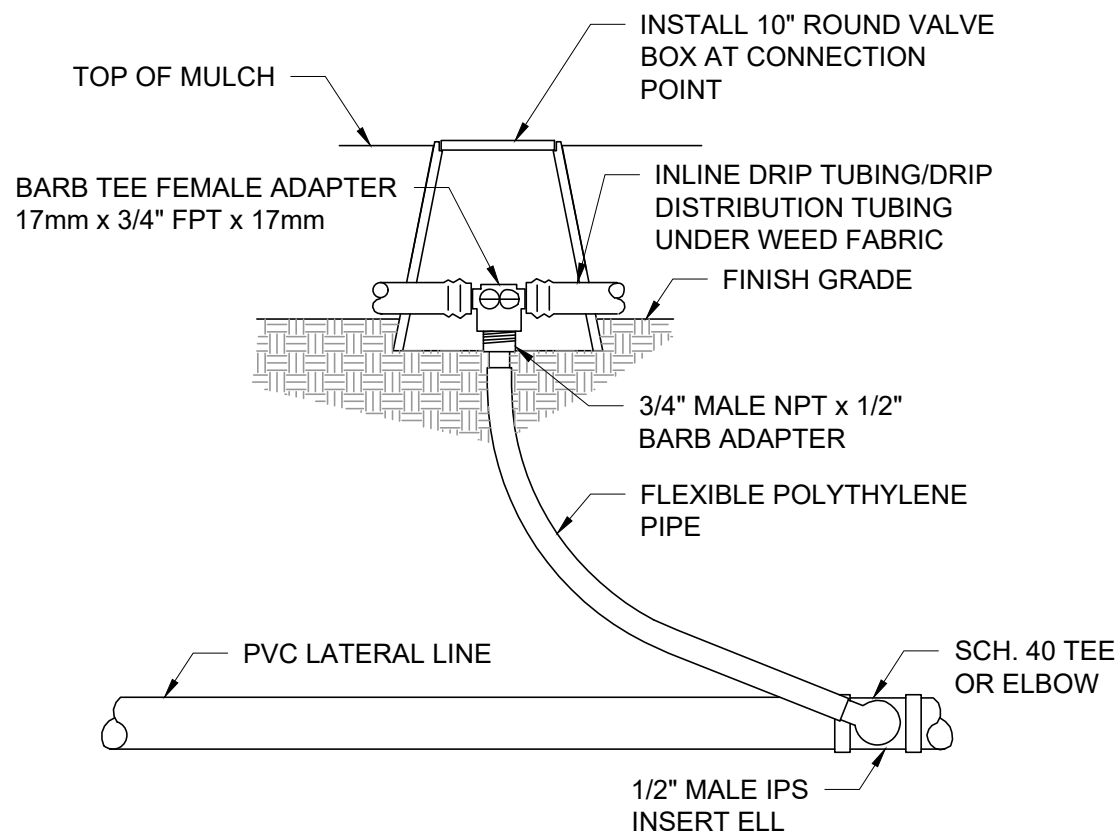
1. LATERAL USE TO BE 10" DEEP AT MANIFOLD, 12" AT HEADS AND EVERYWHERE ELSE.
2. LOCATE ALL TRENCHES 12" AWAY FROM ALL BUILDINGS, SIDEWALKS OR ANY HARD SURFACES. SETTLE ALL TRENCHES WITH WATER PRIOR TO INSTALLATION OF TOPSOIL. PROVIDE 2" HORIZ SEPARATION BETWEEN PIPES.



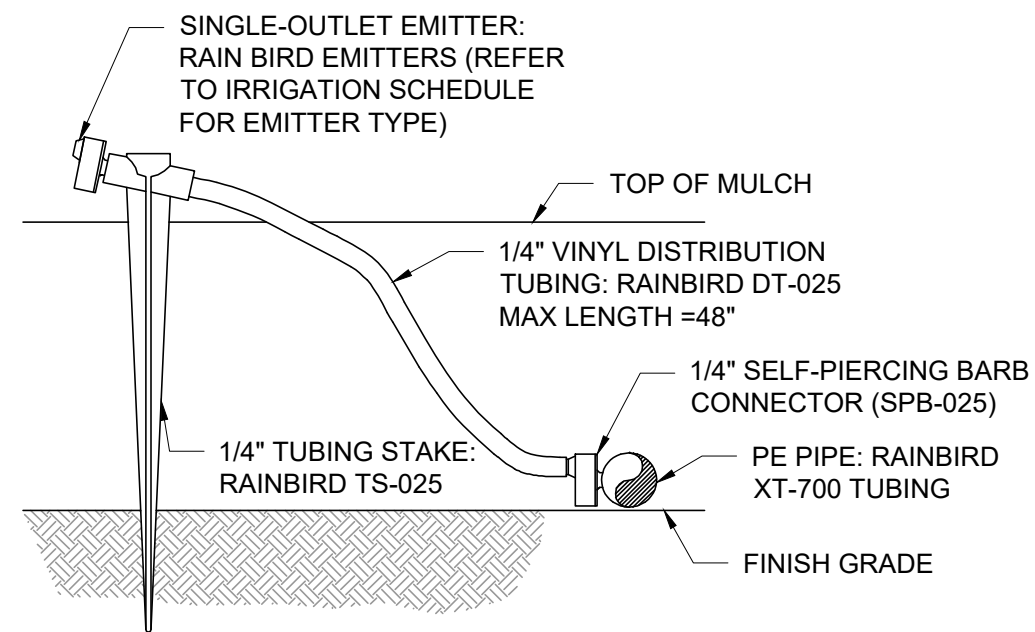
DETAIL NOTES:

1. PROVIDE 4" HORIZ SEPARATION BETWEEN MAINLINE & LATERAL LINE.
2. EXTEND ALL SLEEVING 12" MIN. B EYOND EDGE OF PAVING.
3. REFER TO SLEEVING DIAGRAM FOR SIZES OF ALL SLEEVING.

L008 TYPICAL SLEEVING
SCALE: NTS



L009 PVC-PE PIPE CONNECTION
SCALE: NTS

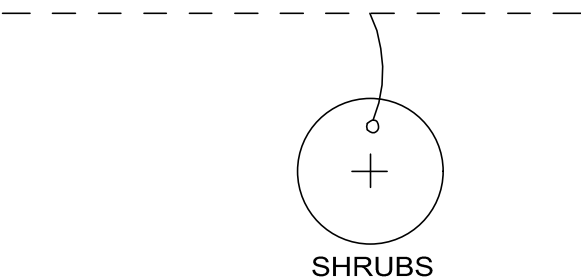


DETAIL NOTES:

1. USE RAINBIRD BUG GUN MODEL EMA-BG TO INSERT EMITTER DIRECTLY INTO XERI-TUBE TUBING.
2. INSTALL PE PIPE UNDER WEED BARRIER.

L010 EMITTER DIST TUBING
SCALE: NTS

- LEGEND
- - - - - RAINBIRD XT-700 TUBING
 - RAINBIRD DT-025
 - RAINBIRD EMITTERS (REFER TO IRRIGATION LEGEND FOR EMITTER SIZE)



DETAIL NOTES:

1. IF ON A SLOPE, LOCATE EMITTER UPHILL SIDE OF PLANT. IF NOT ON SLOPE, LOCATE EMITTER ON BUILDING OR FENCE SIDE OF PLANT.
2. EMITTER SHALL BE VISIBLE TO MAINTENANCE PERSONNEL.
3. EMITTER TO BE LOCATED 6" FROM BASE OF SHRUB AND 3" FROM BASE OF PERENNIAL.

L011 SHRUB DRIP - PLAN VIEW
SCALE: NTS

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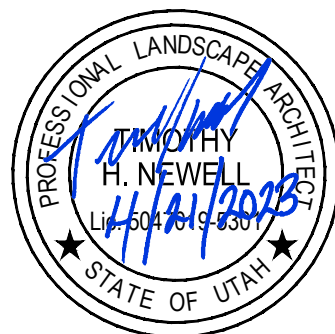
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

LANDSCAPE
TYPICAL DETAILS
SHEET 2

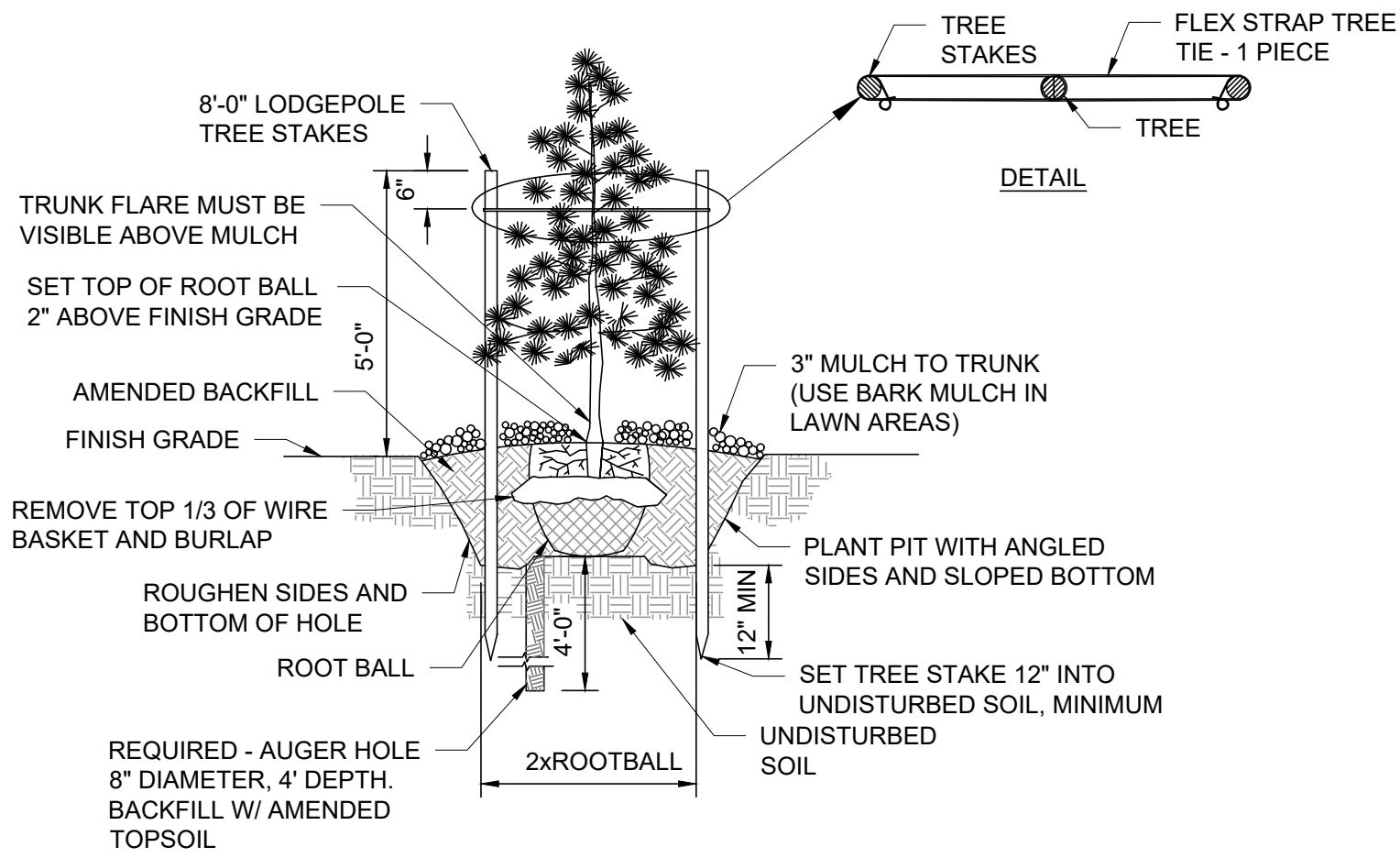
DRAWING NUMBER

99-L702

99-L703

ANSI D 22" x 34" Approved: M. ALLEN Checked: M. CHAMBERS Designer: T. NEWELL Project Manager: M. CHAMBERS Drafter: C. AIELLO-HARRIS

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Filename: H:\Projects\035 - Provo City\15.420 WTP Design\CAD\09-L704 LANDSCAPE TYP DETAILS.dwg

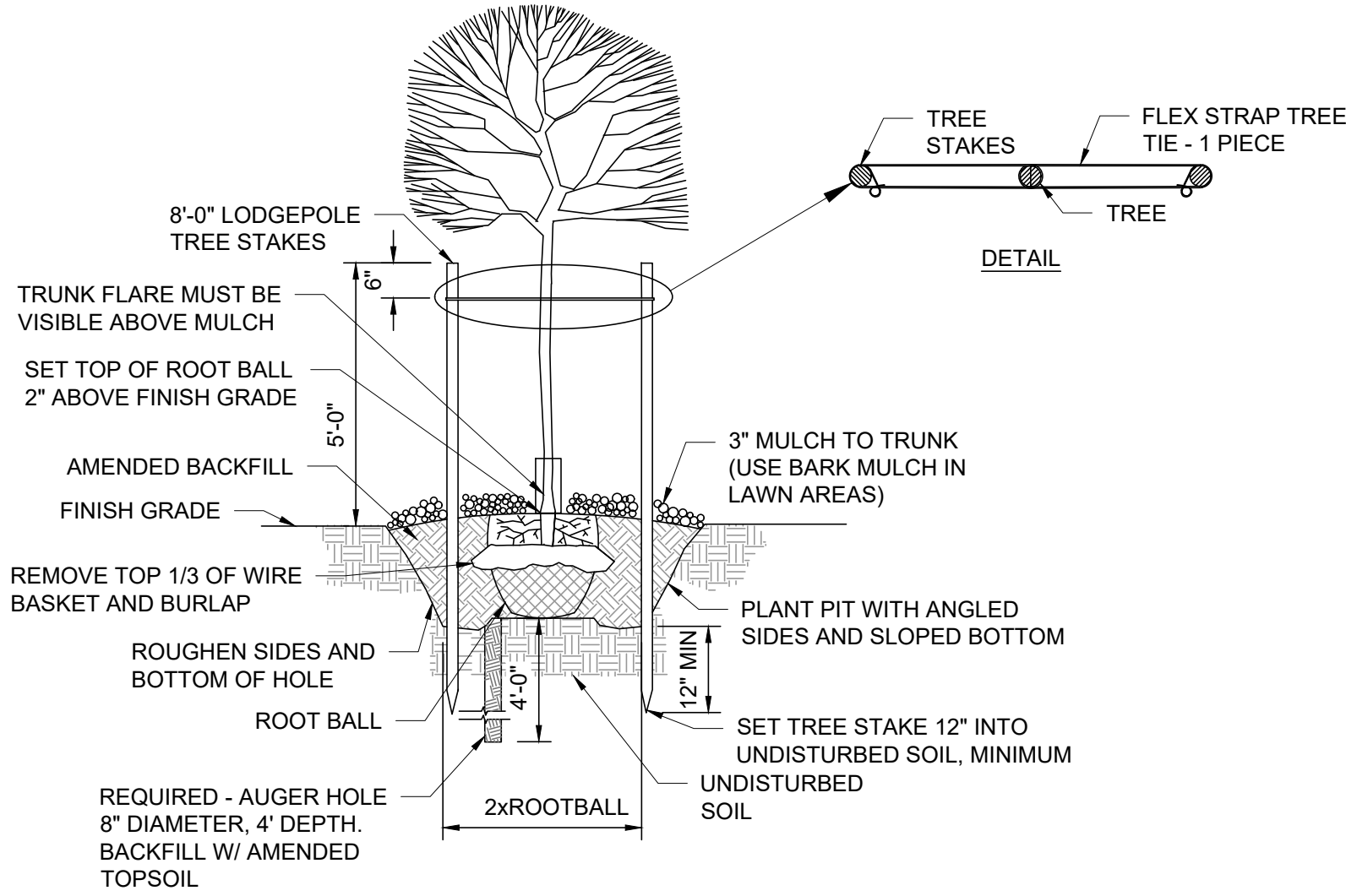


DETAIL NOTES:

1. INSTALL TREE IN HOLE, ADD 1ST LAYER OF COMPACTED SOIL MIX. CUT AND REMOVE ALL BURLAP, TWINE AND WIRE FROM TOP 1/3 OF BALL, ADD SECOND LAYER OF SOIL MIX.
2. SOIL MIX FOR ALL TREE SHALL BE 30% EXISTING SOIL EXCAVATED FROM PLANT HOLE, 30% LOAMY TOPSOIL, 20% CLEAN COARSE SAND, 20% PEAT MOSS.
3. PLACE AGRIFORM TABLETS IN EACH PLANTING BIT, BURY AT 1/3 DEPTH OF ROOT BALL. PLACE 3 TABLETS IN EACH PIT, NO CLOSER THAN 18" APART.
4. DIAMETER OF TREE RING IN LAWN AREAS IS TO BE 2'-0" WIDER THEN DIAMETER OF CANOPY.

CONIFER PLANTING

L016 SCALE: NTS

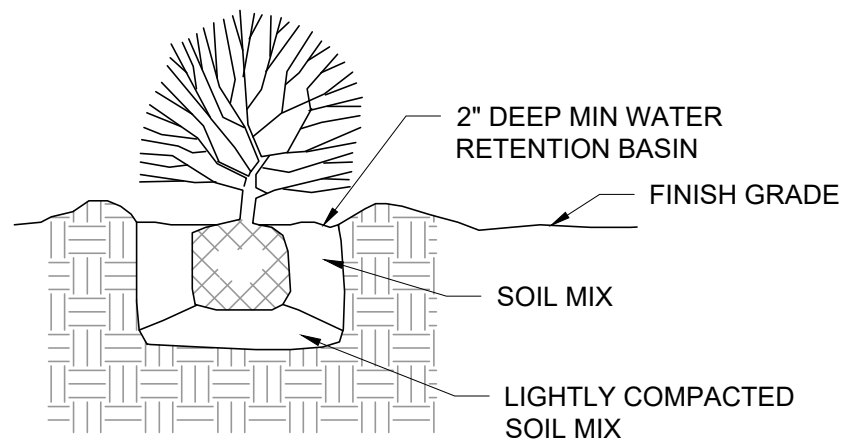


DETAIL NOTES:

1. INSTALL TREE IN HOLE, ADD 1ST LAYER OF COMPACTED SOIL MIX. CUT AND REMOVE ALL BURLAP, TWINE AND WIRE FROM TOP 1/3 OF BALL, ADD SECOND LAYER OF SOIL MIX.
2. SOIL MIX FOR ALL TREE SHALL BE 30% EXISTING SOIL EXCAVATED FROM PLANT HOLE, 30% LOAMY TOPSOIL, 20% CLEAN COARSE SAND, 20% PEAT MOSS.
3. PLACE AGRIFORM TABLETS IN EACH PLANTING BIT, BURY AT 1/3 DEPTH OF ROOT BALL. PLACE 3 TABLETS IN EACH PIT, NO CLOSER THAN 18" APART.
4. DIAMETER OF TREE RING IN LAWN AREAS IS TO BE 4'-0".

DECIDUOUS PLANTING

L017 SCALE: NTS

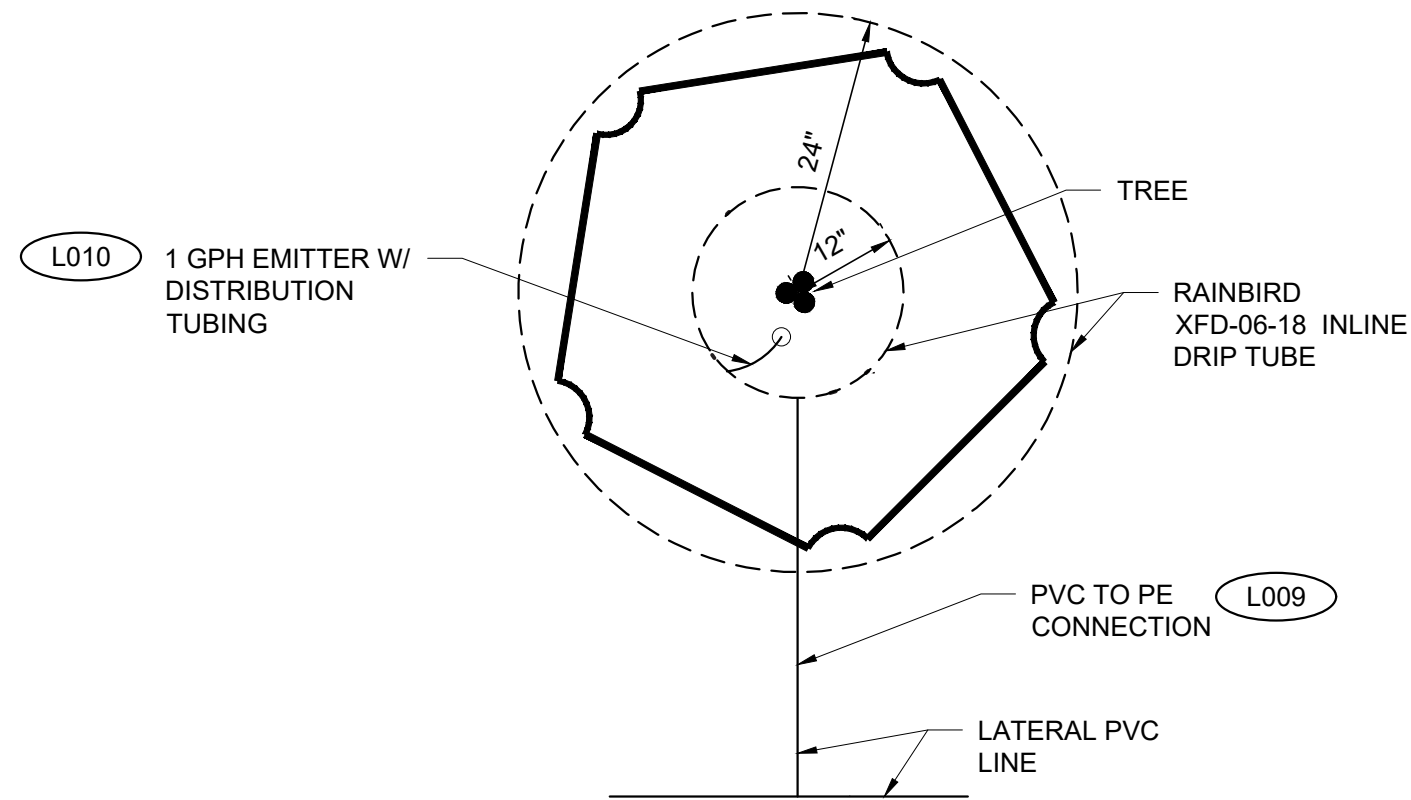


DETAIL NOTES:

1. SOIL MIX FOR ALL TREE, SHRUBS AND GROUND COVER SHALL BE 30% EXISTING SOIL EXCAVATED FROM PLANT HOLE, 30% LOAMY TOPSOIL, 20% CLEAN COARSE SAND, 20% PEAT MOSS.
2. PLACE AGRIFORM TABS IN EACH PLANTING BIT, BURY 1/3 DEPTH OF BALL, PLACE TABS AS FOLLOWS:
#1 & #2 SIZE - 1 TAB
#5 SIZE - 2 TABS
1-1/2" CAL. & UP - 3 TABS
PLACE TABS NO CLOSER THAN 18" APART.
3. TYPICAL SHRUB PLANTING DEPTH: DEPTH OF BALL + 3"
TYPICAL SHRUB PLANTING WIDTH: WIDTH OF BALL + 6".

SHRUB PLANTING

L018 SCALE: NTS

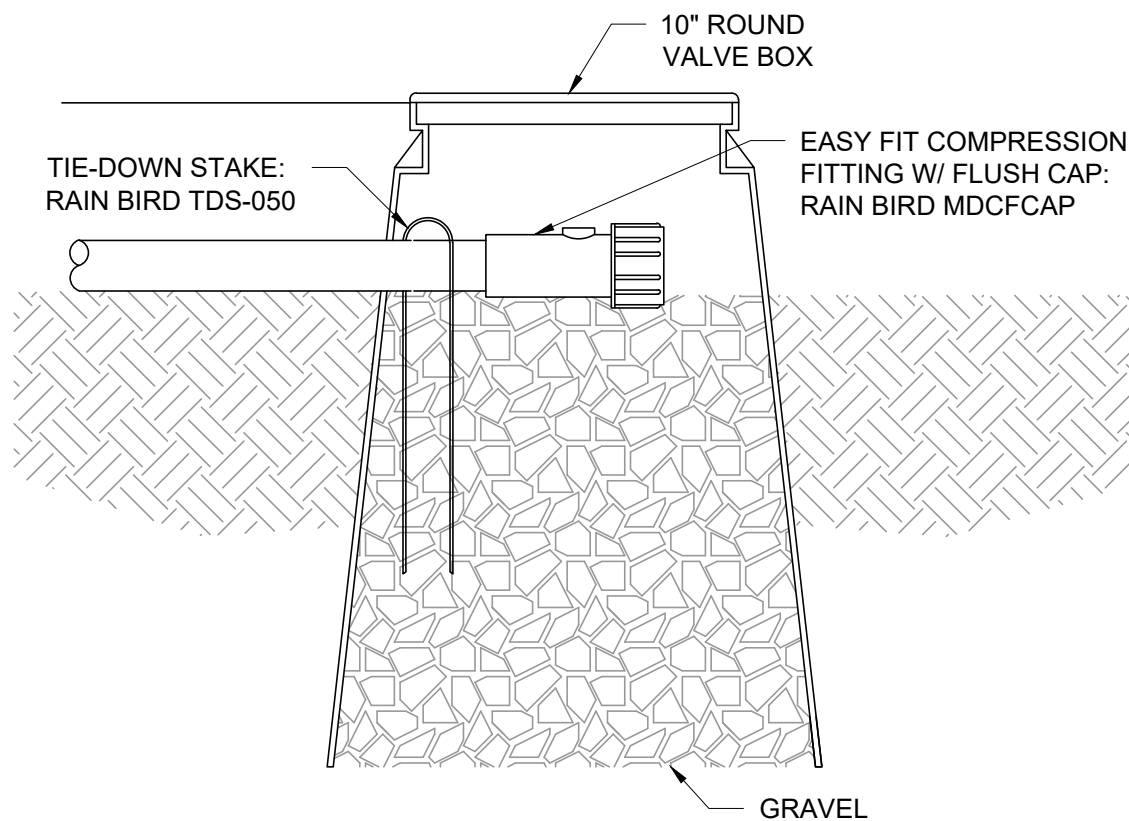


DETAIL NOTE:

SET NETAFIM ON TOP OF FINISH GRADE. STAPLE TO GROUND AND COVER WITH WEED BARRIER AND MULCH.

TREE DRIP PLAN VIEW

L019 SCALE: NTS

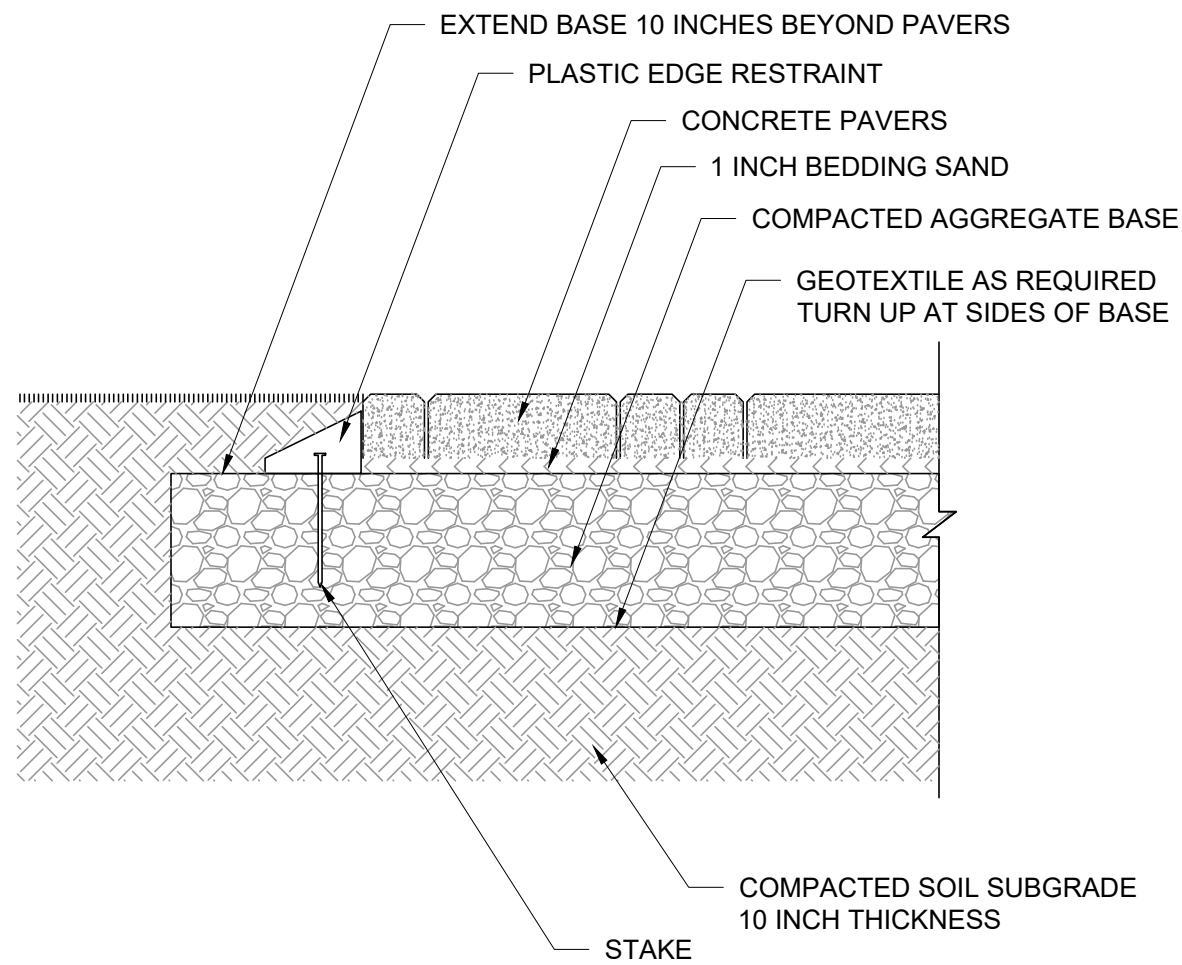


DETAIL NOTE:

INSTALL FLUSH CAP AT LOW POINT OF EACH DRIP AREA.

FLUSHING CAP

L020 SCALE: NTS



PAVER INSTALL DETAIL

L021 SCALE: NTS

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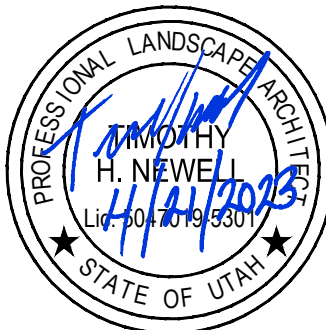
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SHEET TITLE

LANDSCAPE
TYPICAL DETAILS
SHEET 4

DRAWING NUMBER

99-L704

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

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STRUCTURAL TYPICAL DETAILS INDEX	
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S002	CONSTRUCTION JOINT - WALL TO WALL
S003	CONSTRUCTION JOINT - WALL TO SLAB
S004	CONCRETE COVER FOR REINFORCEMENT STEEL
S005	CONSTRUCTION JOINT - SLAB
S006	CONSTRUCTION JOINT W/ WATERSTOP - SLAB
S007	CONTROL JOINT - SLAB
S008	STANDARD HOOK & REINFORCEMENT LAP SPLICE
99-S702	
S015	CONSTRUCTION JOINT - SEALANT
S016	TYPICAL CURB DETAIL
S017	TYPICAL FLOOR HATCH CURB DETAIL
S018	DOOR LANDING DETAIL
S019	WALL INTERSECTION / CORNER REINFORCING
S020	WALL TO ELEVATED SLAB JOINT
S021	EXTERIOR EQUIPMENT SLAB-ON-GRADE
S022	EQUIPMENT PAD DETAIL
S023	HOUSEKEEPING PAD
99-S703	
S025	WATERSTOP DETAILS
S026	WATERSTOP-FLAT STRIP
S027	VAPOR BARRIER DETAIL
S028	GROUT FILLET TERMINATION
S029	CHILLER PAD REINFORCING DETAIL
S030	TRENCH DRAIN SLAB REINFORCING DETAIL
S032	LIFTING EYE BOLT
S033	RETROFIT WATERSTOP
99-S704	
S035	GRATING EDGE DETAIL
S036	GRATING FLUSH SUPPORT
S037	CHECKER PLATE SUPPORT
99-S705	
S045	MASONRY CONTROL JOINT (MCJ PLAN)
S046	MASONRY CONTROL JOINT (MCJ)
S047	MASONRY REINFORCING HOOKS AND LAP SPLICES
S048	MASONRY WALL
S049	MASONRY CORNER AND INTERSECTION REINFORCING
S050	MASONRY WALL LINTEL REINFORCING SCHEDULE
S051	TYPICAL MASONRY WALL REINFORCING
99-S706	
S055	INTERIOR WALL BRACING
S058	TYPICAL REINFORCED OPENINGS IN SLAB ON METAL DECK
S059	JOIST BEARING
S060	DECK CONNECTION BETWEEN JOISTS
S061	TYPICAL JOIST MODIFICATION AT CONCENTRATED LOADS
S062	TYPICAL ROOF OPENING
S063	BEAM TO BEAM CONNECTION DETAIL
S064	BEAM SPLICE DETAIL
S065	BRIDGING CONNECTION
S066	BEAM TO COLUMN CONNECTION DETAIL
99-S707	
S070	PIPE ENCASEMENT ATTACHED TO SLAB DETAIL
S071	PIPE ENCASEMENT - SECTION
S072	PIPE ENCASEMENT - ELEVATION
S073	BEAM COLUMN CONNECTION - STEEL
S074	TRANSFORMER MOUNTING DETAIL
S075	TYPICAL PERIMETER BEAM CONNECTION DETAIL



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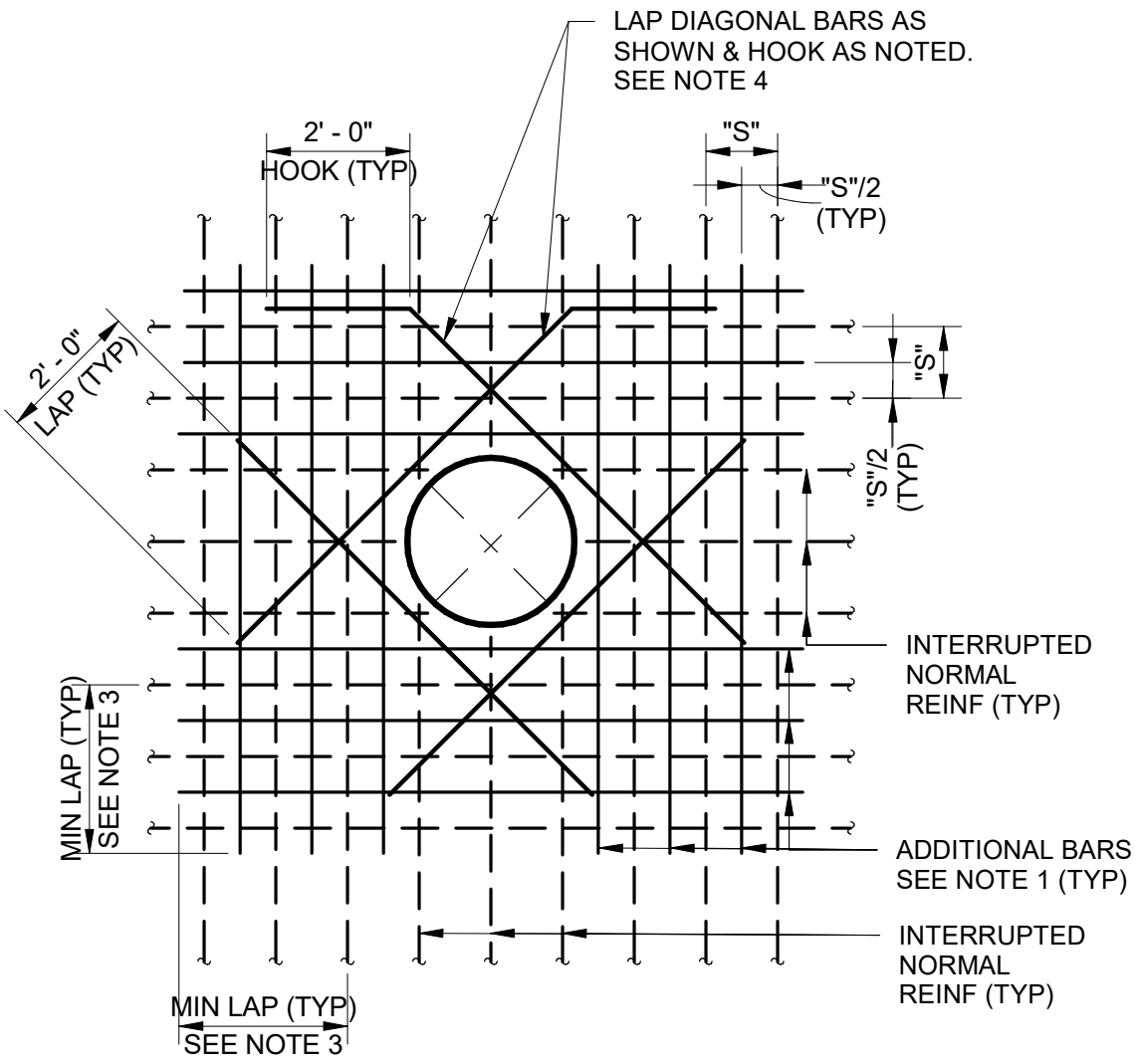
WATER TREATMENT
STRUCTURAL
TYPICAL DETAILS INDEX

DRAWING NUMBER

99-S700

ANSI D 22" x 34" Approved: B.HODGSON Designer: R.YOUNG Drafter: R.PITTMAN Project Manager: J.KRINKS

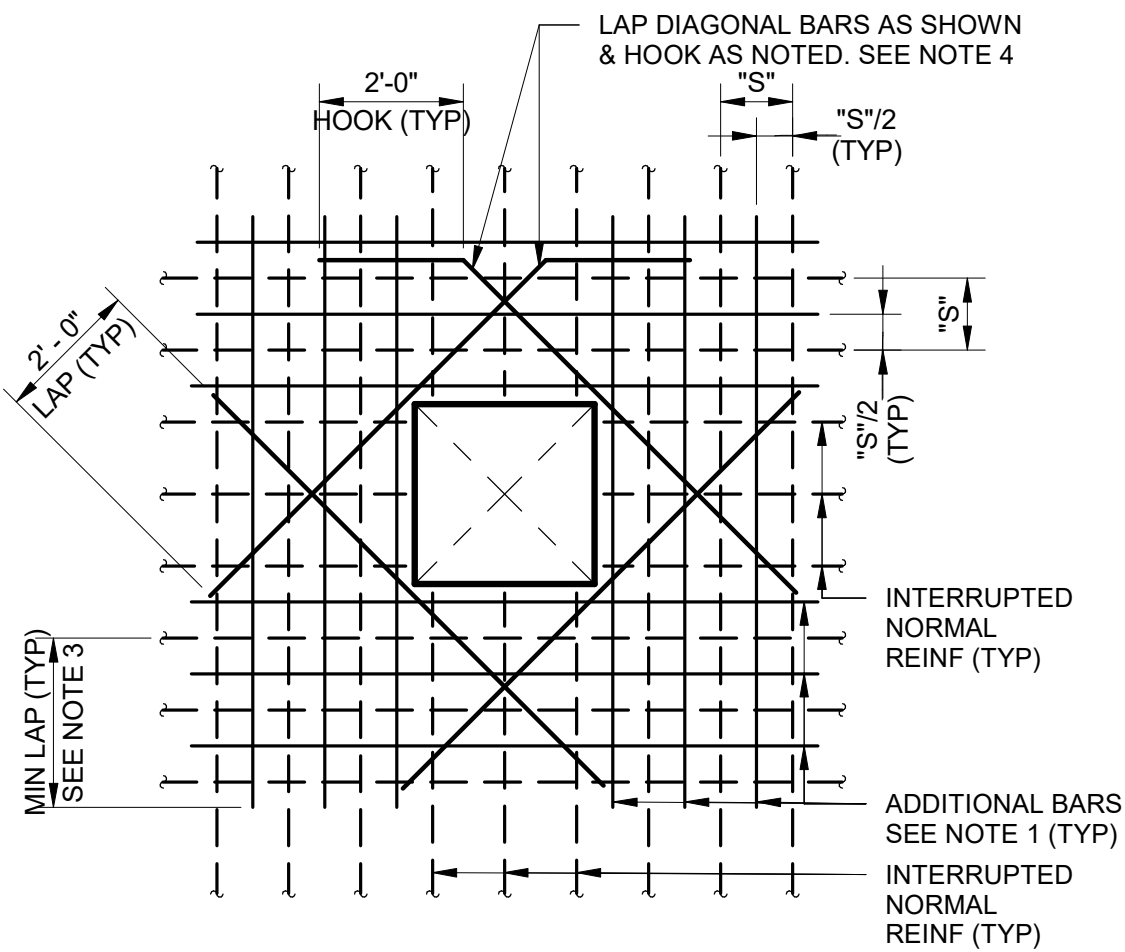
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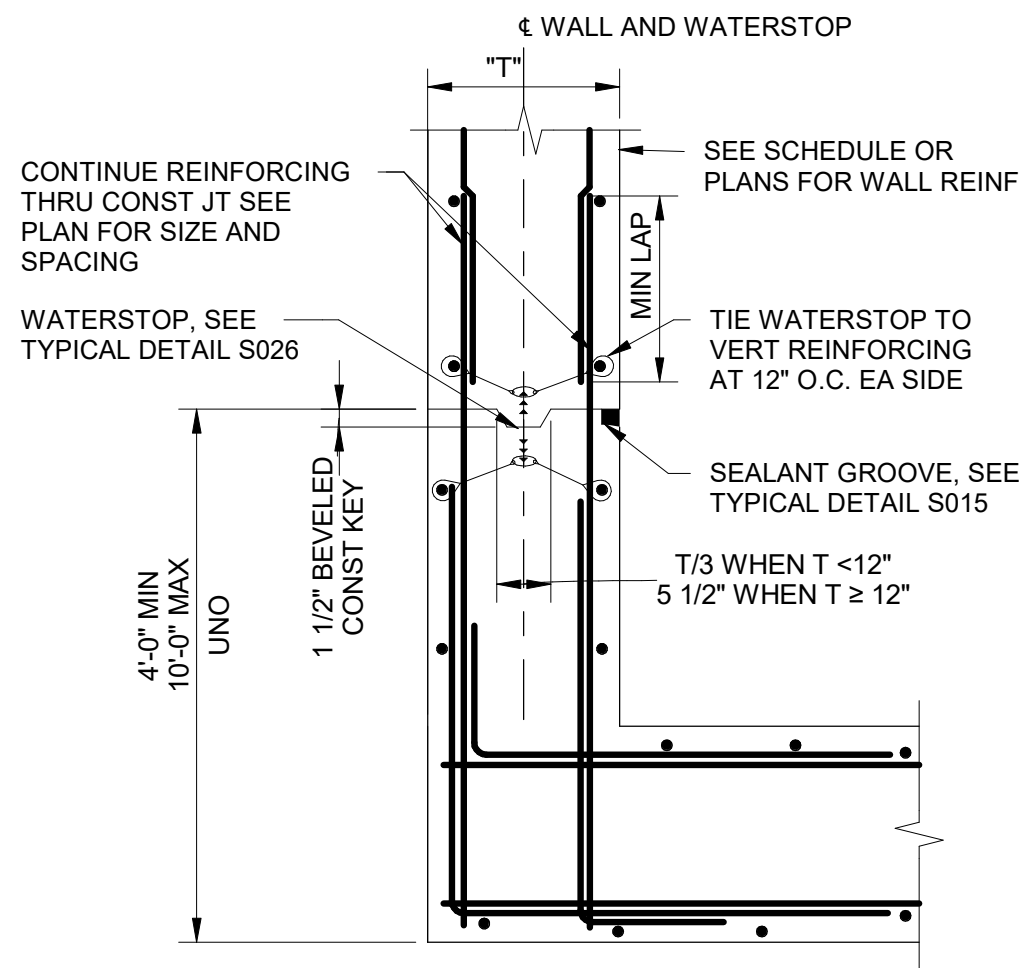
NOTES:

- NUMBER OF ADDITIONAL REINF BARS AT EACH SIDE OF OPNG SHALL EQUAL HALF THE NUMBER OF INTERRUPTED BARS IN EACH LAYER OF REINF.
- SIZE OF ADDITIONAL REINF BARS TO EQUAL SIZE OF INTERRUPTED REINF BARS.
- PROVIDE STD HOOKS FOR BARS IF LAP LENGTH EXTENSION CANNOT BE OBTAINED AT JOINTS OR OTHER OBSTRUCTIONS. PLACE ADDITIONAL BARS IN SAME PLANES AS INTERRUPTED REINF.
- SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINF BAR CUT, UNO. LOCATE DIAGONALS IN EACH LAYER OF REINF.
- PLACE DIAGONAL BARS INSIDE NORMAL REINF.
- ALL REINF TO CLEAR OPENING OR FLANGE COLLARS BY 2".
- TWO OR MORE OPENINGS WITH 6" OR LESS BETWEEN THEM MAY BE A SINGLE OPENING.
- ADDITIONAL REINF NOT REQUIRED IF OPENING DOES NOT INTERRUPT REINF OR ON ANY SIDE WHERE OPENING IS BORDERED BY A BEAM.
- DETAILS APPLY TO PENETRATION 8" DIA OR LARGER.

S001 ADDITIONAL REINFORCING BARS
NOT TO SCALE



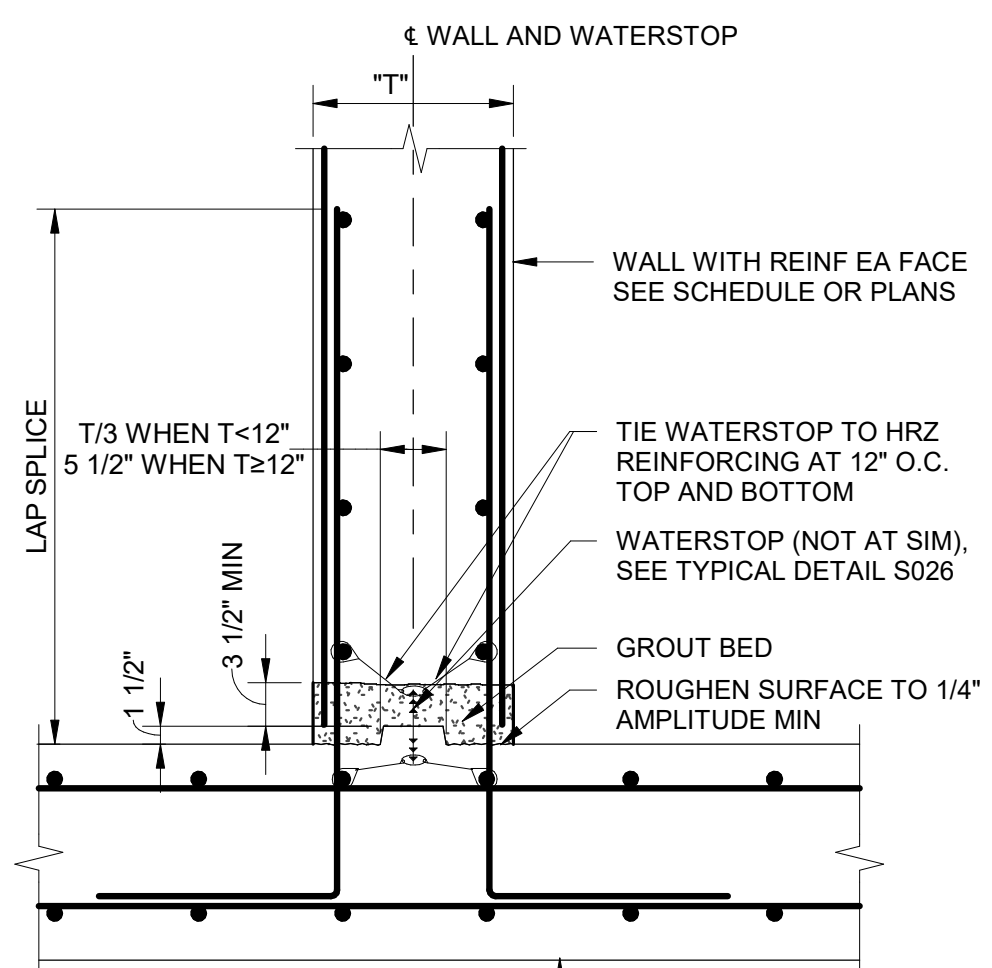
NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.



- NOTES:
- "T" = WALL THICKNESS WITH DOUBLE MAT OF STEEL.

NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.

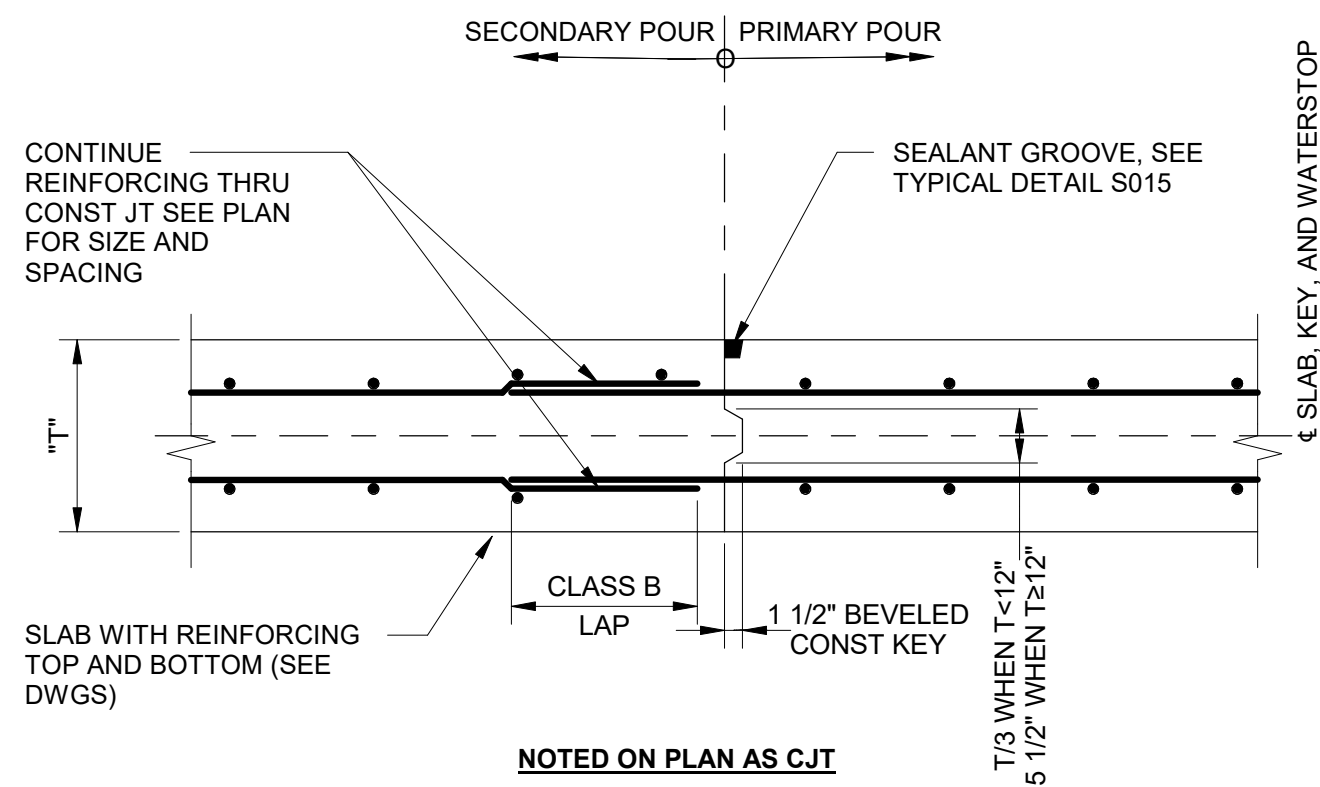
S002 CONSTRUCTION JOINT - WALL TO WALL
NOT TO SCALE



- NOTES:
- GROUT BED TO BE PLACED IMMEDIATELY PRIOR TO PLACEMENT OF WALL CONCRETE.

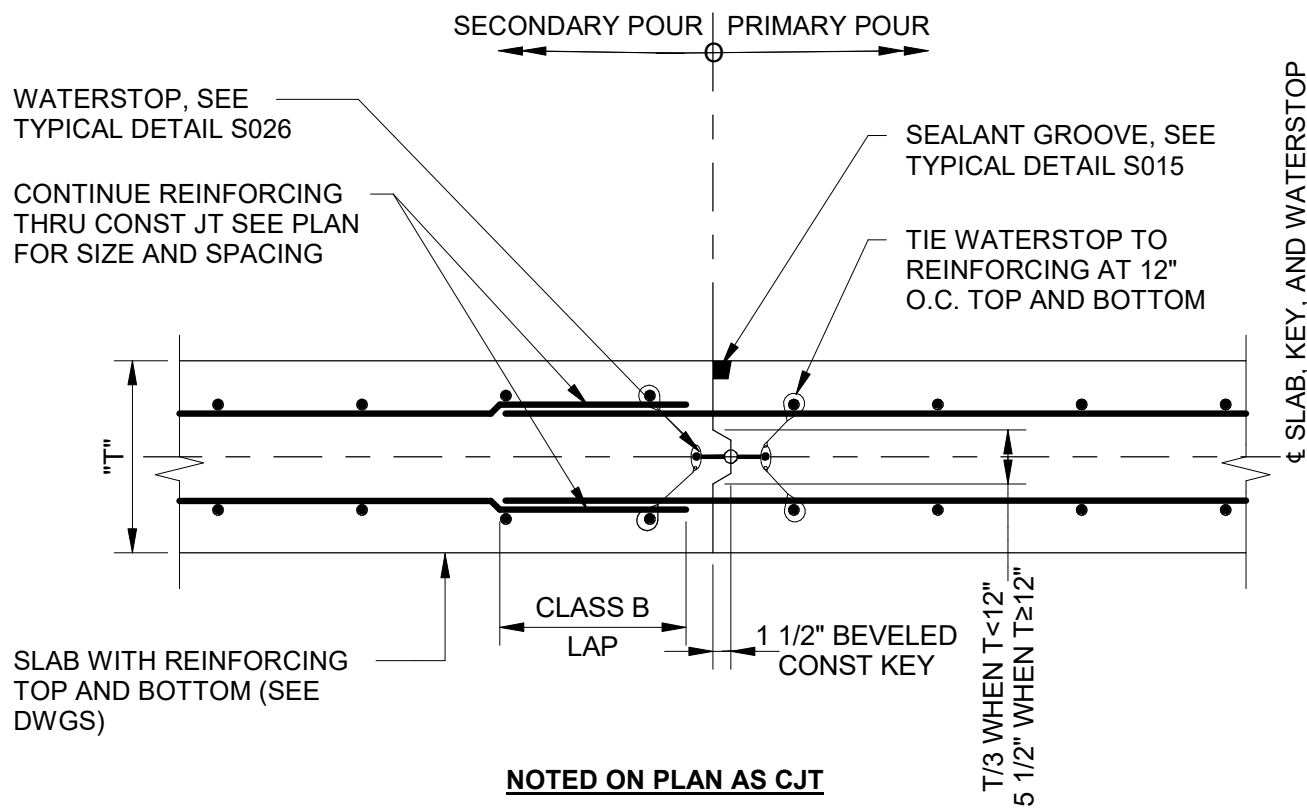
NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.

S003 CONSTRUCTION JOINT - WALL TO SLAB
NOT TO SCALE



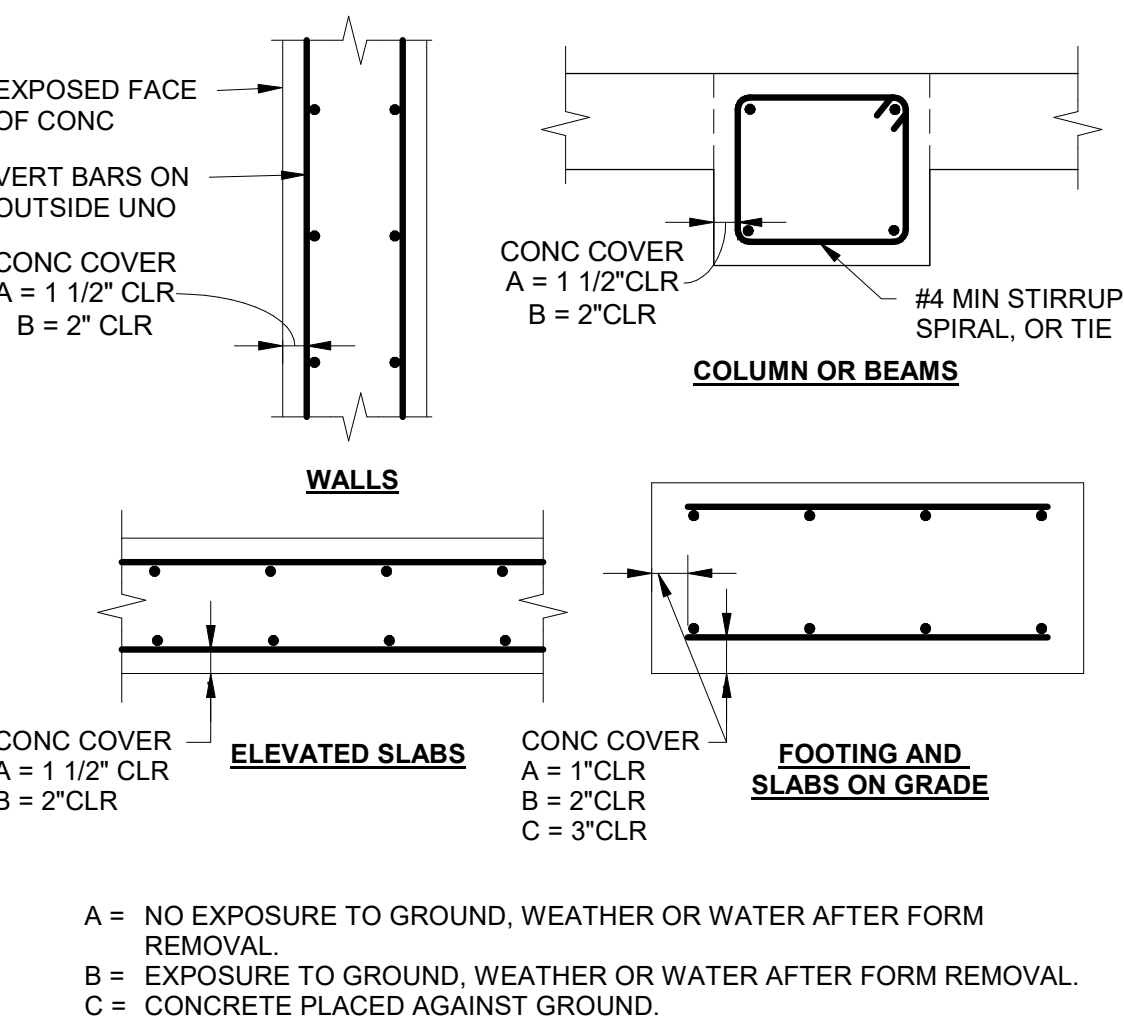
NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.

S005 CONSTRUCTION JOINT - SLAB
NOT TO SCALE



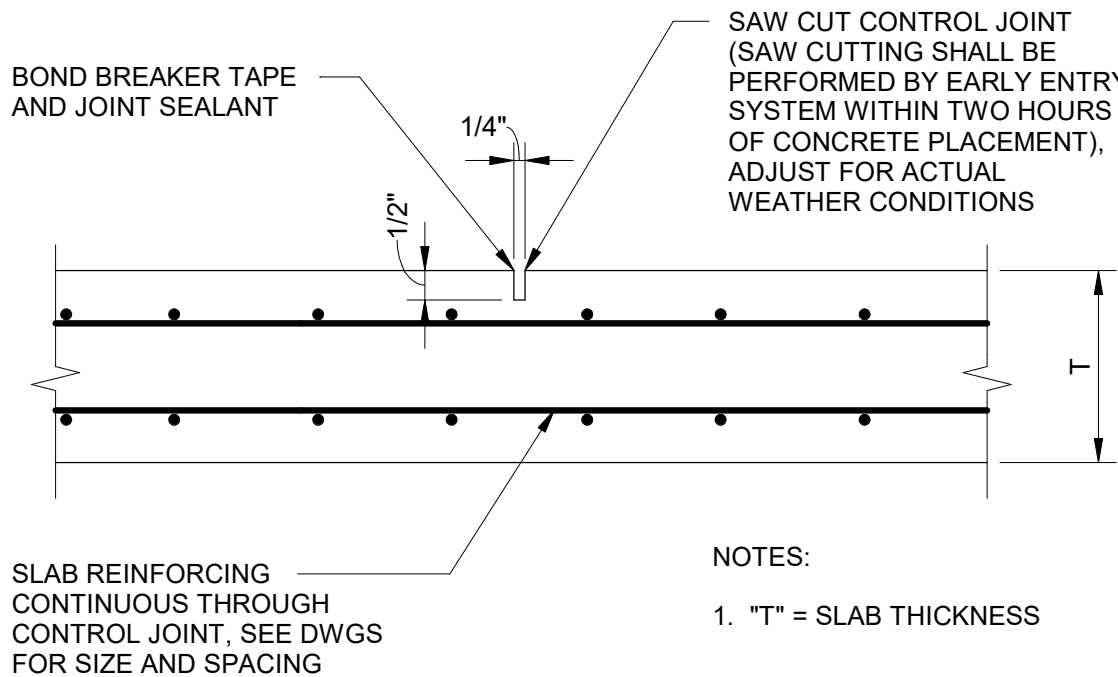
NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.

S006 CONSTRUCTION JOINT W/ WATERSTOP - SLAB
NOT TO SCALE



- A = NO EXPOSURE TO GROUND, WEATHER OR WATER AFTER FORM REMOVAL.
B = EXPOSURE TO GROUND, WEATHER OR WATER AFTER FORM REMOVAL.
C = CONCRETE PLACED AGAINST GROUND.

S004 CONCRETE COVER FOR REINFORCEMENT STEEL
NOT TO SCALE

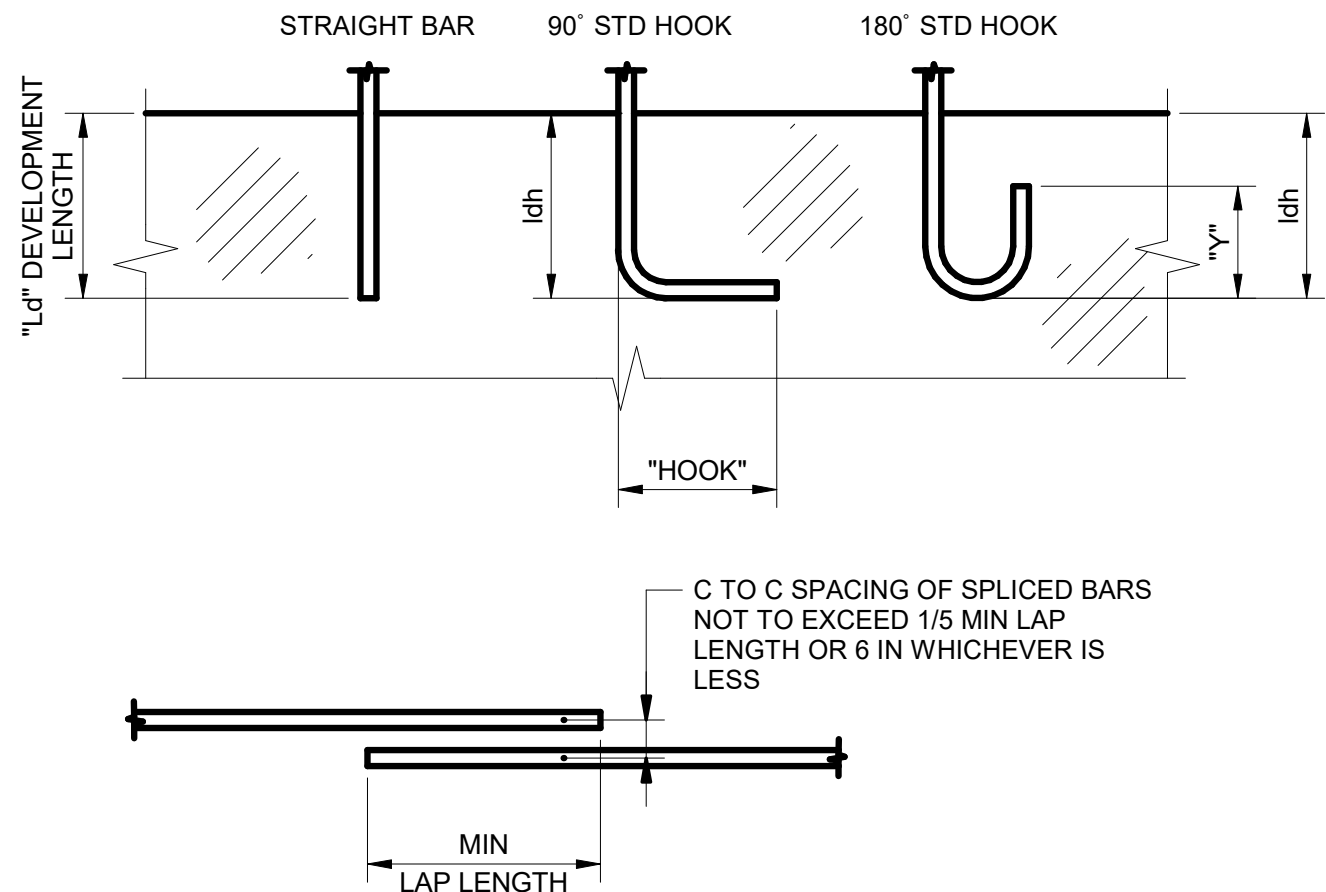


NOTE: THIS DETAIL DOES NOT APPLY TO CLEAR-WELL. REFERENCE CLEAR-WELL DRAWINGS FOR ALL APPLICABLE DETAILS.

S007 CONTROL JOINT - SLAB
NOT TO SCALE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

f _c = 4500 PSI		f _y = 60,000 PSI							
BAR SIZE	DIAMETER (db) (INCHES)	DEVELOPMENT LENGTH (L _d) (INCHES)		CLASS B LAP SPLICING (INCHES)		90° STD HOOK (INCHES)		180° STD HOOK "Y"	
		"TOP" BARS	OTHER	"TOP" BARS	OTHER	HOOK	ldh		
		REINFORCING BARS IN TENSION							
#3	0.375	18	14	23	18	6	7	4	
#4	0.5	24	18	30	24	8	9	5	
#5	0.625	29	23	38	29	10	11	5	
#6	0.75	35	27	45	35	12	14	6	
#7	0.875	51	39	66	51	14	16	7	
#8	1.0	58	45	76	58	16	18	8	
#9	1.128	66	51	85	66	19	20	11	
#10	1.270	74	57	96	74	22	23	12	
#11	1.41	82	63	107	82	24	25	13	
REINFORCING BARS IN COMPRESSION									
#3	0.375	8		12		HOOKED BARS SHALL NOT BE USED IN COMPRESSION			
#4	0.5	9		15					
#5	0.625	12		19					
#6	0.75	14		23					
#7	0.875	16		27					
#8	1.0	18		30					
#9	1.125	21		34					
#10	1.270	23		38					
#11	1.41	26		43					



- NOTES:
- "TOP" BARS SHALL BE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
 - CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED SHALL:
 - NOT BE LESS THAN d_b, HAVE CLEAR COVER NOT LESS THAN d_b, AND STIRRUPS OR TIES THROUGHOUT L_d NOT LESS THAN THE CODE MINIMUM OR;
 - CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2d_b AND CLEAR COVER NOT LESS THAN d_b, WHERE d_b = DIAMETER OF REINFORCING BAR AND L_d = DEVELOPMENT LENGTH.
 - ALL LAP SPLICES SHALL BE CLASS B UNLESS NOTED OTHERWISE.
 - WHEN SPLICING BARS OF DIFFERENT SIZE, THE LENGTH OF LAP SHALL BE GOVERNED BY THE LARGER DIAMETER BAR.
 - SPLICES ARE TO BE MADE SO THAT THE GIVEN DISTANCES TO FACE OF CONCRETE WILL BE MAINTAINED.
 - SPLICES SHALL BE STAGGERED TO GIVE 12 INCHES CLEAR BETWEEN ENDS OF ADJACENT SPLICES, IF BARS ARE SPACED CLOSER THAN 6 INCHES OR 6 BAR DIAMETERS.

S008 STANDARD HOOK & REINFORCEMENT LAP SPLICE
NOT TO SCALE

AECOM
HANSEN
ALLEN
& LUCE inc
ENGINEERS

PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

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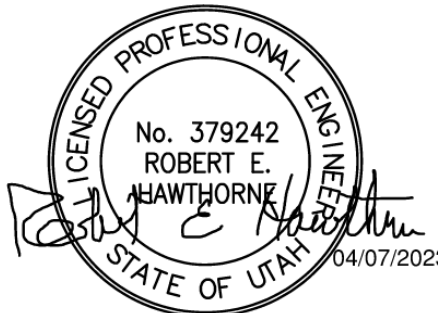


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REGISTRATION



ISSUE/REVISION

C	2023-04-07	ISSUED FOR BID
B	2023-01-20	ISSUED FOR 90%
A	2022-10-14	ISSUED FOR 60%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

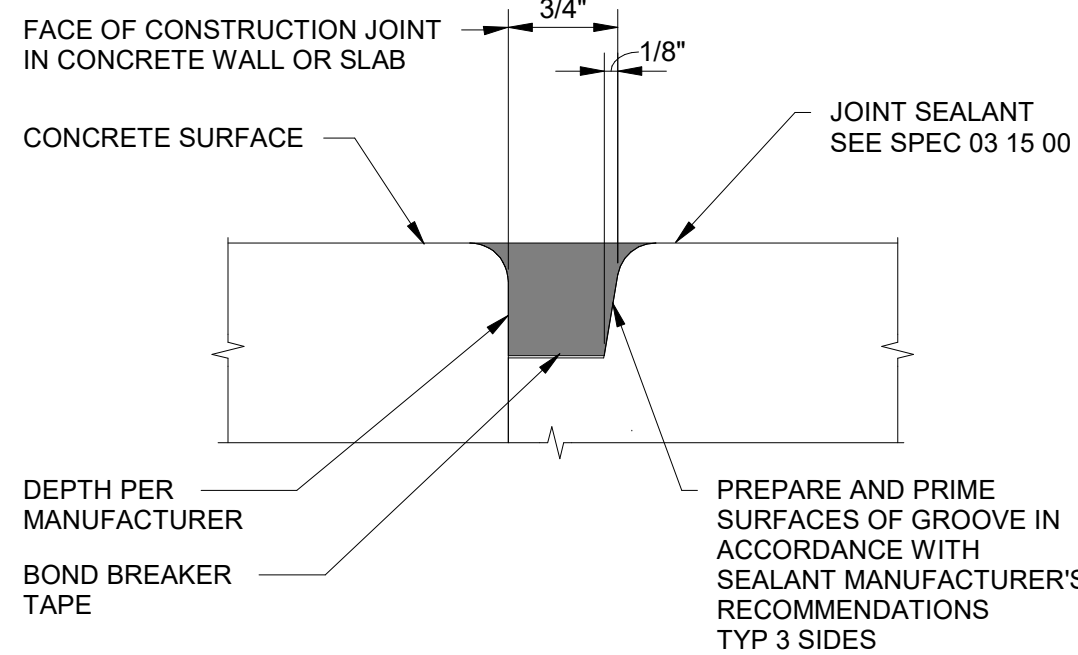
STRUCTURAL
TYPICAL DETAILS
SHEET 1

DRAWING NUMBER

99-S701

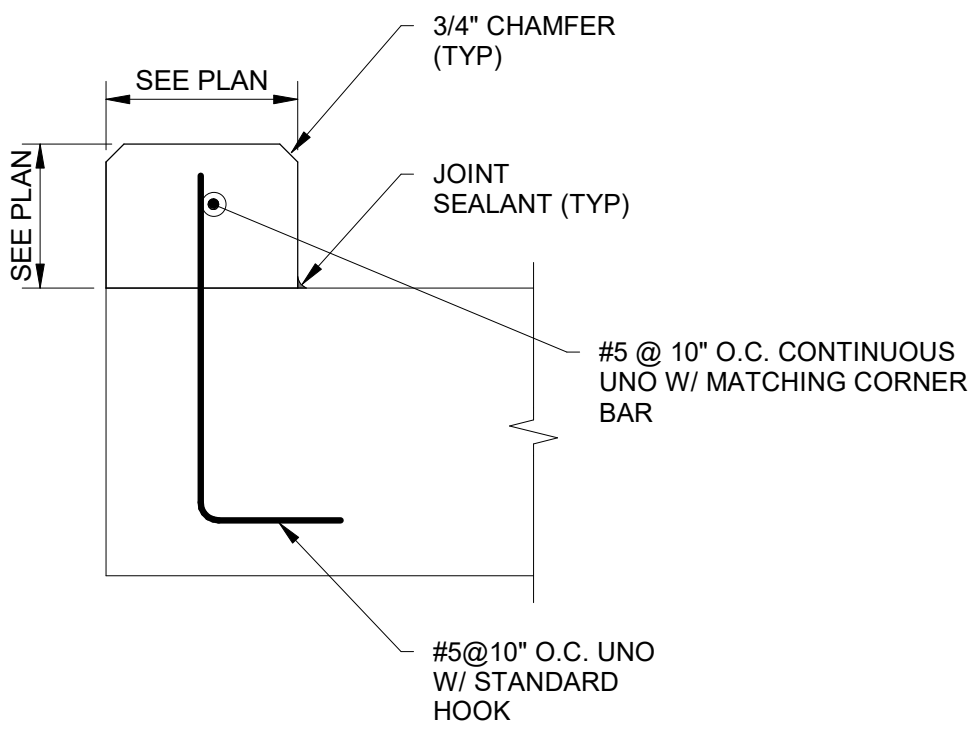
ANSI D 22" x 34" Approved: B HODGSON Checked: R HAWTHORNE Designer: R YOUNG Drafter: R PITTMAN Project Manager: J KRINKS

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Filename: \\BM\607\CLAMER\USA\60670884-Provo River WTP\60670884-10-S001.rvt

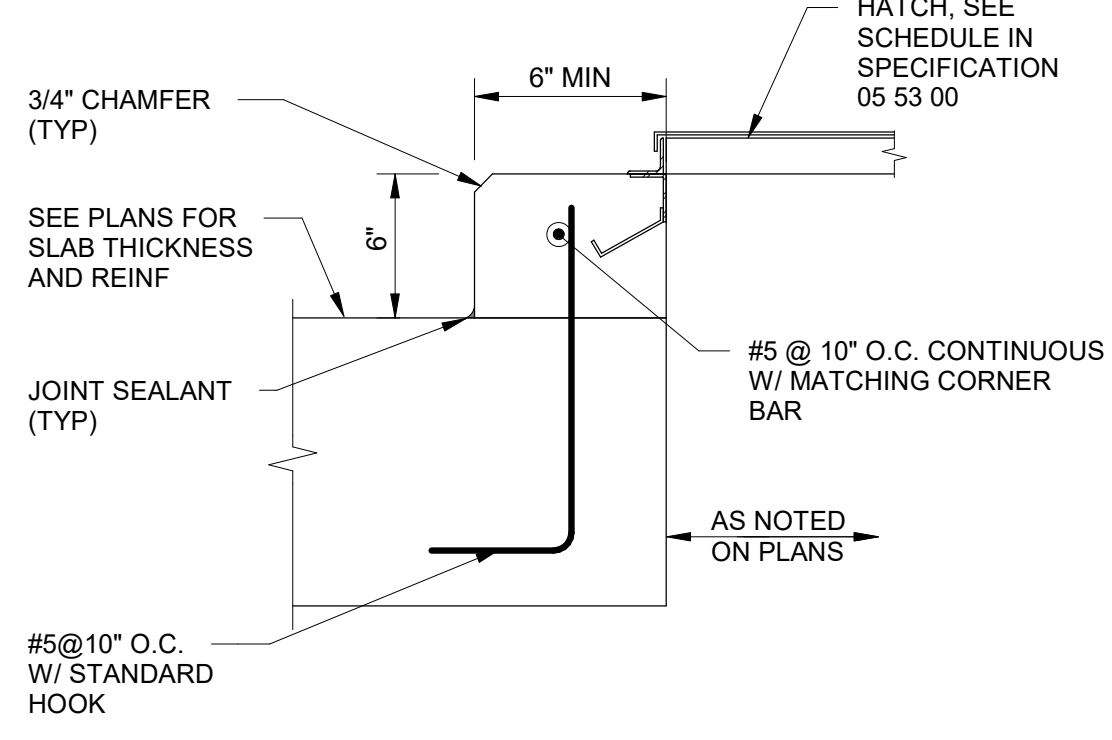


NOTE: SEALANT TO BE LOCATED ON FLUID SIDE OF WALL OR WEATHER SIDE, IF NO FLUID.

S015 CONSTRUCTION JOINT - SEALANT
NOT TO SCALE

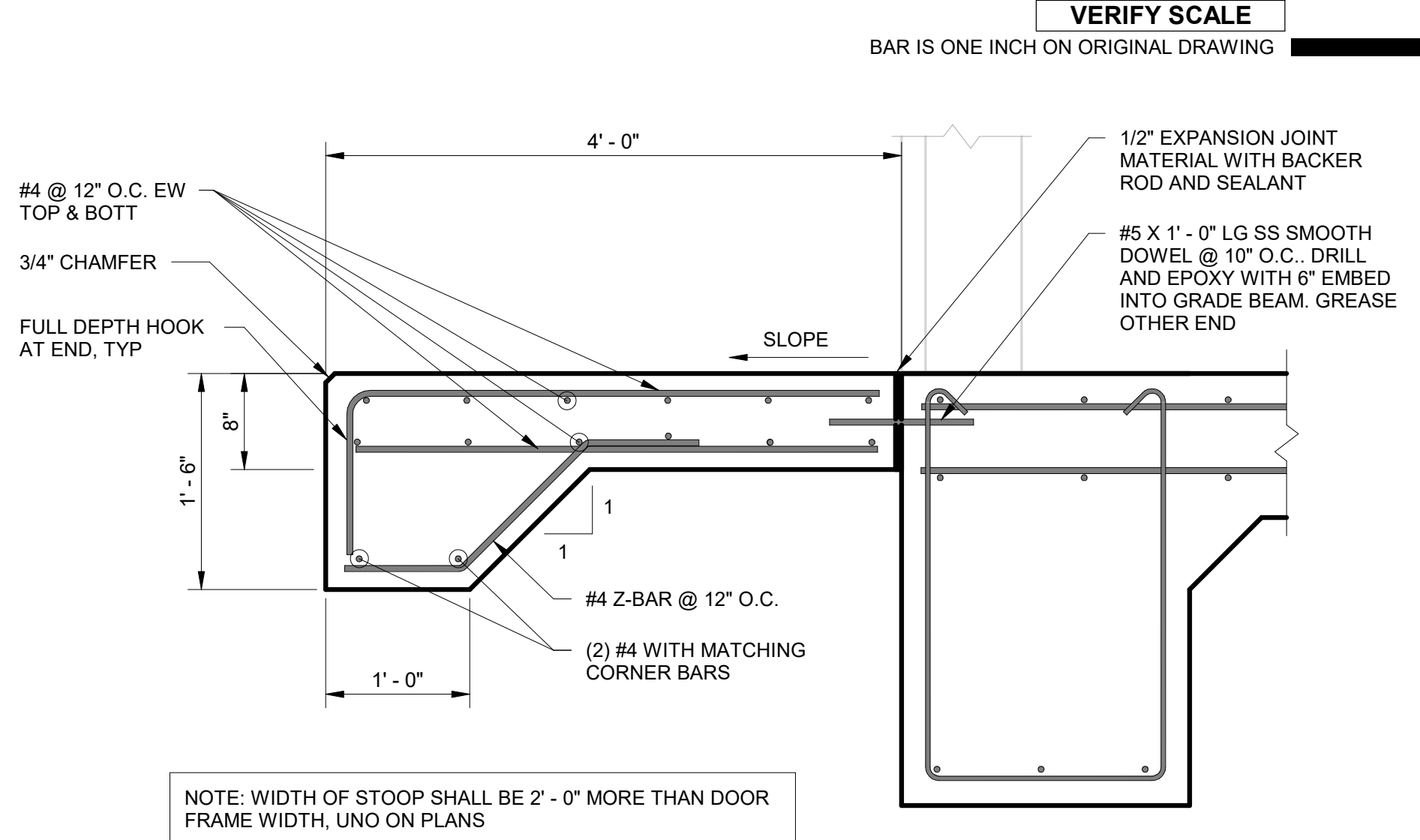


S016 TYPICAL CURB DETAIL
NOT TO SCALE



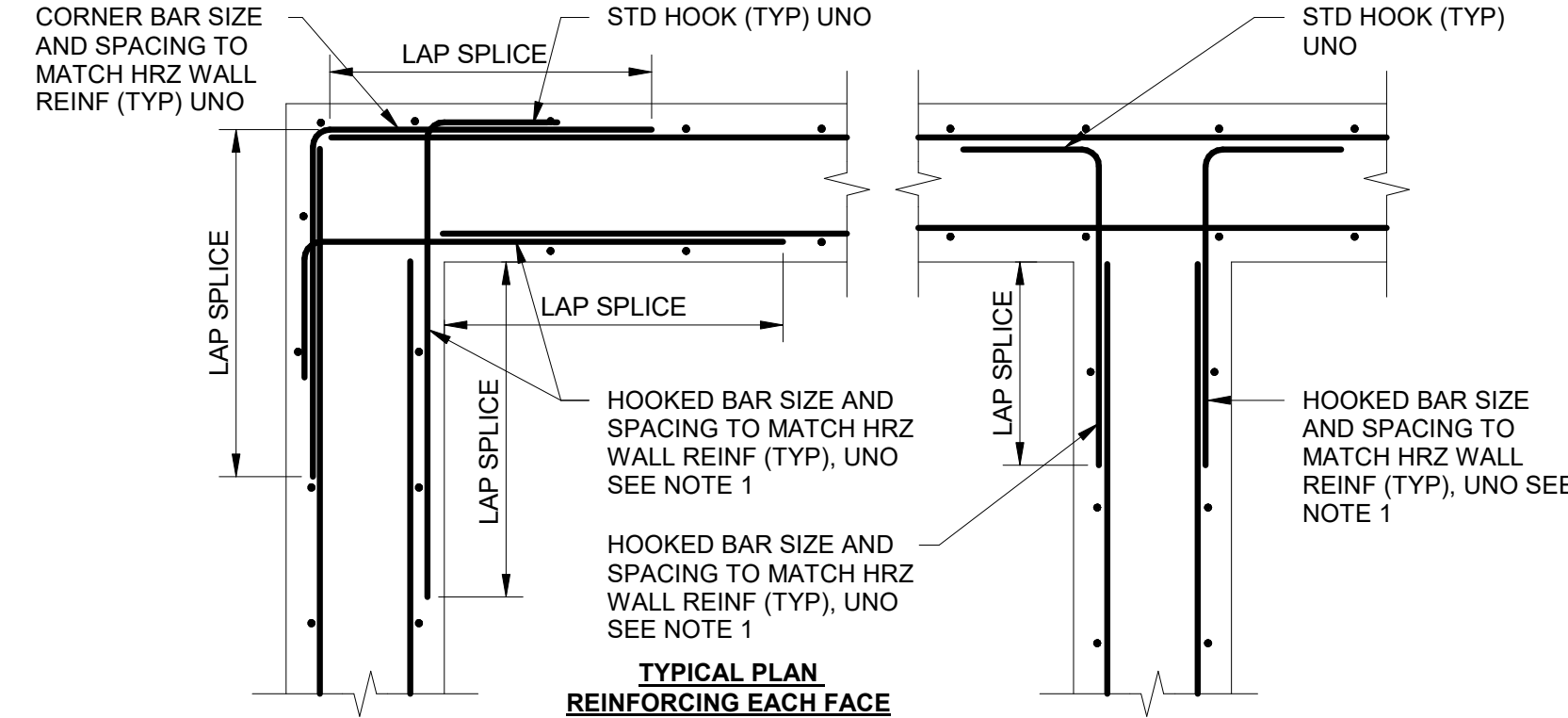
NOTE: COORDINATE CURB SIZE WITH HATCH REQUIREMENTS. COORDINATE ANY EMBEDS REQUIRED WITH HATCH MFR.

S017 TYPICAL FLOOR HATCH CURB DETAIL
NOT TO SCALE



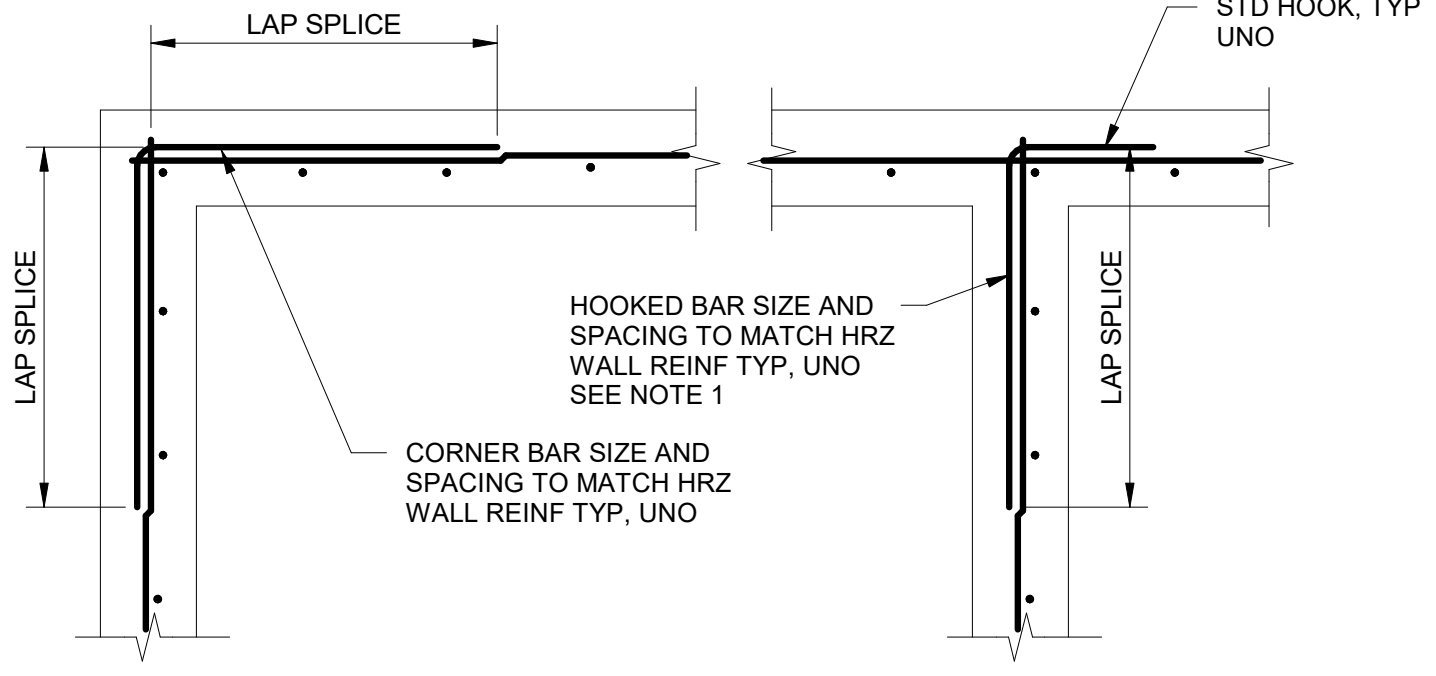
NOTE: WIDTH OF STOOP SHALL BE 2' - 0" MORE THAN DOOR FRAME WIDTH, UNO ON PLANS

S018 DOOR LANDING DETAIL
NOT TO SCALE



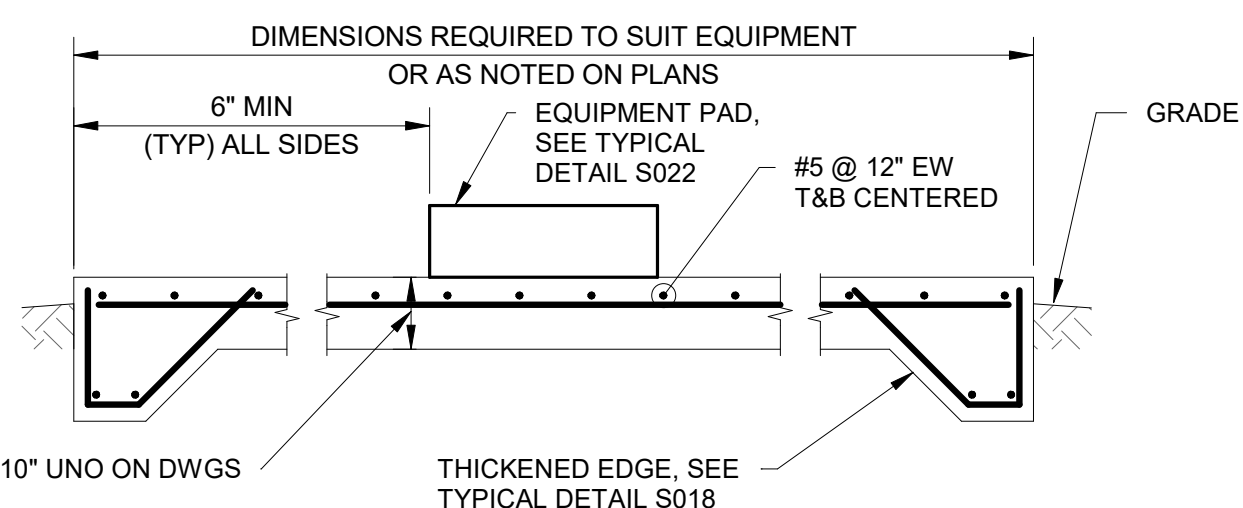
NOTE: IN LIEU OF SEPARATE HOOKED BAR, CONTRACTOR OPTION TO USE HRZ REINF WITH STD HOOK EACH END.

S019 WALL INTERSECTION / CORNER REINFORCING
NOT TO SCALE

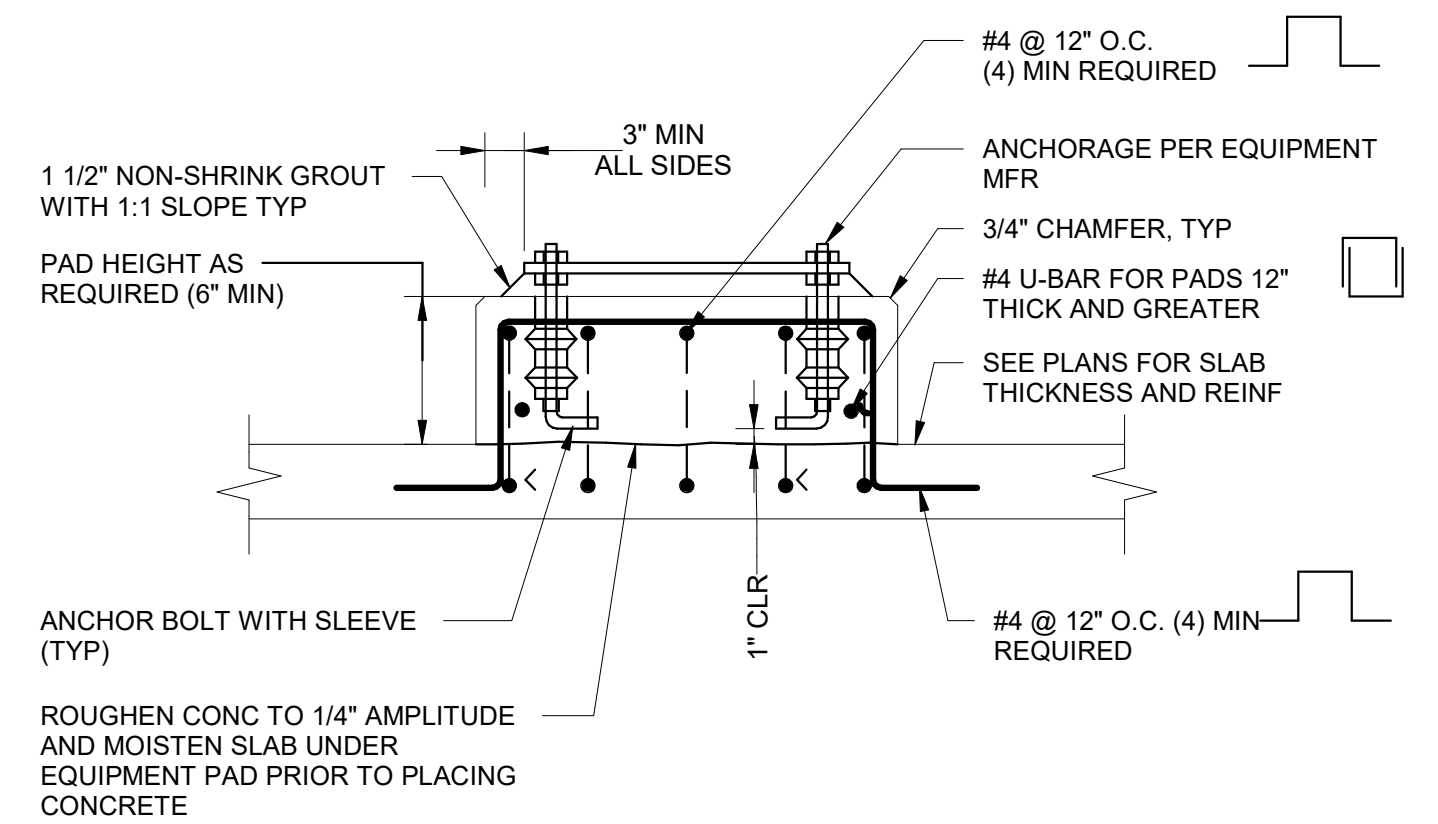


NOTES:
1. "T" = WALL THICKNESS SEE STRUCTURE DRAWING
2. "T1" = SLAB THICKNESS SEE STRUCTURE DRAWING

S020 WALL TO ELEVATED SLAB JOINT
NOT TO SCALE

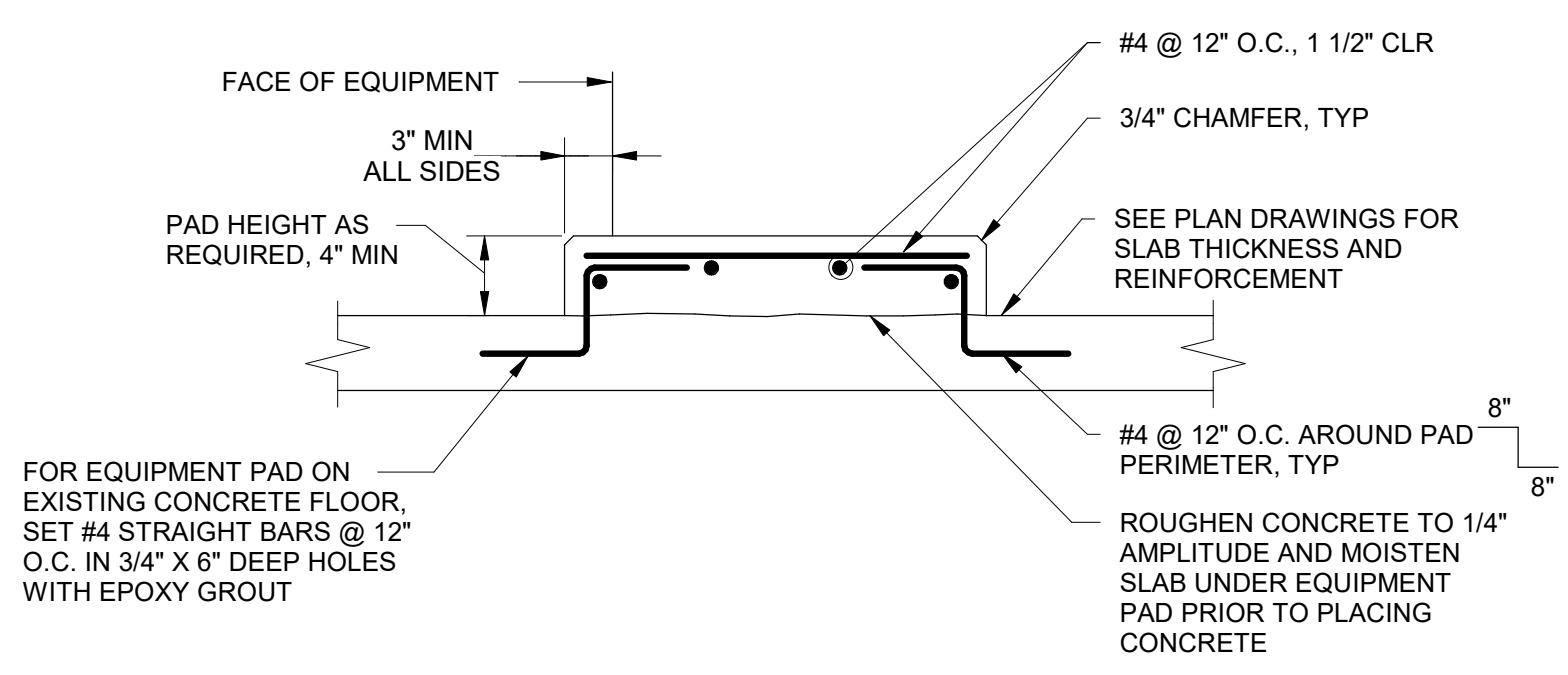


S021 EXTERIOR EQUIPMENT SLAB-ON-GRADE
NOT TO SCALE



S022 EQUIPMENT PAD DETAIL
NOT TO SCALE

- EQUIPMENT PAD NOTES:
- DIMENSIONS TO BE BASED ON VERTICAL AND LATERAL LOADING REQUIREMENTS. PROVIDE CONCRETE COVER FOR ALL ANCHOR BOLTS PER CRACKED CONCRETE REQUIREMENTS OF ACI-318.
 - THE SIZE, NUMBER, TYPE, LOCATION AND THE THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER. HOLD CONCRETE ANCHOR BOLTS IN POSITION WITH A TEMPLATE WHILE PAD IS BEING PLACED.
 - USE PIPE SLEEVES TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT AFTER EQUIPMENT IS INSTALLED.
 - PIPE SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN THE ANCHOR BOLT DIAMETER.
 - EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS NOTED OTHERWISE ON THE PLANS.
 - PROVIDE WEDGES OR SHIMS TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. THE WEDGES OR SHIMS THAT REMAIN IN PLACE SHALL NOT BE EXPOSED TO VIEW.



NOTE: DIMENSIONS TO BE BASED ON VERTICAL AND LATERAL LOADING REQUIREMENTS. PROVIDE CONCRETE COVER FOR ALL ANCHOR BOLTS PER CRACKED CONCRETE REQUIREMENTS OF ACI-318.

S023 HOUSEKEEPING PAD
NOT TO SCALE

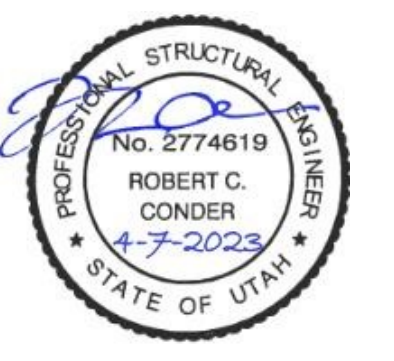


PROJECT
PROVO RIVER WATER TREATMENT PLANT

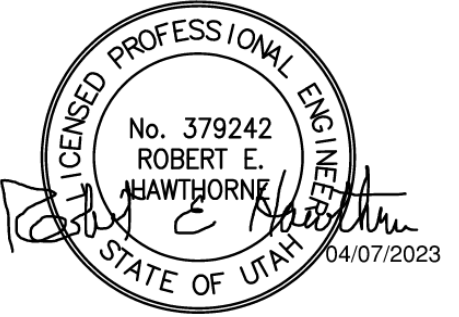
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PROVO CITY PUBLIC WORKS
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Provo, UT 84606
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REGISTRATION



ISSUE/REVISION		
C	2023-04-07	ISSUED FOR BID
B	2023-01-20	ISSUED FOR 90%
A	2022-10-14	ISSUED FOR 60%
I/R	DATE	DESCRIPTION

PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

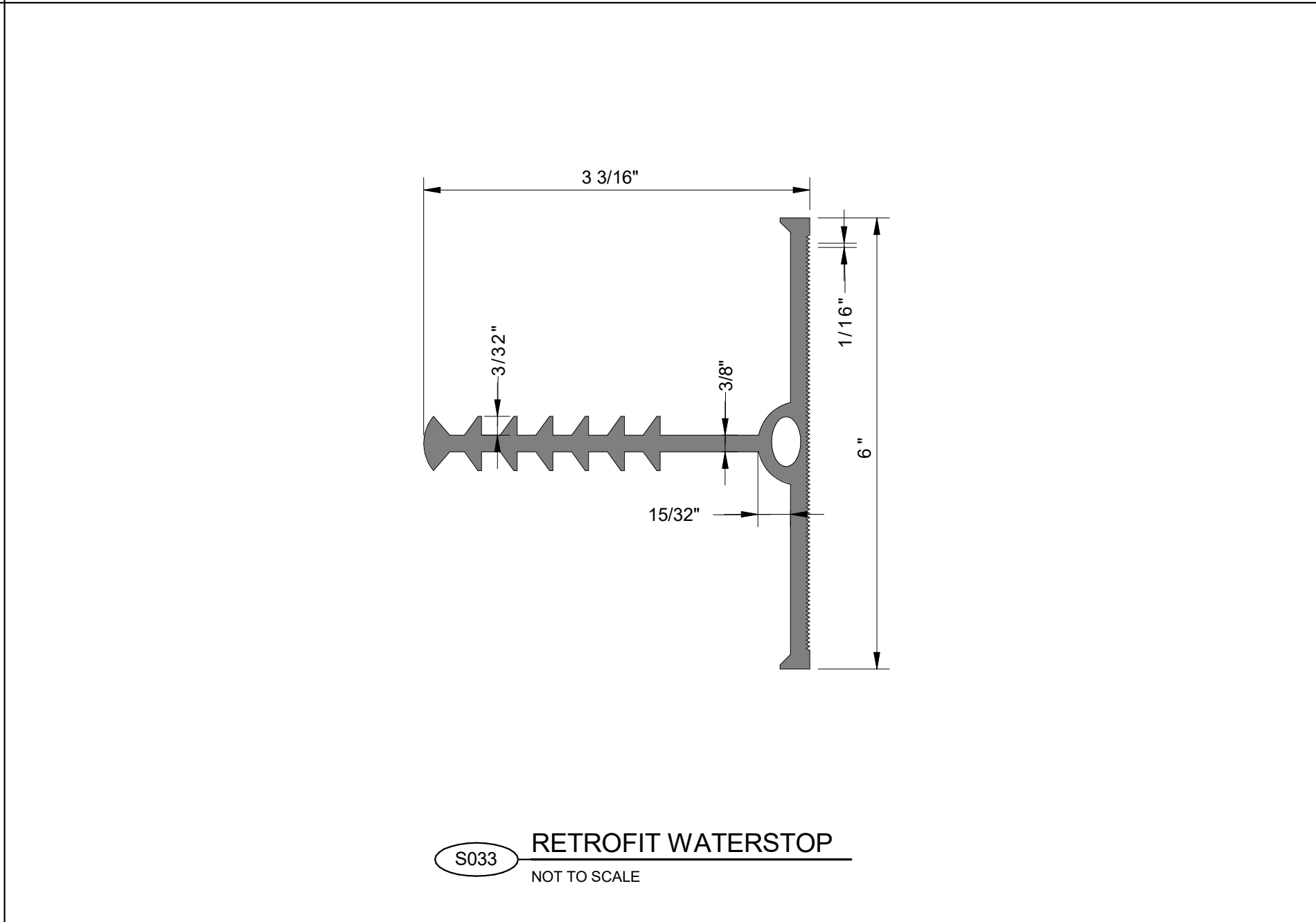
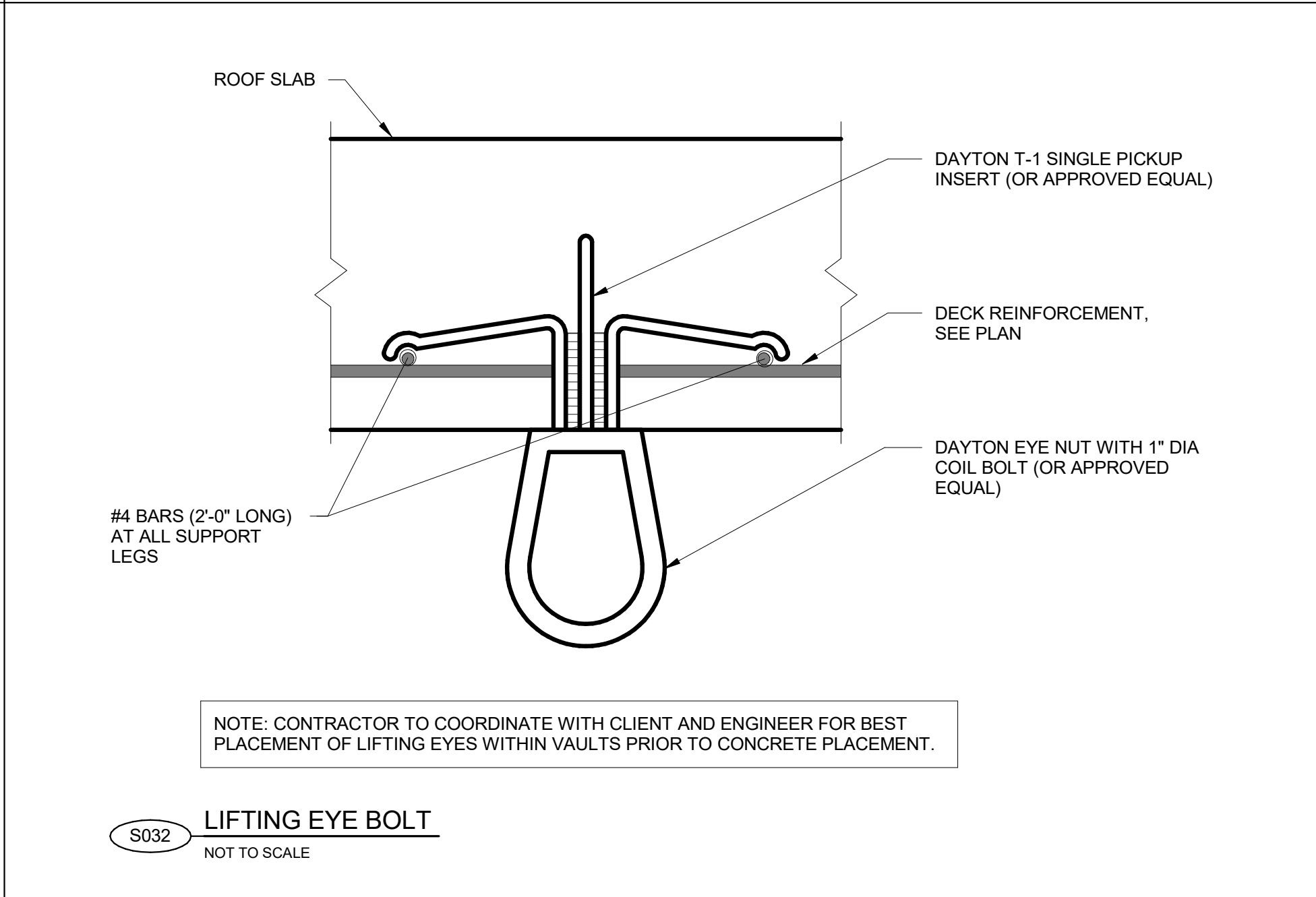
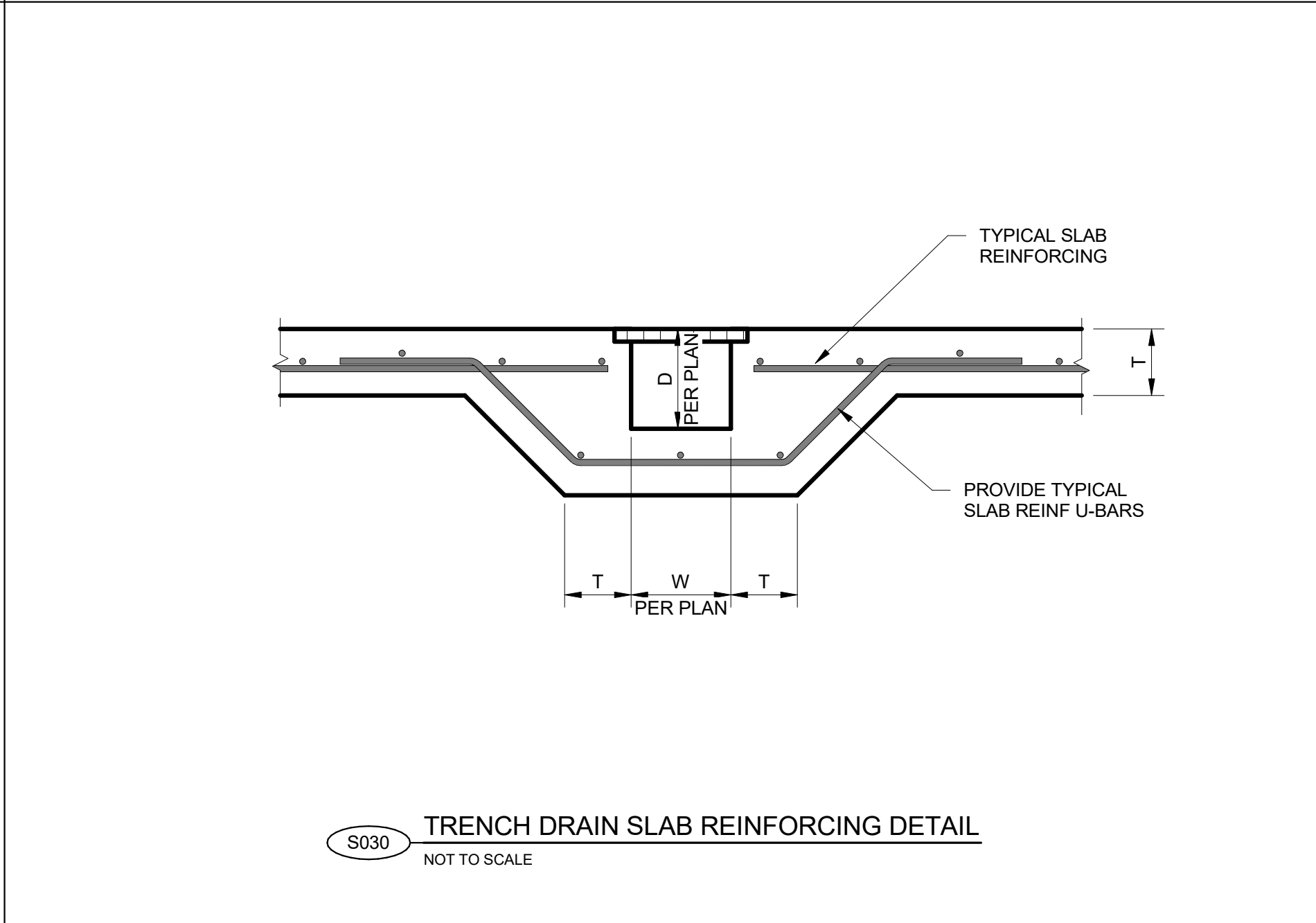
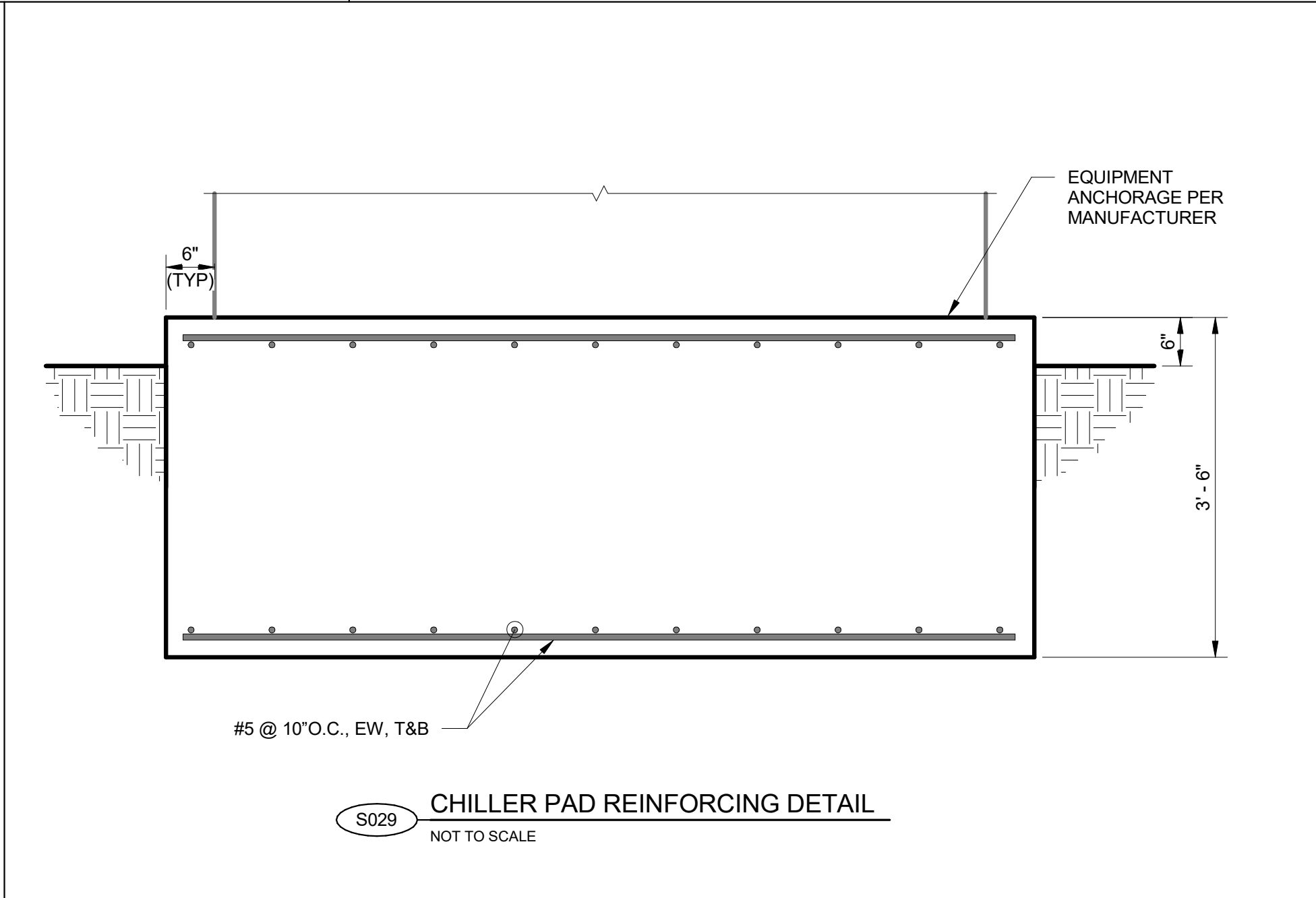
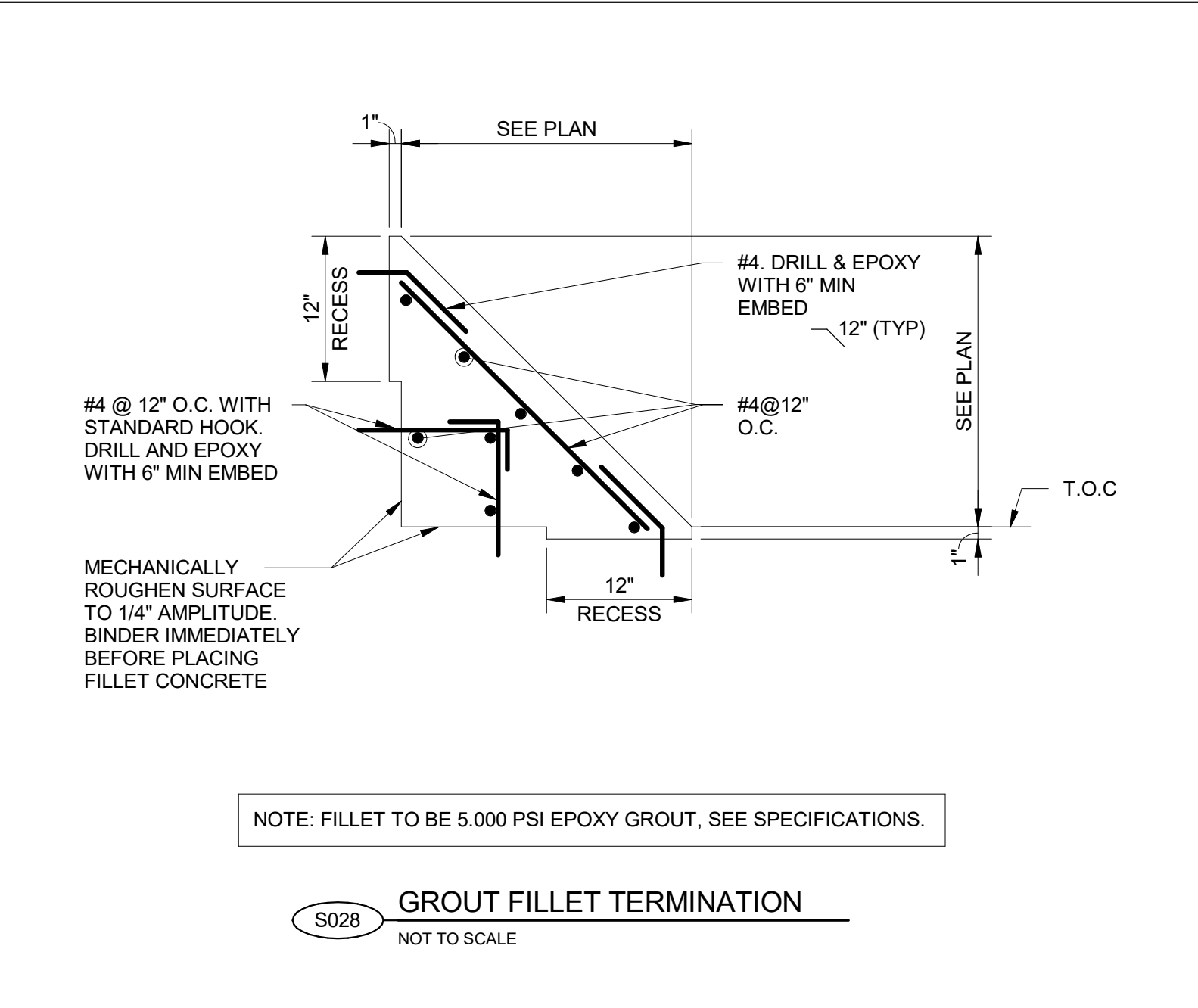
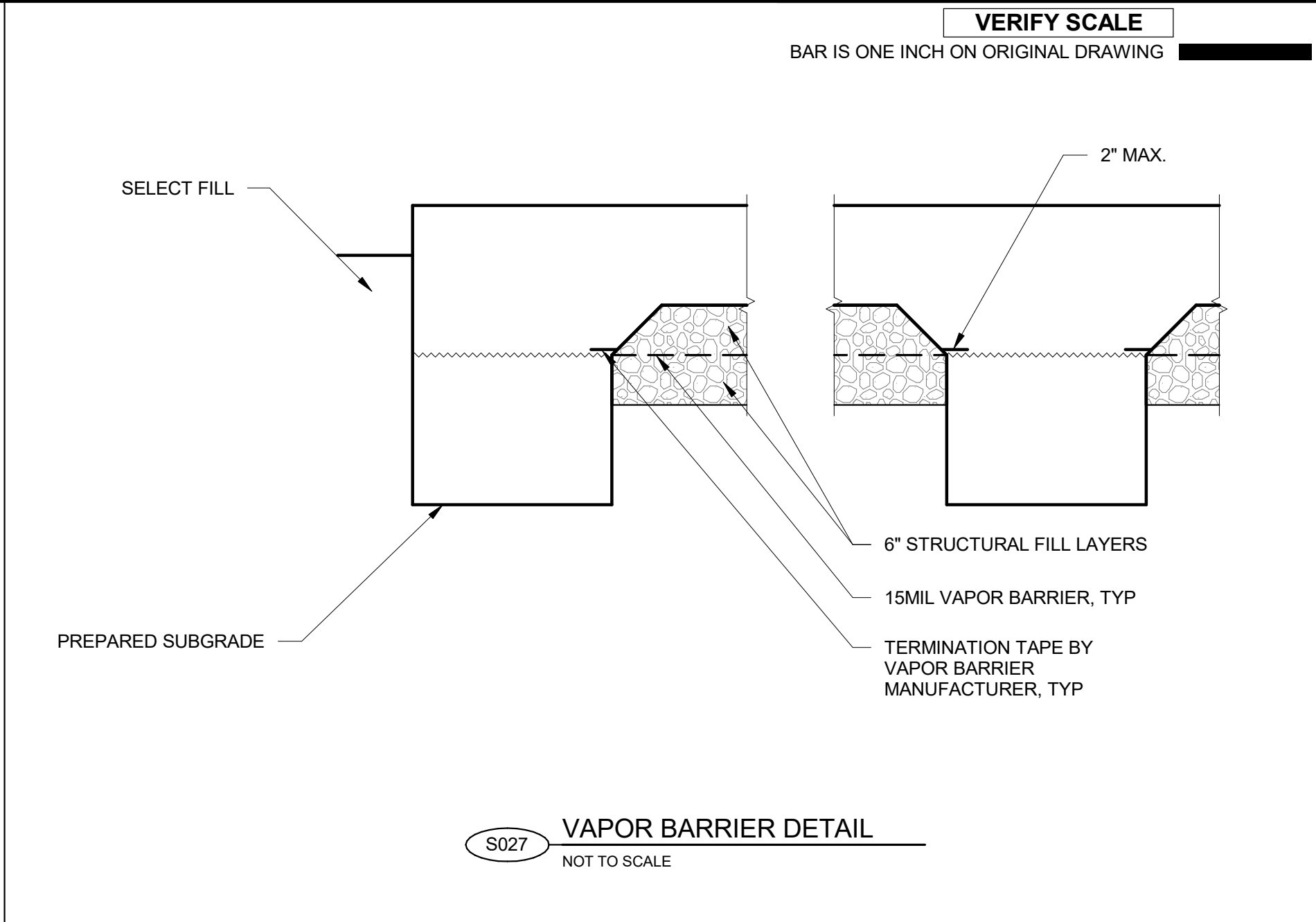
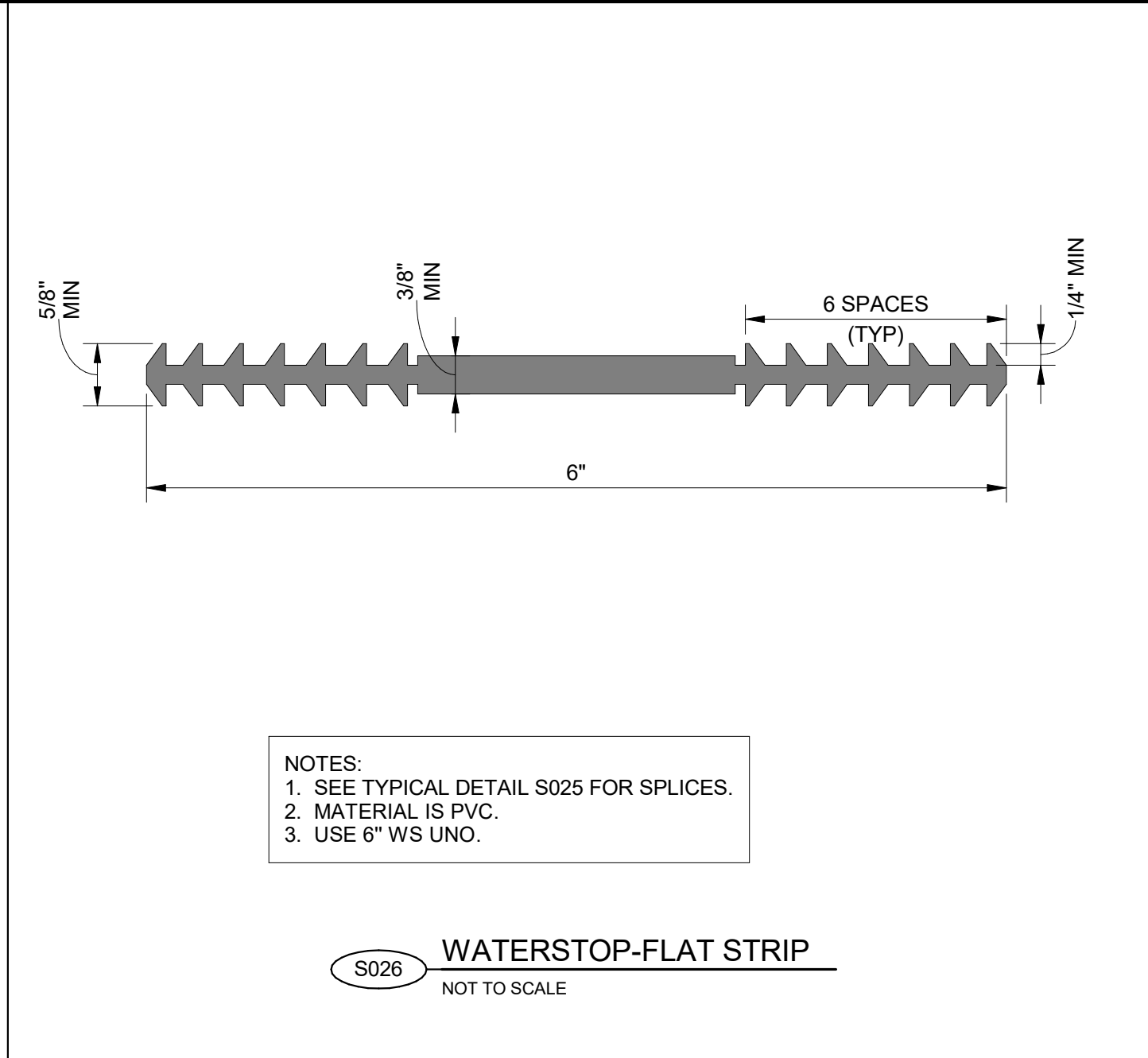
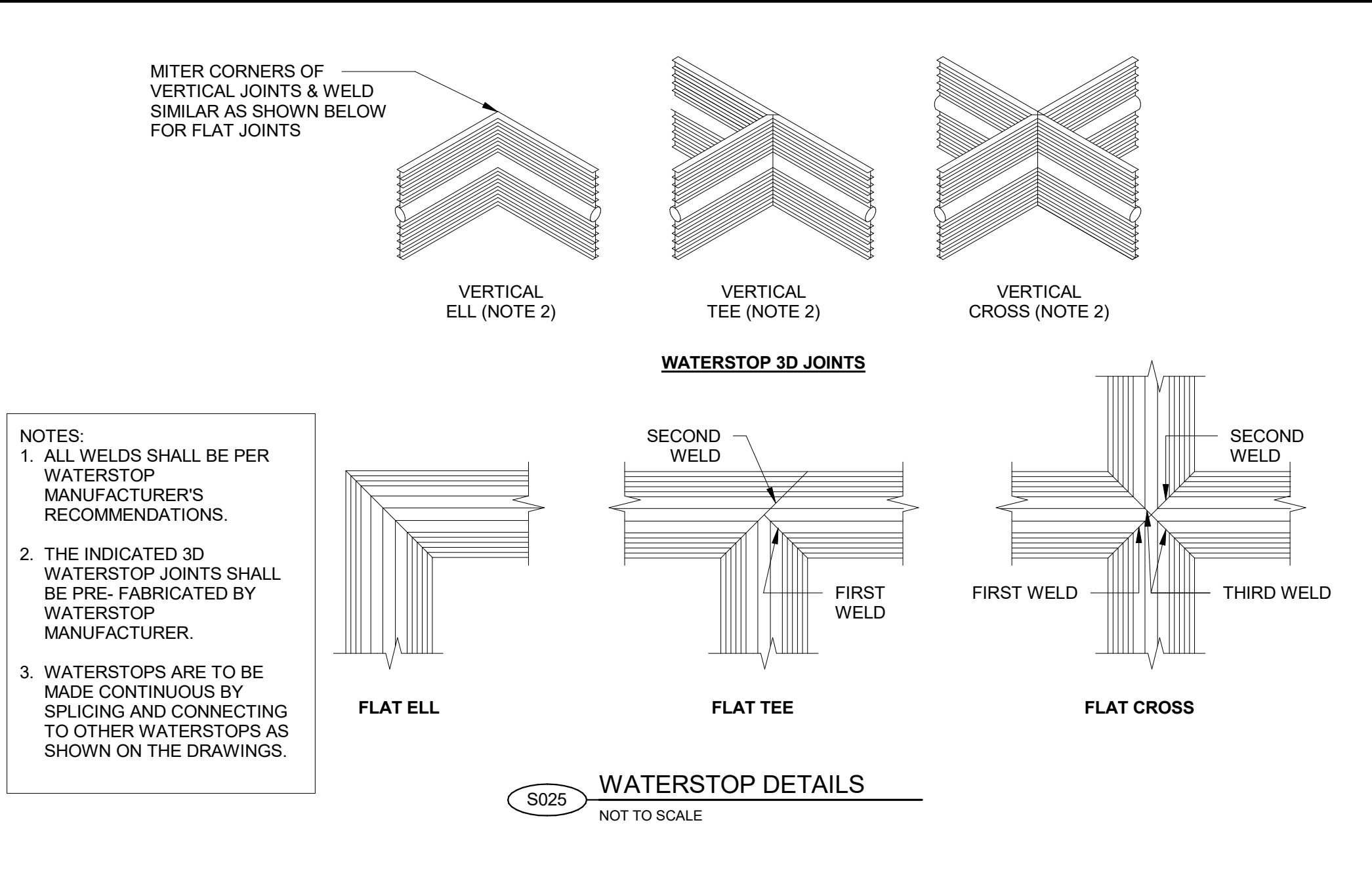
SHEET TITLE

STRUCTURAL TYPICAL DETAILS SHEET 2

DRAWING NUMBER
99-S702

ANSI D 22" x 34" Approved: B HODGSON Checked: R HAWTHORNE Designer: R YOUNG Drafter: R PITTMAN Project Manager: J KRINKS

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PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

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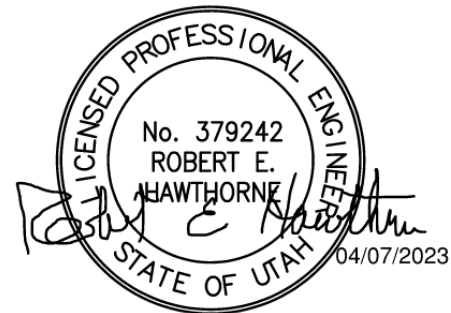
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ISSUE/REVISION

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D	2023-06-09	ISSUED FOR BID - REV 1
C	2023-04-07	ISSUED FOR BID
B	2023-01-20	ISSUED FOR 90%
A	2022-10-14	ISSUED FOR 60%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

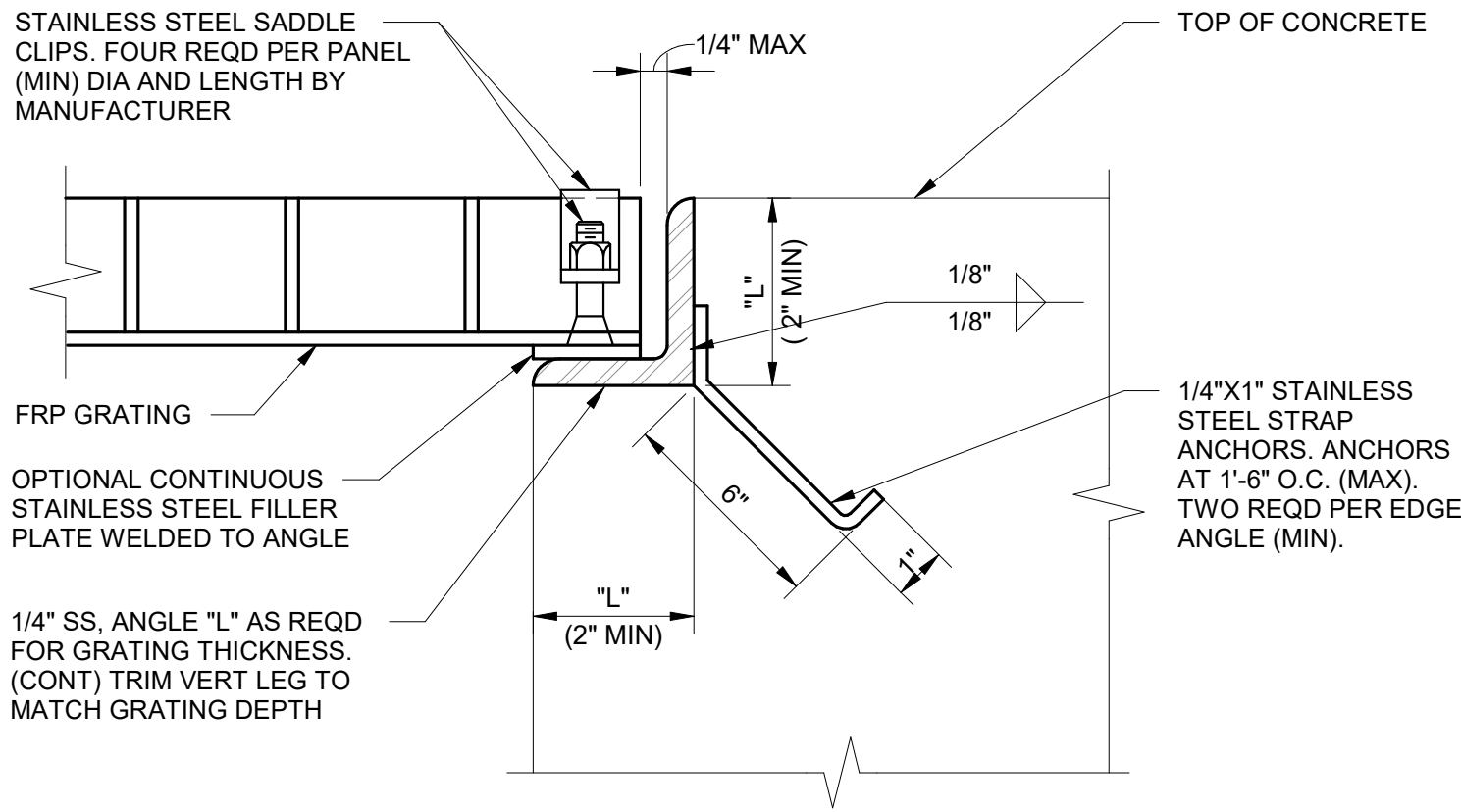
STRUCTURAL
TYPICAL DETAILS
SHEET 3

DRAWING NUMBER

99-S703

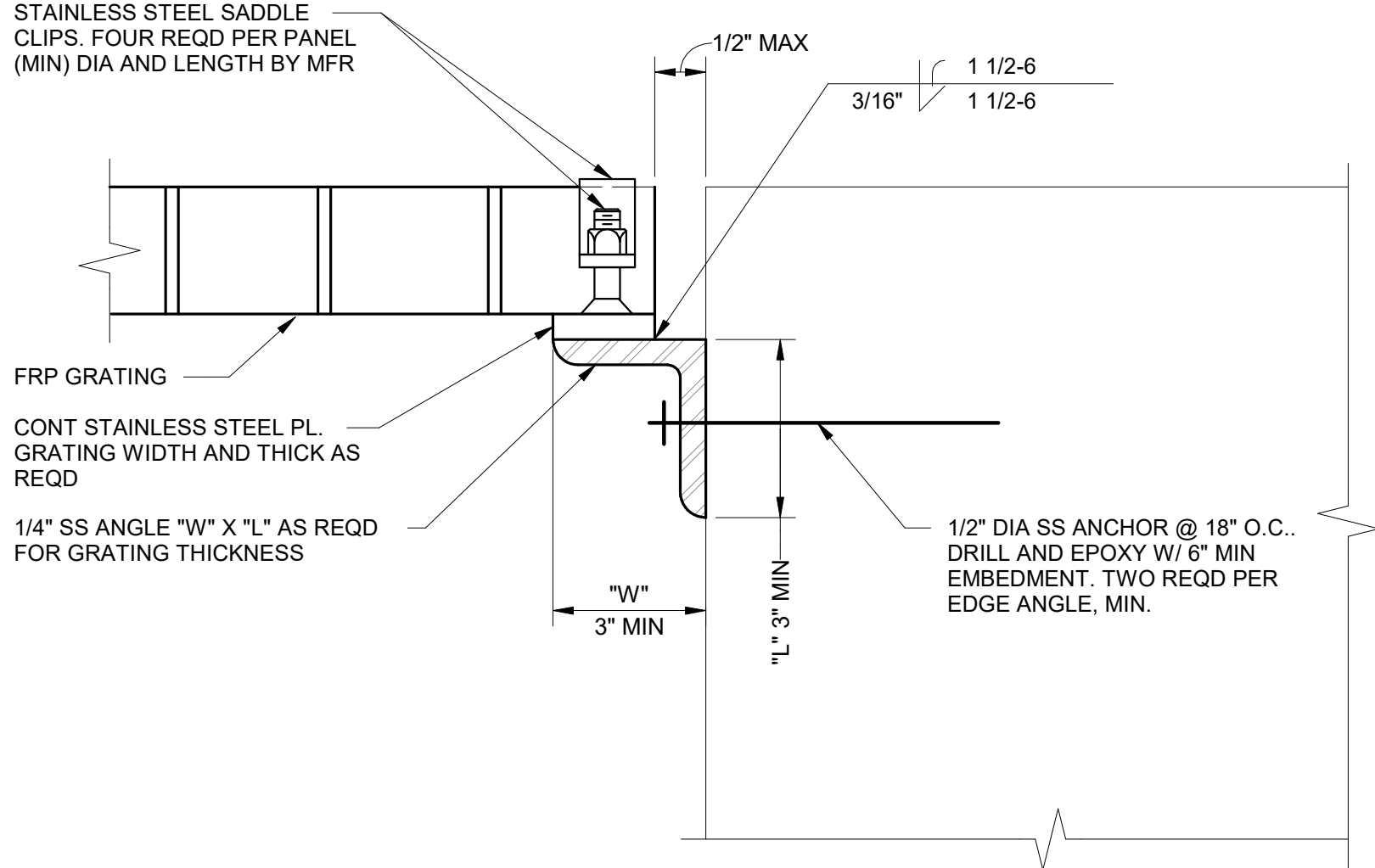
ANSI D 22" x 34" Approved: B HODGSON Checked: R HAWTHORNE Designer: R YOUNG Drafter: R PITTMAN Project Manager: J KRINKS

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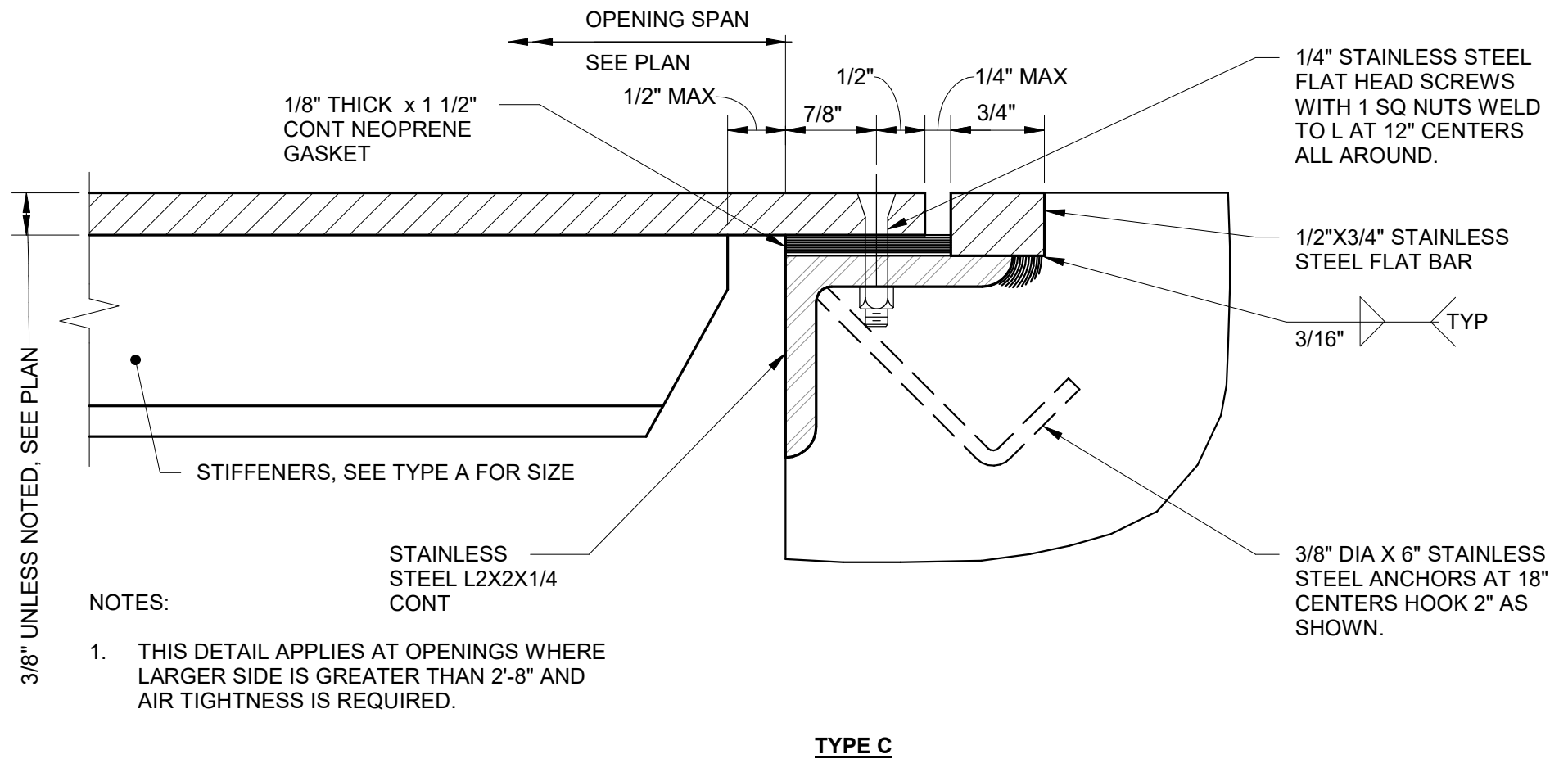
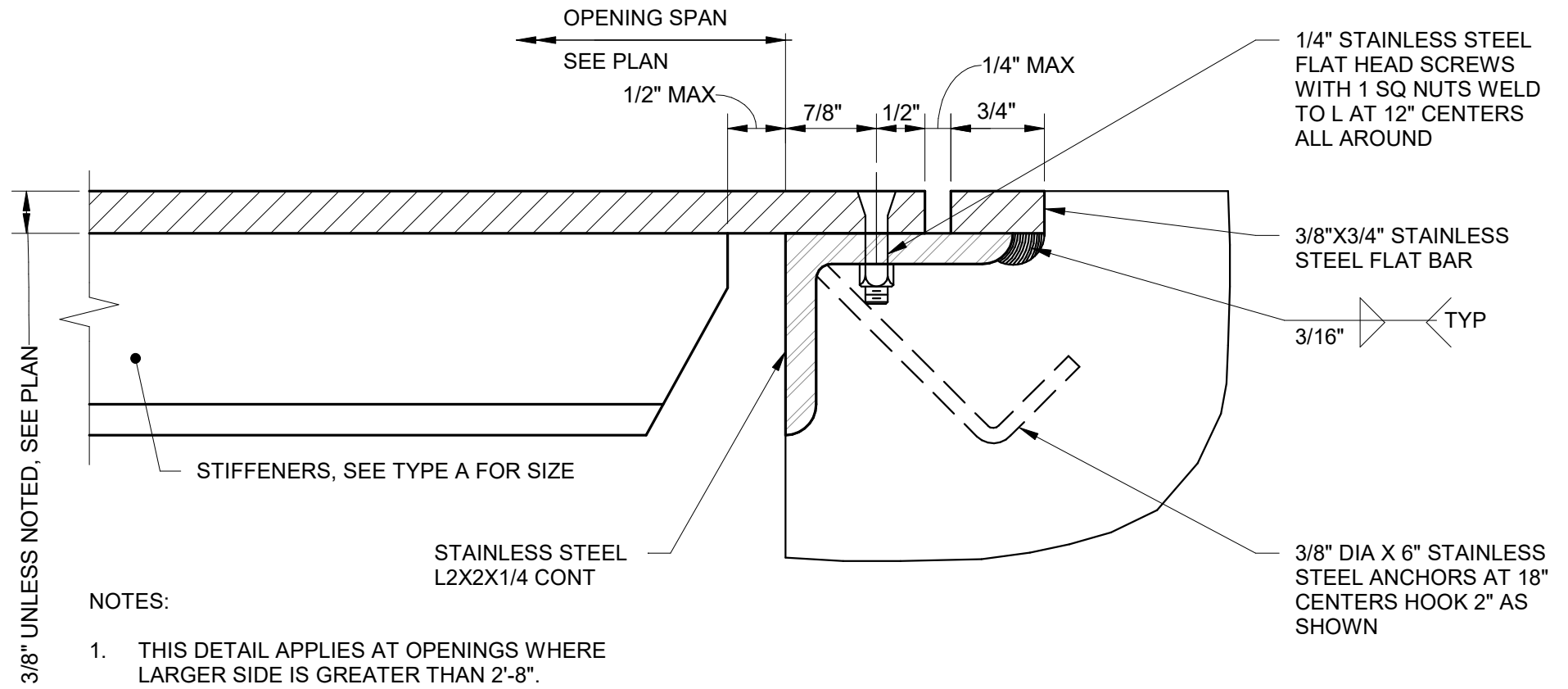
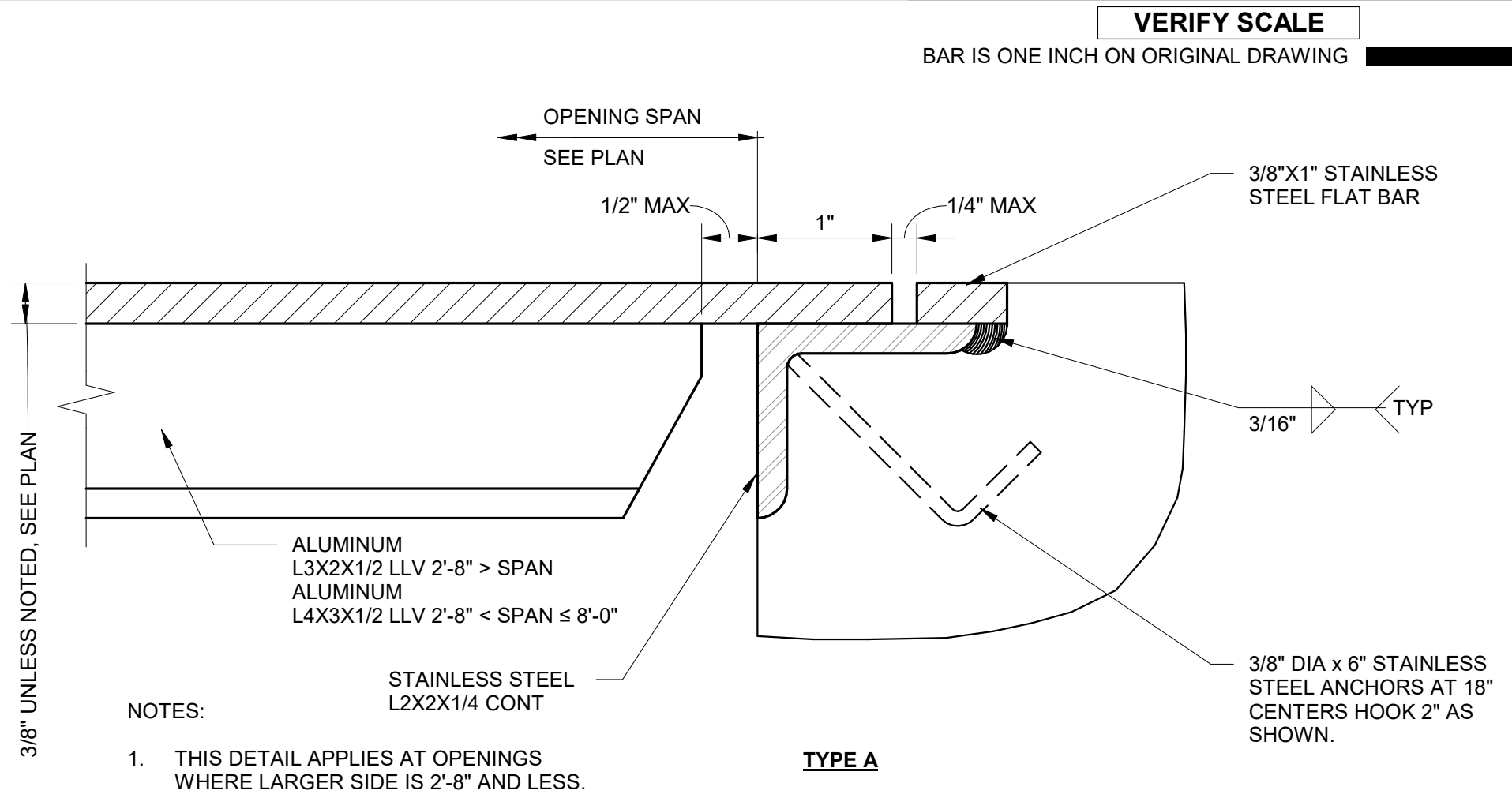
NOTE: ALL DIMENSIONS ARE TO BE COORDINATED WITH GRATING MFR.

S035 GRATING EDGE DETAIL
NOT TO SCALE



NOTE: ALL DIMENSIONS ARE TO BE COORDINATED WITH GRATING MFR.

S036 GRATING FLUSH SUPPORT
NOT TO SCALE



- NOTES:
- COVER PLATE AND STIFFENERS SHALL BE ALUMINUM PLATES & ANGLES.
 - COVER PLATES SHALL HAVE APPLICABLE LIFTING EYES.
 - STIFFENERS SHALL BE PLACED LONG LEG VERTICAL.
 - STIFFENERS SHALL BE PARALLEL TO THE SHORT EDGE OF OPENINGS.
 - THESE DETAILS ARE APPLICABLE TO NORMAL PROCESS LOADS ONLY.

S037 CHECKER PLATE SUPPORT
NOT TO SCALE



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

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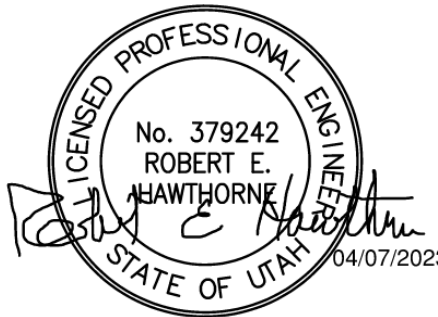


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HAL Project No. - 035.15.420

SHEET TITLE

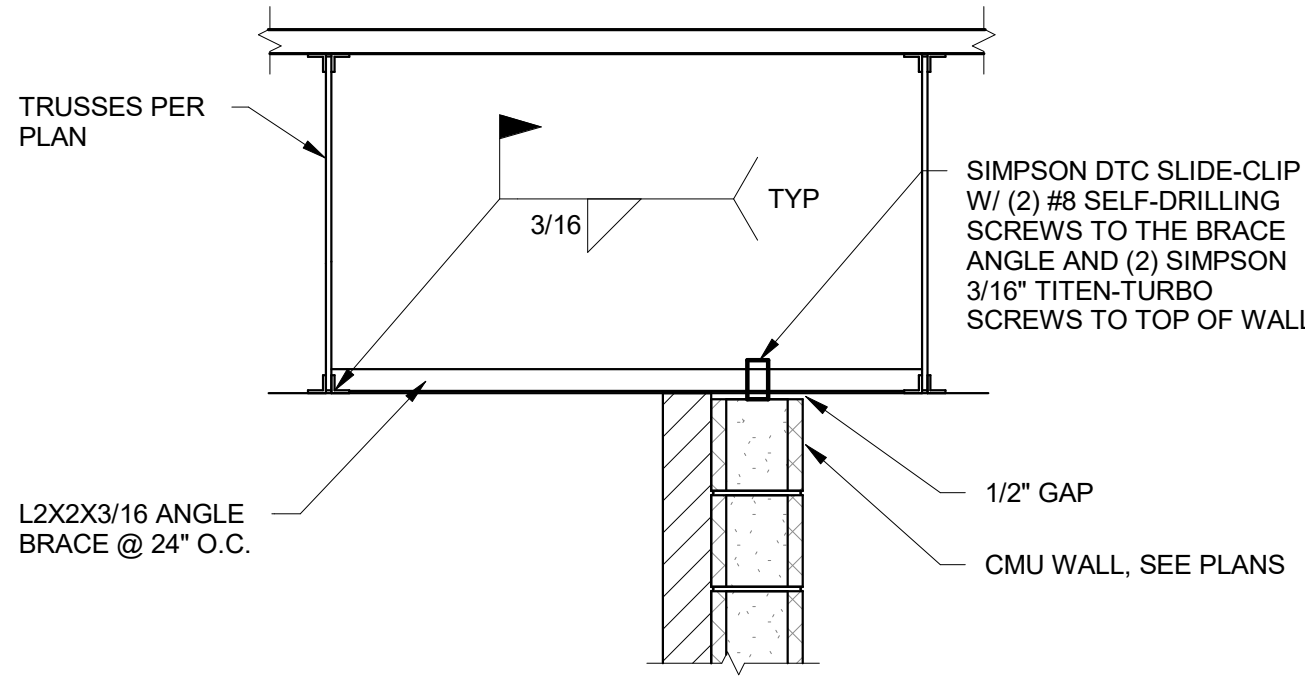
STRUCTURAL
TYPICAL DETAILS
SHEET 4

DRAWING NUMBER

99-S704

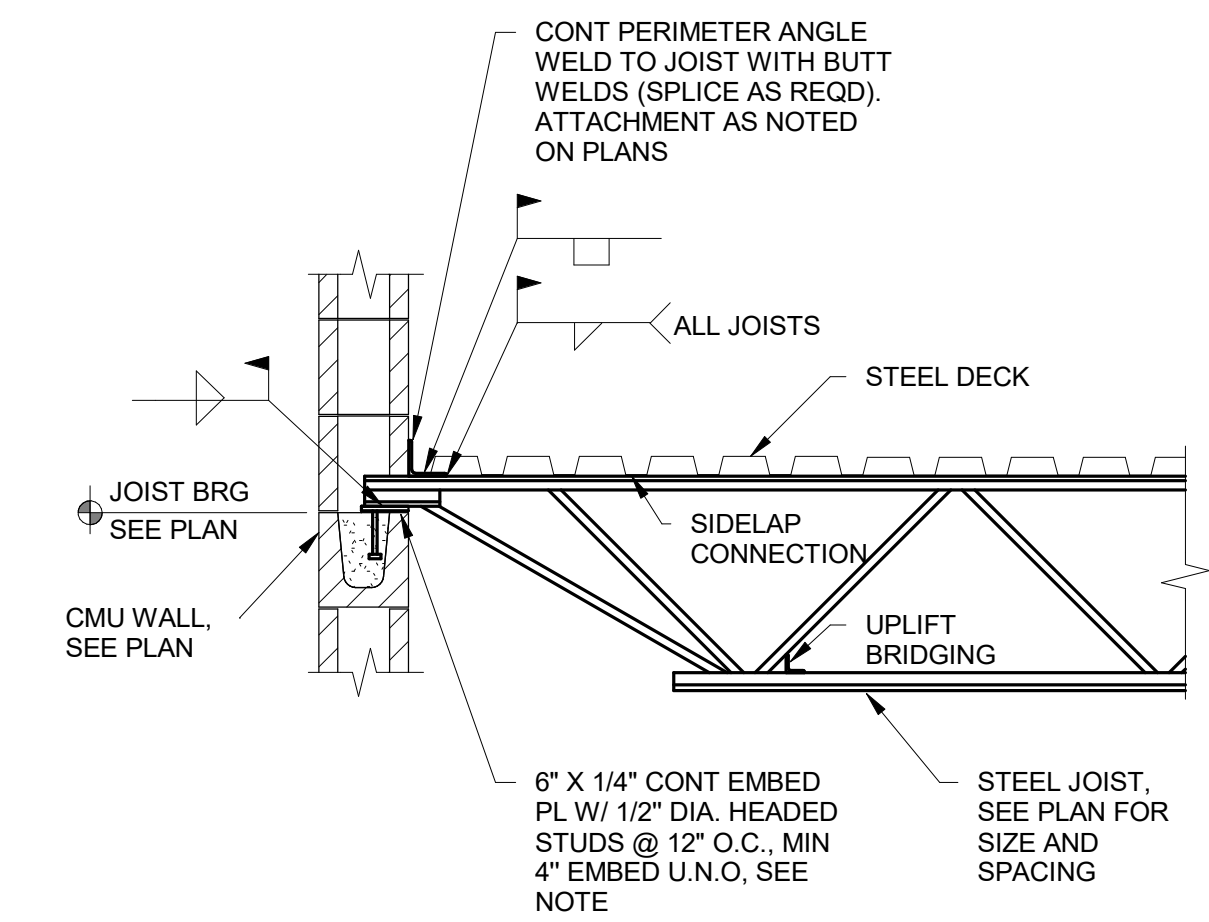
ANSI D 22" x 34" Approved: B HODGSON Checked: R HAWTHORNE Designer: R YOUNG Drafter: R PITTMAN Project Manager: J KRINKS

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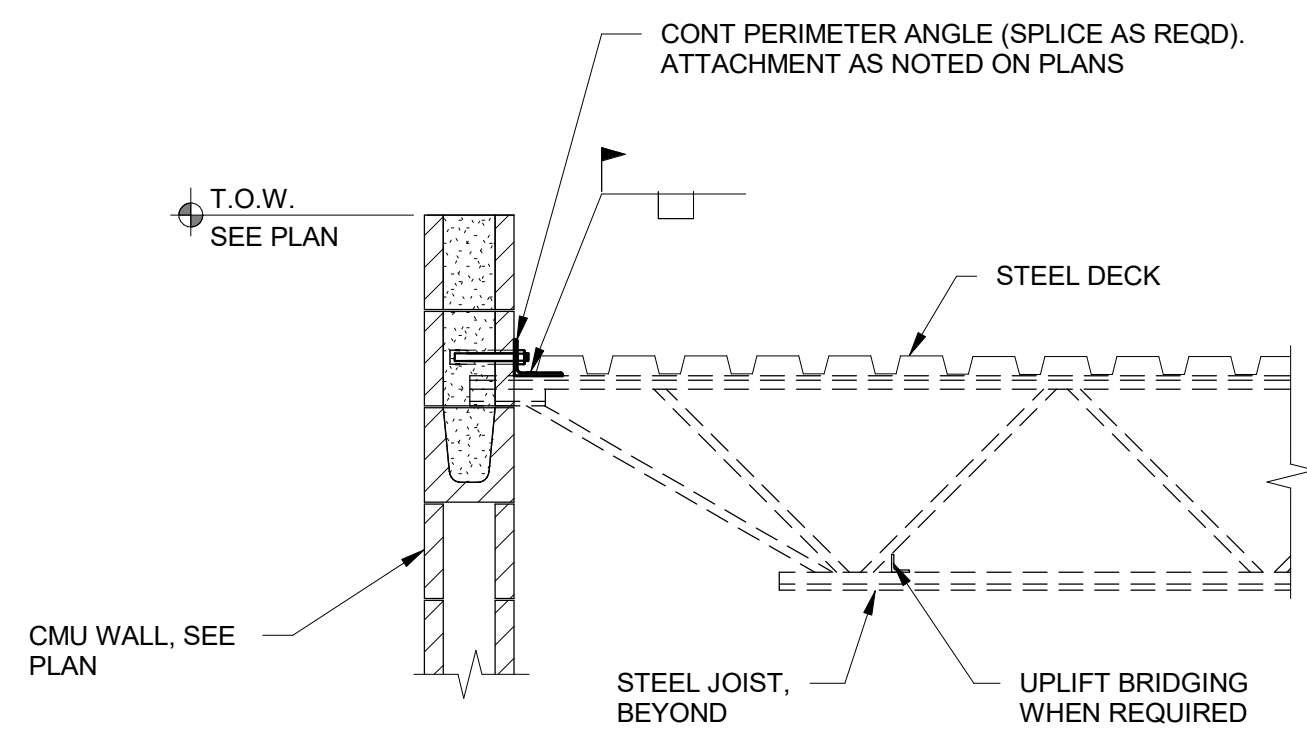
NOTE: SIMILAR DETAIL MAY BE USED FOR WALL PERPENDICULAR TO ROOF TRUSSES, EXCEPT CLIP MAY BE ATTACHED TO EACH TRUSS AND THEN AN ANGLE IS TO BE ADDED PARALLEL WITH THE WALL SUCH THAT THE CLIPS MAY BE ADDED AT 24\"/>

S055 INTERIOR WALL BRACING
NOT TO SCALE

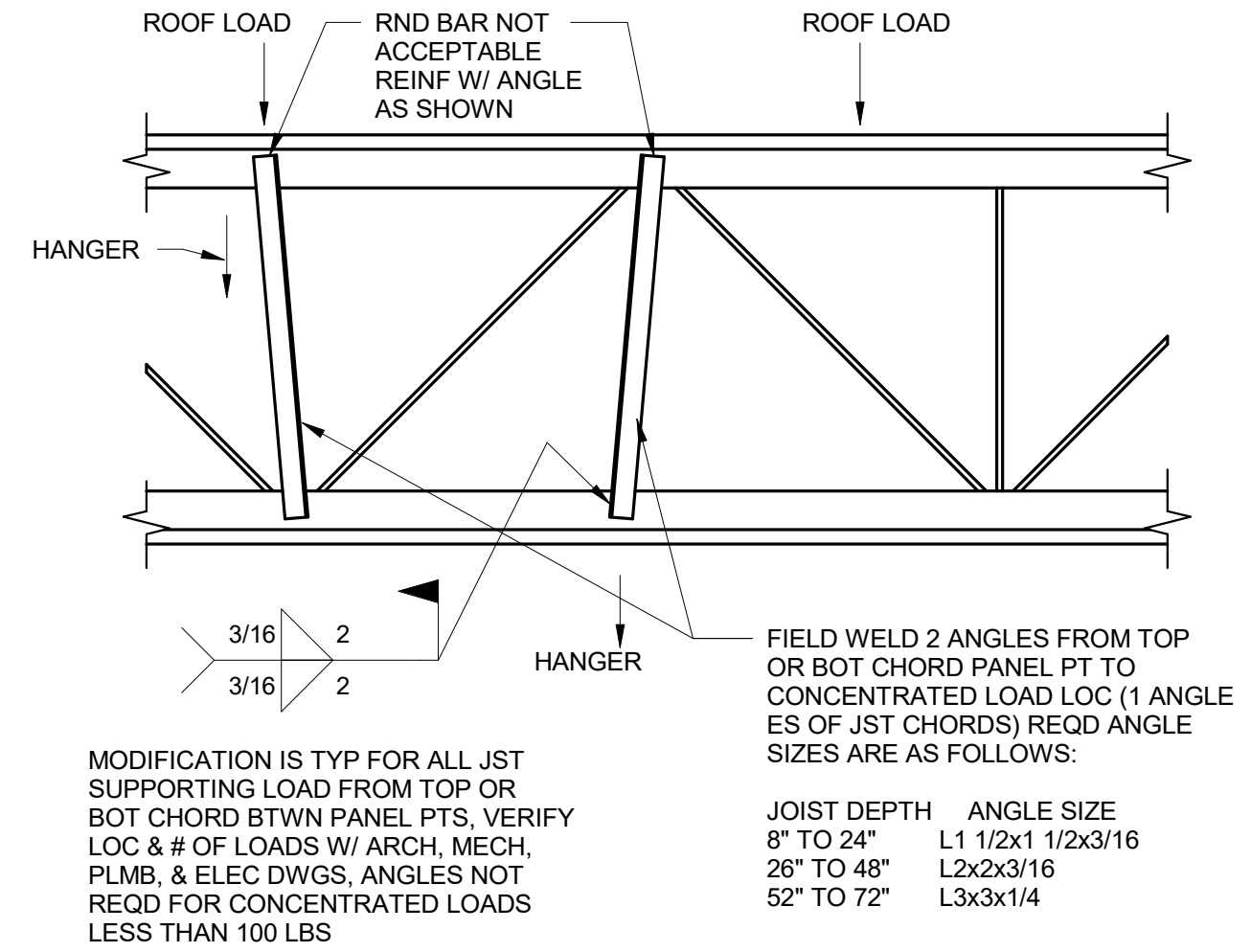


NOTE: CONTRACTOR MAY PROPOSE ALTERNATE CONNECTION DESIGNED PER LOADS SHOWN ON PLANS

S059 JOIST BEARING
NOT TO SCALE

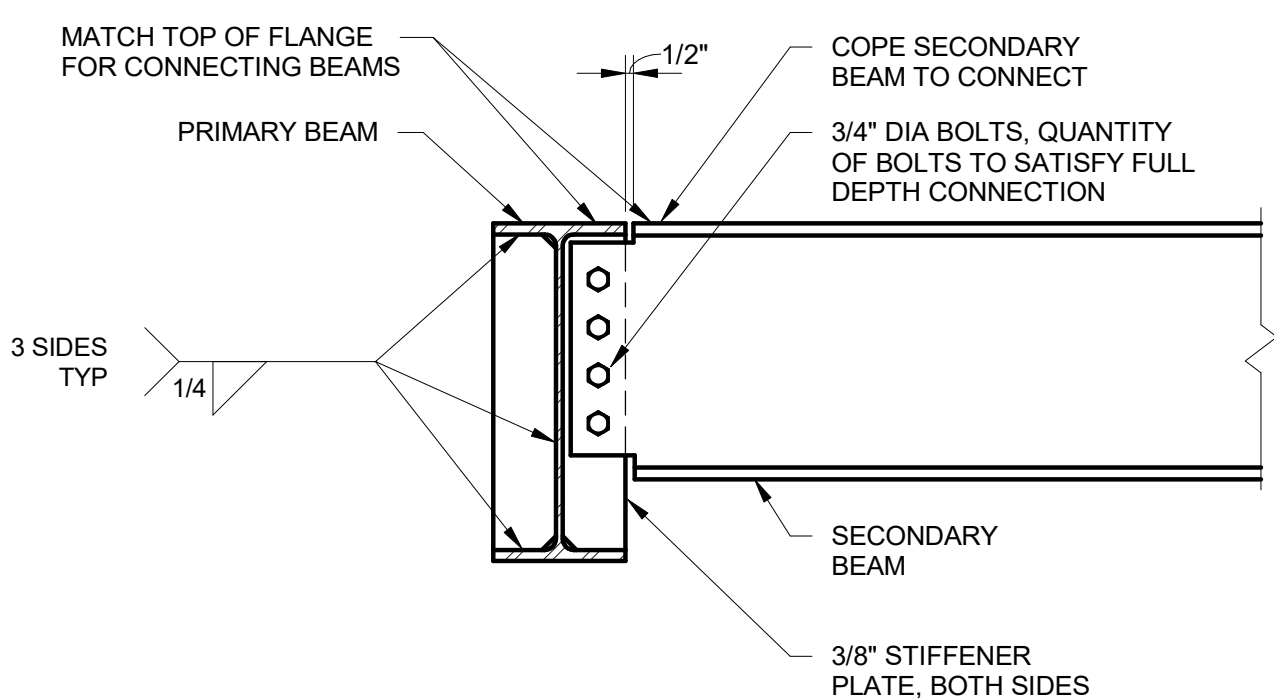


S060 DECK CONNECTION BETWEEN JOISTS
NOT TO SCALE

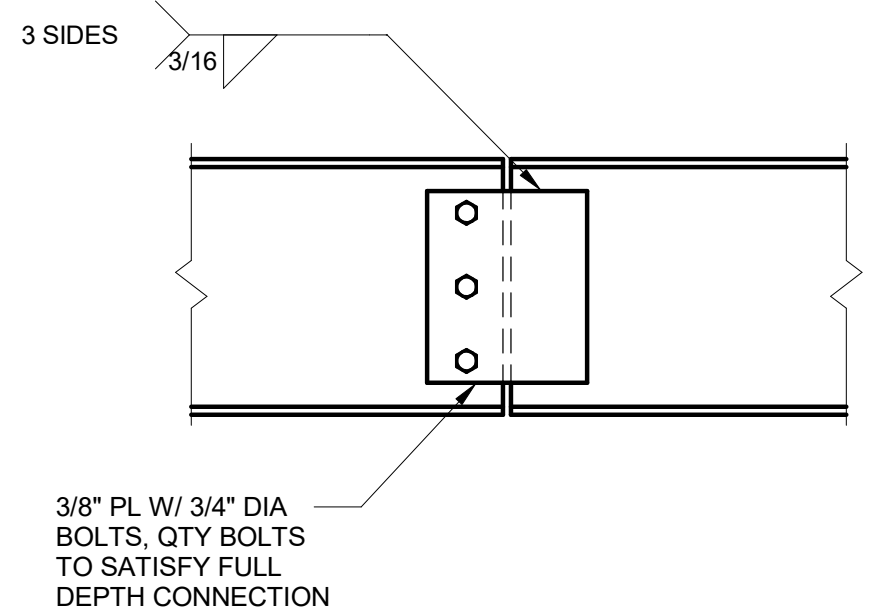


JOIST DEPTH	ANGLE SIZE
8" TO 24"	L1 1/2x1 1/2x3/16
26" TO 48"	L2x2x3/16
52" TO 72"	L3x3x1/4

S061 TYPICAL JOIST MODIFICATION AT CONCENTRATED LOADS
NOT TO SCALE

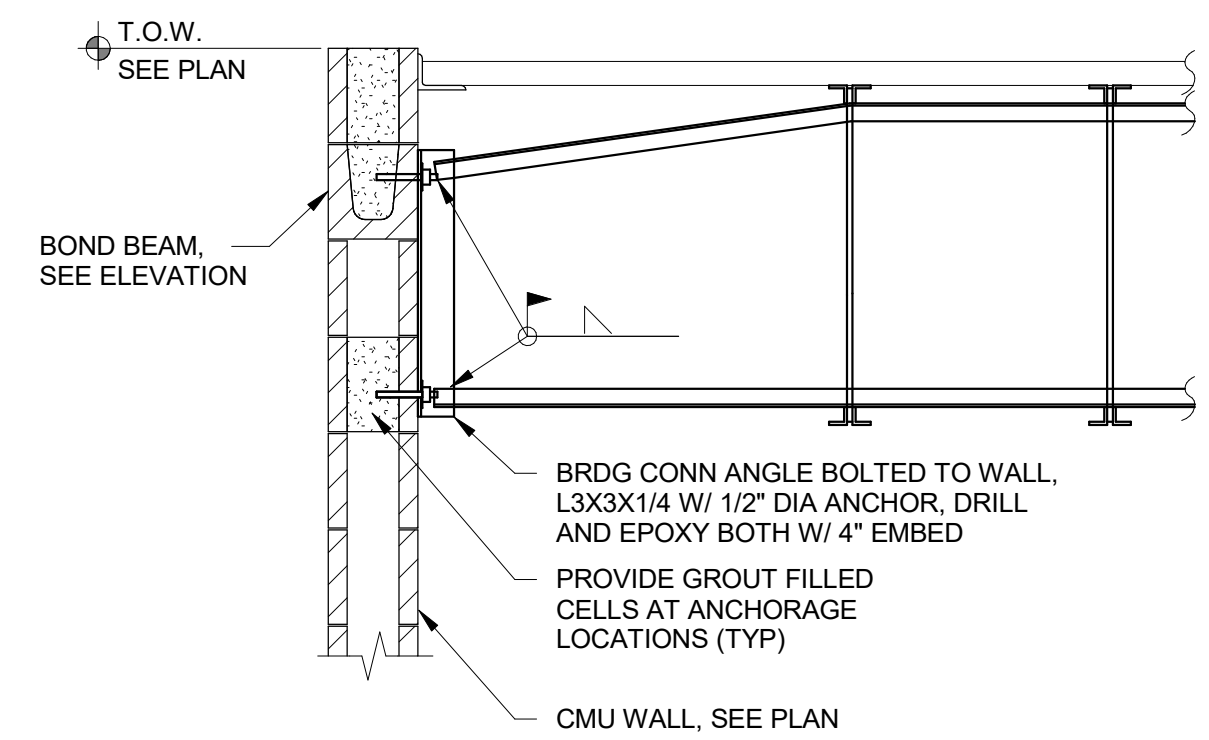


S063 BEAM TO BEAM CONNECTION DETAIL
NOT TO SCALE

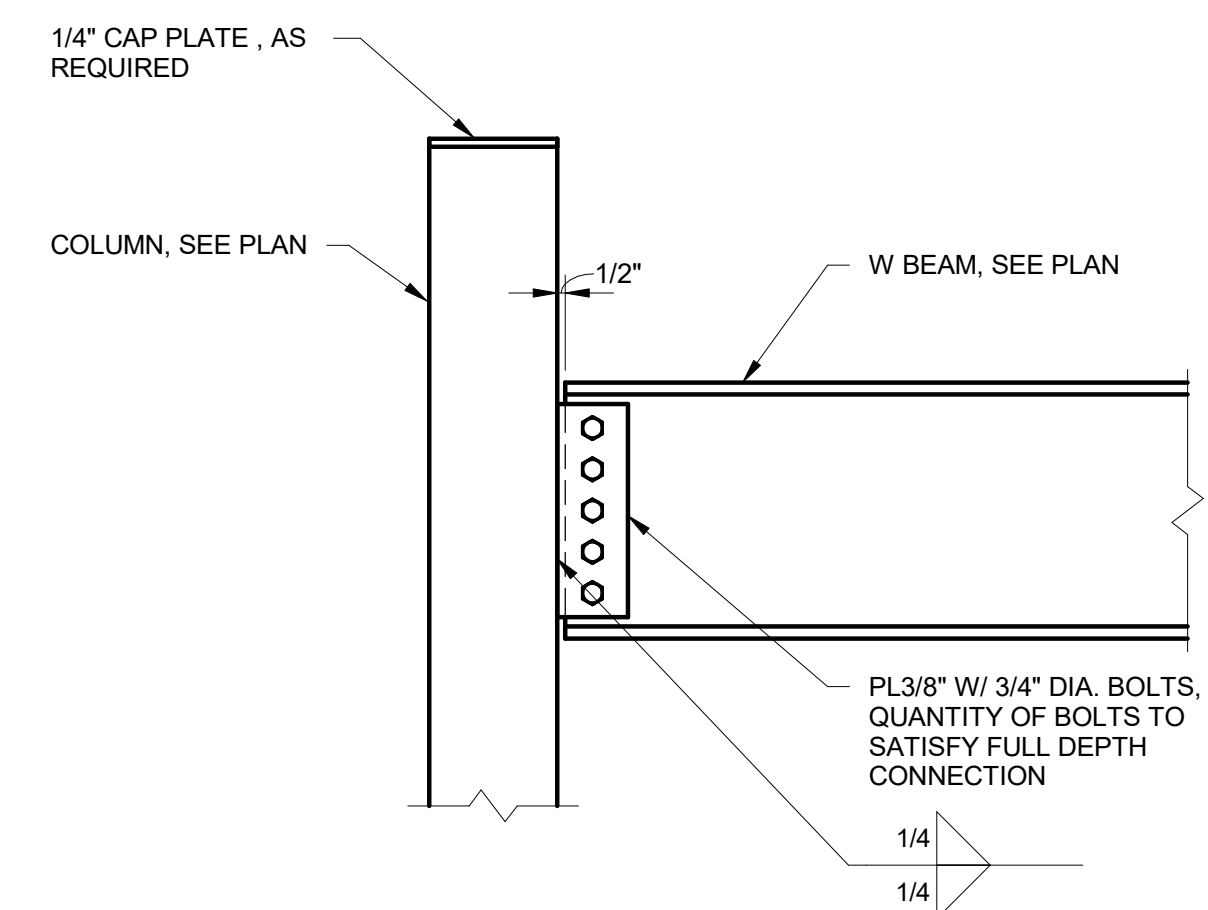


NOTE: BEAM SPLICES TO ONLY OCCUR AT THOSE LOCATIONS INDICATED ON PLANS.

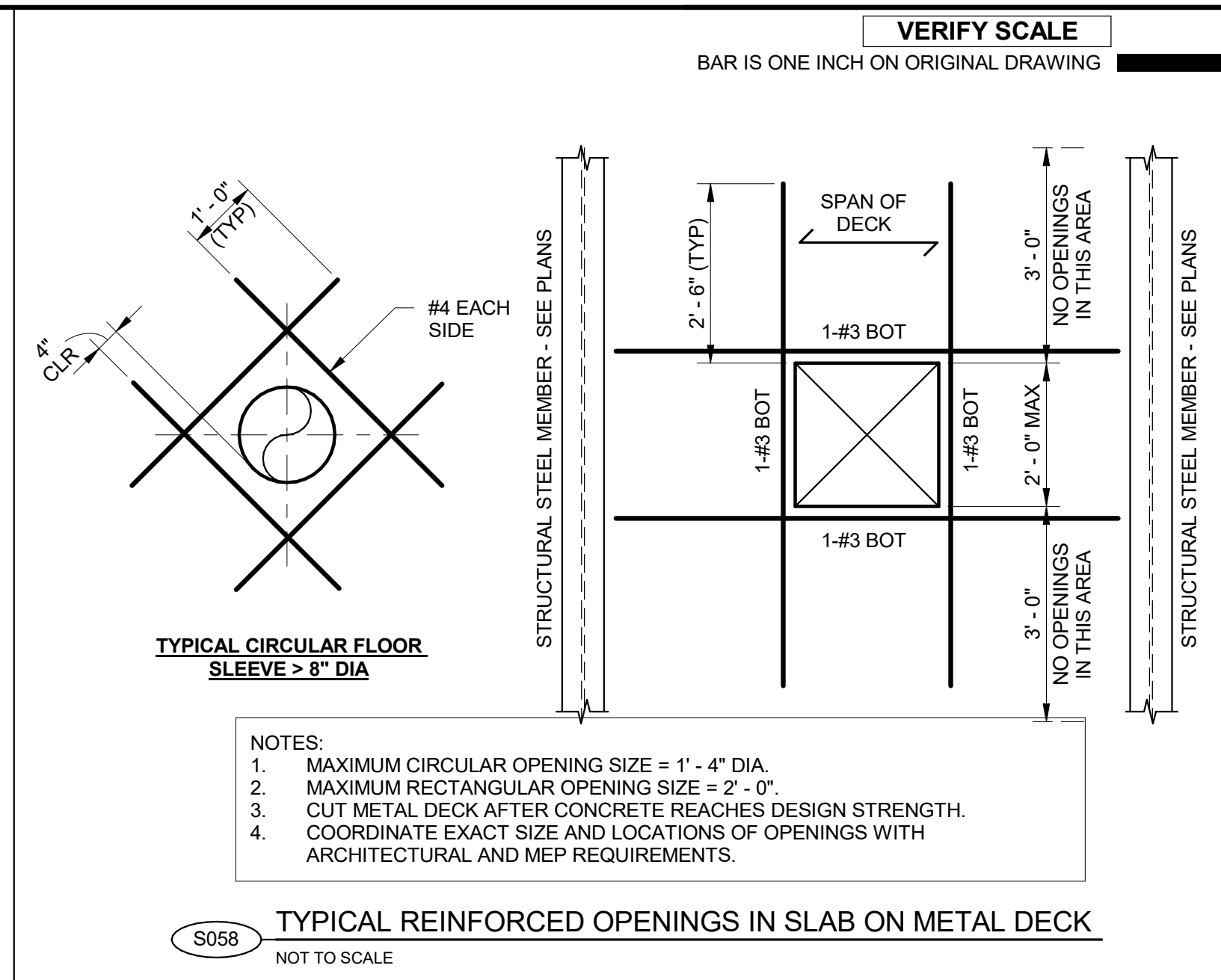
S064 BEAM SPLICE DETAIL
NOT TO SCALE



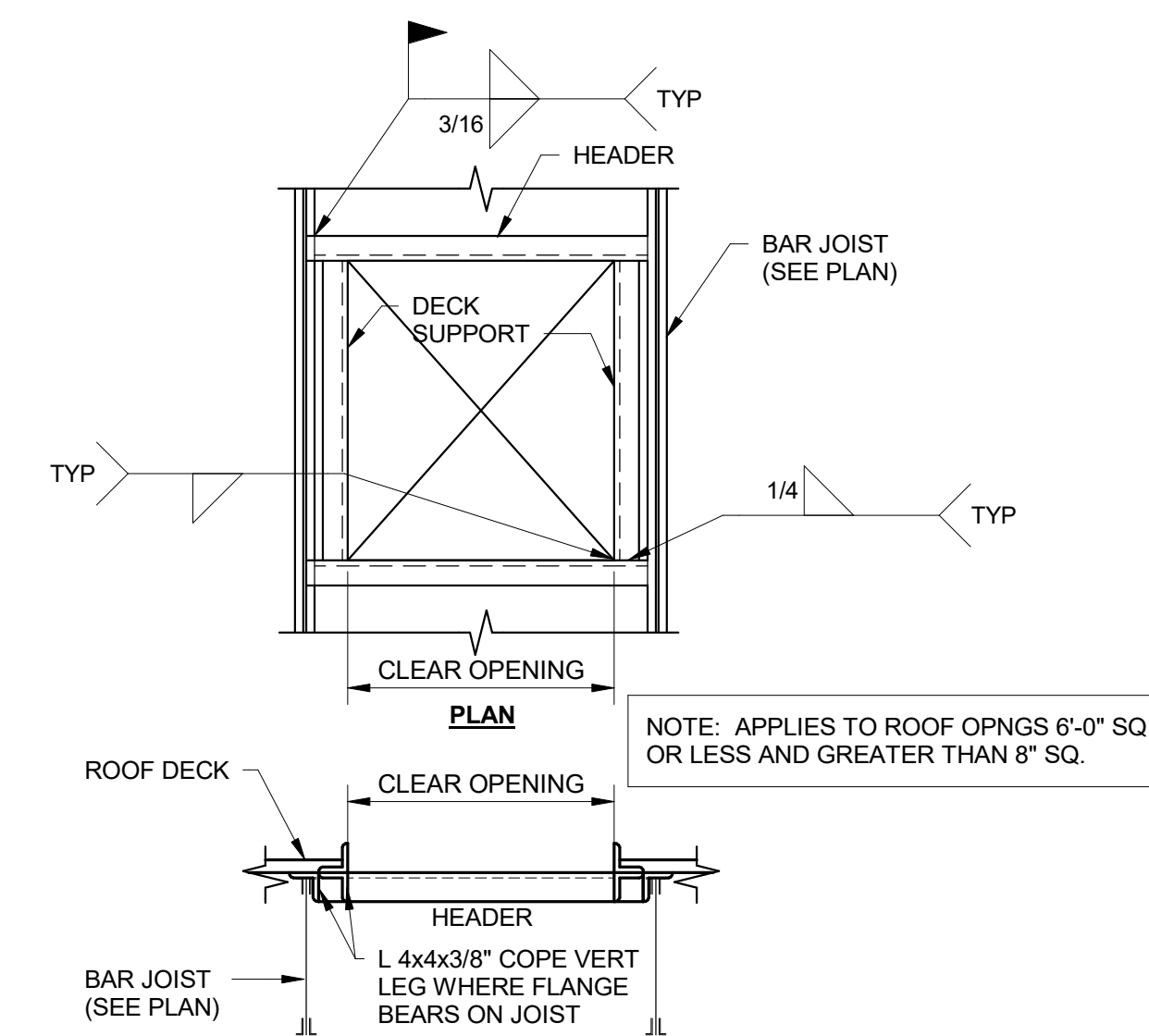
S065 BRIDGING CONNECTION
NOT TO SCALE



S066 BEAM TO COLUMN CONNECTION DETAIL
NOT TO SCALE



S058 TYPICAL REINFORCED OPENINGS IN SLAB ON METAL DECK
NOT TO SCALE



S062 TYPICAL ROOF OPENING
NOT TO SCALE

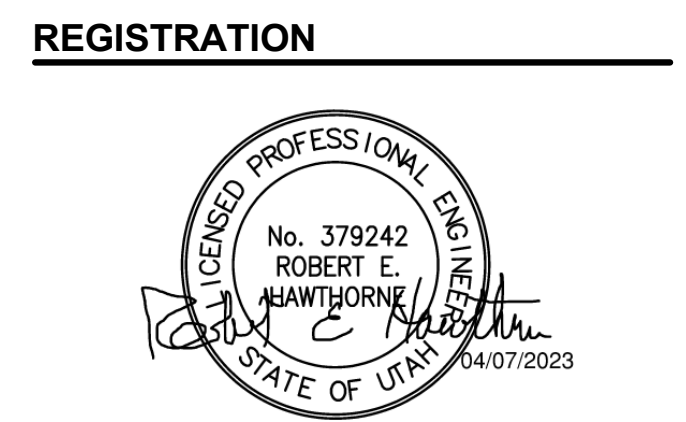


PROJECT
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WATER TREATMENT
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PUBLIC WORKS**
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CONSULTANTS
AECOM
756 East Winchester Street
Salt Lake City, UT 84107
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ISSUE/REVISION		
D	2023-06-09	ISSUED FOR BID - REV 1
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A	2022-10-14	ISSUED FOR 60%
I/R	DATE	DESCRIPTION

PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

**STRUCTURAL
TYPICAL DETAILS
SHEET 6**

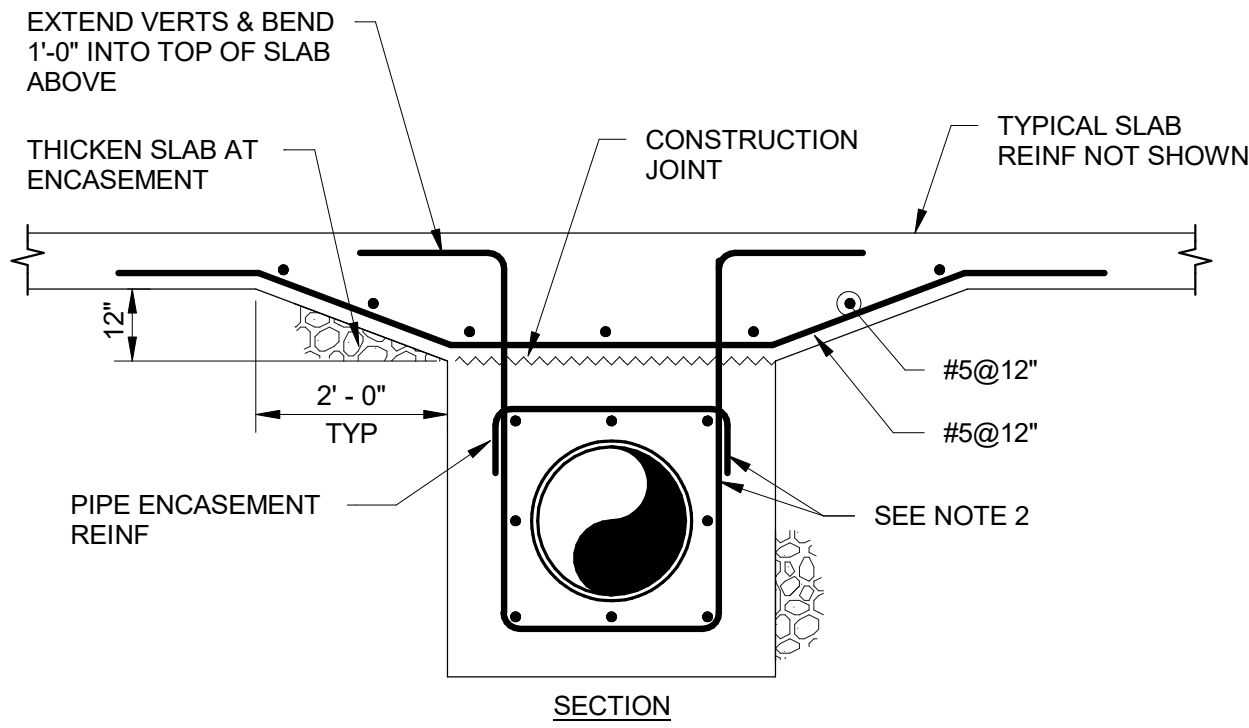
DRAWING NUMBER
99-S706

ANSI D 22" x 34"
Approved: B.HODGSON
Checked: R.HAWTHORNE
Designer: R.YOUNG

Drafter: R.PITTMAN

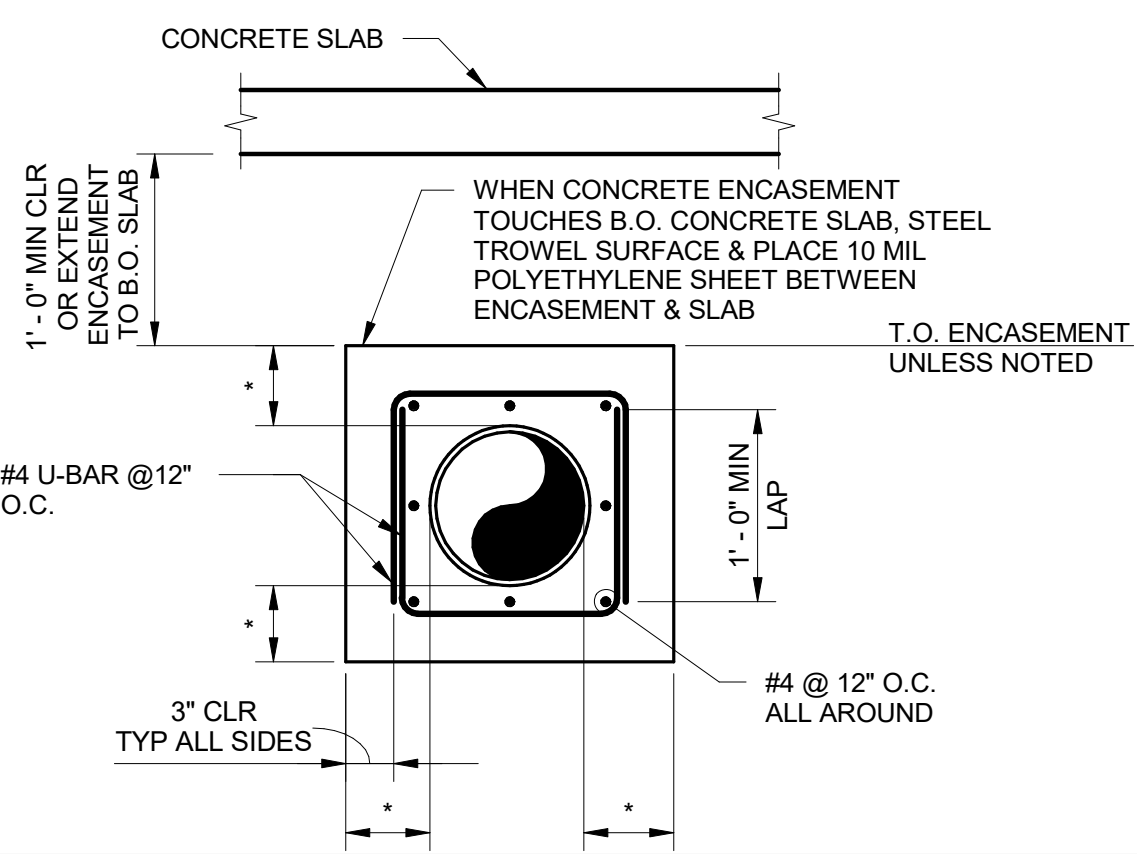
Project Manager: J.KRINKS

Last Plotted: 8/20/2023 1:05:30 PM
Filename: E:\M\9607\CLAMER (USA) 6067\8884-Provo River WTP\6067\8884 - 10-S001.rvt



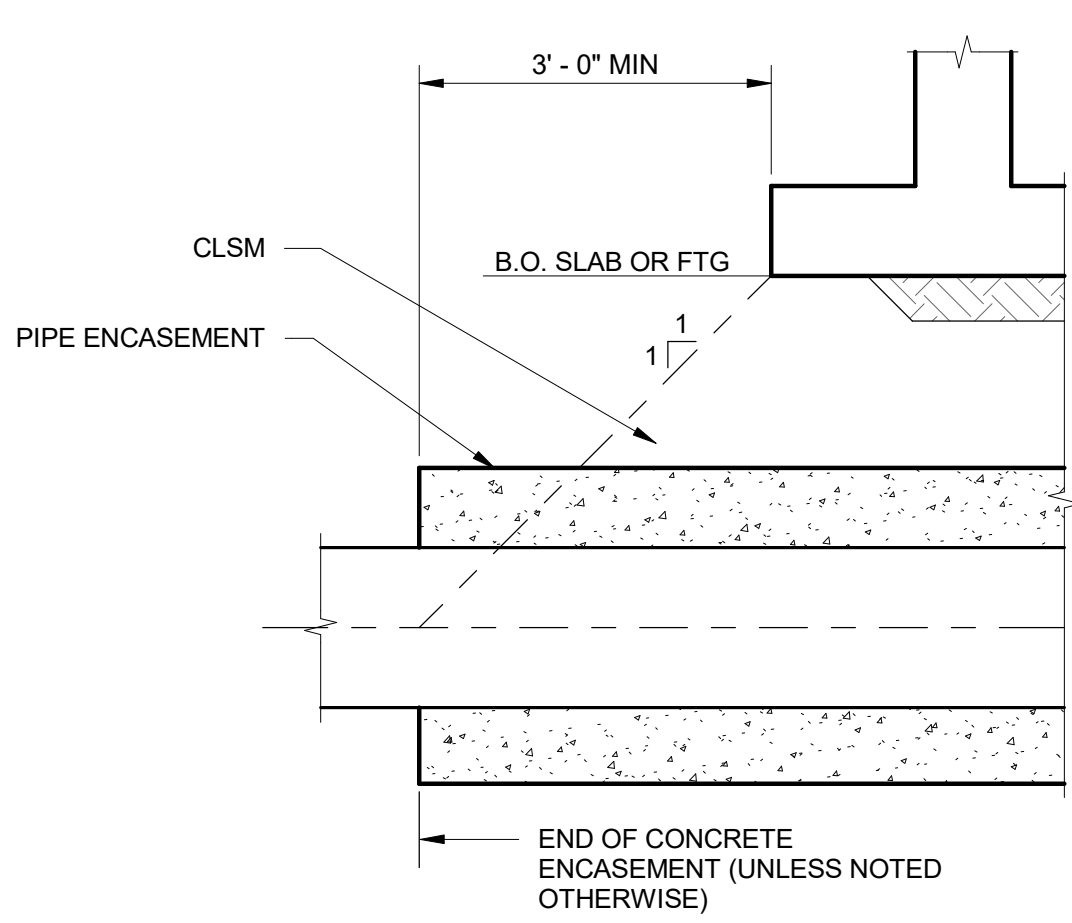
- NOTES:
1. TIE PIPE ENCASUREMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASUREMENT AND BOTTOM OF SLAB IS LESS THAN 12IN AND WHERE INDICATED ON THE DRAWINGS.
 2. FOR REINFORCEMENT AND COVER SEE TYPICAL DETAIL S004.
 3. LONGITUDINAL CONSTRUCTION JOINTS ARE OPTIONAL.
 4. WHERE THE FLOOR SLAB ABOVE THE ENCASUREMENT IS GREATER THAN 12" THICKNESS, ENCASMENTS MAY BE BROUGHT DIRECTLY UP TO THE BOTTOM OF SLAB WITHOUT TAPERING.

S070 PIPE ENCASUREMENT ATTACHED TO SLAB DETAIL
NOT TO SCALE



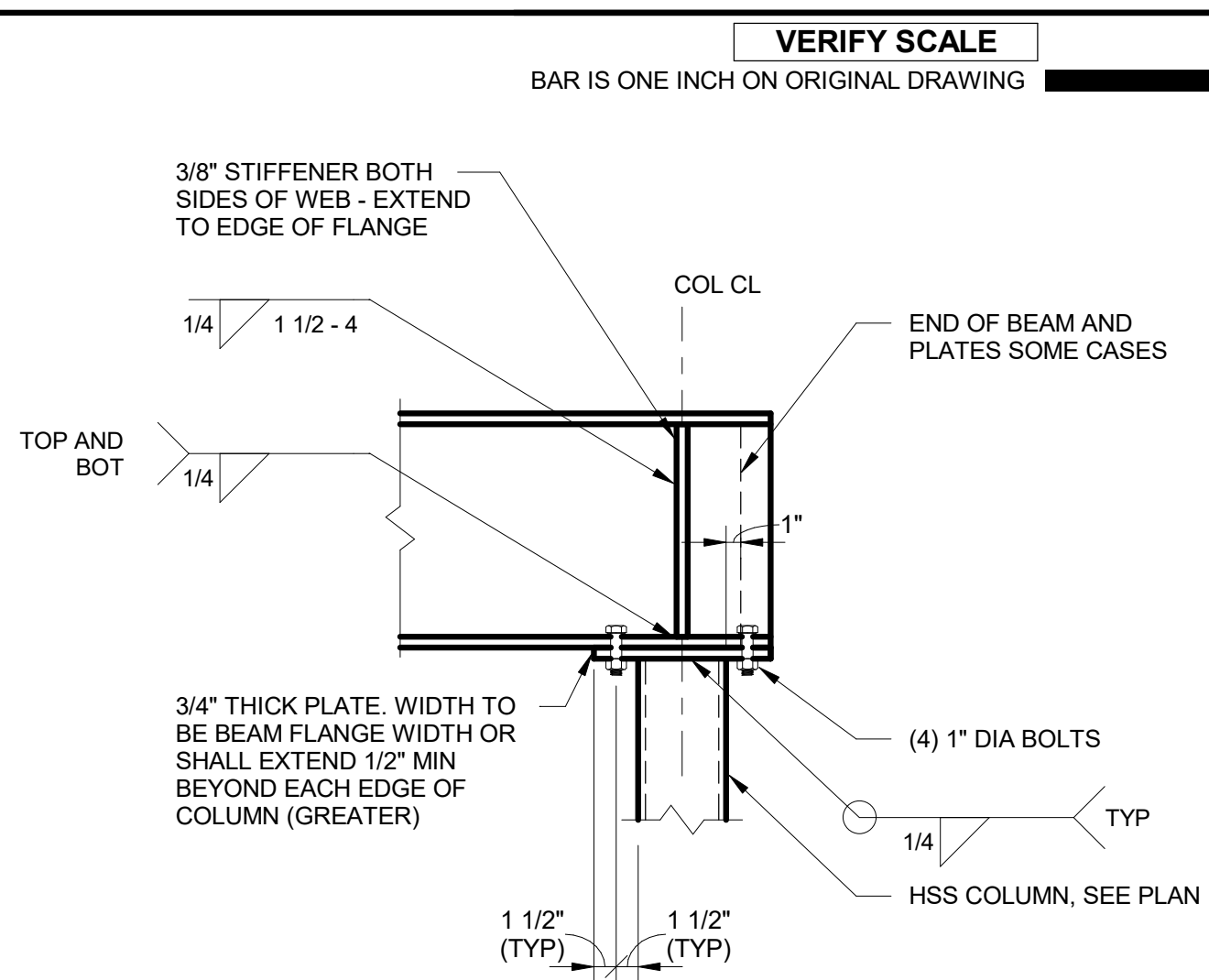
- NOTES:
- * = 8" MIN FOR PIPE ≤ 24" DIA, 12" FOR PIPE > 24" DIA
1. CONCRETE ENCASEMENT SHALL BE TERMINATED AT PIPE JOINTS ONLY.
 2. SEE PIPE ENCASUREMENT (ELEVATION) FOR EXTENTS OF ENCASEMENT BEYOND STRUCTURE.
 3. FOR MULTI PIPE, PROVIDE U-BARS AT EACH PIPE.

S071 PIPE ENCASUREMENT - SECTION
NOT TO SCALE

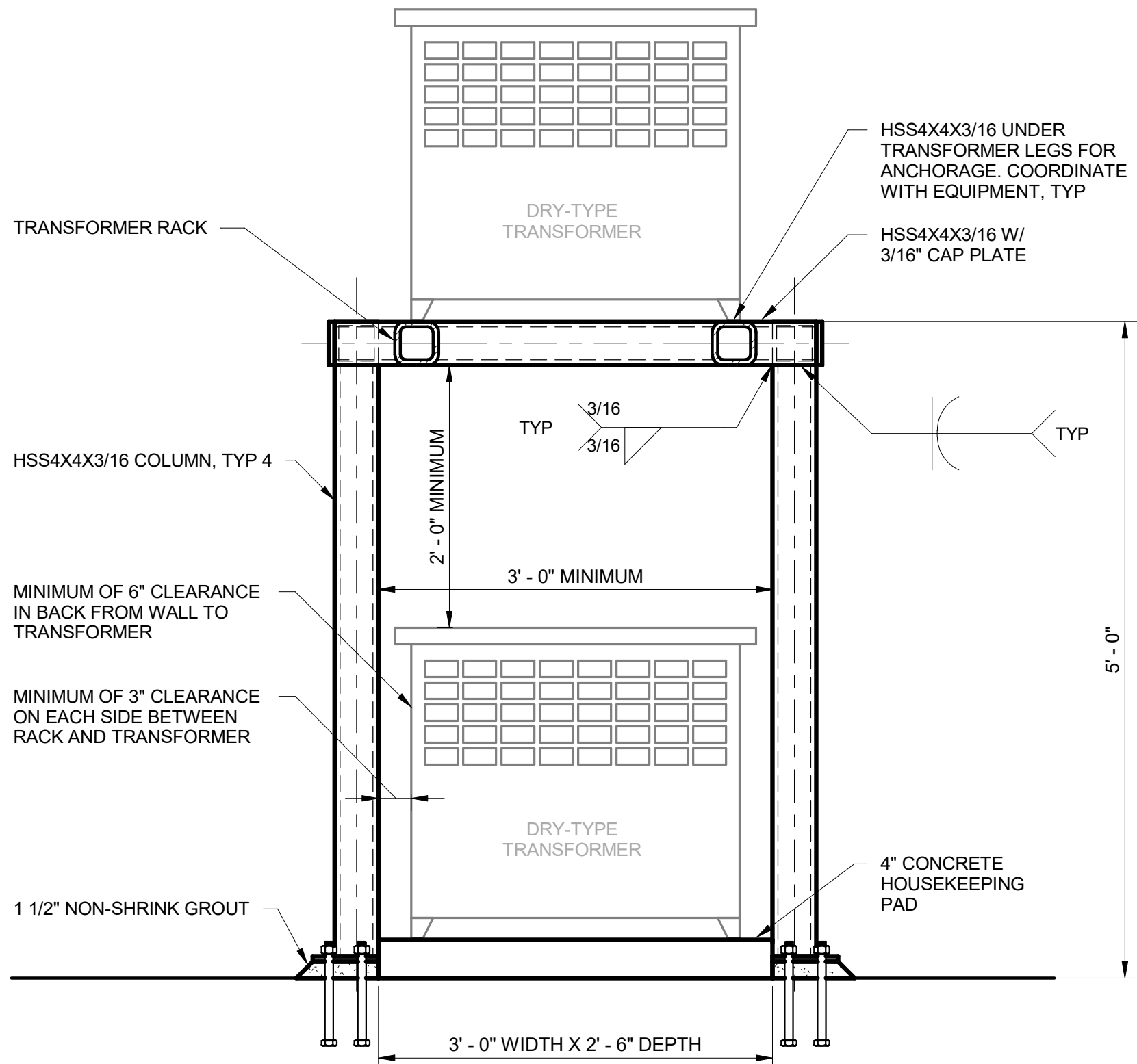


NOTE: EXTENT OF PIPE ENCASEMENT BEYOND EDGE OF STRUCTURE MINIMUM 3ft OR MINIMUM 1:1 ZONE AS SHOWN WHICHEVER IS GREATER.

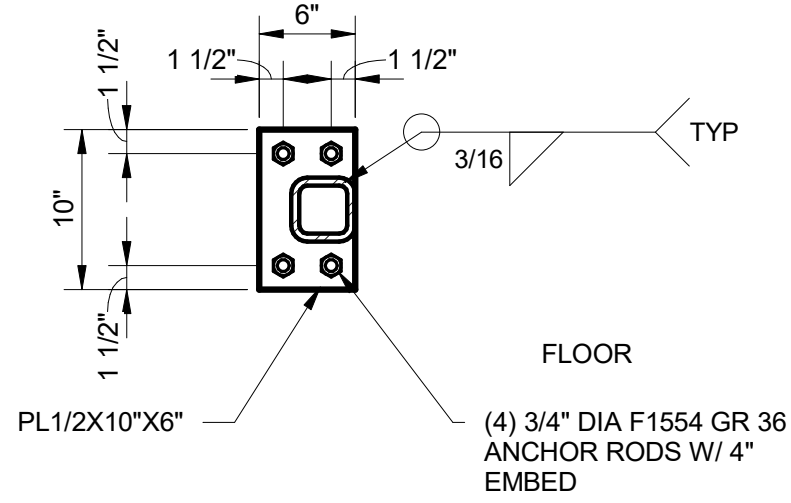
S072 PIPE ENCASUREMENT - ELEVATION
NOT TO SCALE



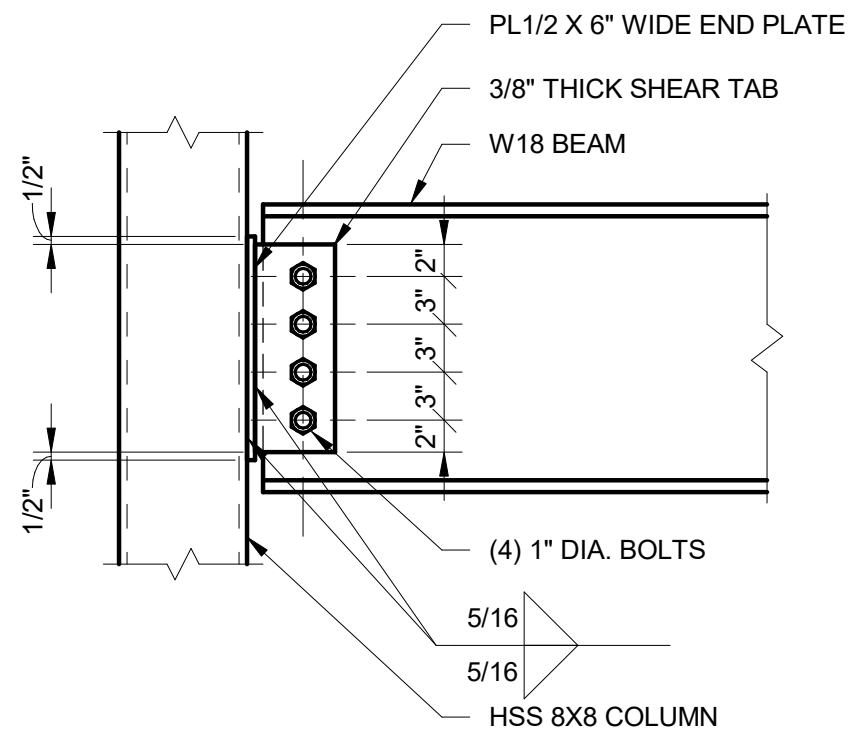
S073 BEAM COLUMN CONNECTION - STEEL
NOT TO SCALE



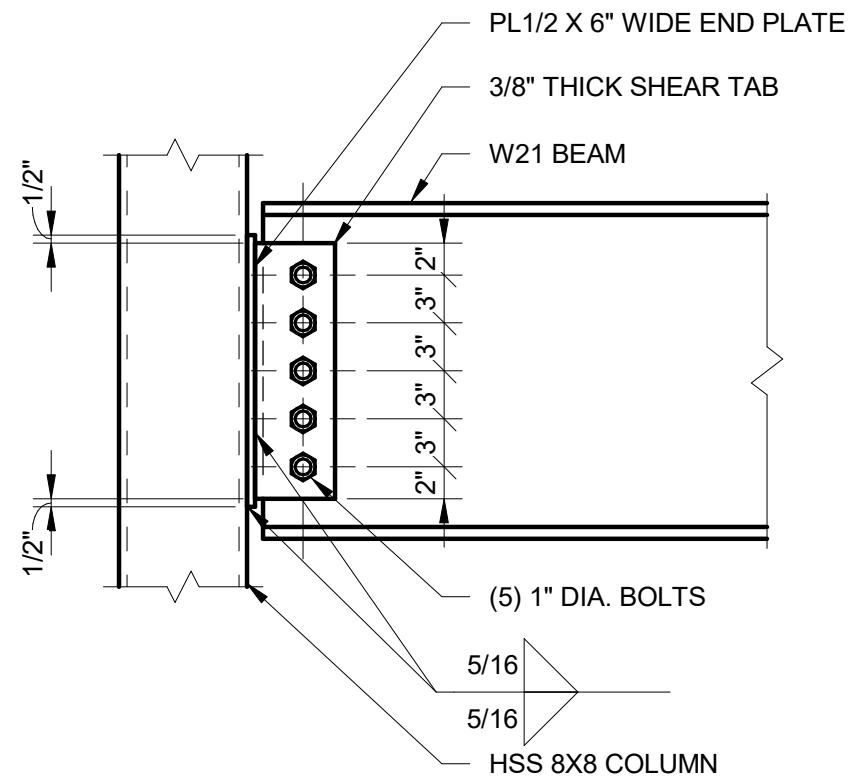
- NOTE:
1. REFER TO APPROVED SHOP DRAWINGS FOR EXACT TRANSFORMER SIZE AND DIMENSIONS. ADJUST RACK SIZE ACCORDINGLY.



S074 TRANSFORMER MOUNTING DETAIL
NOT TO SCALE



W18



W21

S075 TYPICAL PERIMETER BEAM CONNECTION DETAIL
NOT TO SCALE

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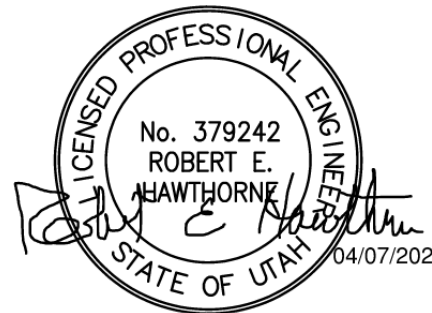
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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

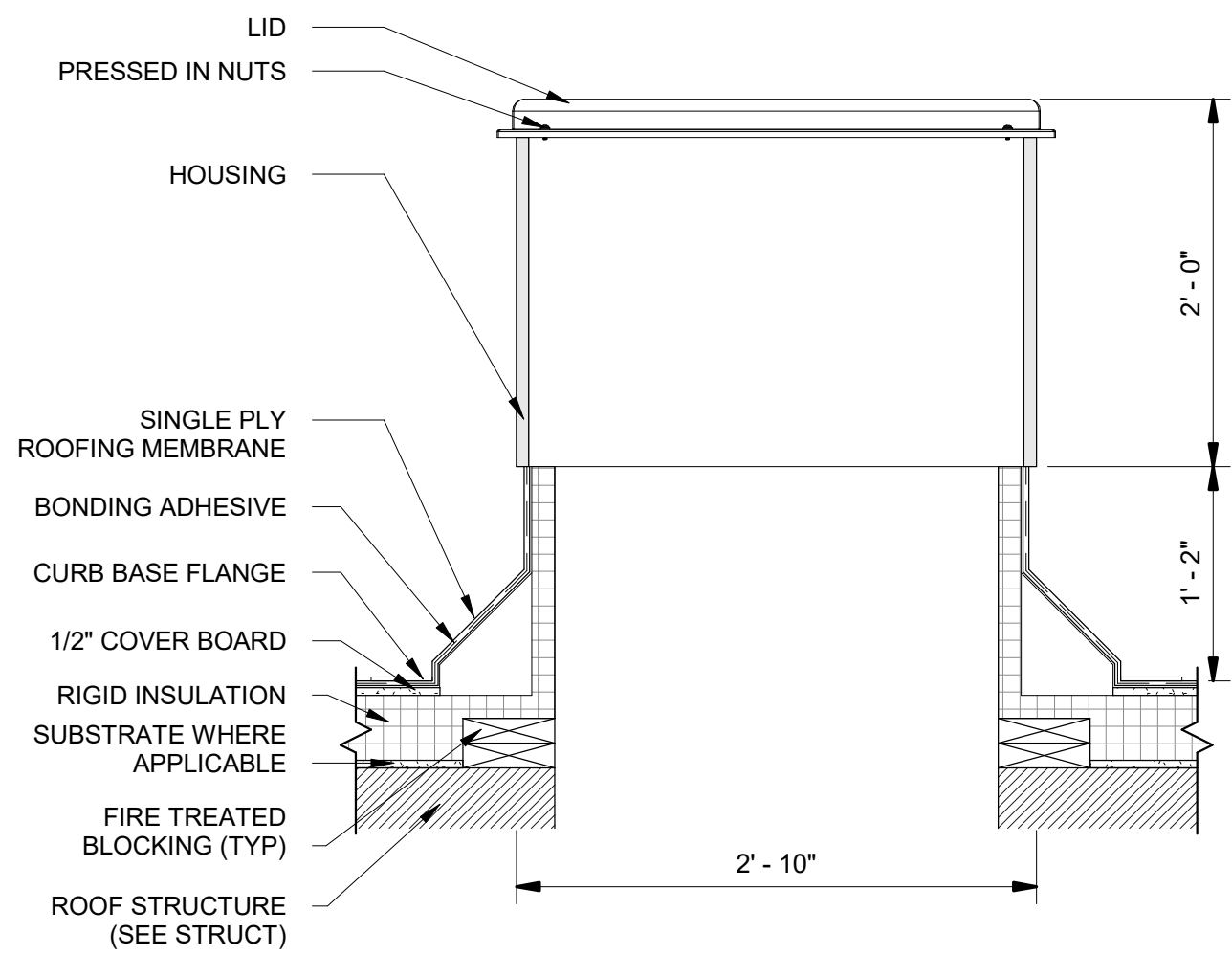
STRUCTURAL
TYPICAL DETAILS
SHEET 7

DRAWING NUMBER

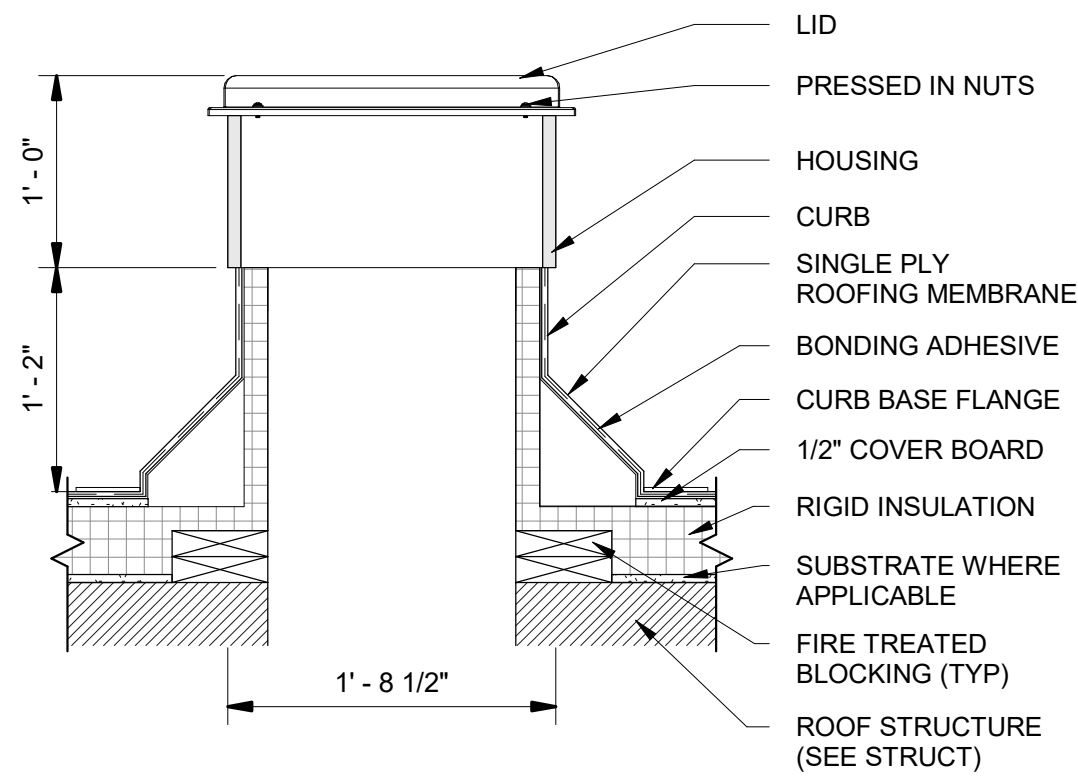
99-S707

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

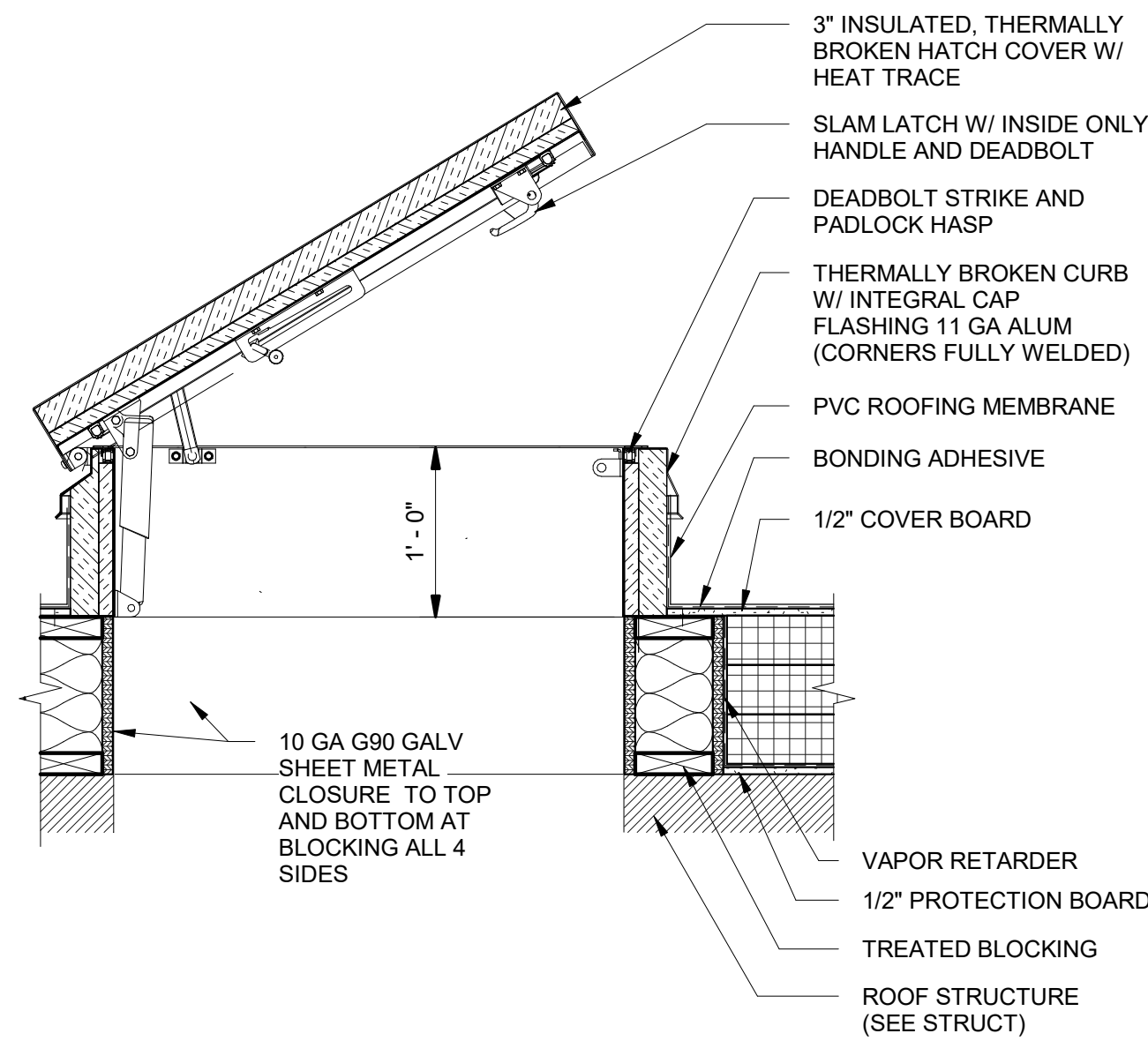
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Filename: BM 3607/CLAWER (USA) 6167/0884-Provo River WTP/6167/0884-10-A011.rvt



LARGE



MEDIUM



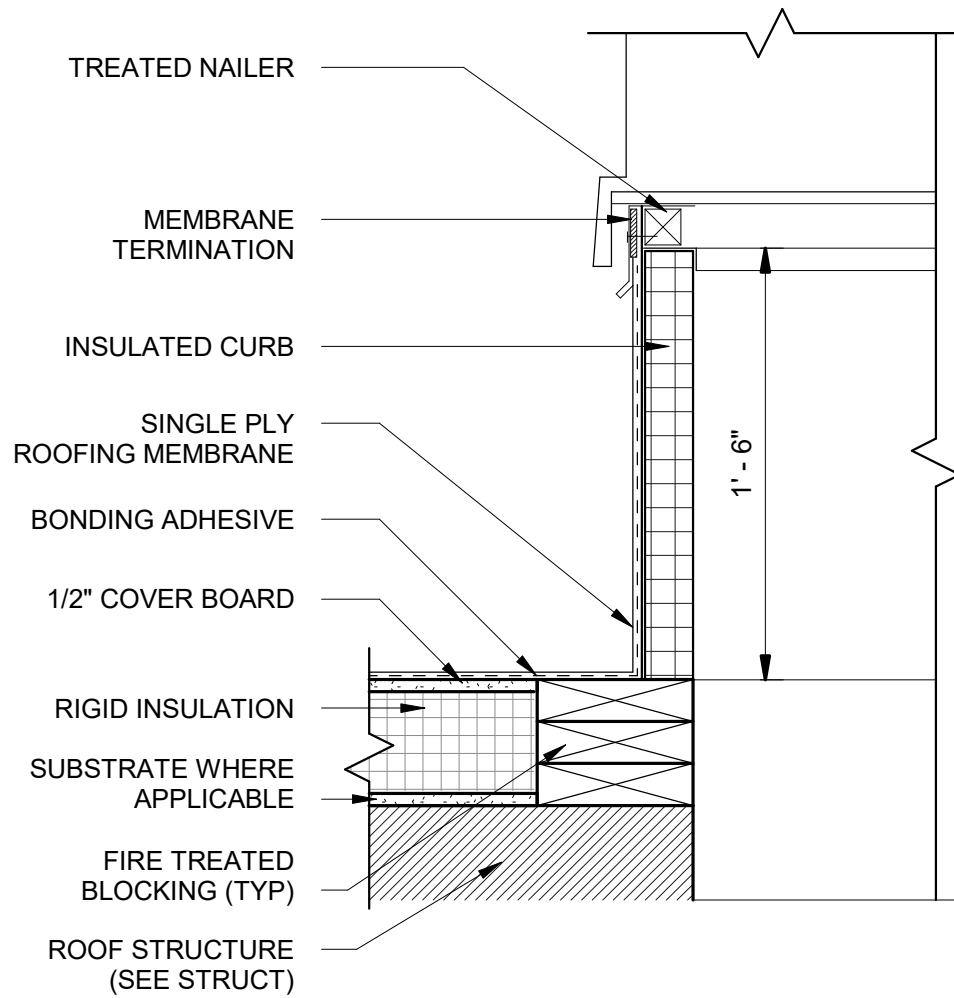
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

GENERAL NOTES

1. TYPICAL DETAILS AS SHOWN ARE GENERIC FOR CONDITIONS INVOLVED, CONTRACTOR TO MODIFY AS REQUIRED TO COMPLY WITH SUBMITTED MANUFACTURER'S REQUIREMENTS, INCLUDING ATTACHMENTS AND WOOD BLOCKING.
2. ALL REQUIRED WOOD BLOCKING SHALL BE MOISTURE RESISTANT TREATED (MRT) TYPICAL.

PIPE CHASE HOUSING @
MEMBRANE ROOF

1" = 1'-0"

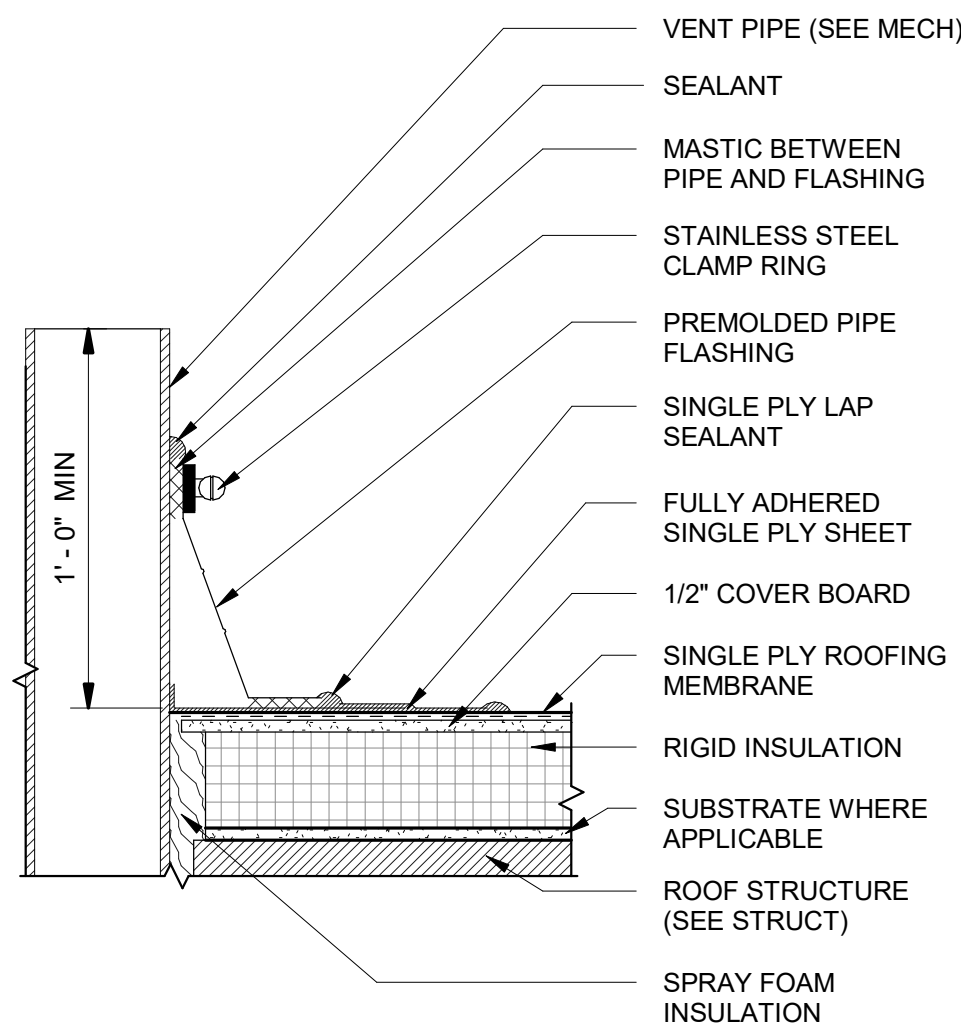


PREFABRICATED ROOF
EQUIPMENT CURB

1 1/2" = 1'-0"

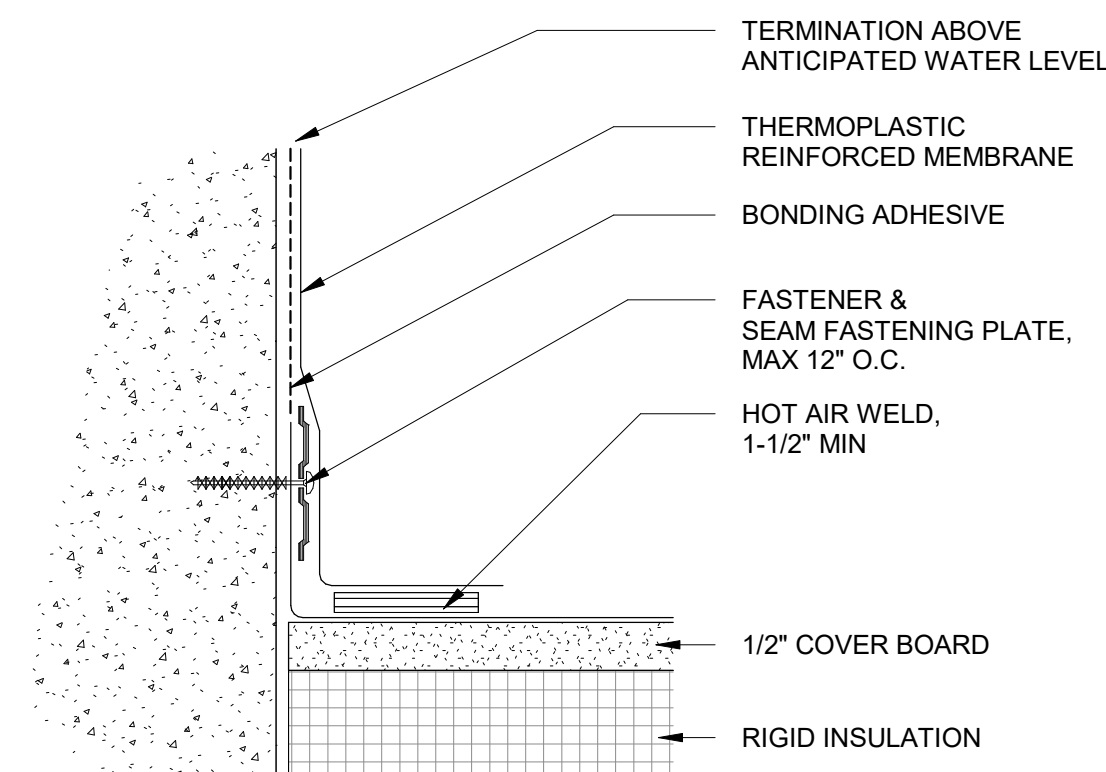
MEMBRANE ROOF VENT
FLASHING

1 1/2" = 1'-0"



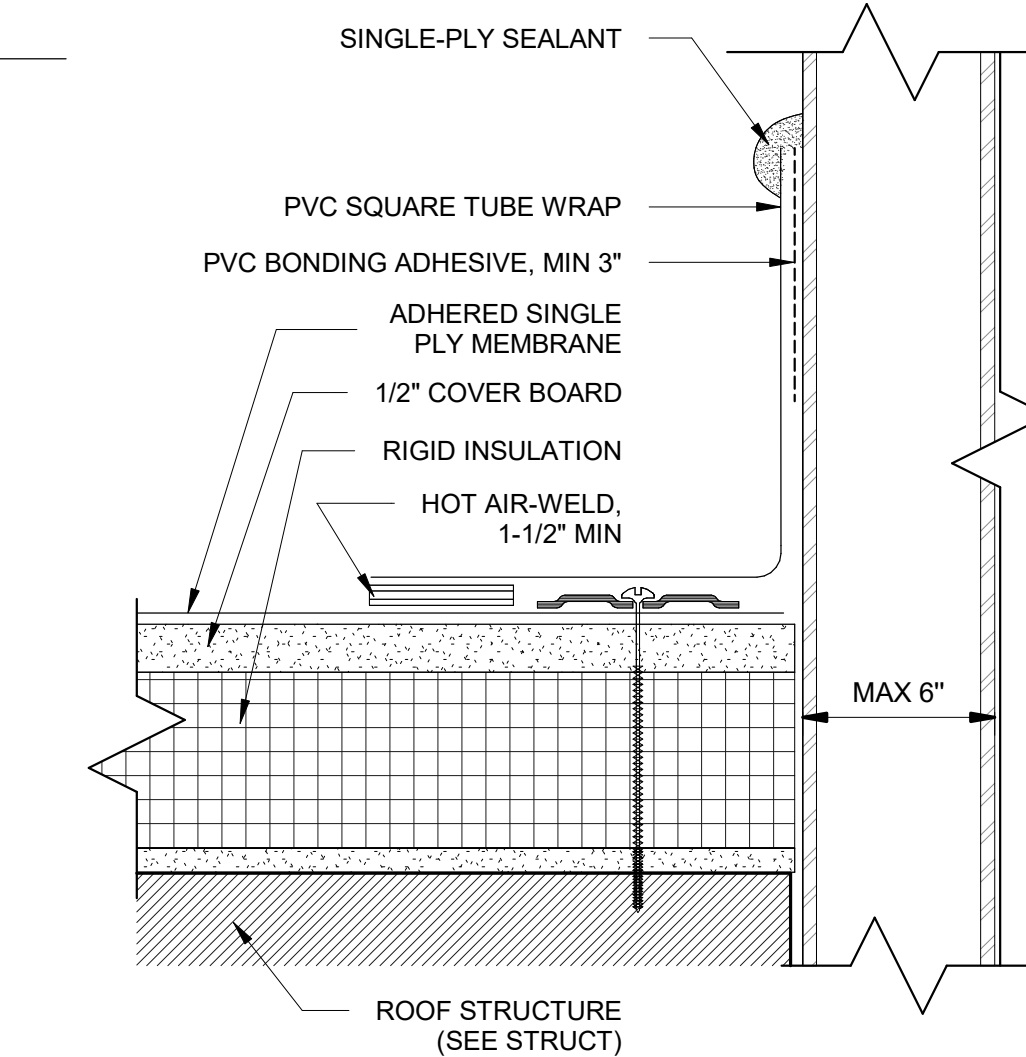
ROOF HATCH DETAIL

1" = 1'-0"



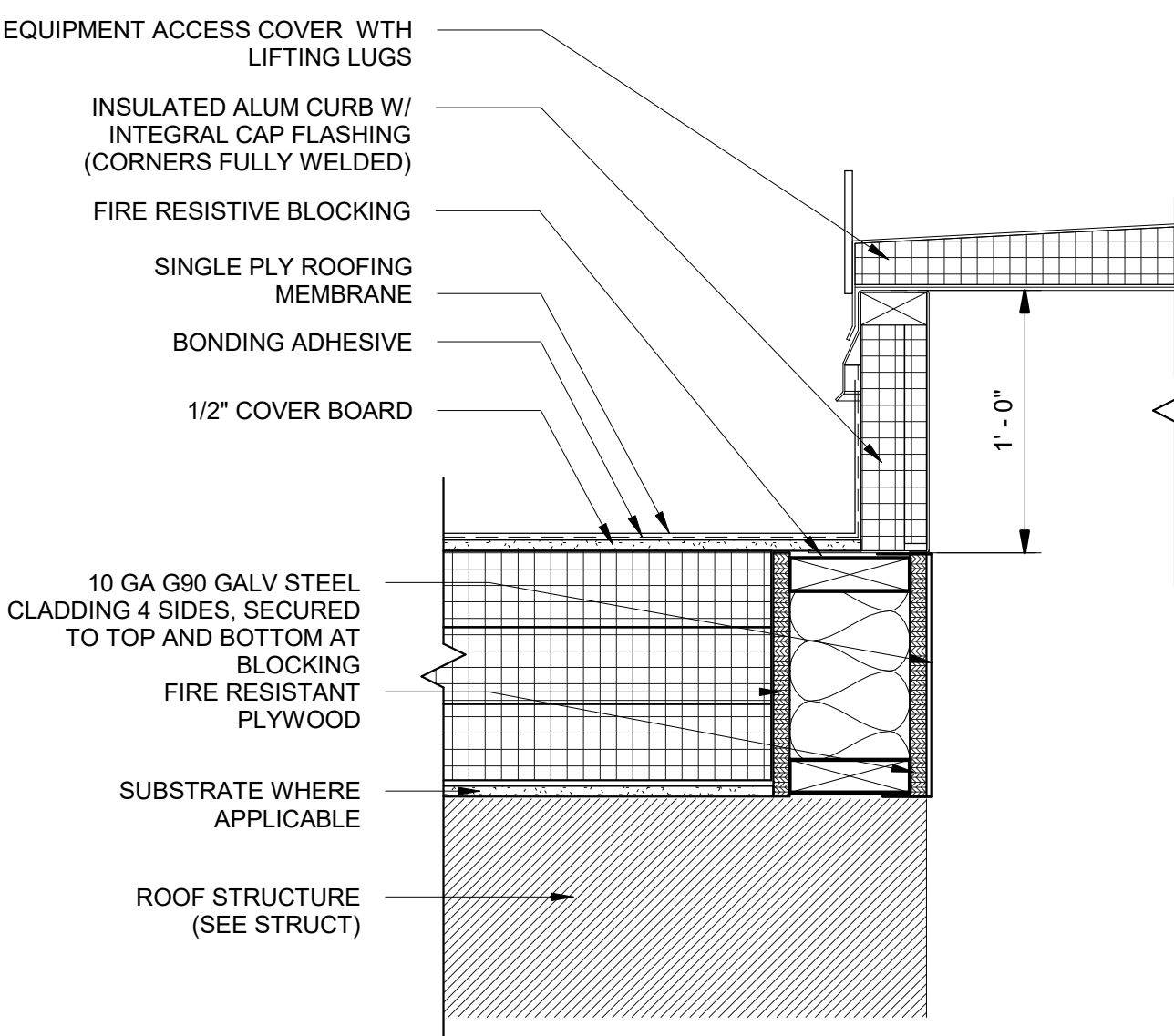
HORIZONTAL MEMBRANE @
WALL TRANSITION

6" = 1'-0"



SQUARE TUBE ROOF
PENETRATION

6" = 1'-0"

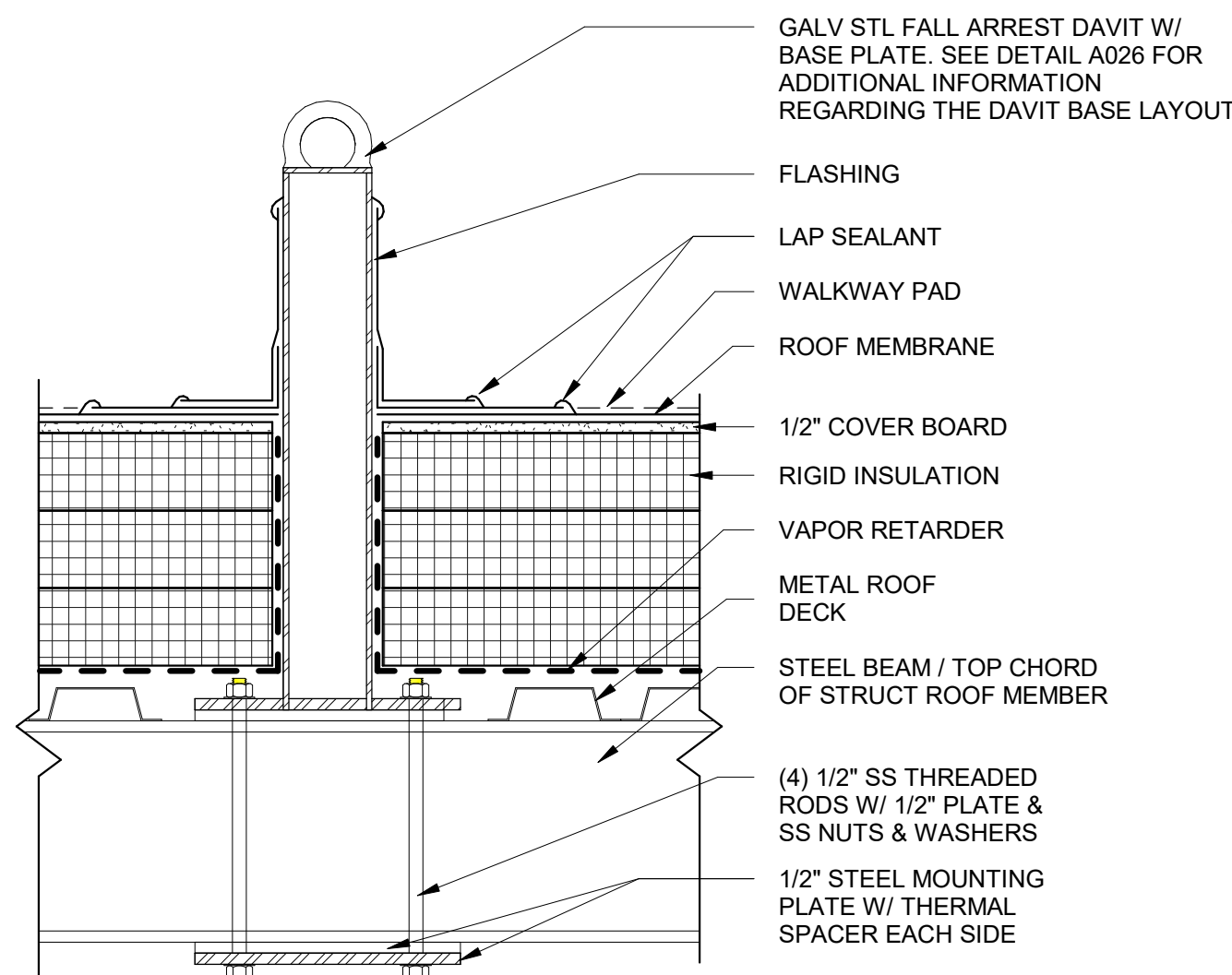


EQUIP ACCESS COVER @
MEMBRANE ROOFING

1 1/2" = 1'-0"

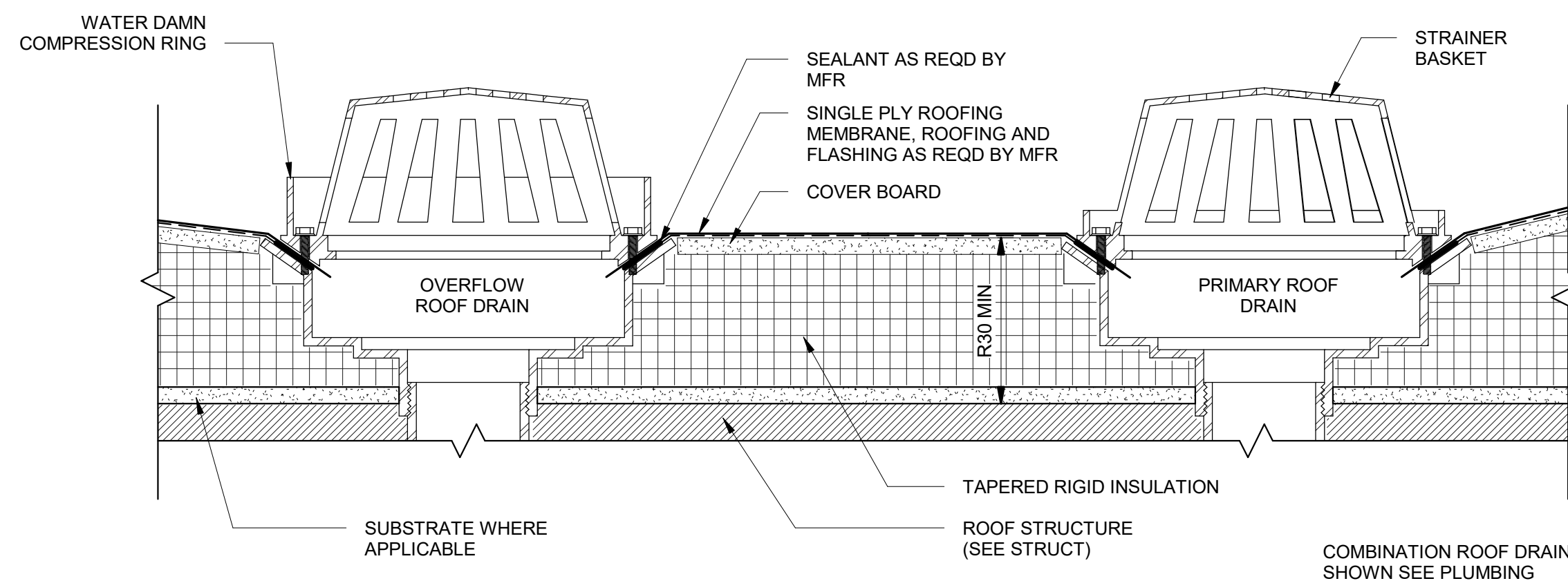
FALL ARREST ANCHOR AT STL
STRUCTURE

1 1/2" = 1'-0"



ROOF AND OVERFLOW DRAIN

3" = 1'-0"



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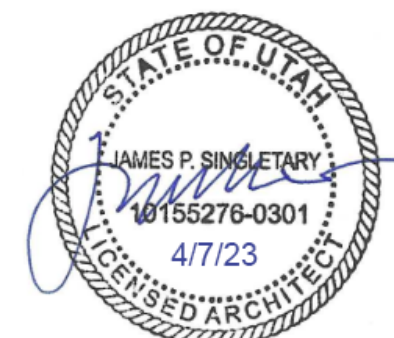
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

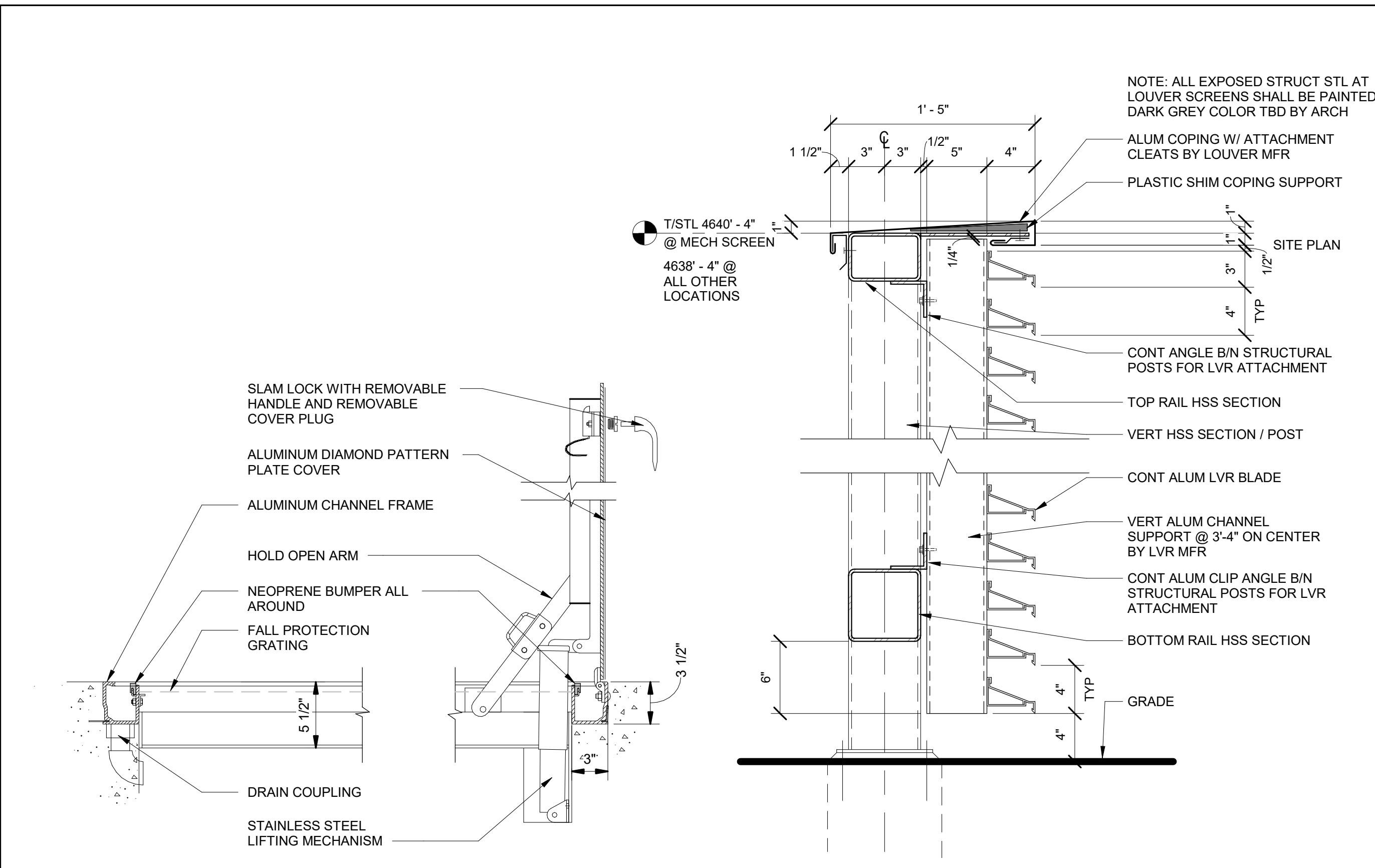
**ARCHITECTURAL
TYPICAL DETAILS
SHEET 3**

DRAWING NUMBER

99-A703

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

Last Plotted: 4/4/2023 11:14:04 AM
Filename: BM 980701-CLAWER (USA) 6167/0884-Provo River WTP 6167/0884-10-A001.rvt



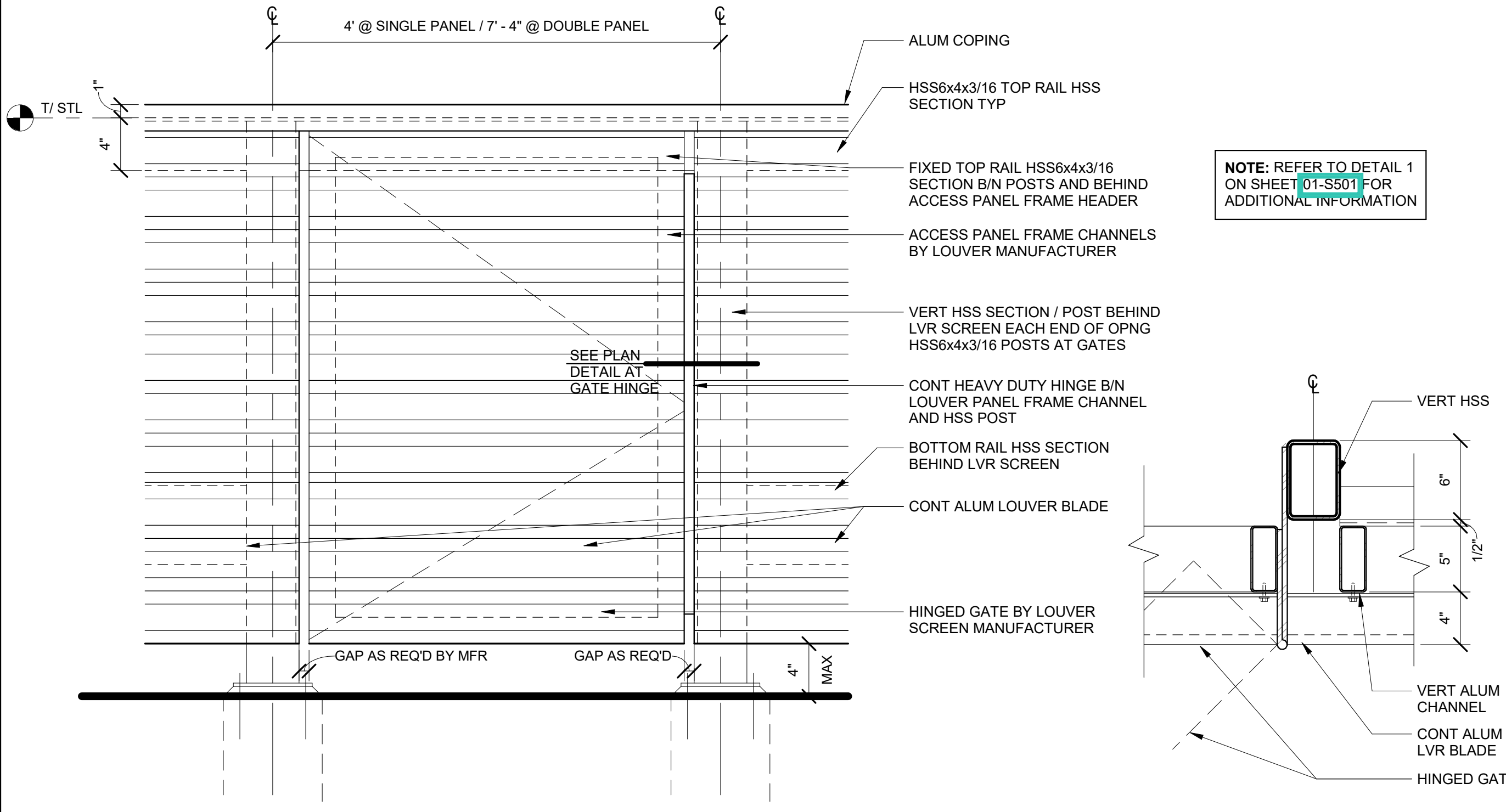
A023 FLOOR HATCH

1 1/2" = 1'-0"

NOTE: THIS DETAIL DOES NOT APPLY TO PUMP-HOUSE OR CLEARWELL. REFERENCE PUMP-HOUSE OR CLEARWELL DRAWINGS FOR ALL APPLICABLE DETAILS.

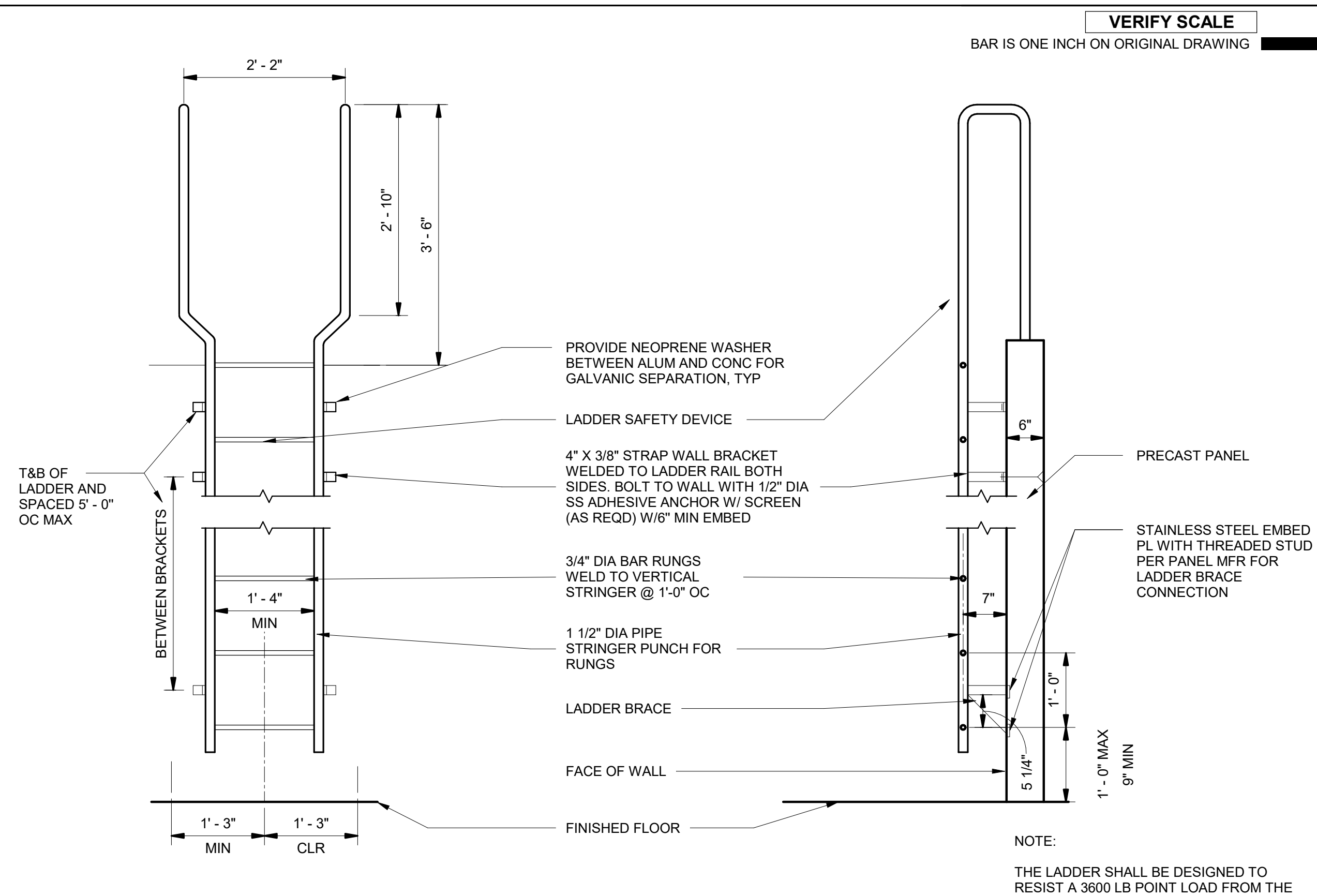
A022A SECTION DETAIL - LOUVER SCREEN WALL

1 1/2" = 1'-0"



A025A ELEVATION DETAIL - LVR SCREEN PANEL

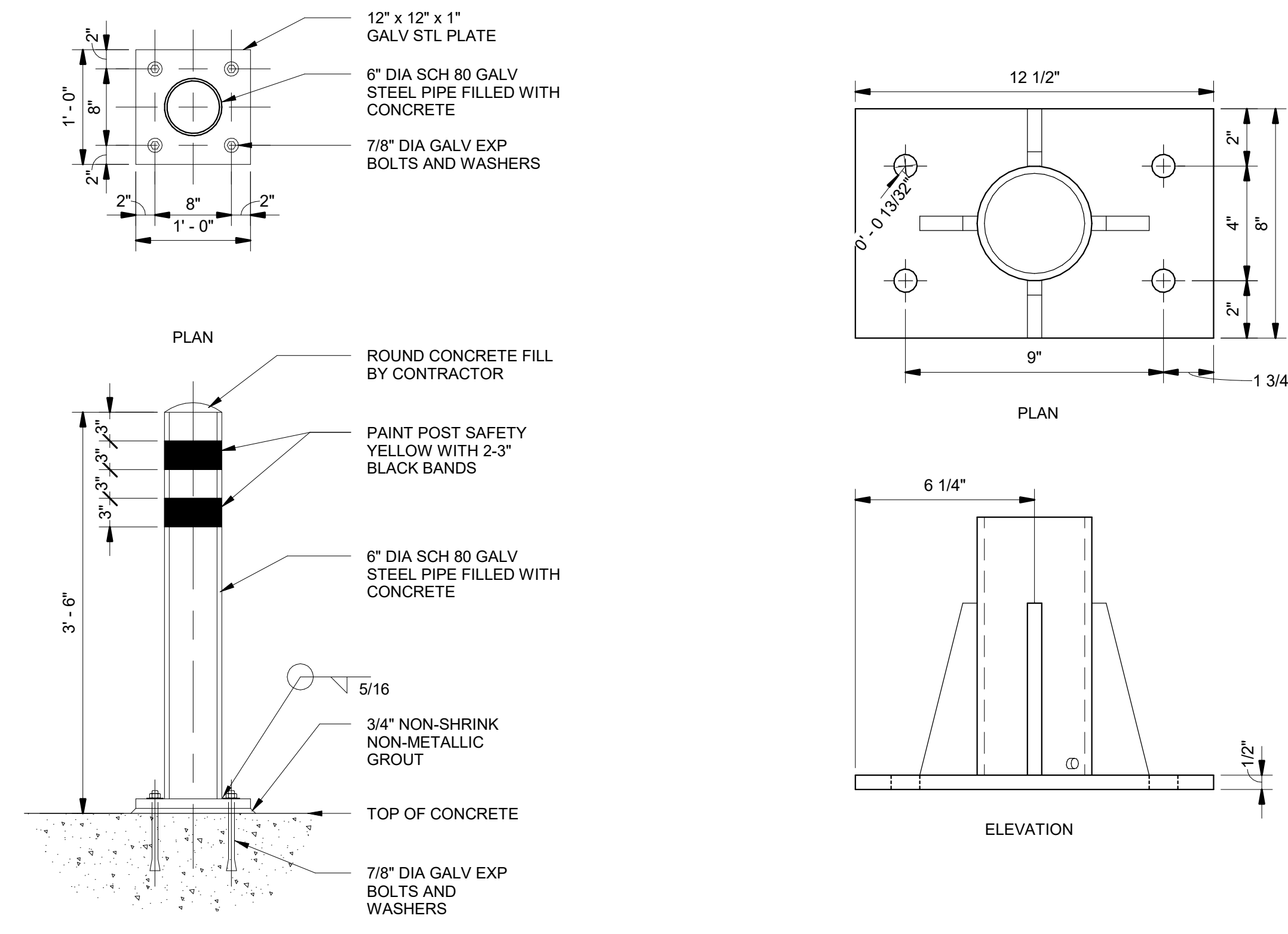
1 1/2" = 1'-0"



A022 LADDER DETAIL

3/4" = 1'-0"

NOTE: THIS DETAIL DOES NOT APPLY TO PUMP-HOUSE OR CLEARWELL. REFERENCE PUMP-HOUSE OR CLEARWELL DRAWINGS FOR ALL APPLICABLE DETAILS.



A025 BOLTED BOLLARD DETAIL

1" = 1'-0"

A026 LIFE SAFETY DAVIT BASE

3" = 1'-0"

NOTE: THIS DETAIL DOES NOT APPLY TO PUMP-HOUSE OR CLEARWELL. REFERENCE PUMP-HOUSE OR CLEARWELL DRAWINGS FOR ALL APPLICABLE DETAILS.

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STATE OF UTAH
JAMES P. SIMS
10155276-0301
4/7/23
LICENSED ARCHITECT

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I/R	DATE	DESCRIPTION

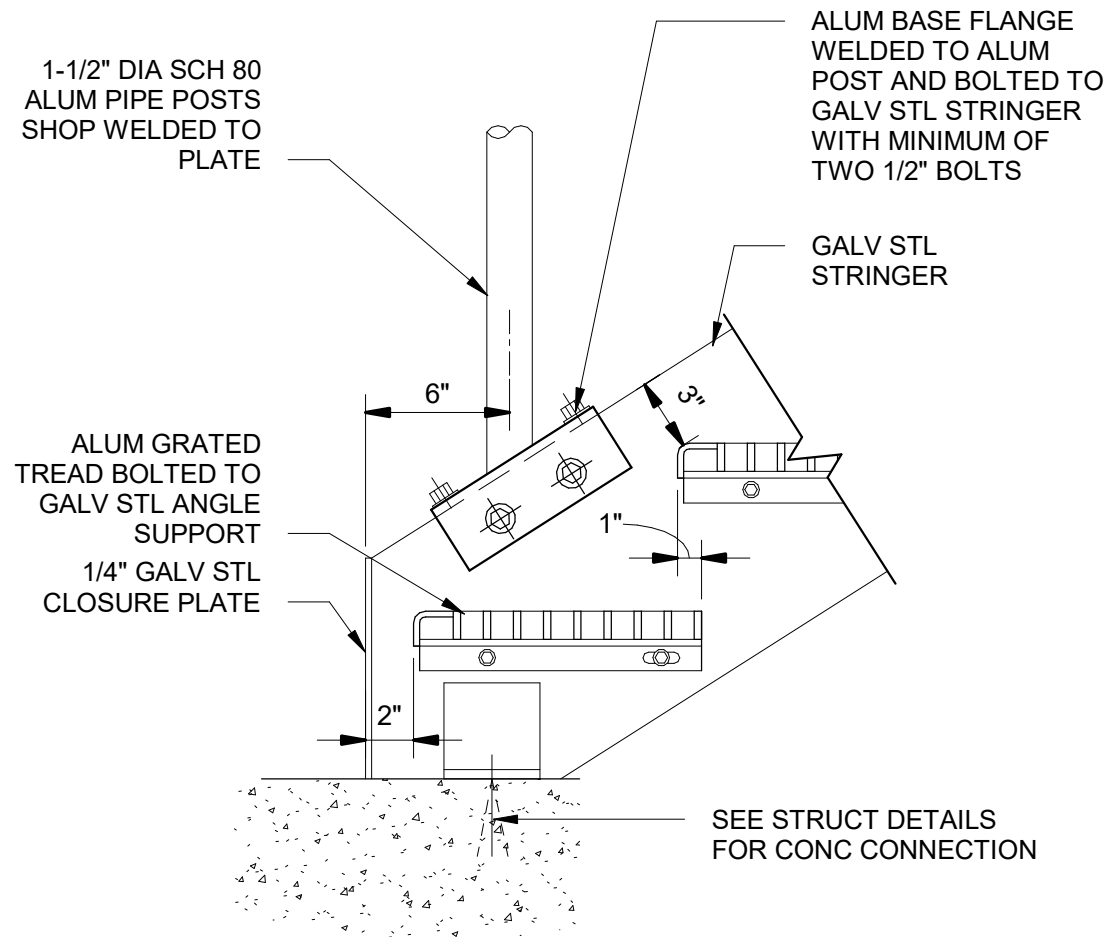
PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE
ARCHITECTURAL
TYPICAL DETAILS
SHEET 4

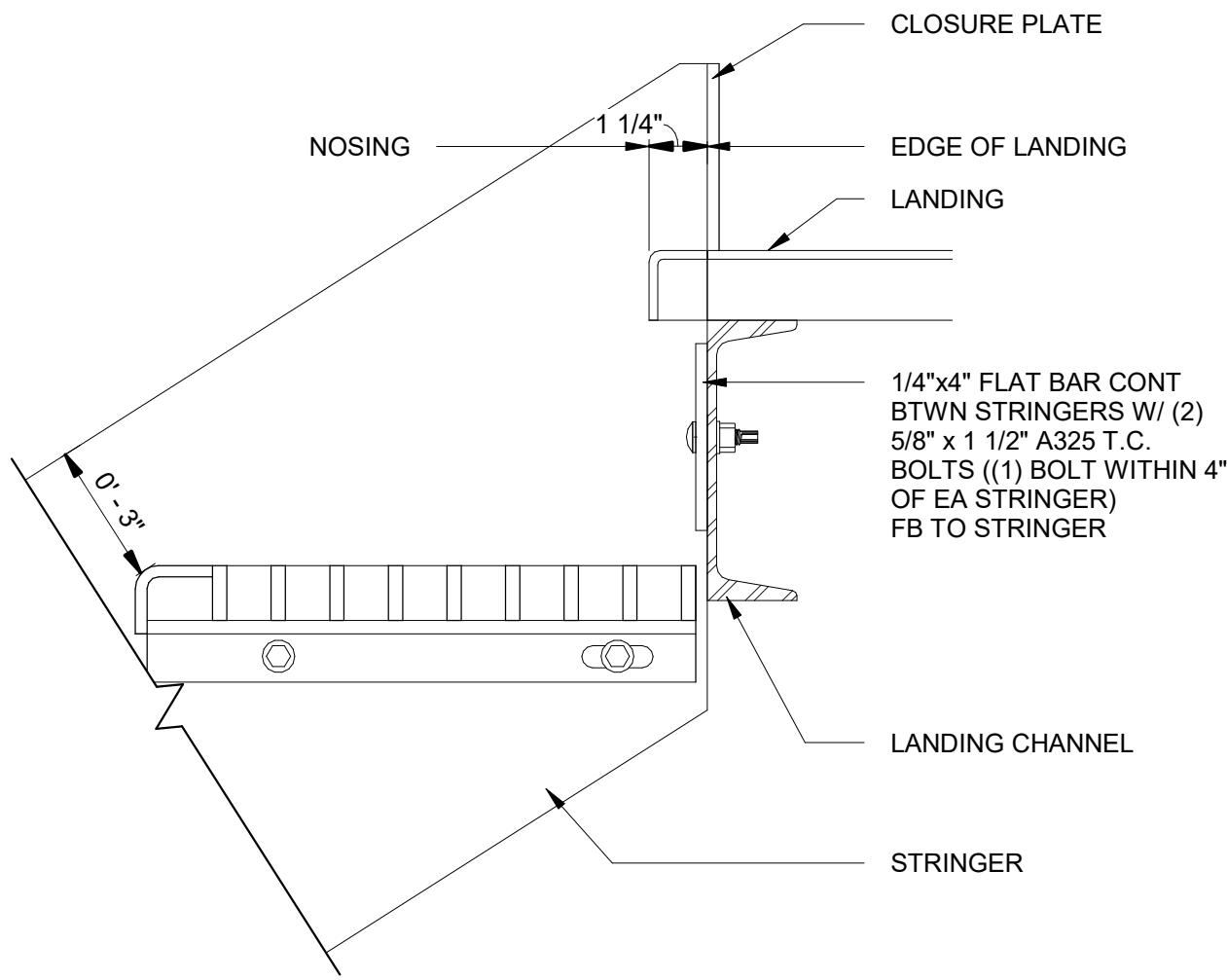
DRAWING NUMBER
99-A704

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

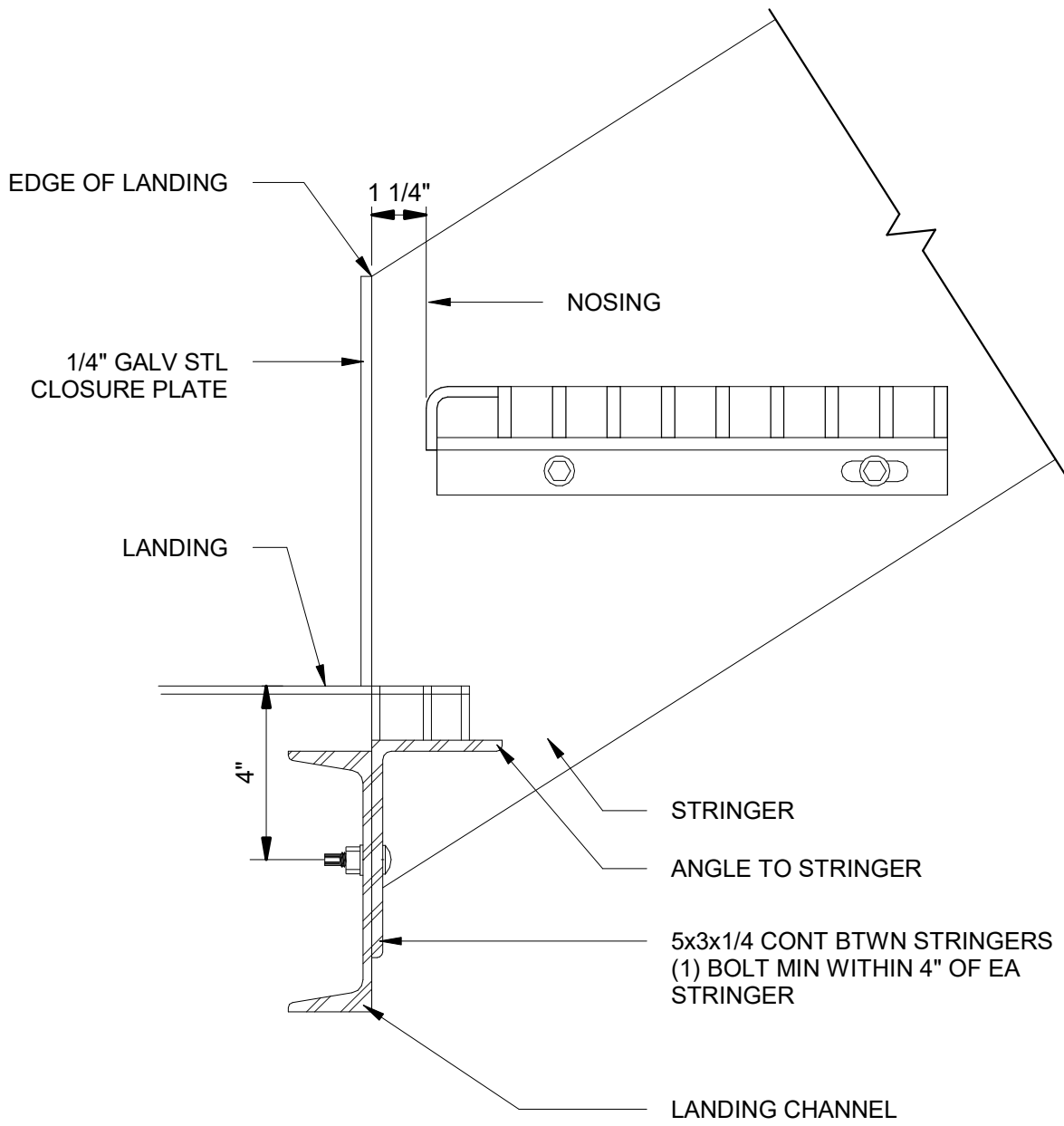
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Filename: BM 9807CLAMER (USA) 6167/0884-Provo River WTP/6167/0884-10A001.rvt



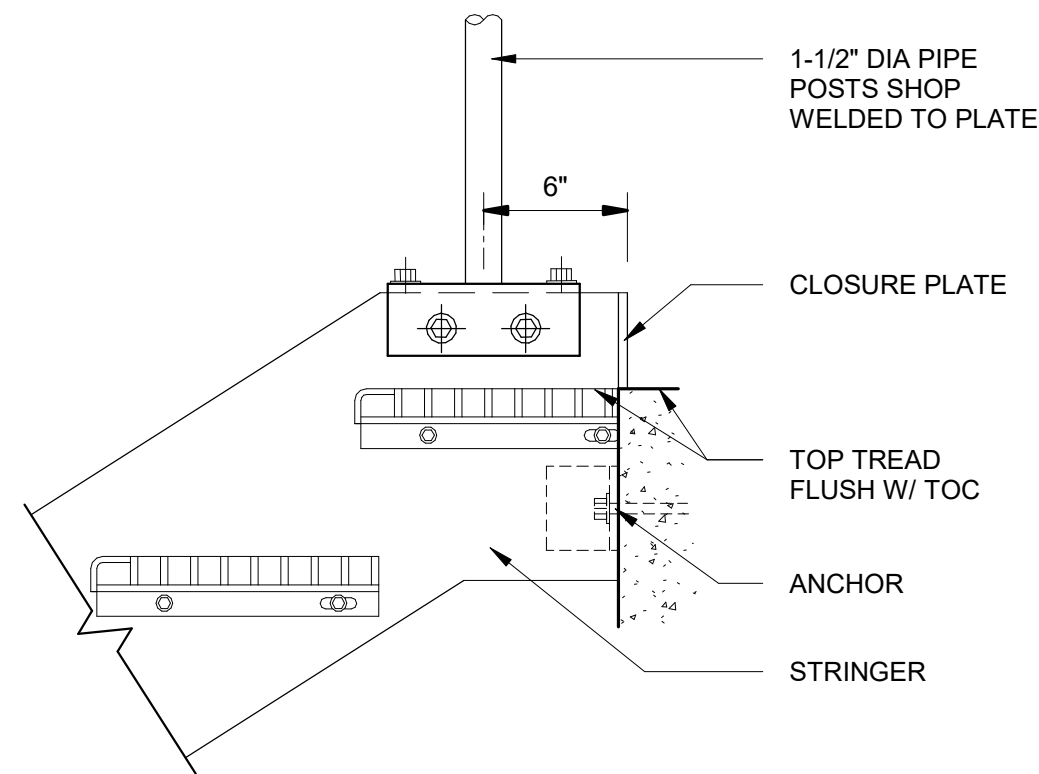
A027 STAIR TREAD @ CONC LANDING
1 1/2" = 1'-0"



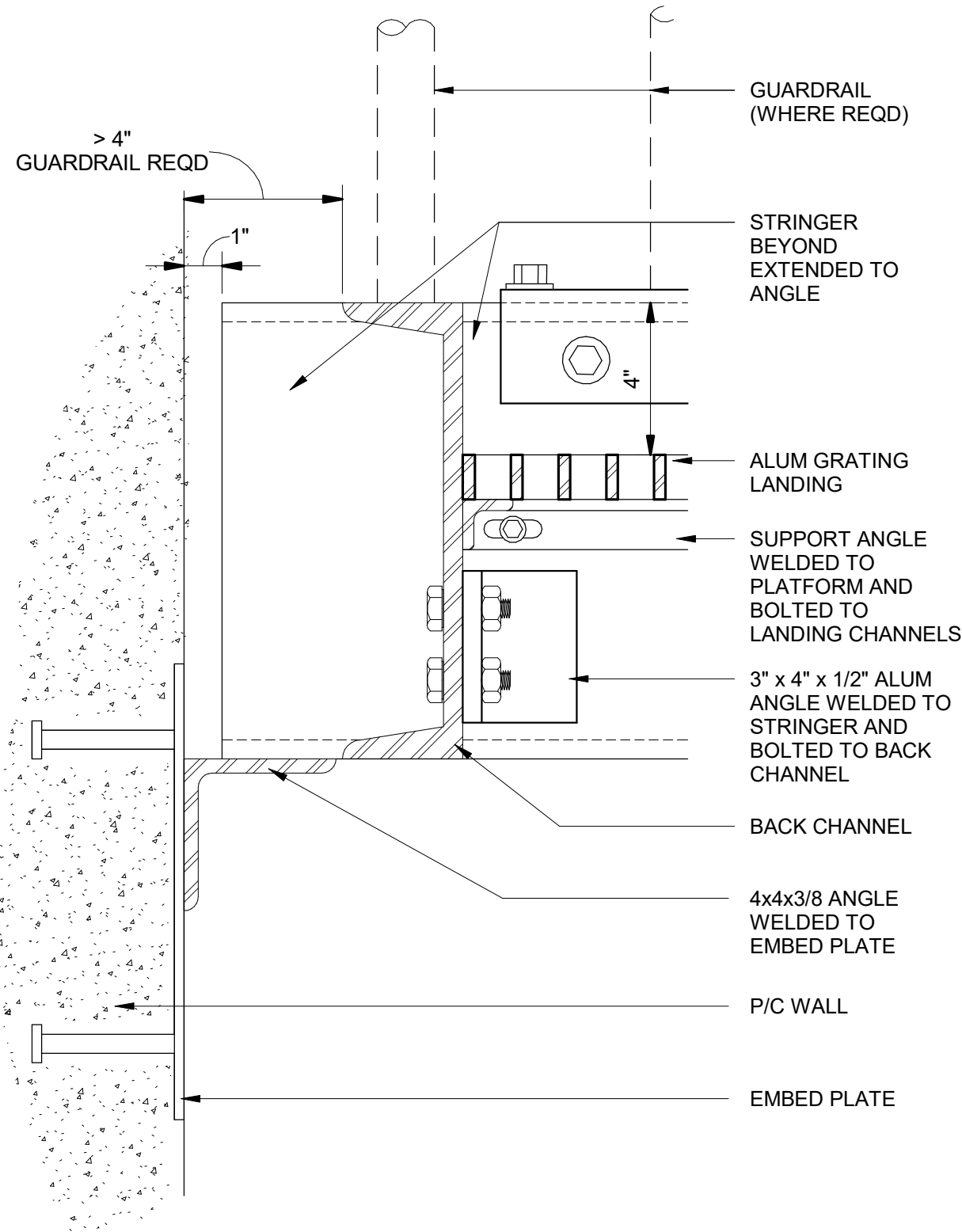
A028 STAIR TOP CONNECTION TO STEEL LANDING
3" = 1'-0"



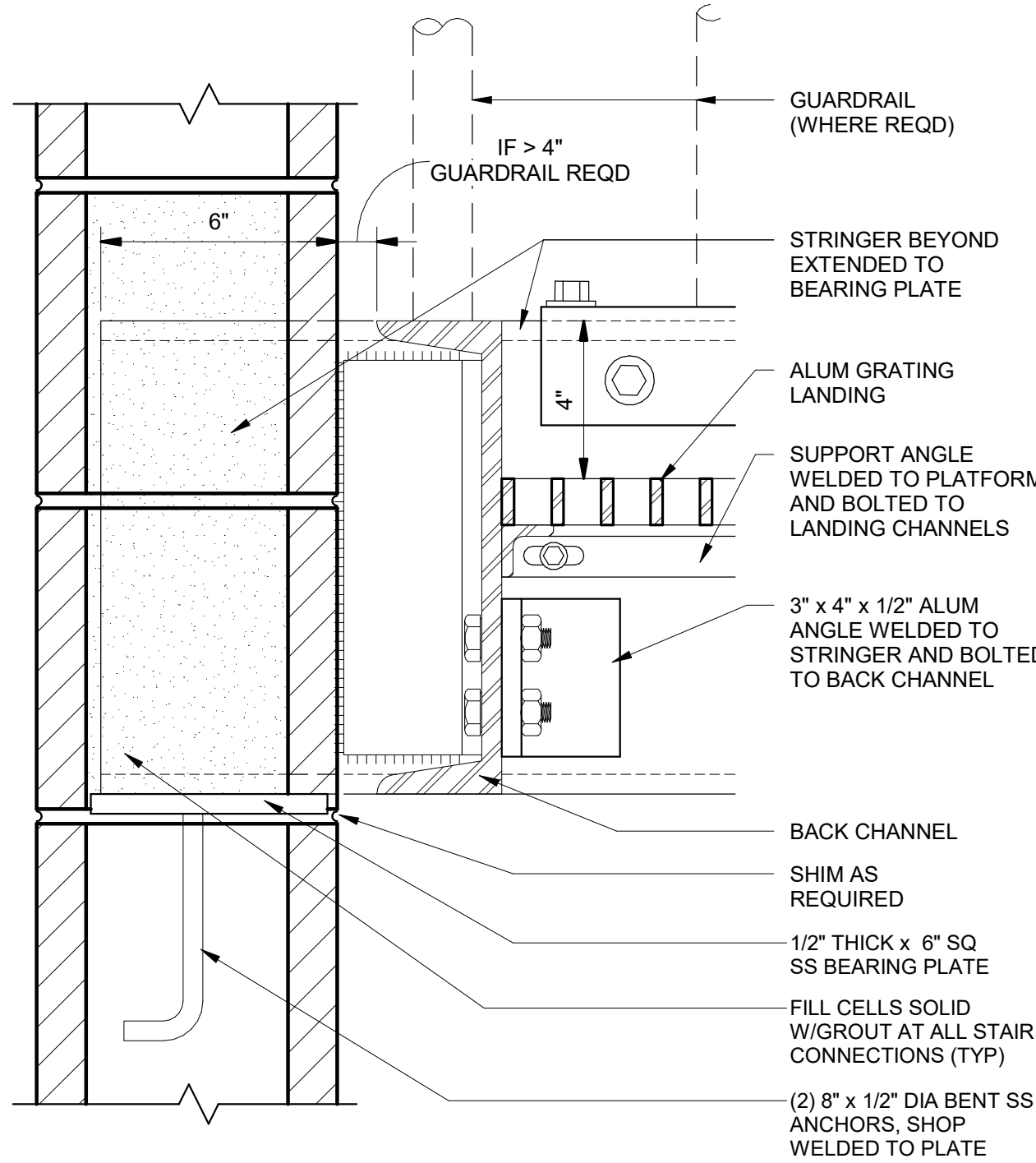
A029 STAIR BOTTOM CONNECTION TO STEEL LANDING
3" = 1'-0"



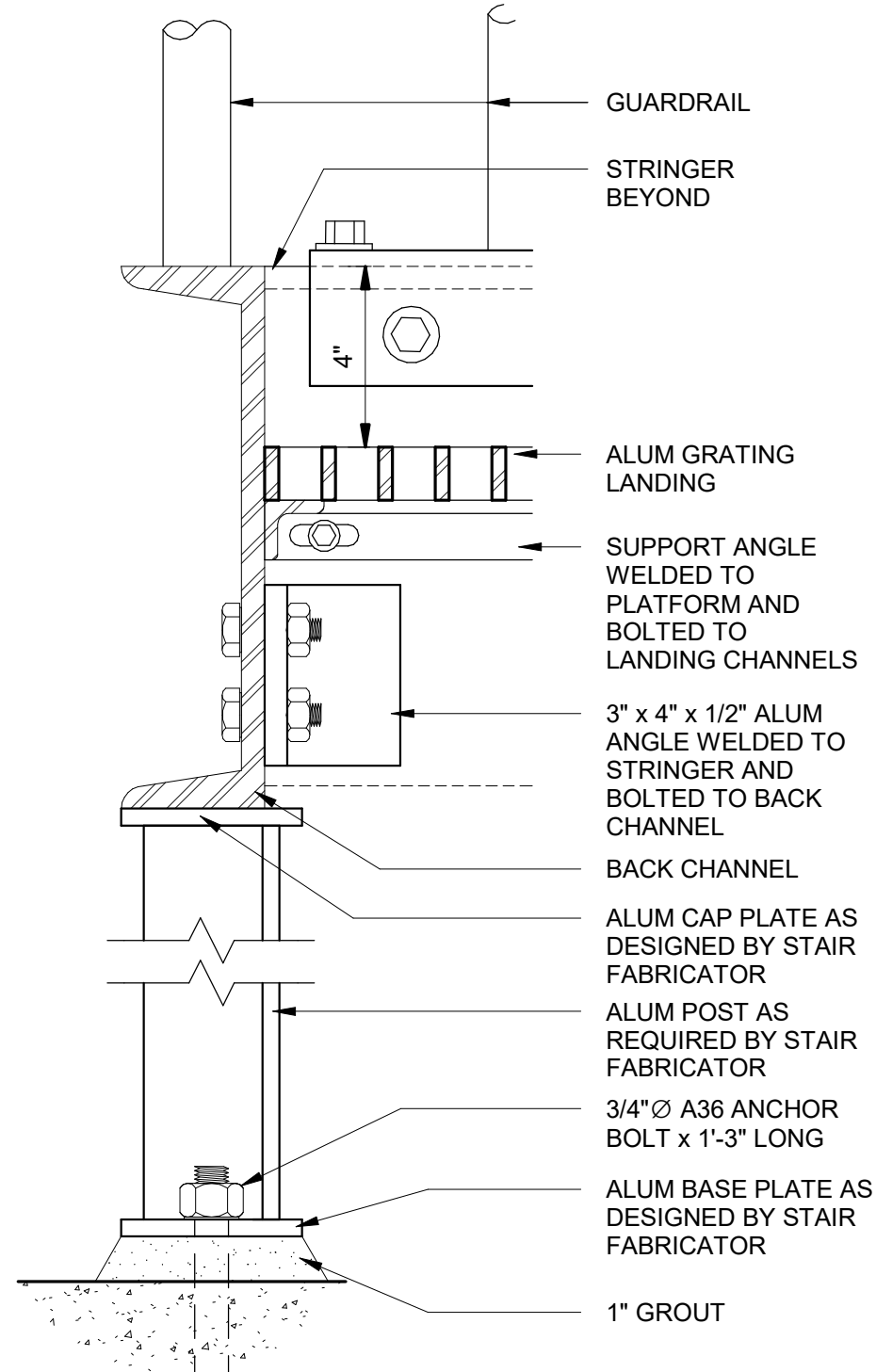
A030 STAIR TOP CONNECTION TO CONC LANDING
1 1/2" = 1'-0"



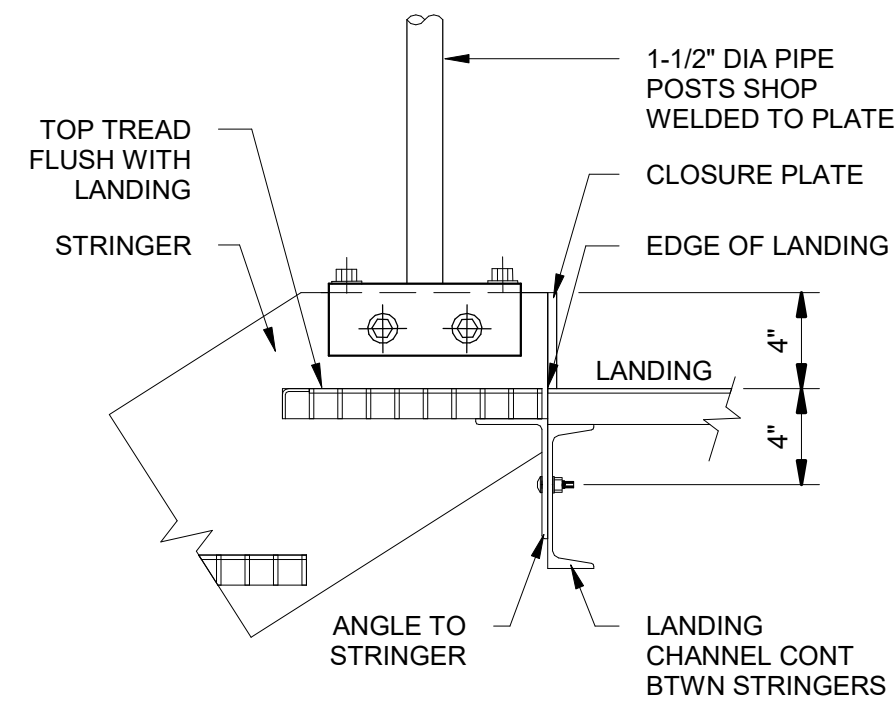
A031 STAIR LANDING CONNECTION TO CONCRETE
3" = 1'-0"



A032 STAIR LANDING CONNECTION TO CMU
3" = 1'-0"



A033 STAIR LANDING CONNECTION TO COLUMN
3" = 1'-0"



A034 TOP TREAD CONNECTION TO ALUM LANDING
1 1/2" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

AECOM HANSEN ALLEN & LUCE Inc ENGINEERS

PROJECT

PROVO RIVER WATER TREATMENT PLANT

CLIENT

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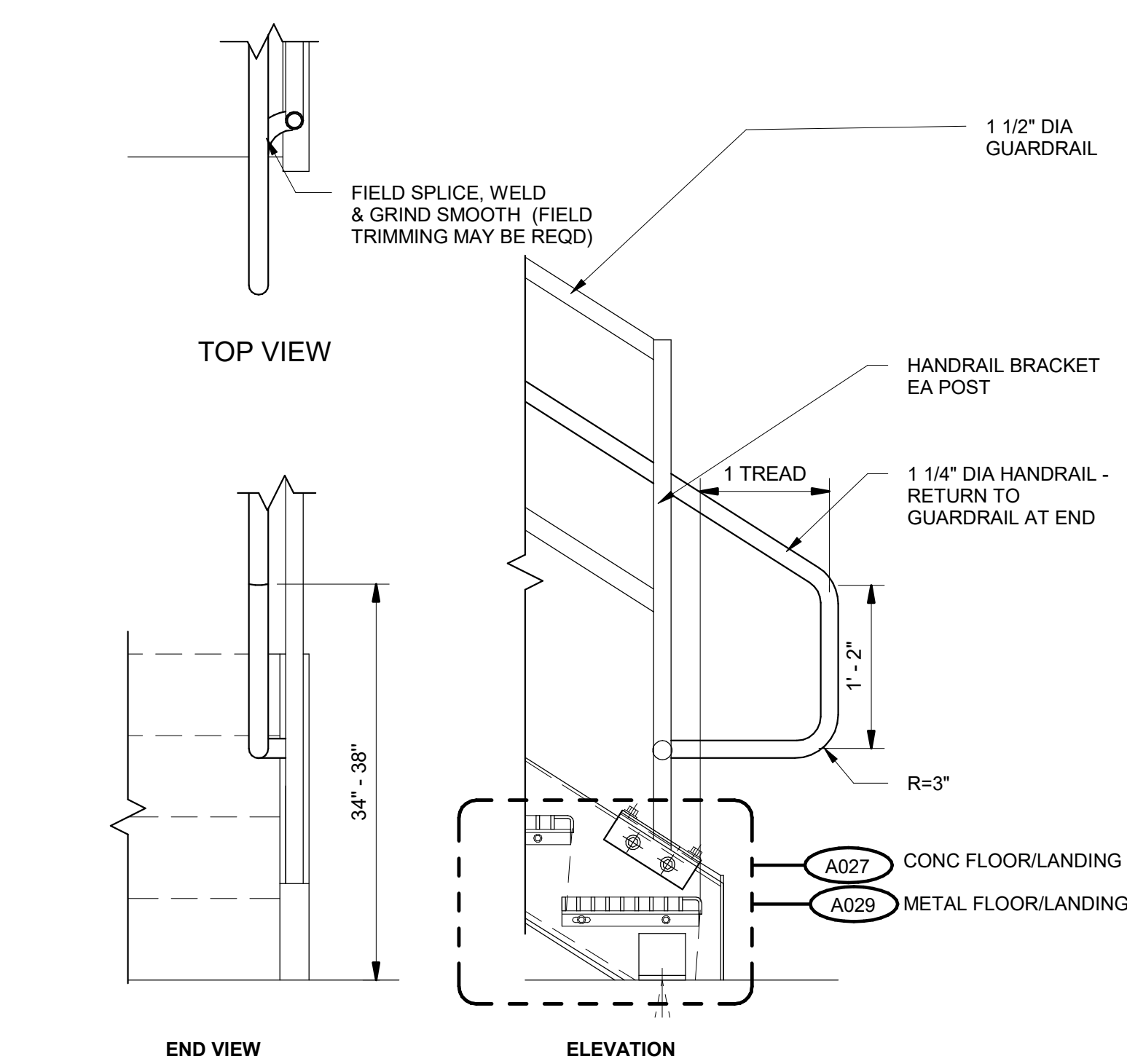
ARCHITECTURAL TYPICAL DETAILS SHEET 5

DRAWING NUMBER

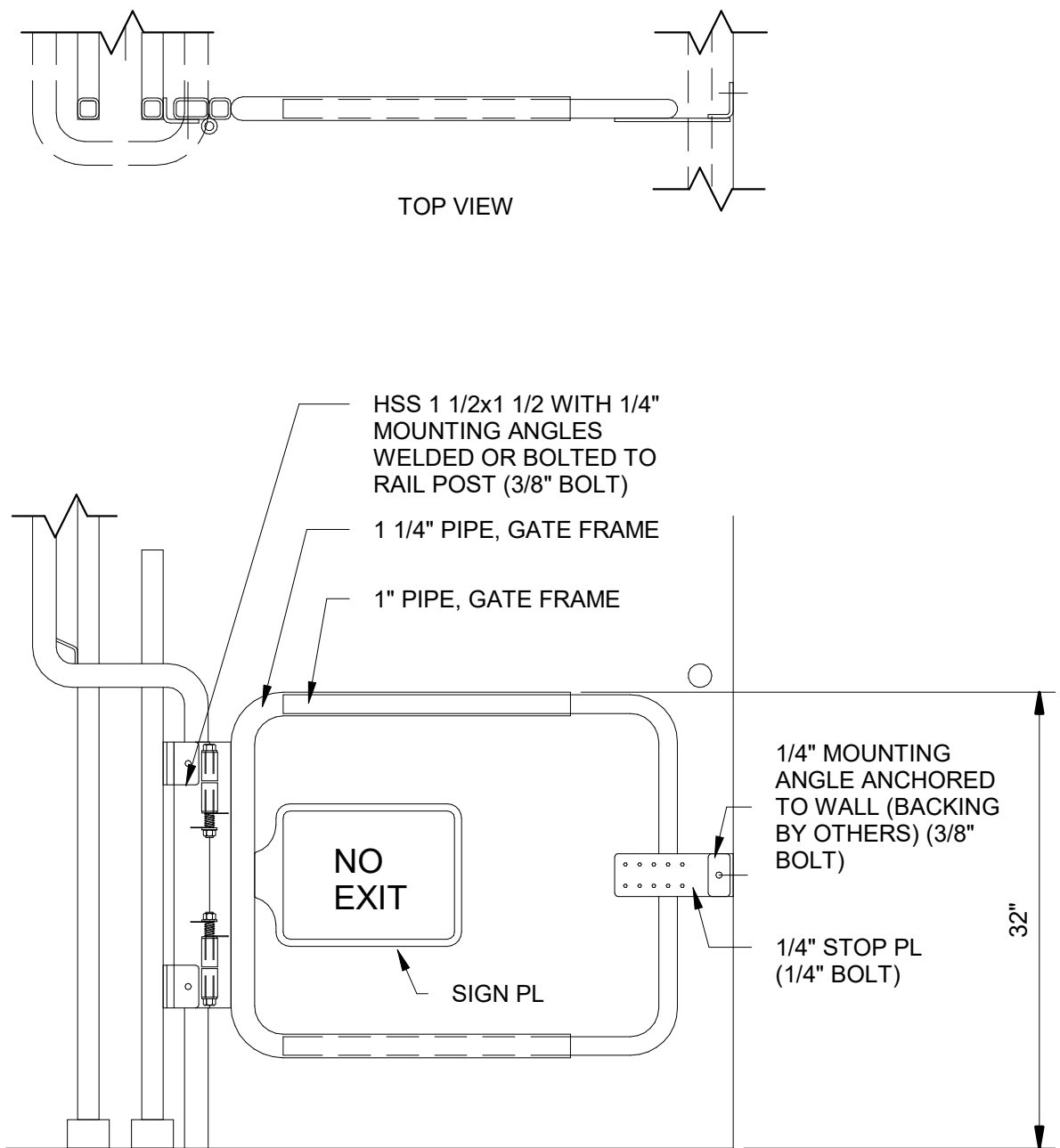
99-A705

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

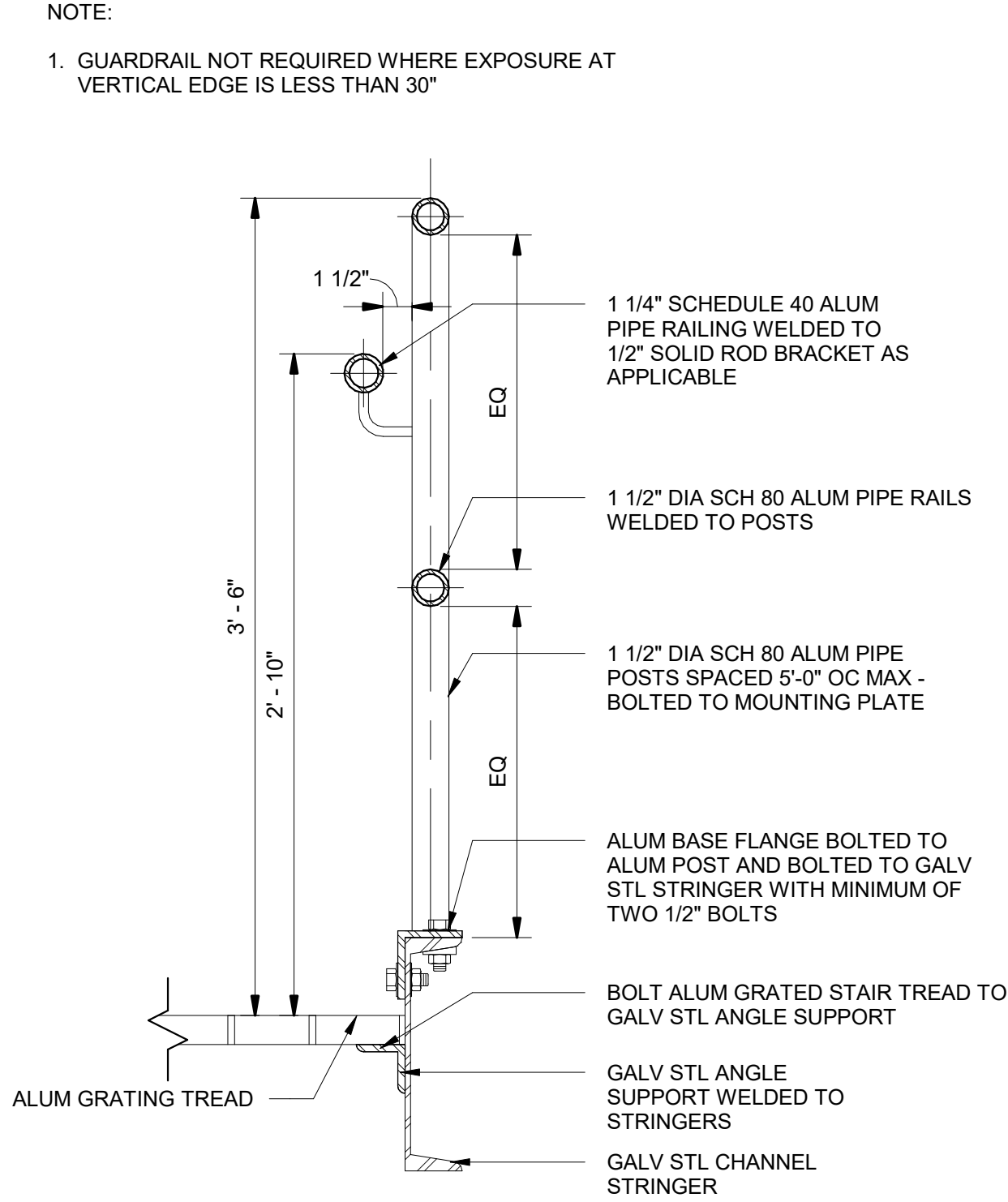
Last Plotted: 4/4/2023 11:14:05 AM
Filename: BM 3607/CLAMER (USA) 6167/0884-Provo River WTP/6167/0884-10A001.rvt



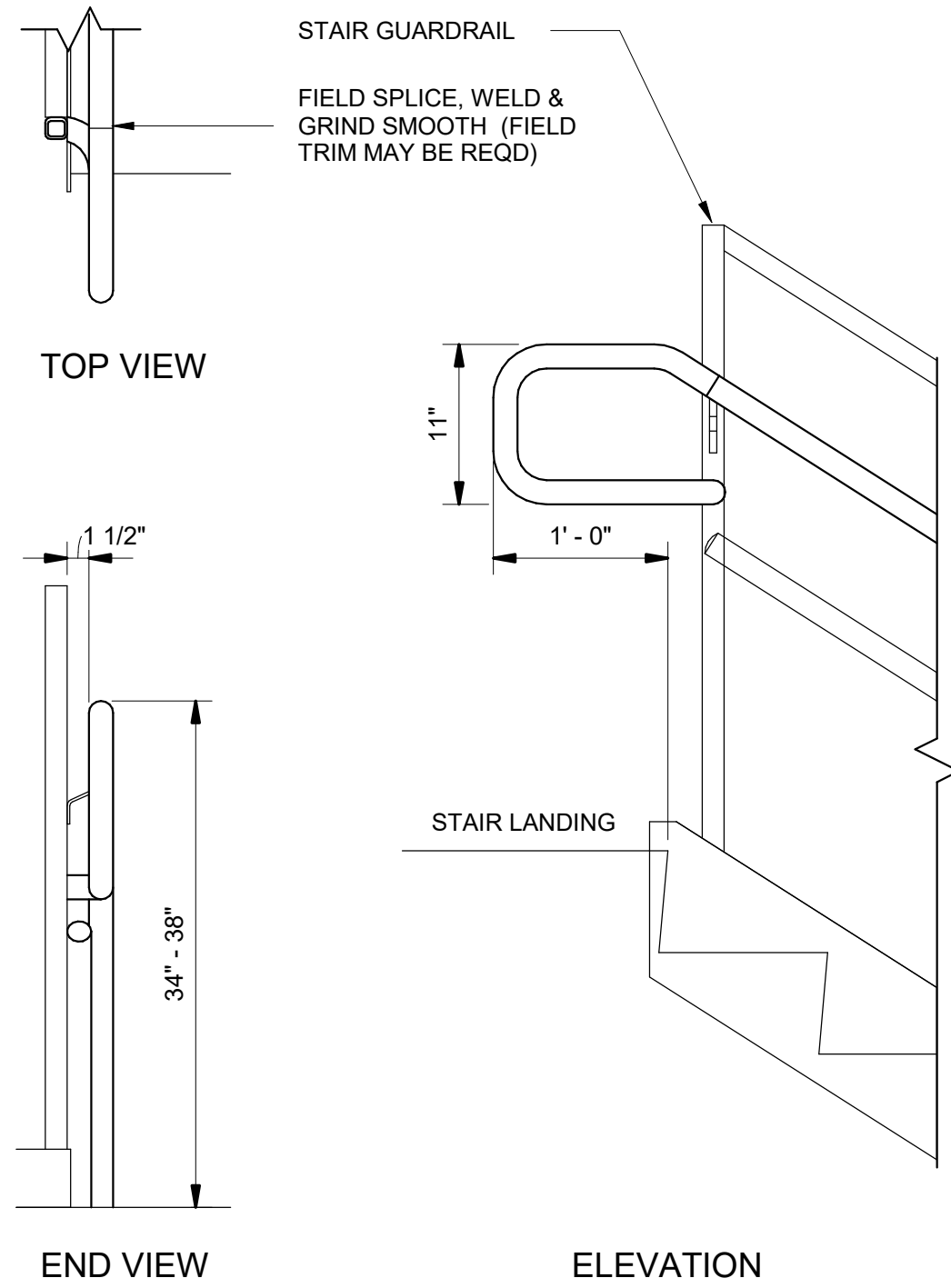
A035 HANDRAIL @ BOTTOM OF STAIRS
1" = 1'-0"



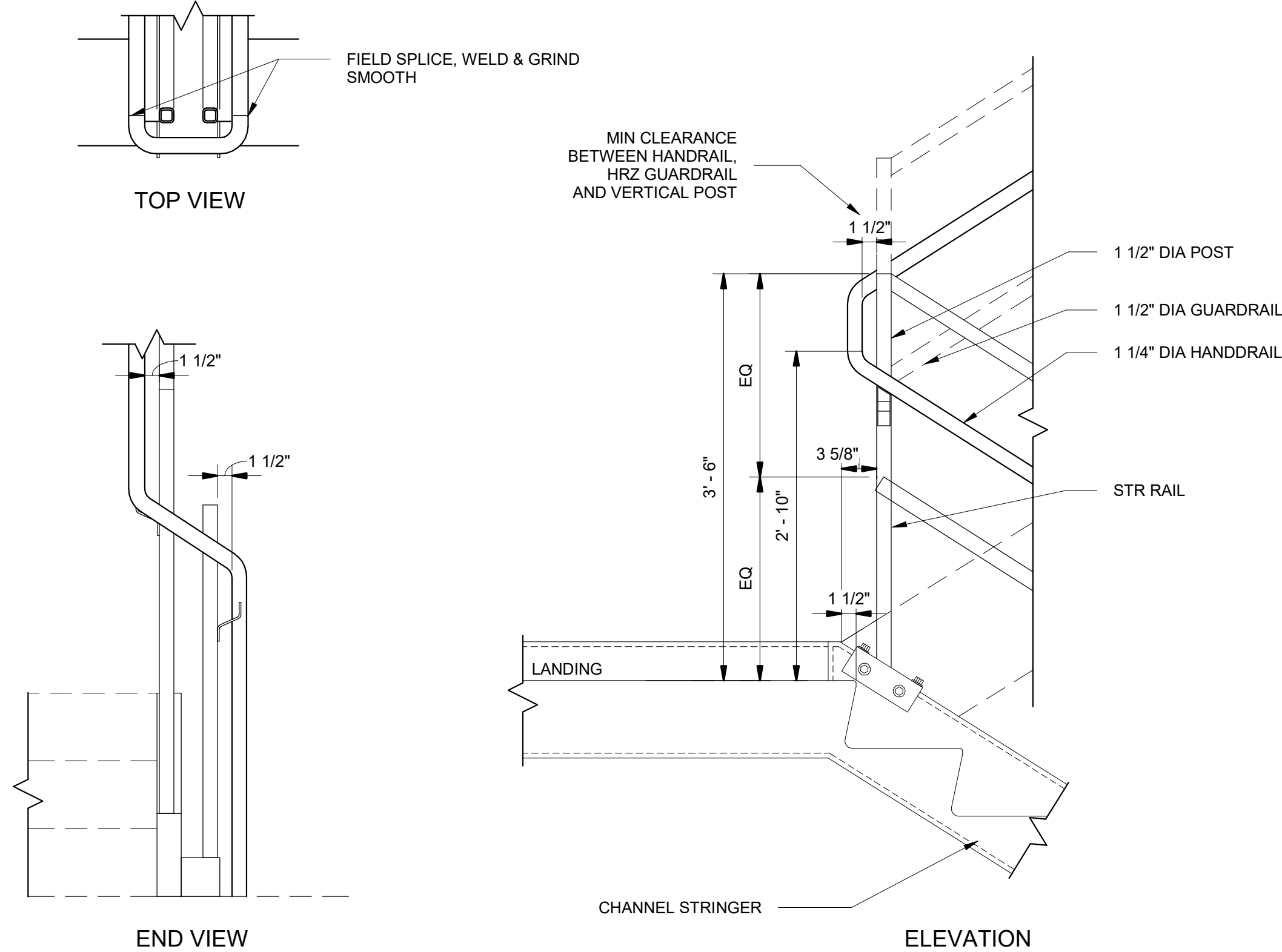
A038 POST MOUNT SWING GATE
1" = 1'-0"



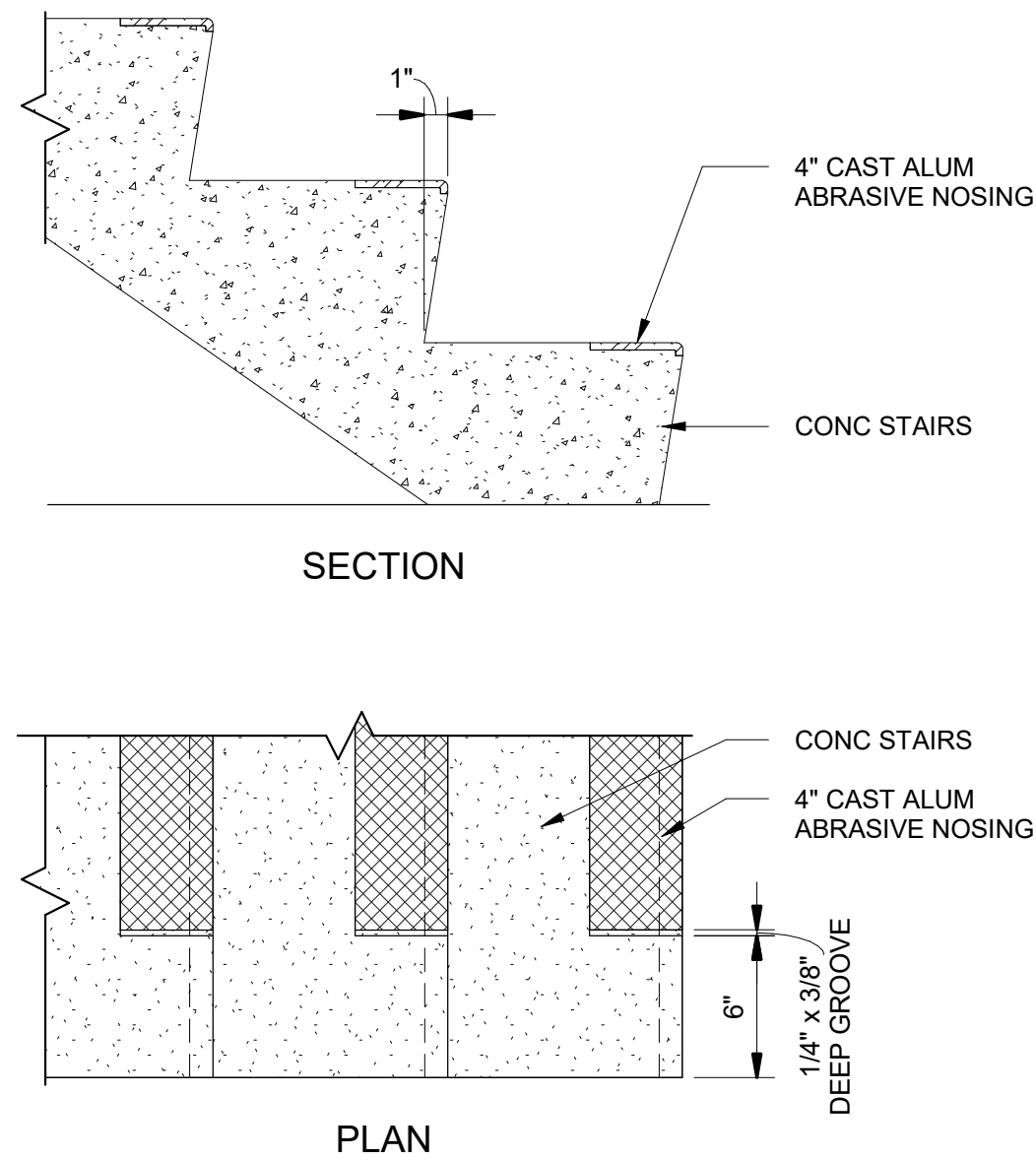
A036 ALUM STAIR RAILING
1 1/2" = 1'-0"



A039 STANDARD HANDRAIL RETURN @ STAIR TOP
1" = 1'-0"



A037 INSIDE RAIL @ STAIR LANDING
1" = 1'-0"



A040 CONC STAIR TREADS
1 1/2" = 1'-0"

PROJECT

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PROJECT NUMBER

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HAL Project No. - 035.15.420

SHEET TITLE

ARCHITECTURAL
TYPICAL DETAILS
SHEET 6

DRAWING NUMBER

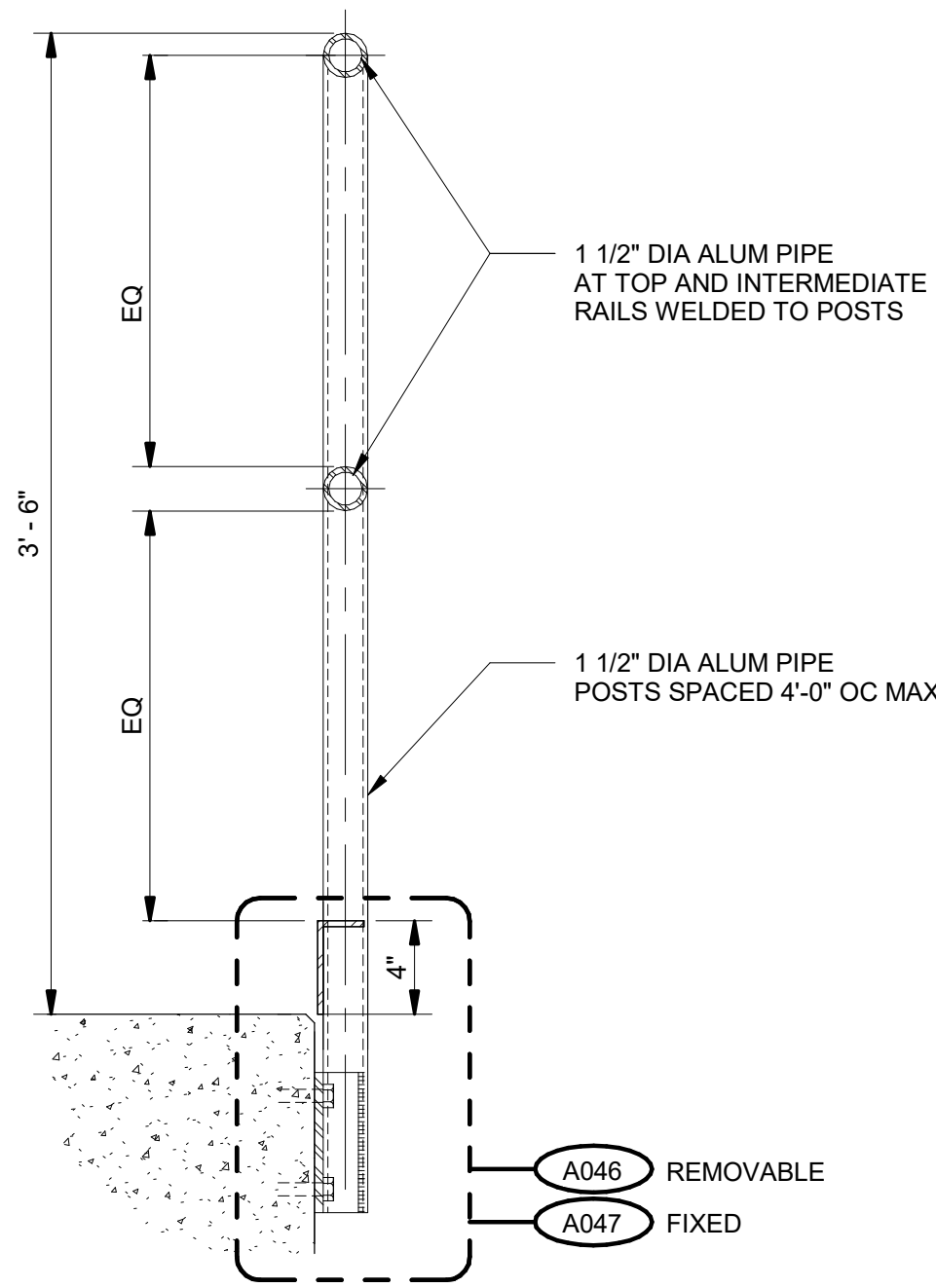
99-A706

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

Last Plotted: 4/4/2023 11:14:05 AM
Filename: BM 5807/CLAMER (USA) 6167/0884-Provo River WTP/6087/0884 - 10A001.rvt

NOTE:

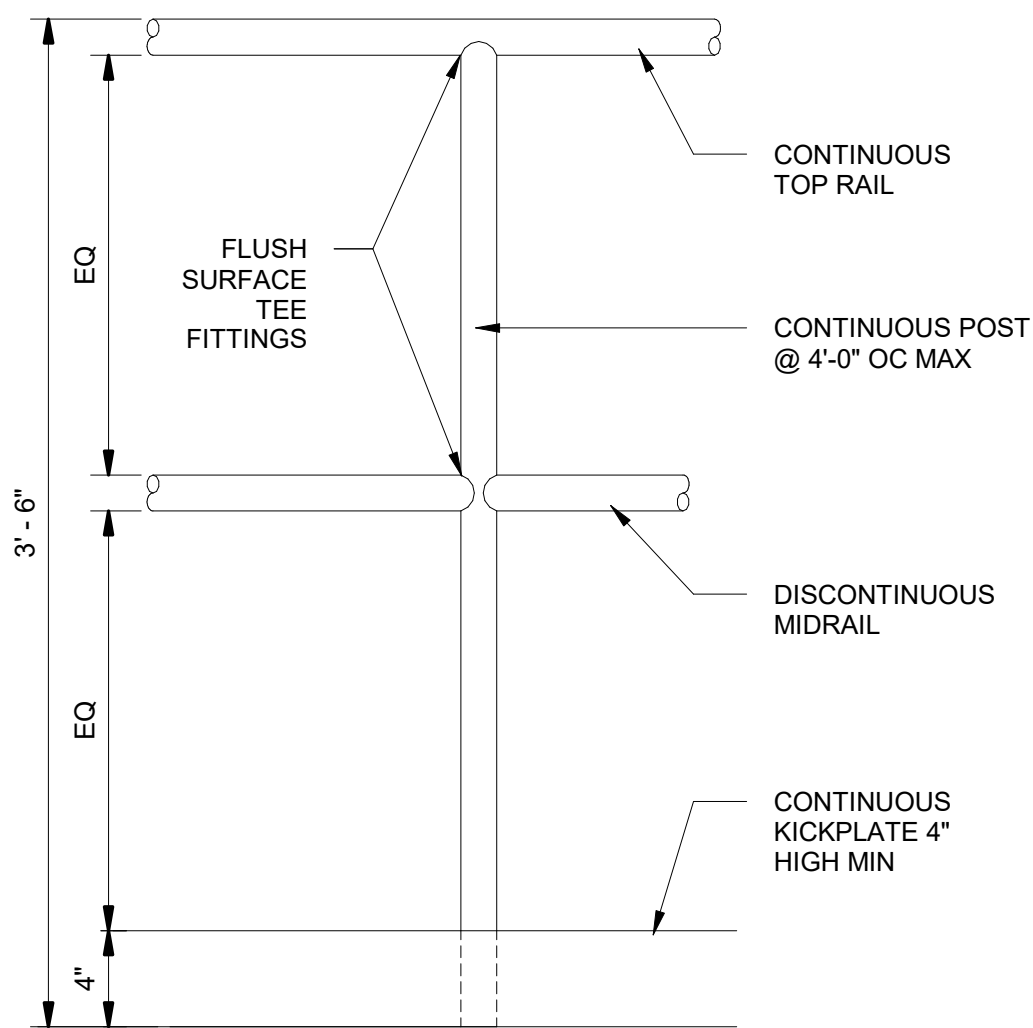
1. GUARDRAIL NOT REQUIRED WHERE EXPOSURE AT VERTICAL EDGE IS LESS THAN 30"



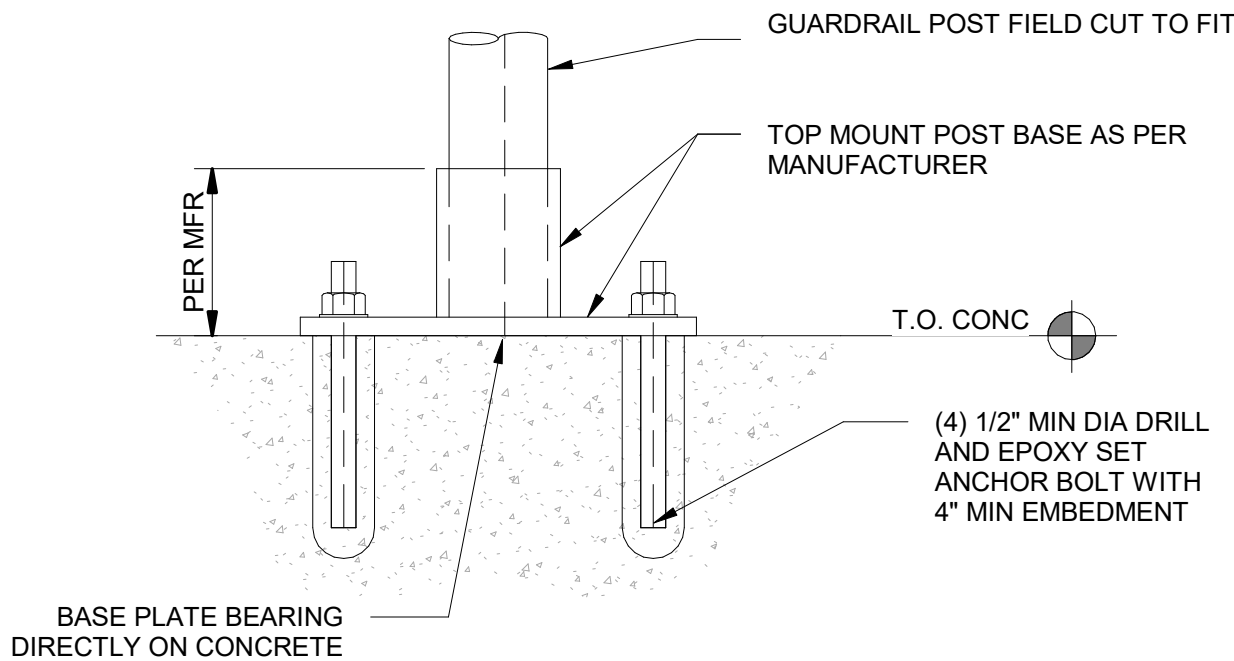
A041 SIDE MOUNTED GUARDRAIL
1 1/2" = 1'-0"

NOTE:

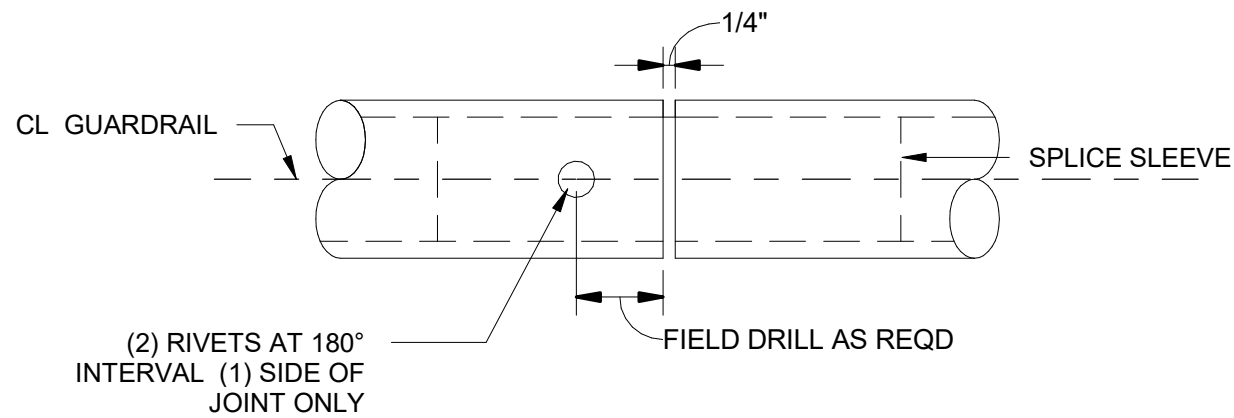
1. GUARDRAIL NOT REQUIRED WHERE EXPOSURE AT VERTICAL EDGE IS LESS THAN 30"



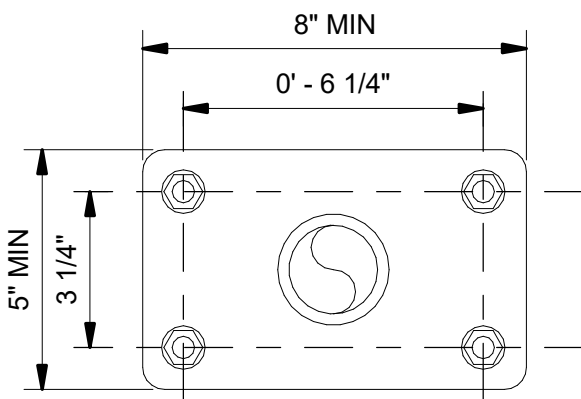
A042 GUARDRAIL ELEVATION
1 1/2" = 1'-0"



A043 TOP MOUNTED POST
3" = 1'-0"



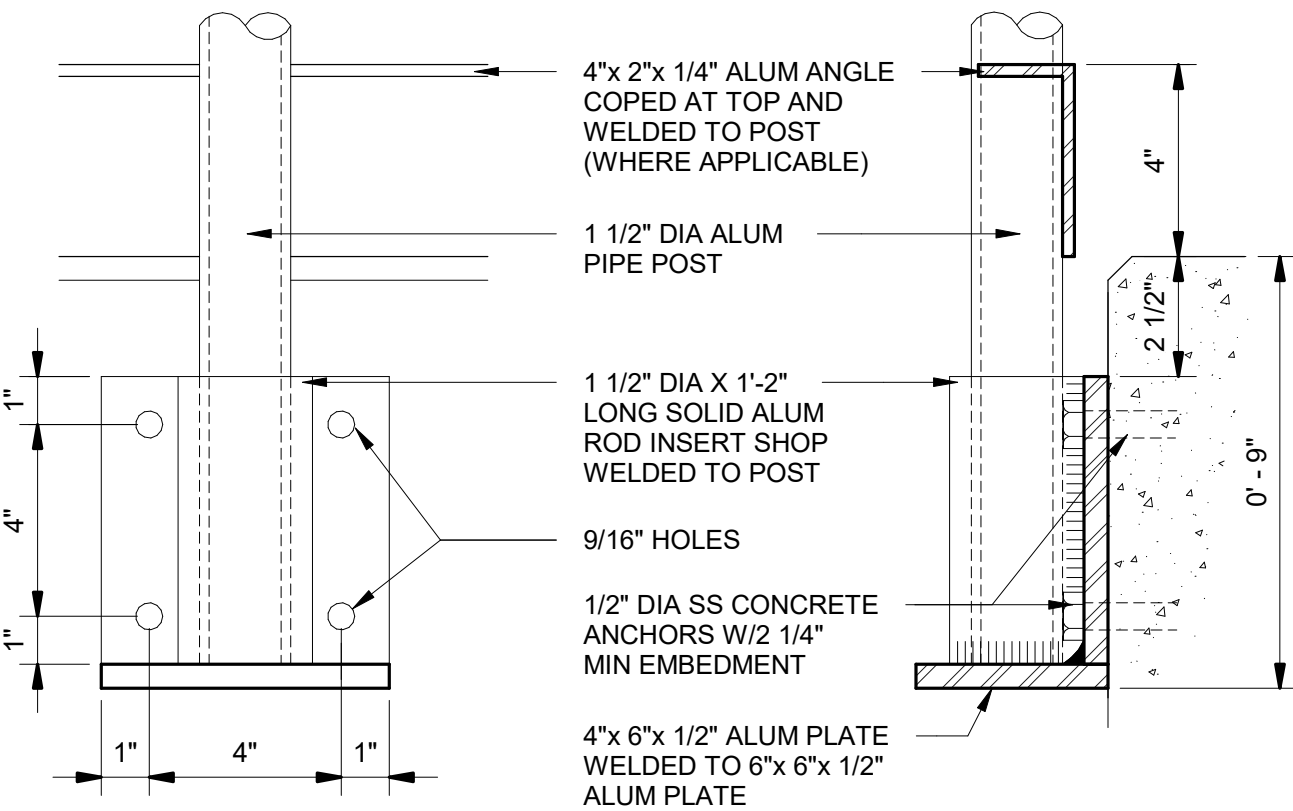
A044 GUARDRAIL SPLICE
3" = 1'-0"



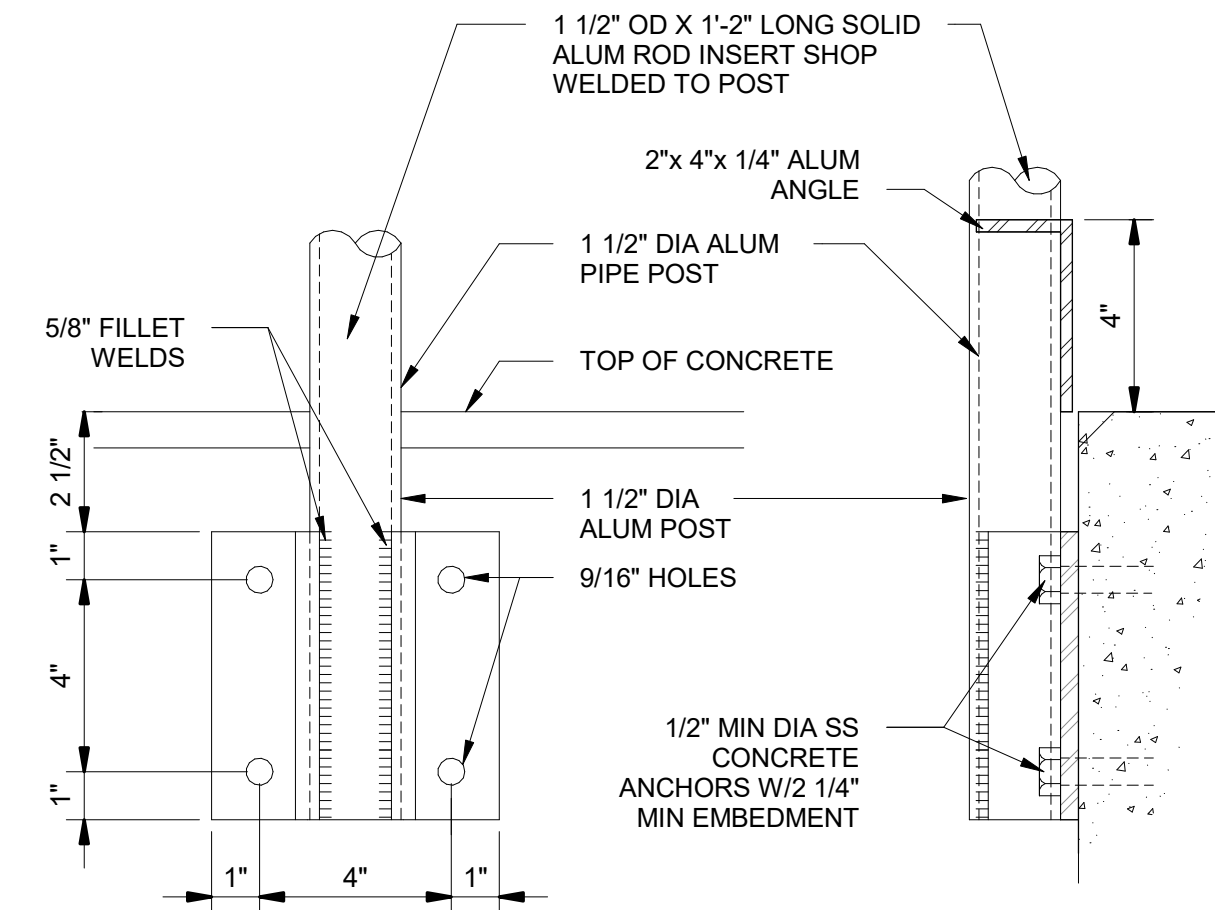
NOTES:

1. ALL GUARDRAIL, KICKPLATES, AND ACCESSORIES SHALL BE ALUM, PER SPECIFICATIONS
2. ALL RAILS AND POSTS MUST BE SIZED AND SPACED TO SATISFY ALL APPLICABLE CODES AND STANDARDS
3. COAT ALL SURFACES OF ALUM THAT CONTACT STEEL AND CONCRETE WITH GALVANIC SEPARATION PER SPECS

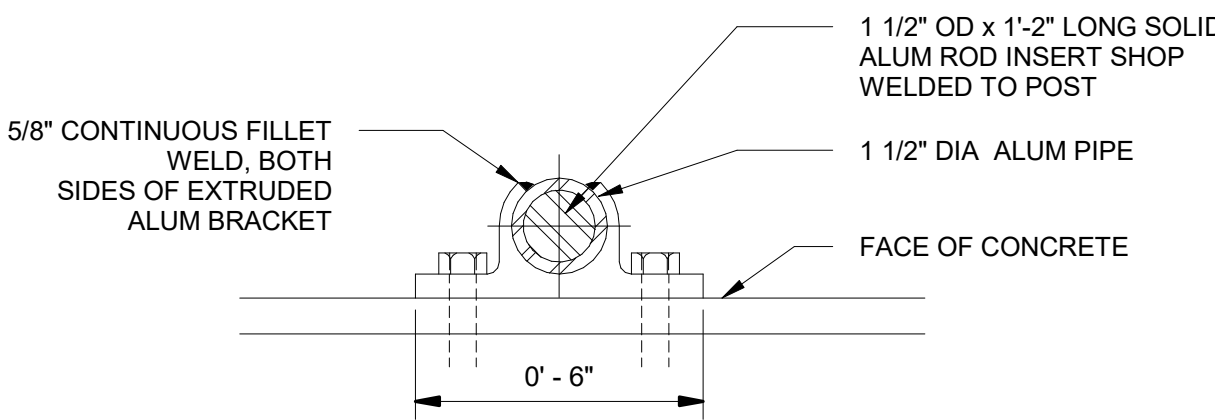
A045 GUARDRAIL MOUNTING PLATE
3" = 1'-0"



A046 REMOVABLE GUARDRAIL BRACKETS
3" = 1'-0"



A047 FIXED GUARDRAIL BRACKETS
3" = 1'-0"



A048 AL GUARDRAIL REMOVABLE - ELEVATION @ CURB
1/2" = 1'-0"

NOTE:

1. GUARDRAIL NOT REQUIRED WHERE EXPOSURE AT VERTICAL EDGE IS LESS THAN 30"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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ENGINEERS

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REGISTRATION



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A	2022-10-14	ISSUED FOR 60%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

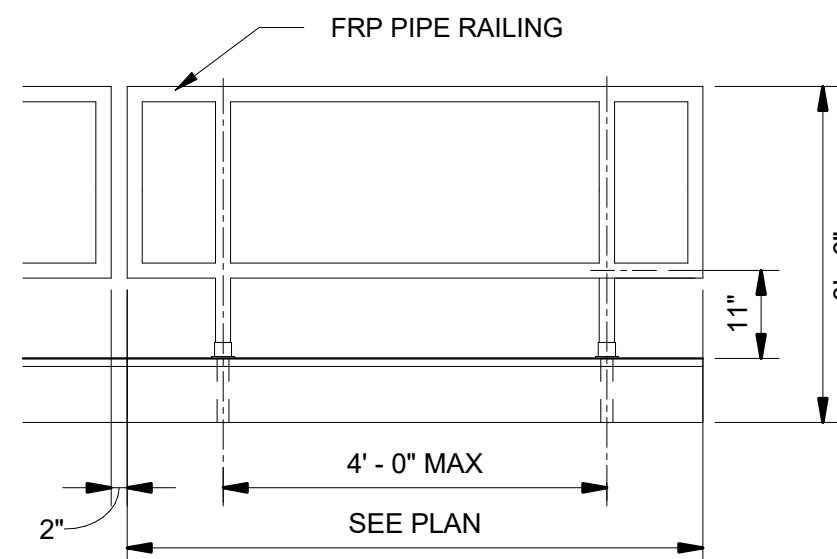
ARCHITECTURAL
TYPICAL DETAILS
SHEET 7

DRAWING NUMBER

99-A707

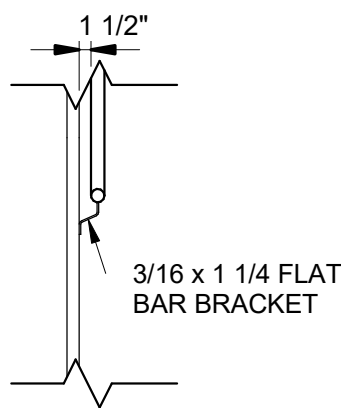
ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

Last Plotted: 4/4/2023 11:14:07 AM
Filename: BM 5807/CLAWER (USA) 6167/0884-Provo River WTP/6167/0884-10A001.rvt

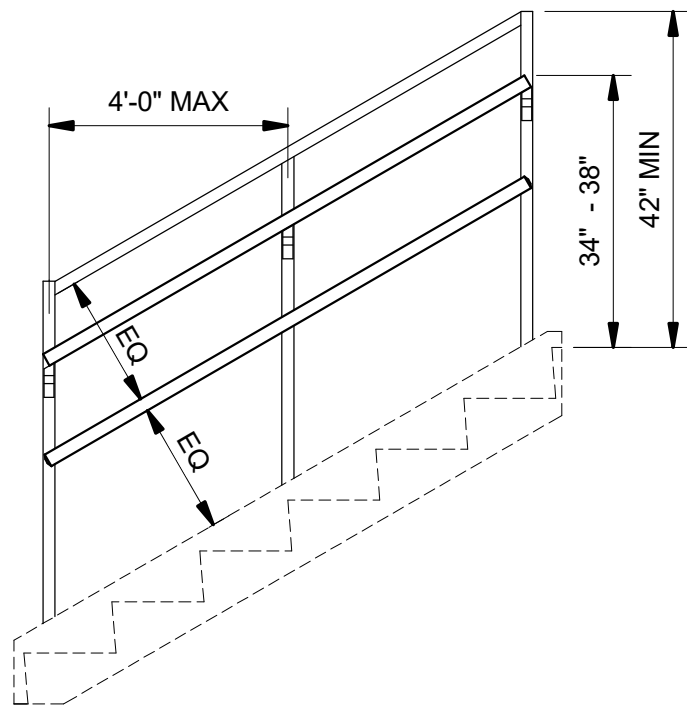


NOTE:
1. GUARDRAIL NOT REQUIRED WHERE EXPOSURE AT VERTICAL EDGE IS LESS THAN 30"

A053 FRP GUARDRAIL REMOVABLE - EL @ HATCH CURB
1/2" = 1'-0"

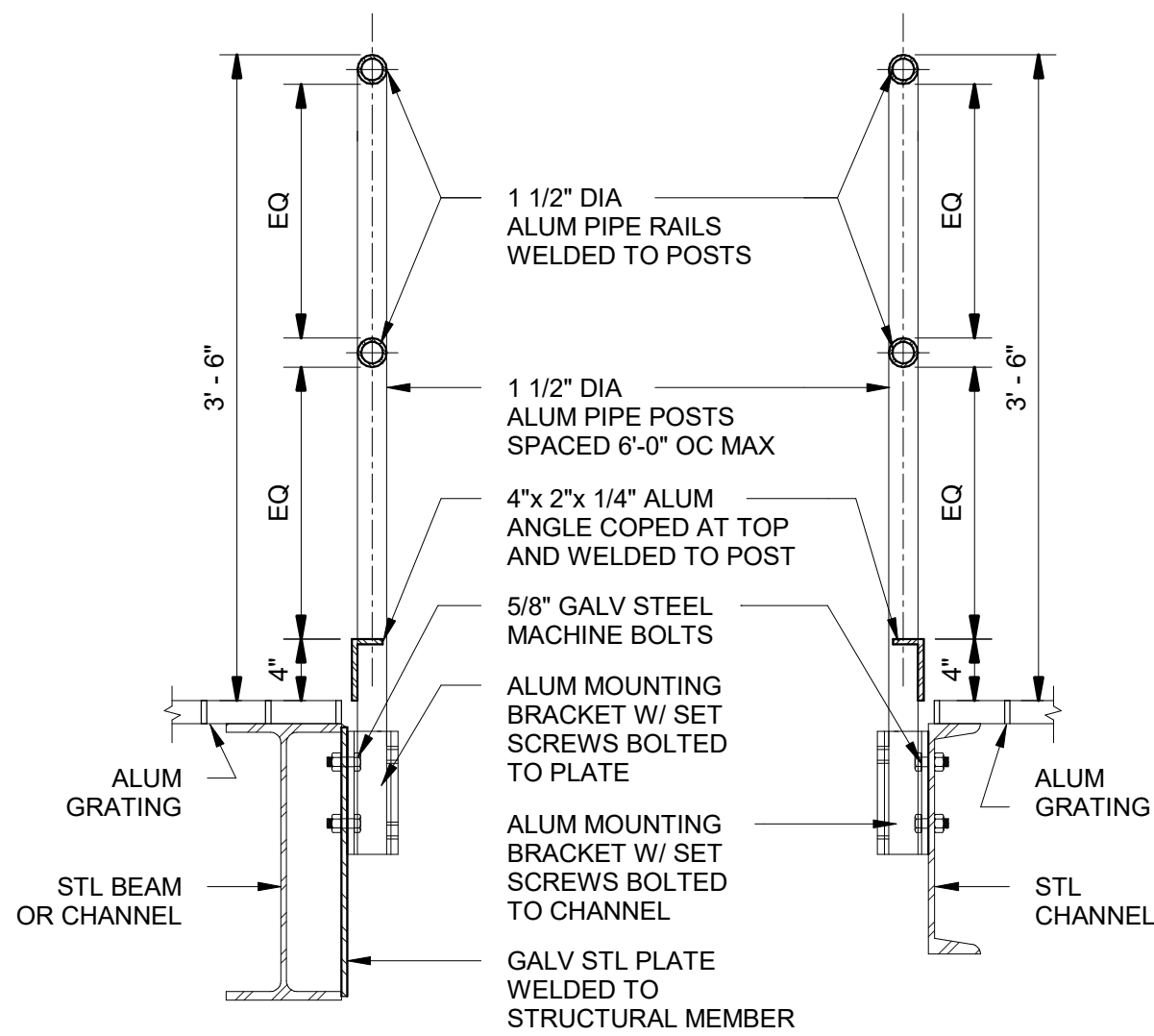


END VIEW



ELEVATION

A054 STAIR HANDRAIL AND GUARDRAIL CONSTRUCTION
1/2" = 1'-0"



NOTE: GUARDRAIL NOT REQUIRED WHERE EXPOSURE AT VERTICAL EDGE IS LESS THAN 30"

A056 GUARDRAIL AT PLATFORM
1" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



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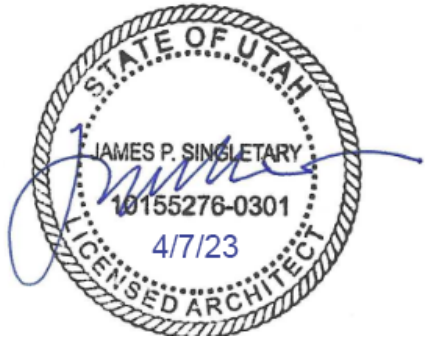
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U/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

ARCHITECTURAL
TYPICAL DETAILS
SHEET 8

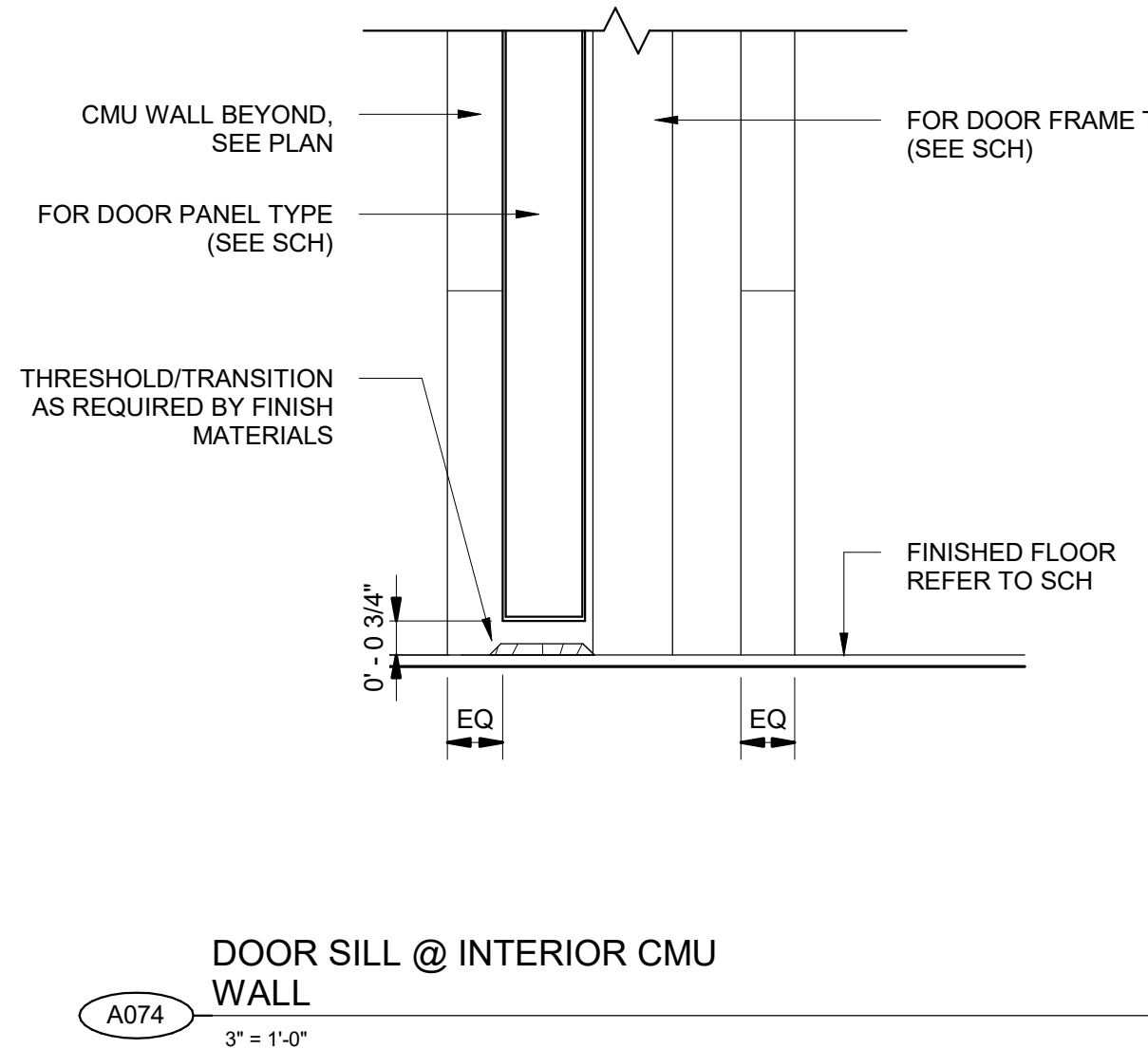
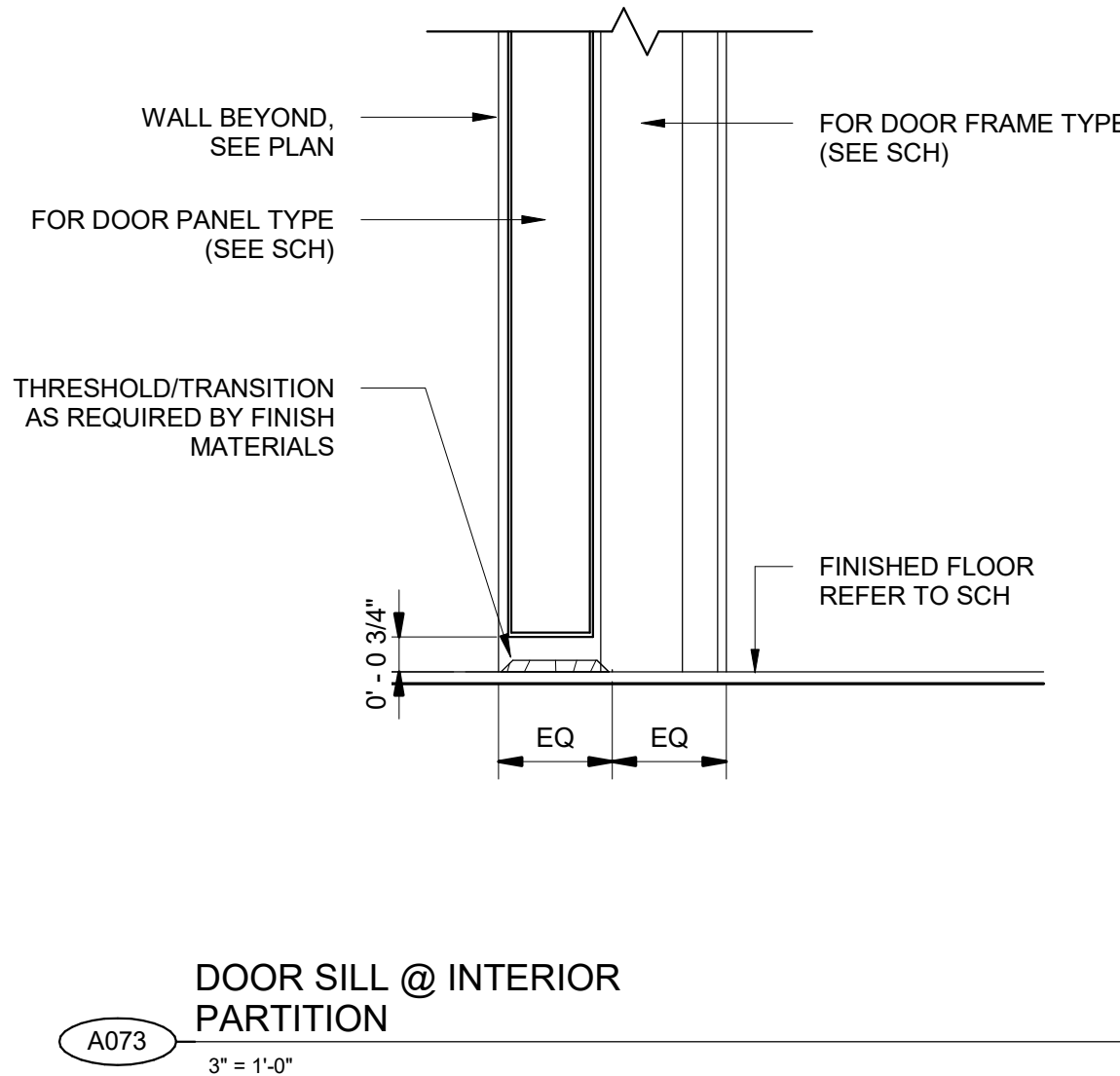
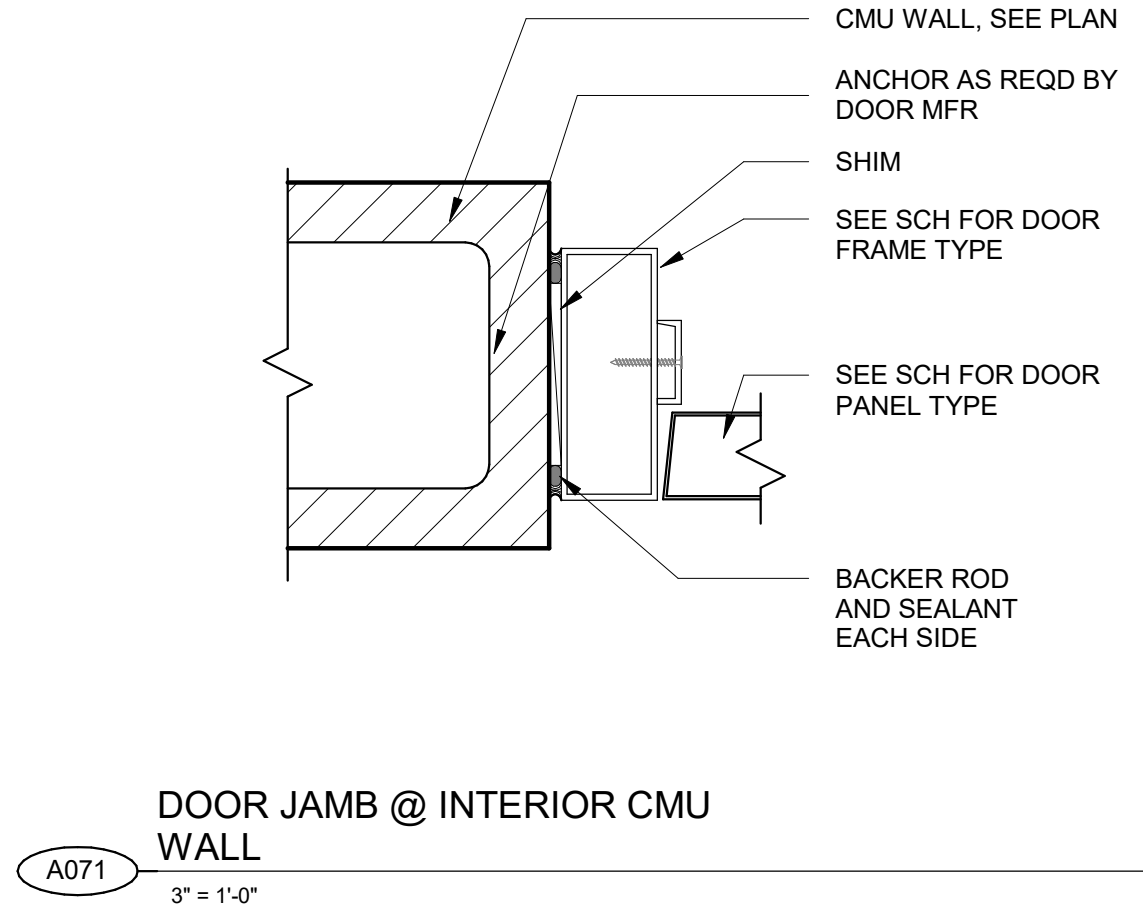
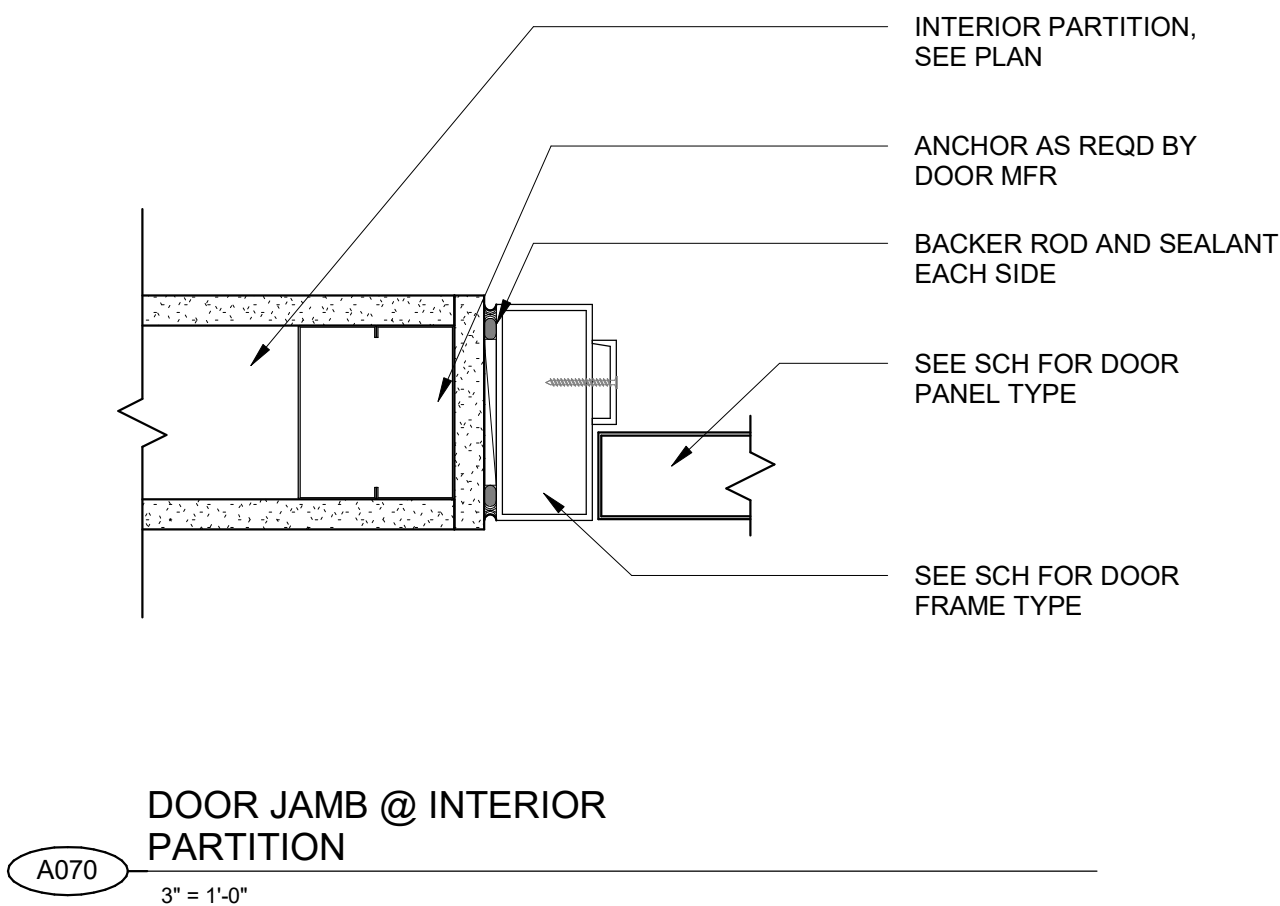
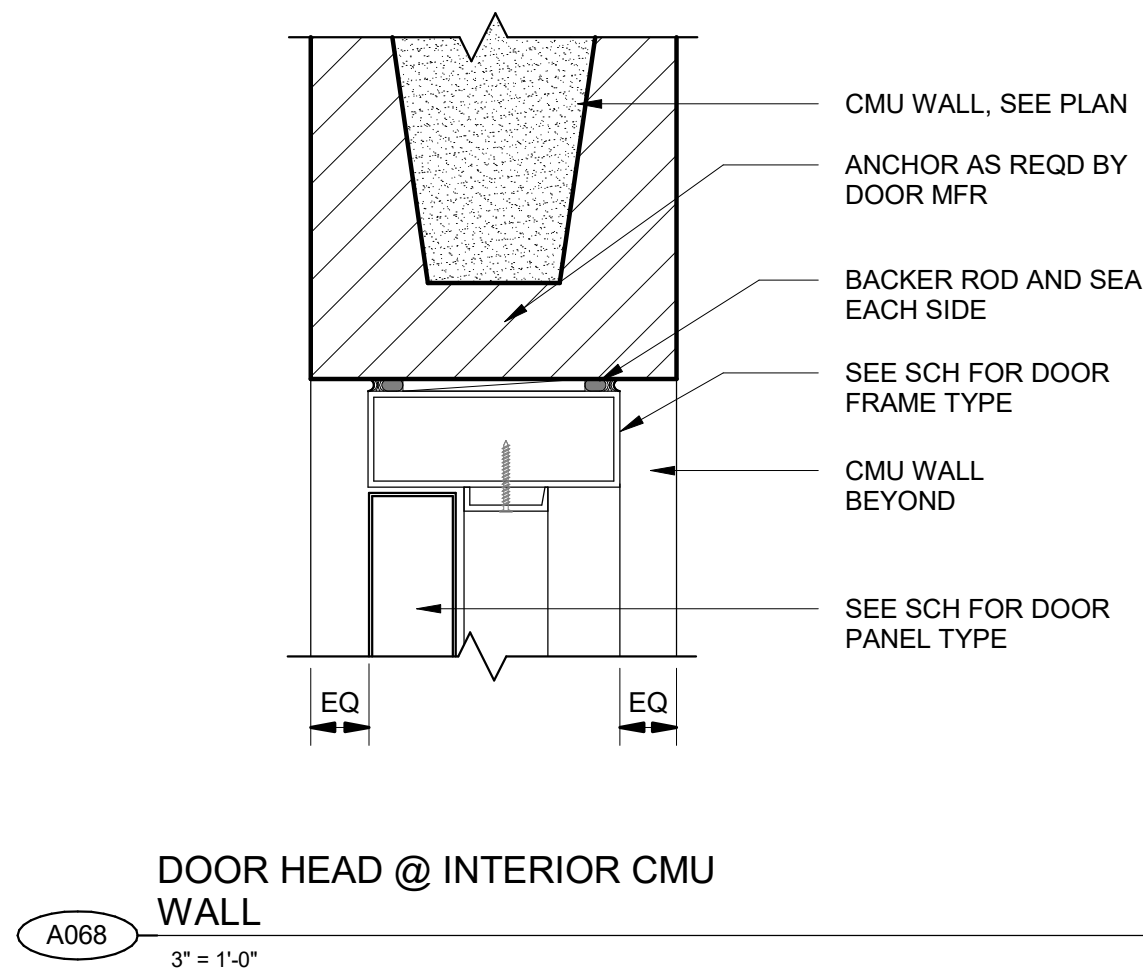
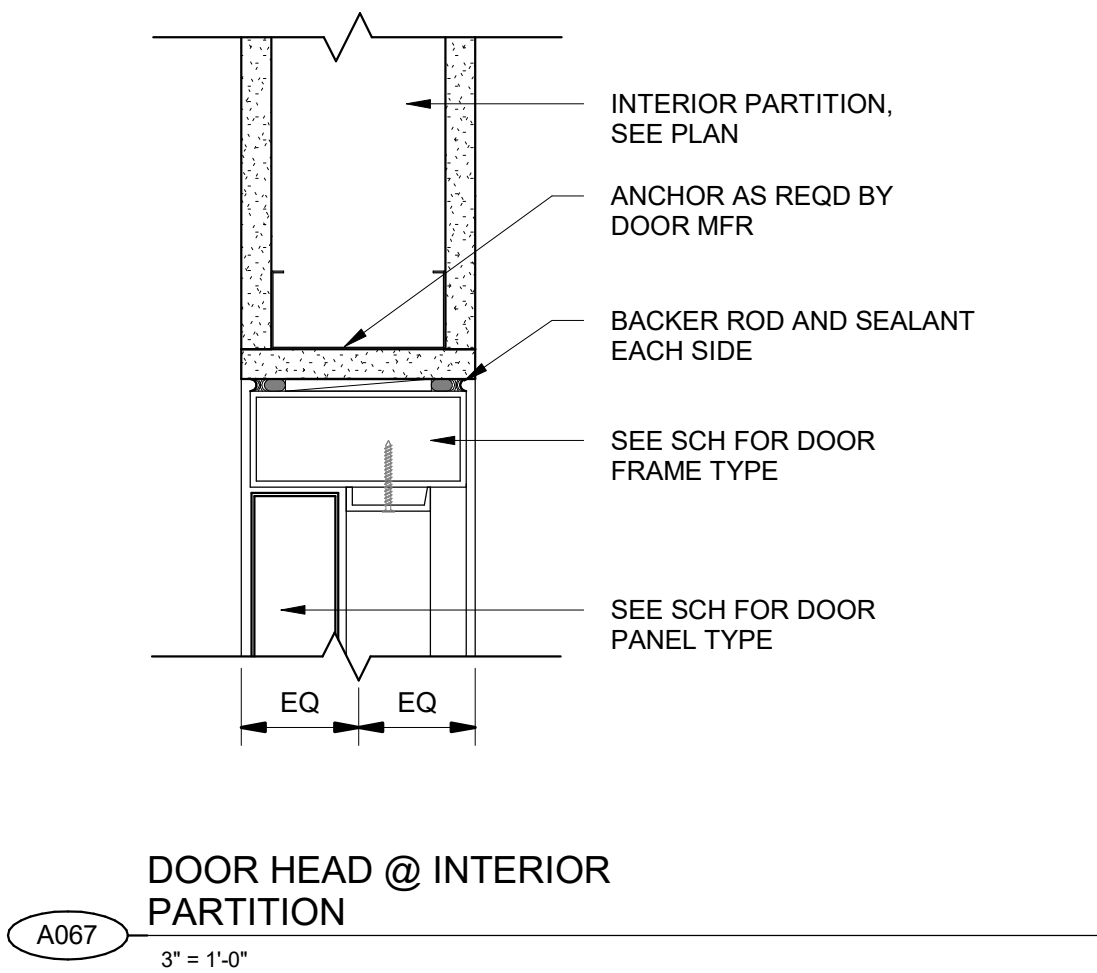
DRAWING NUMBER

99-A708

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

Last Plotted: 4/4/2023 11:14:09 AM
Filename: BM 5807/CLAWER (USA) 6167/0884-Provo River WTP/6167/0884-10A001.rvt

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



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AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

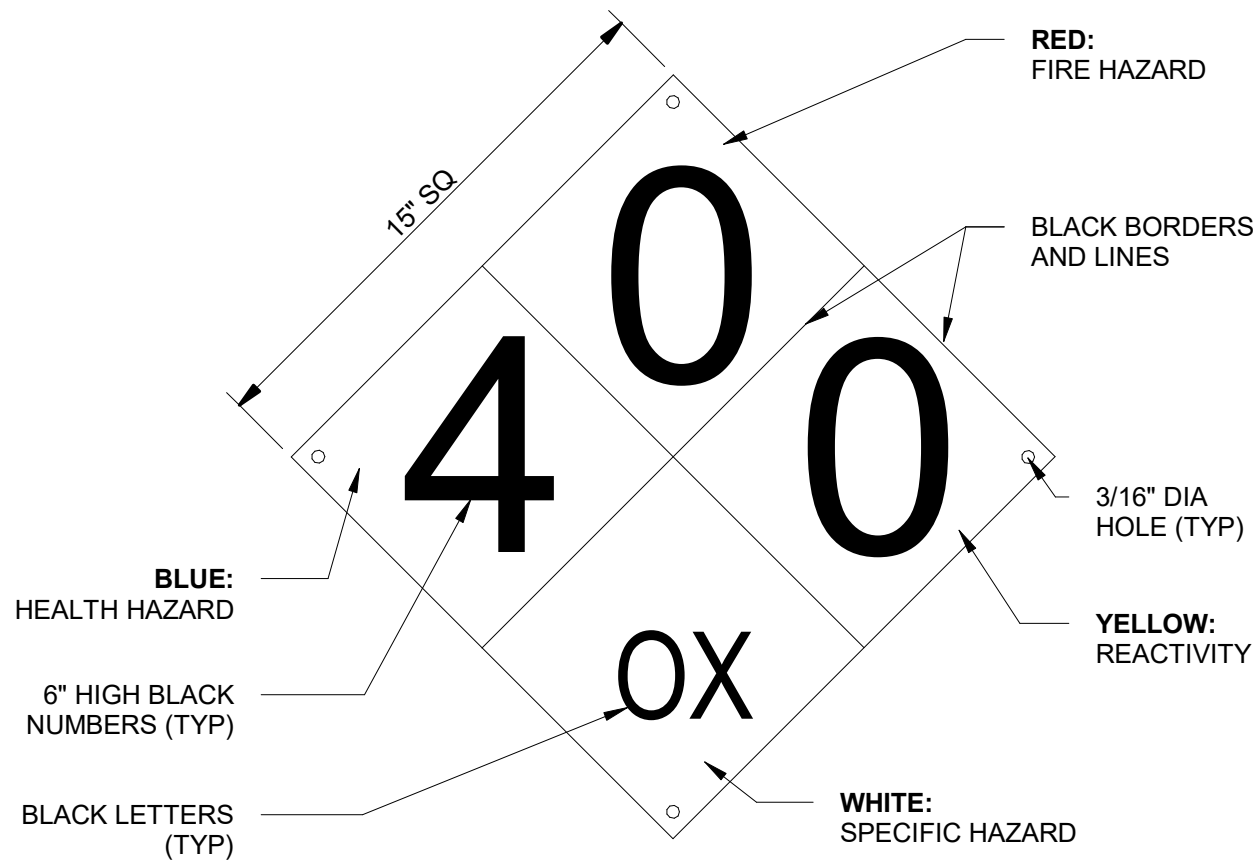
ARCHITECTURAL
TYPICAL DETAILS
SHEET 10

DRAWING NUMBER

99-A710

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS


VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



NOTES:

- DIAMOND HAZARD MATERIALS SIGN SHALL CORRECTLY IDENTIFY THE HAZARDOUS MATERIALS CONTAINED WITHIN THE CHEMICAL STORAGE ROOMS IN ACCORDANCE WITH NFPA 704.
- DIAMOND SIGN SHALL BE SURFACE MOUNTED ADJACENT TO OR ON ALL CHEMICAL ROOM ENTRY DOORS

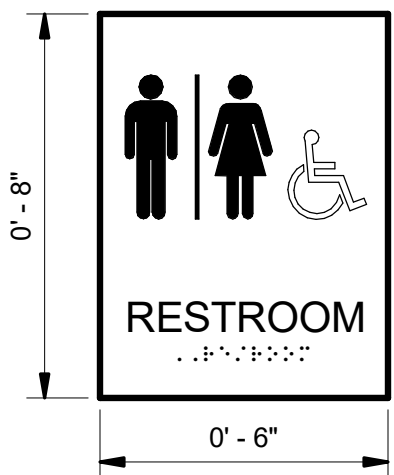
SPECIFIC HAZARD:

ACID:	ACID
ALKALI:	ALK
CORROSIVE:	COR
OXIDIZER:	OX
RADIOACTIVE:	
USE NO WATER:	W

HAZARD TYPES AND LEVELS:

NO.	BLUE: HEALTH HAZARD	RED: FIRE HAZARD	YELLOW: REACTIVITY
0	NORMAL MATERIAL	WILL NOT BURN	STABLE
1	SLIGHTLY HAZARDOUS	ABOVE 200° F	UNSTABLE IF HEATED
2	HAZARDOUS	ABOVE 100° F NOT EXCEEDING 200° F	VIOLENT CHEMICAL CHANGE
3	EXTREME DANGER	BELOW 100° F	SHOCK AND HEAT MAY DETONATE
4	DEADLY	BELOW 73°F	MAY DETONATE

UNISEX

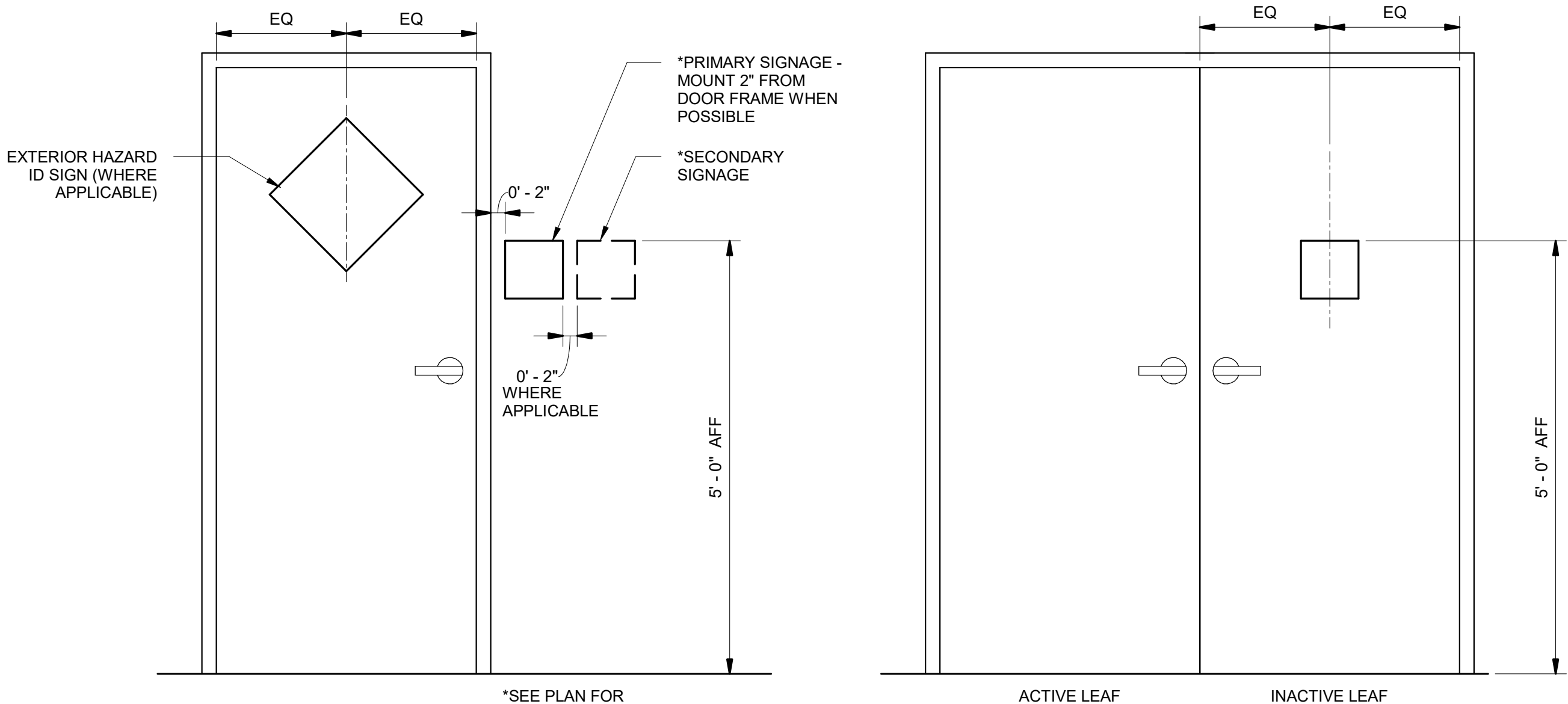


MOUNTED ON DOOR

RESTROOM SIGNAGE (S2)

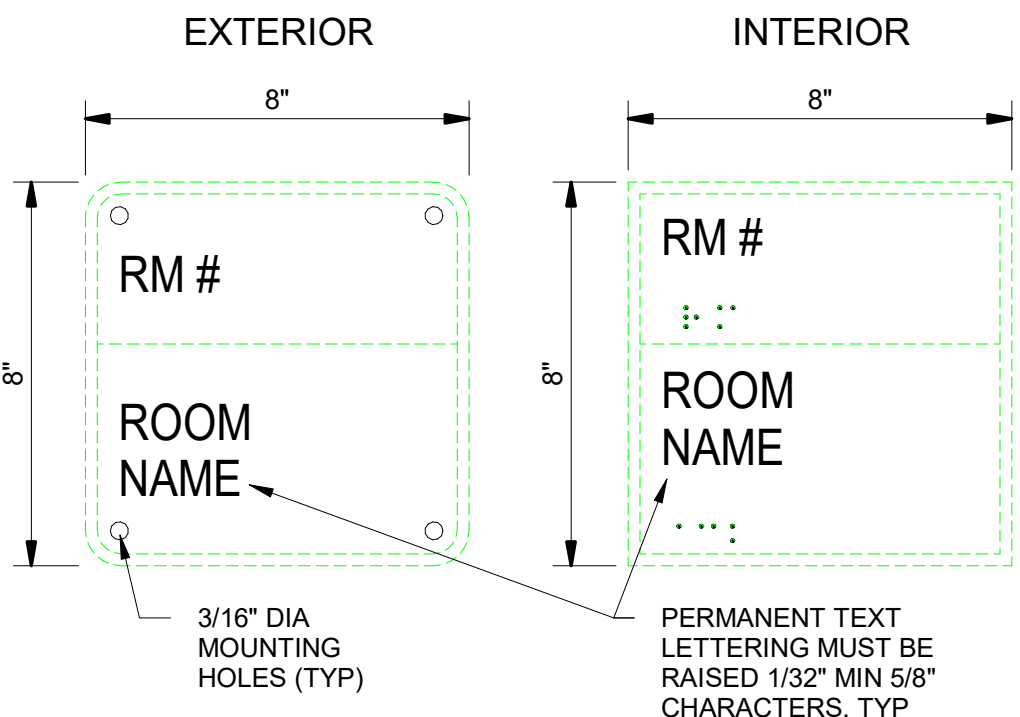
NFPA MATERIAL HAZARD IDENTIFICATION SIGN (S1)

A075
3" = 1'-0"



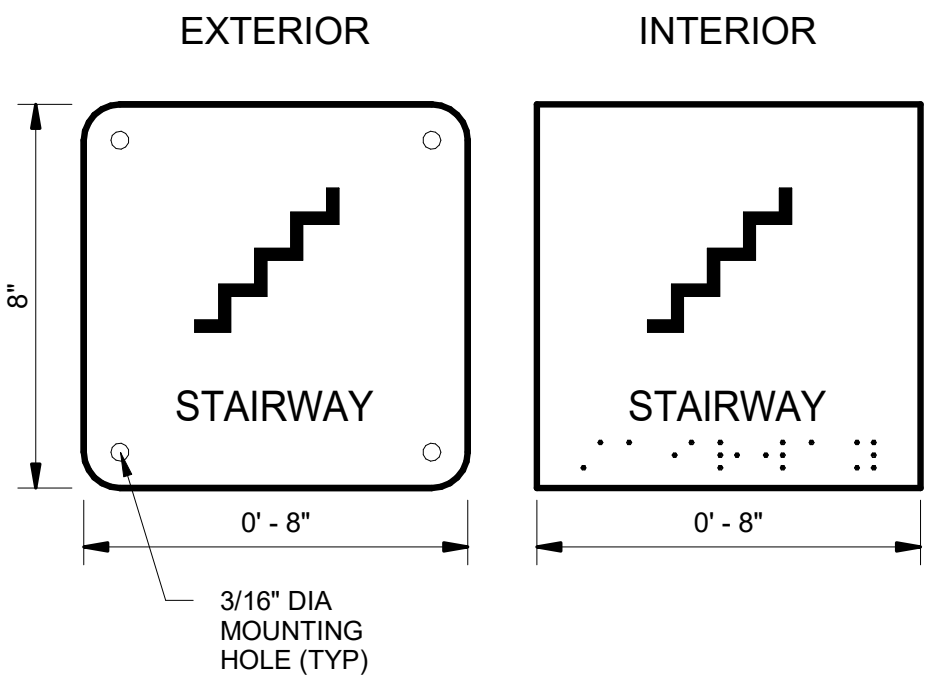
SIGNAGE MOUNTING DIAGRAM

A078
3/4" = 1'-0"



ROOM NAME SIGNS (S3)

A079
3" = 1'-0"



STAIRWAY SIGNS (S4)

A080
3" = 1'-0"

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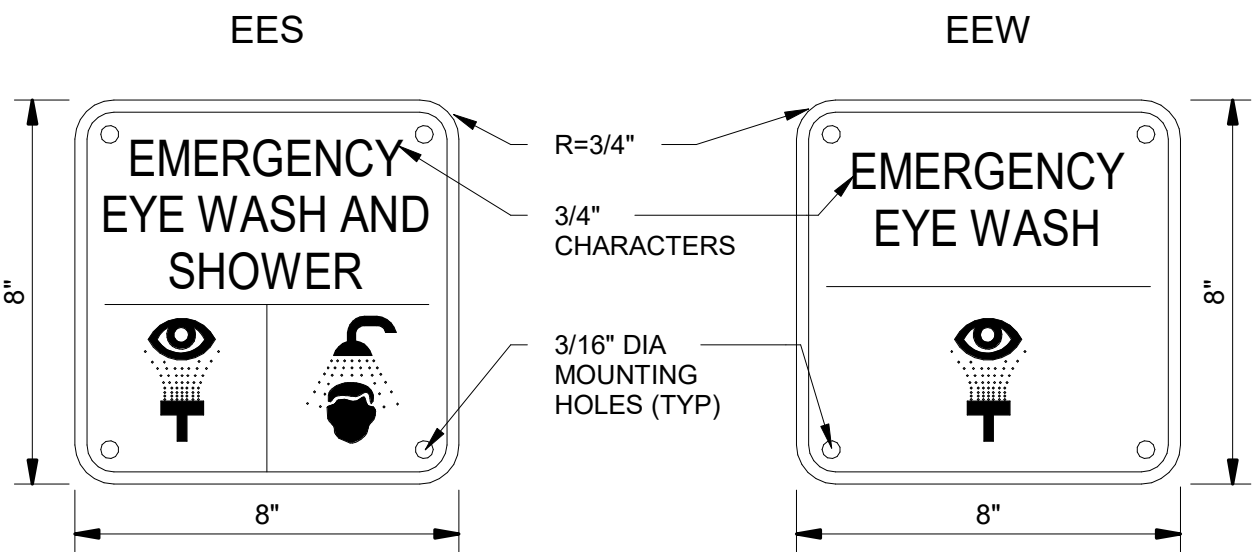
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

ARCHITECTURAL
TYPICAL DETAILS
SHEET 11

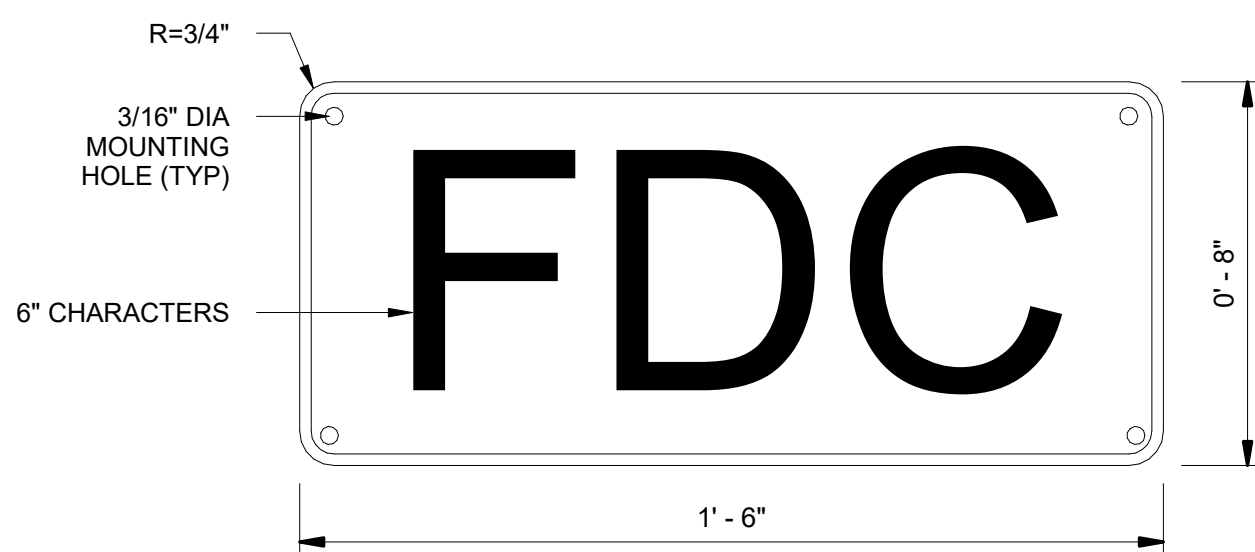
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99-A711

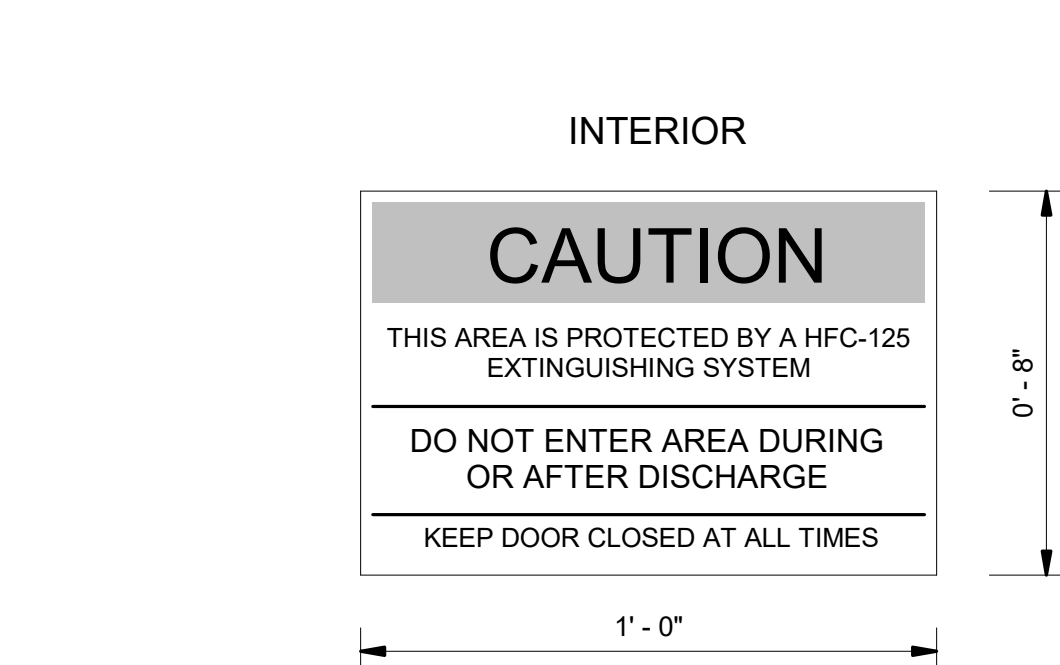
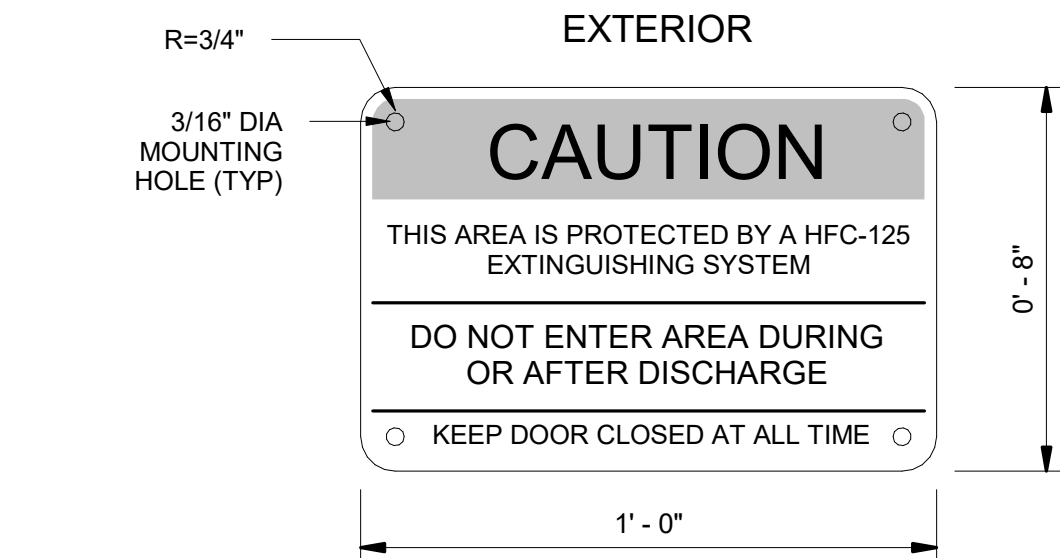


NOTE:
1. FASTEN SIGN ADJACENT TO EMERGENCY SHOWER AND EYE WASH STATIONS AT 5'-0" AFF

A081
EMERGENCY EYE WASH & SHOWER SIGNS (S5)
3" = 1'-0"



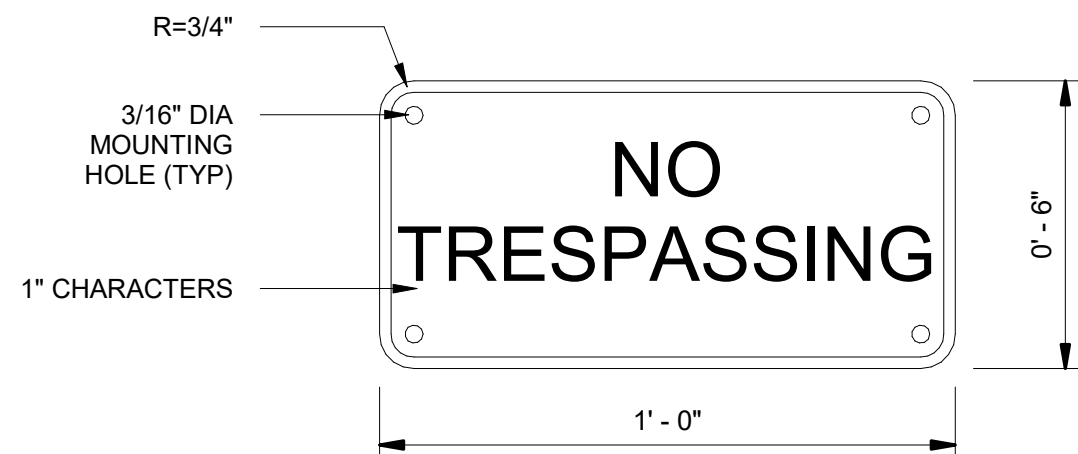
A082
EXTERIOR - FIRE DEPARTMENT CONNECTION (S6)
3" = 1'-0"



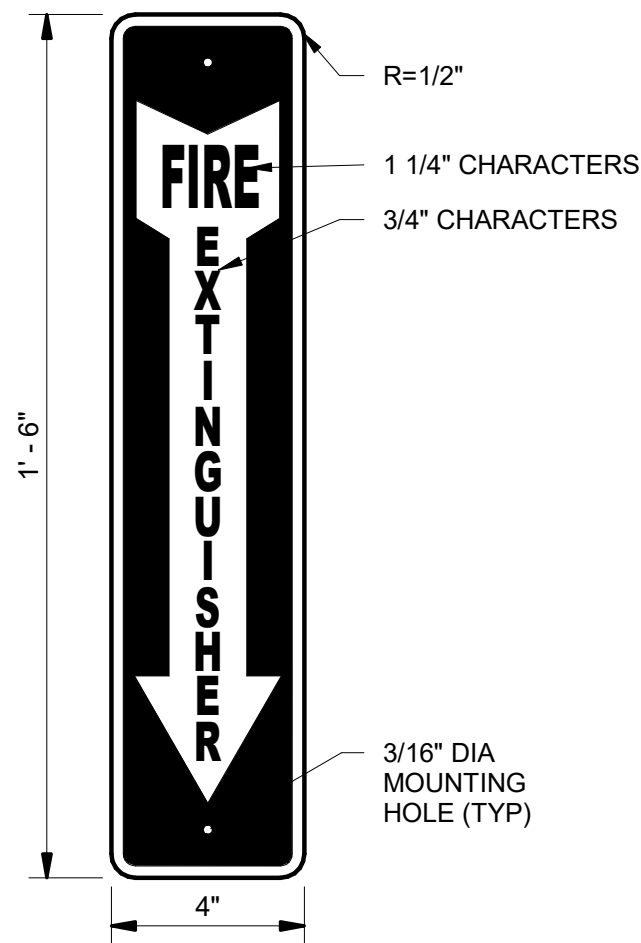
A085
HATCH TO REMAIN CLOSED (S8)
3" = 1'-0"



A087
EXTERIOR - NON POTABLE (S9)
3" = 1'-0"



A088
EXTERIOR - NO TRESPASSING SIGN (S10)
3" = 1'-0"



A084
FIRE EXTINGUISHER SIGN (S7)
3" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

ARCHITECTURAL
TYPICAL DETAILS
SHEET 12

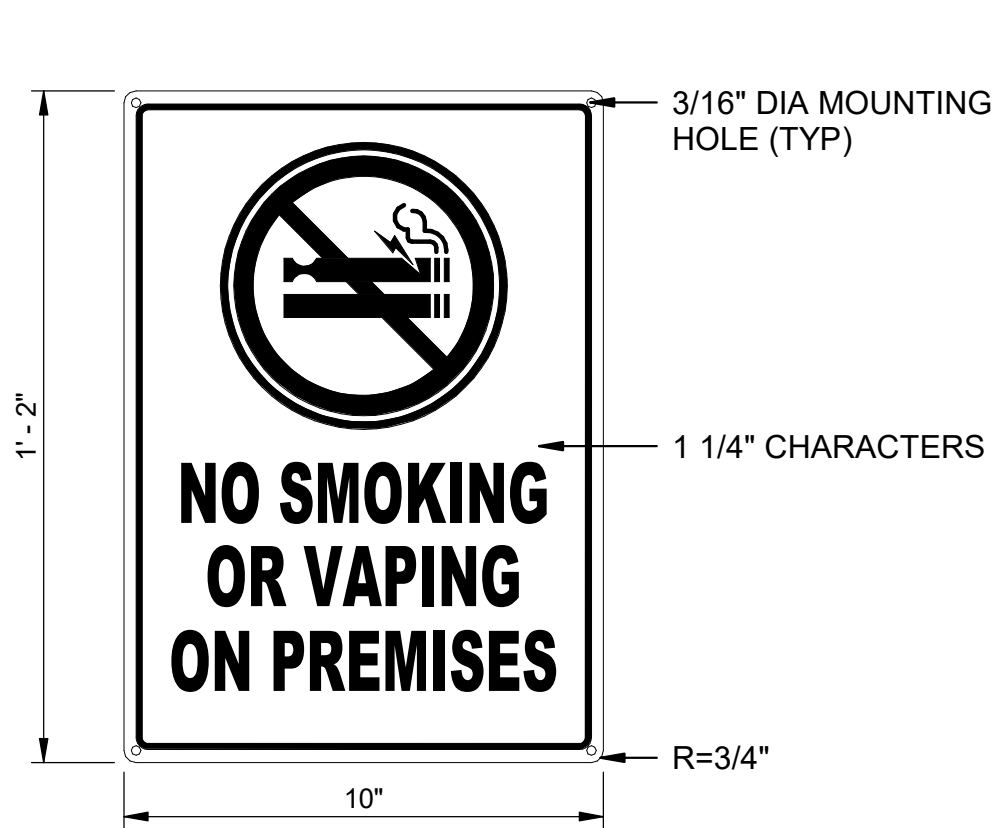
DRAWING NUMBER

99-A712

ANSI D 22" x 34" Approved: BHODGSON Checked: MSCHANTZ Designer: DBLOOD Drafter: JWOLFF Project Manager: JKRINKS

Last Plotted: 4/4/2023 11:14:10 AM
Filename: BM 5807/CLAWER (USA) 6067/0884-Provo River WTP/6067/0884 - 10A01.rvt

VERIFY SCALE
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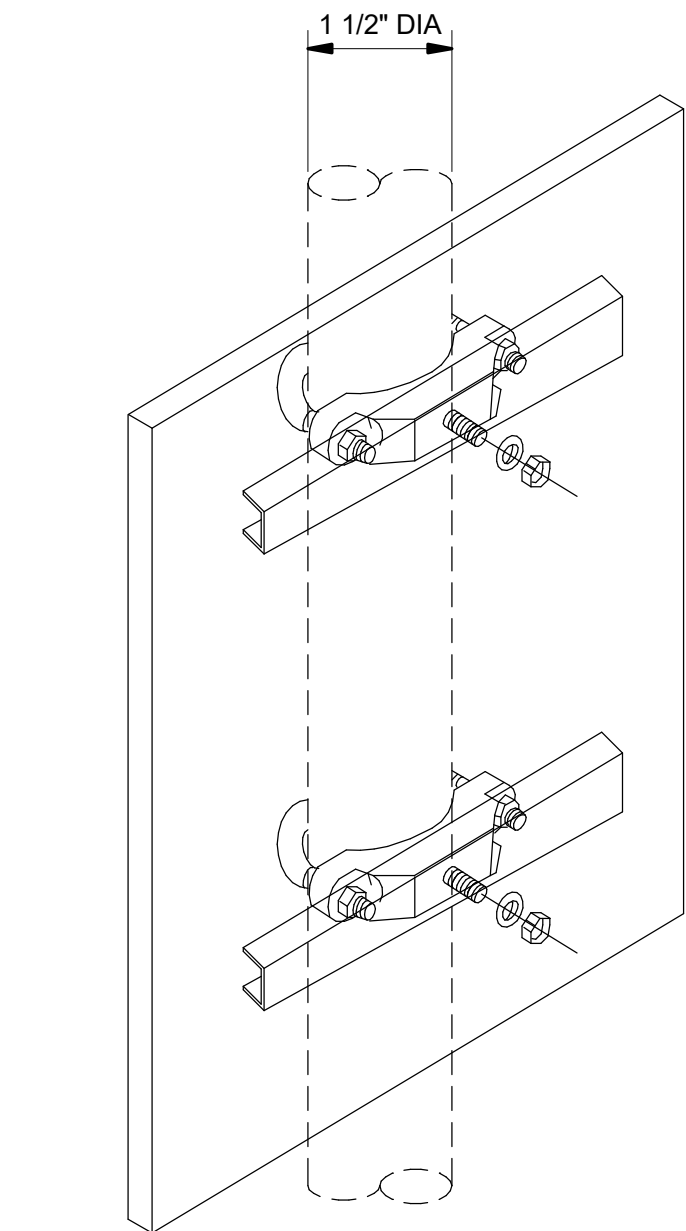
A089 EXTERIOR - NO SMOKING OR VAPING SIGN (S11)
3" = 1'-0"



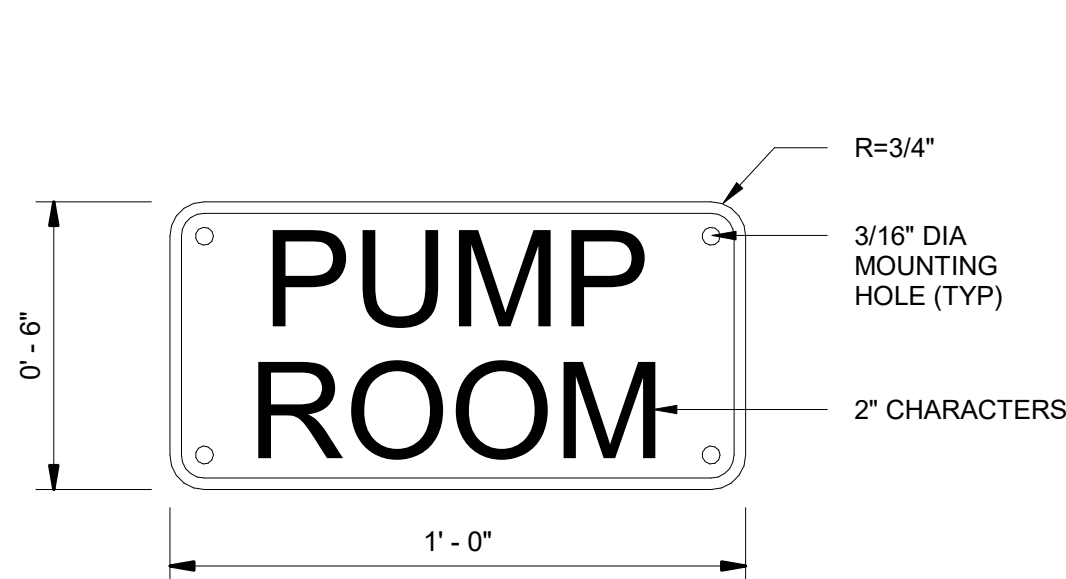
A090 CONFINED SPACE SIGN (S12)
3" = 1'-0"



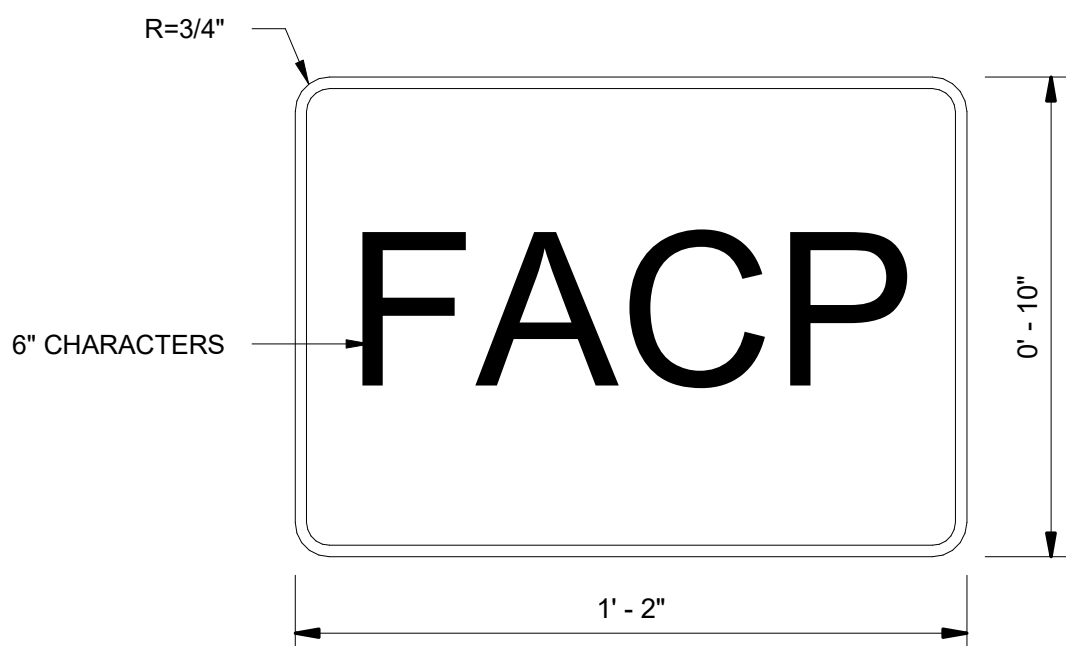
A091 REMOVABLE HATCH SIGN (S13)
3" = 1'-0"



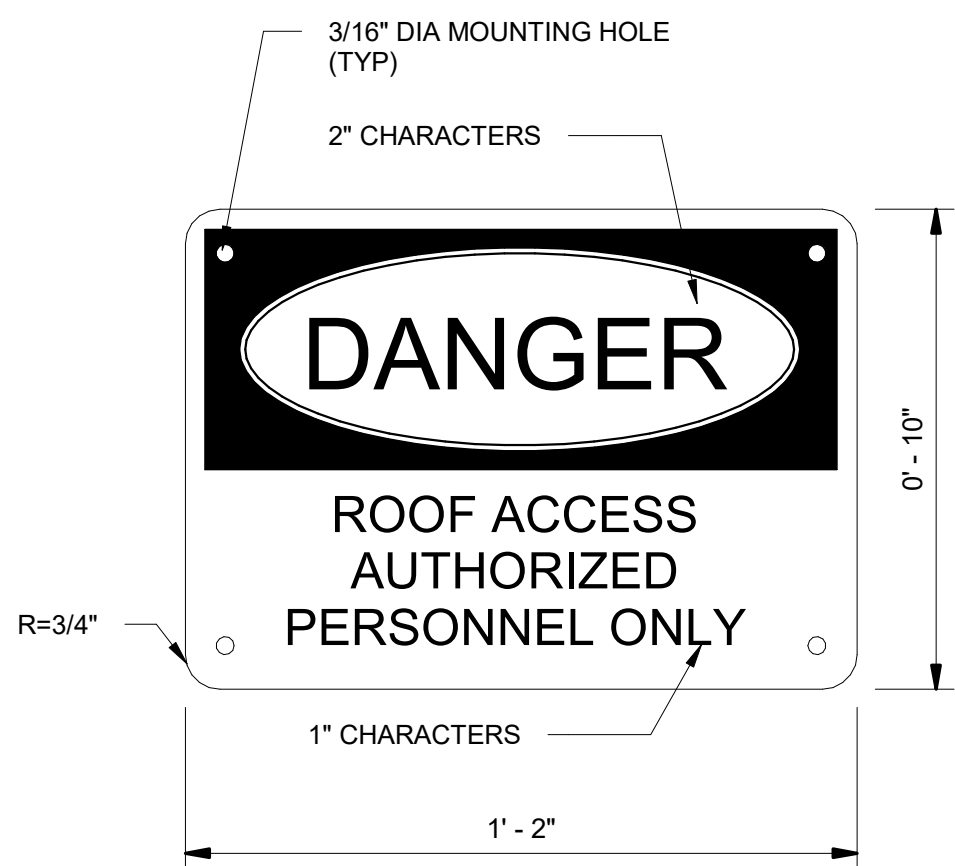
A092 GUARDRAIL MOUNT
6" = 1'-0"



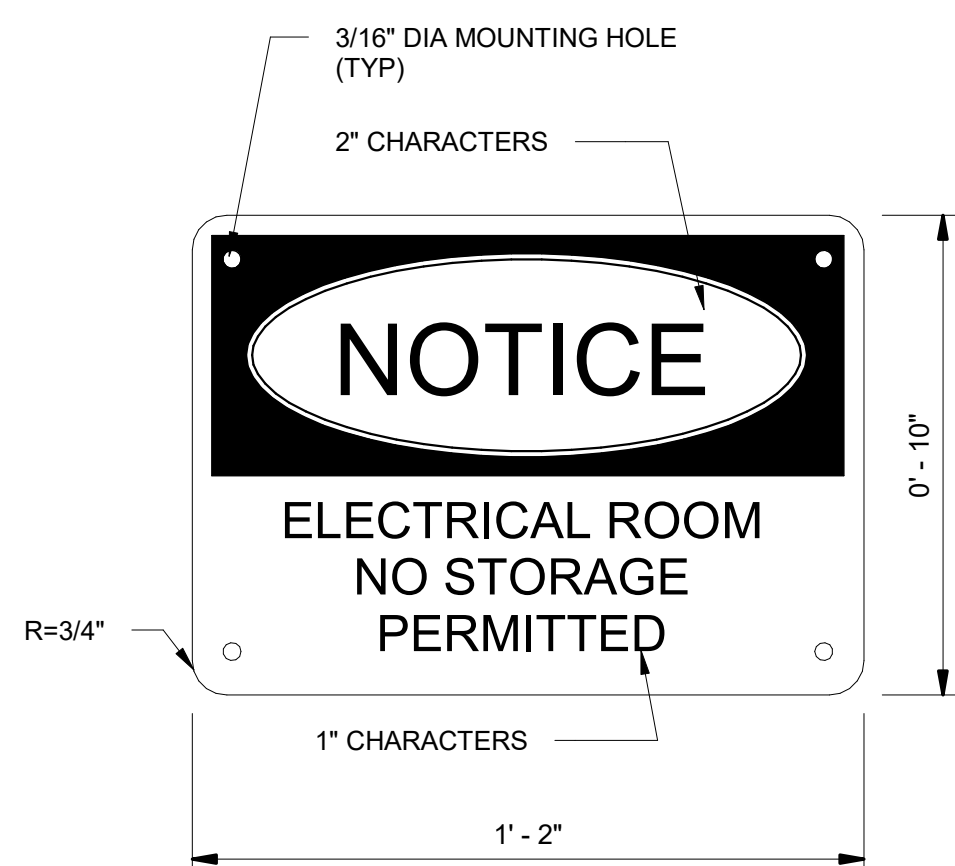
A093 EXTERIOR - PUMP ROOM (S14)
3" = 1'-0"



A094 EXTERIOR - FIRE ALARM CONTROL PANEL SIGN (S15)
3" = 1'-0"



A095 ROOF ACCESS (S16)
3" = 1'-0"



A096 ELEC ROOM SIGNAGE (S17)
3" = 1'-0"

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HAL Project No. - 035.15.420

SHEET TITLE

ARCHITECTURAL
TYPICAL DETAILS
SHEET 13

DRAWING NUMBER

99-A713

ANSI D 22" x 34"

Approved: B.HODGSON

Checked: J.KRINKS

Designer: J.MIX

Drafter: P.ALCOX

Project Manager: J.KRINKS

Last Plotted: 4/12/2023 3:01:30 PM
Filename: BM 3607/CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D001.rvt

PROCESS TYPICAL DETAIL INDEX	
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D002	TRAPEZE HANGER - PH-02
D003	PIPE BAND HANGER - PH-03
D004	RISER CLAMP - PH-04
D005	WALL BRACKET HANGER - PH-05
D006	U-BOLT PIPE HANGER - PH-06
D007	PIPE HANGER FOR INDIVIDUAL PIPES - PH-07
D008	BEAM HANGER CLAMP STYLES
99-D702	
D009	WALL PIPE SUPPORT BRACKET - PS-01
D010	ADJUSTABLE STANCHION SUPPORT - PS-02
D011	ADJUSTABLE STANCHION SUPPORT WITH SADDLE - PS-03
D012	CONCRETE PIPE SUPPORT PS-04
D013	CONCRETE PIPE SUPPORT PS-05
D014	PIPE CLAMP - PS-06
D015	ADJUSTABLE BRIDGE SUPPORT - PS-07
D016	FLUSH MOUNTED PIPE SUPPORT - PS-08
99-D703	
D017	MECHANICAL SEAL PENETRATION - WP-01
D018	MJ x MJ PENETRATION - WP-02
D019	FL/MJ/PE WALL PIPE - WP-03
D020	FLOOR SLEEVE PENETRATION - WP-04
D021	EXPOSED PIPE PENETRATION - WP-05
D022	ELASTOMER BOOT PENETRATION - WP-06
D023	PE x FL FLOOR PENETRATION - WP-07
99-D704	
D024	INSTRUMENT TAPS ON DUCTILE IRON PIPE
D025	INSTRUMENT TAPS ON STAINLESS STEEL
D026	INSTRUMENT TAPS ON PVC AND CPVC
D027	TYPICAL VENT
D028	COMPRESSED AIR COUPLER
D029	SAMPLE TAP
D030	AIR RELEASE VALVE
99-D705	
D031	CHEMICAL DANGER SIGNS
D032	CHEMICAL FILL SIGNS
D033	PORTABLE CHEMICAL PUMP
D034	CHEMICAL FILL PIPE
D035	CHEMICAL VENT
D036	INTERIOR WALL CHEMICAL PIPE PENETRATION
D037	CHEMICAL INJECTION QUILL

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING



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AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

PROCESS MECHANICAL
TYPICAL DETAILS
INDEX

DRAWING NUMBER

99-D700

ANSI D 22' x 34'

Approved: B.HODGSON

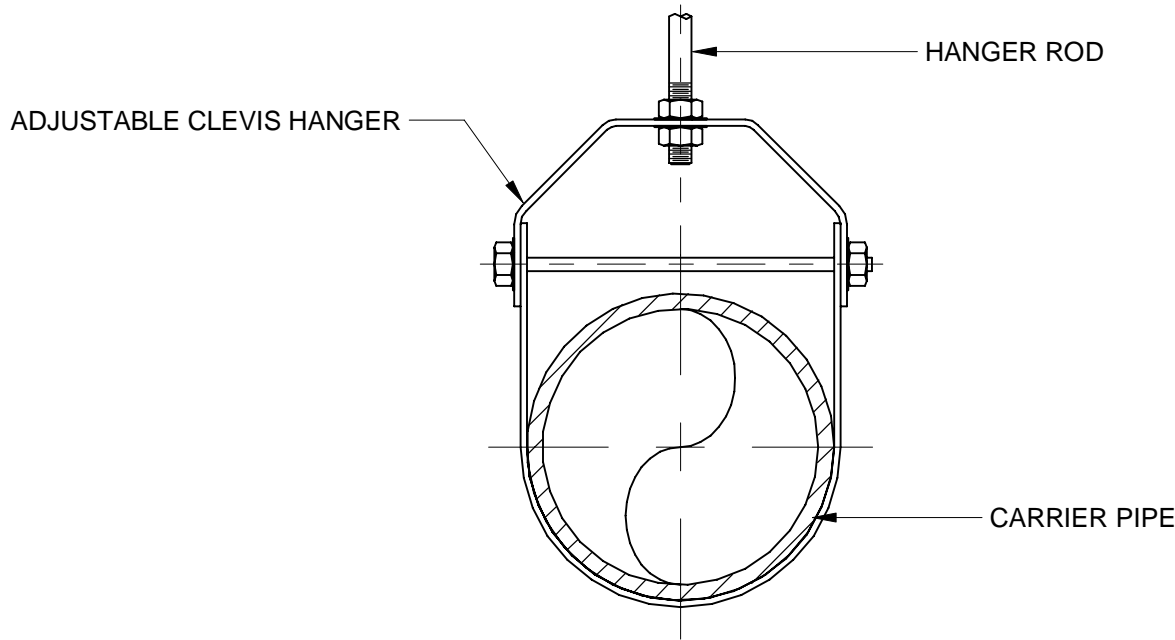
Checked: J.KRINKS

Designer: J.MIX

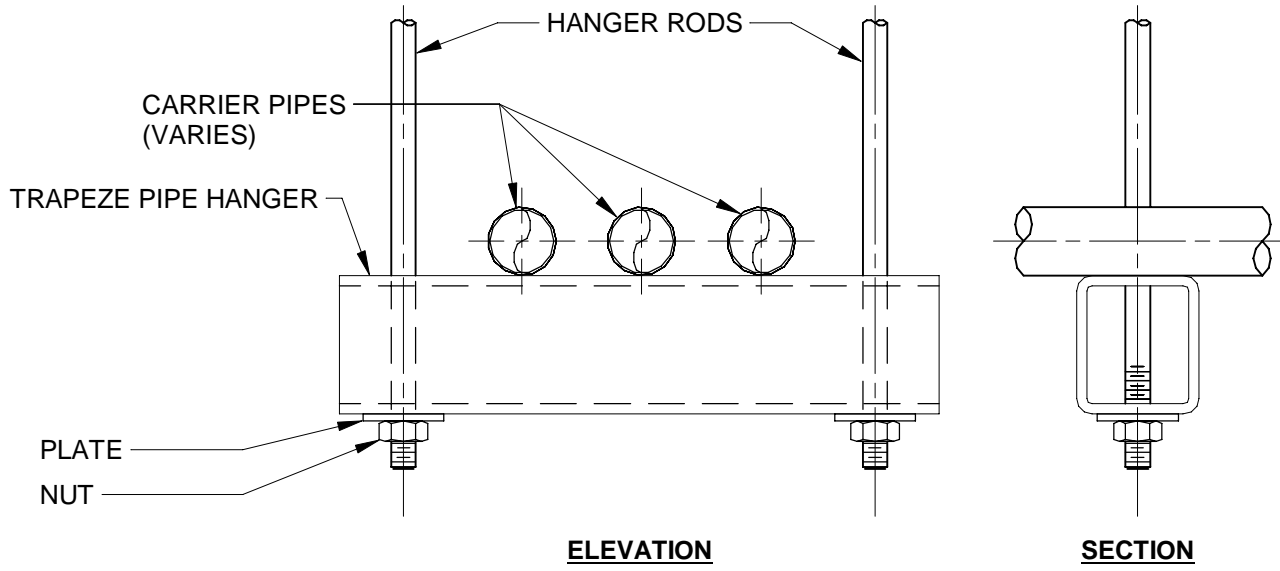
Drafter: P.ALCOUS

Project Manager: J.KRINKS

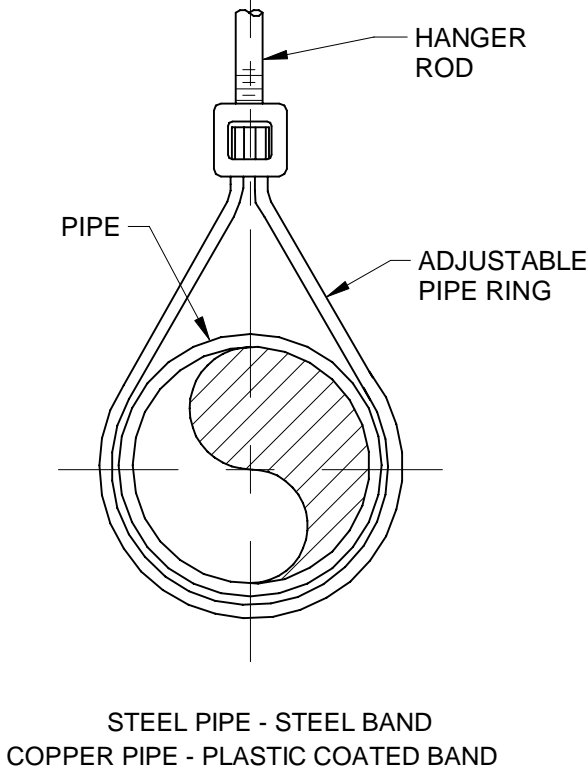
Last Plotted: 4/12/2023 3:01:30 PM
Filename: BM 3607/CJ-AMER/USA 60670884-Provo River WTP/60670884_10-D001.rvt



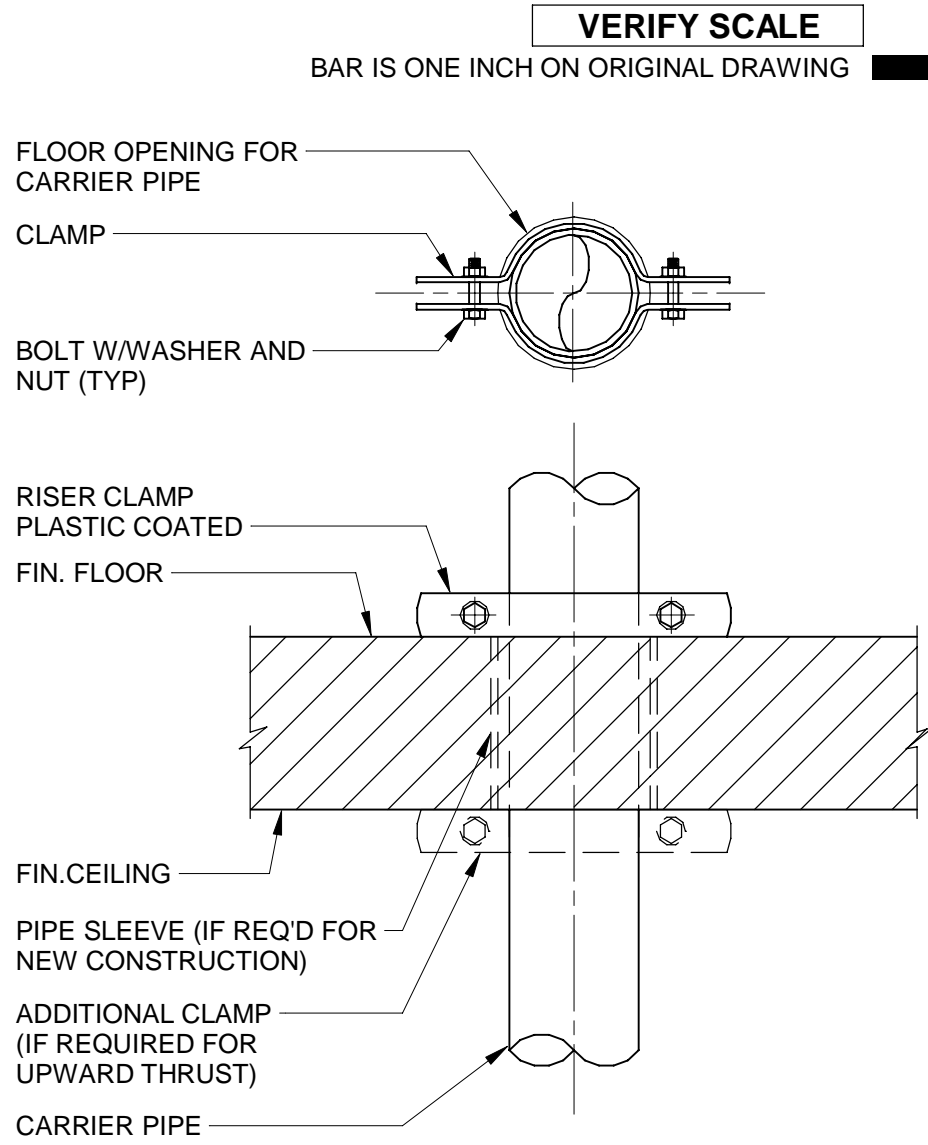
D001 CLEVIS HANGER - PH-01
NOT TO SCALE



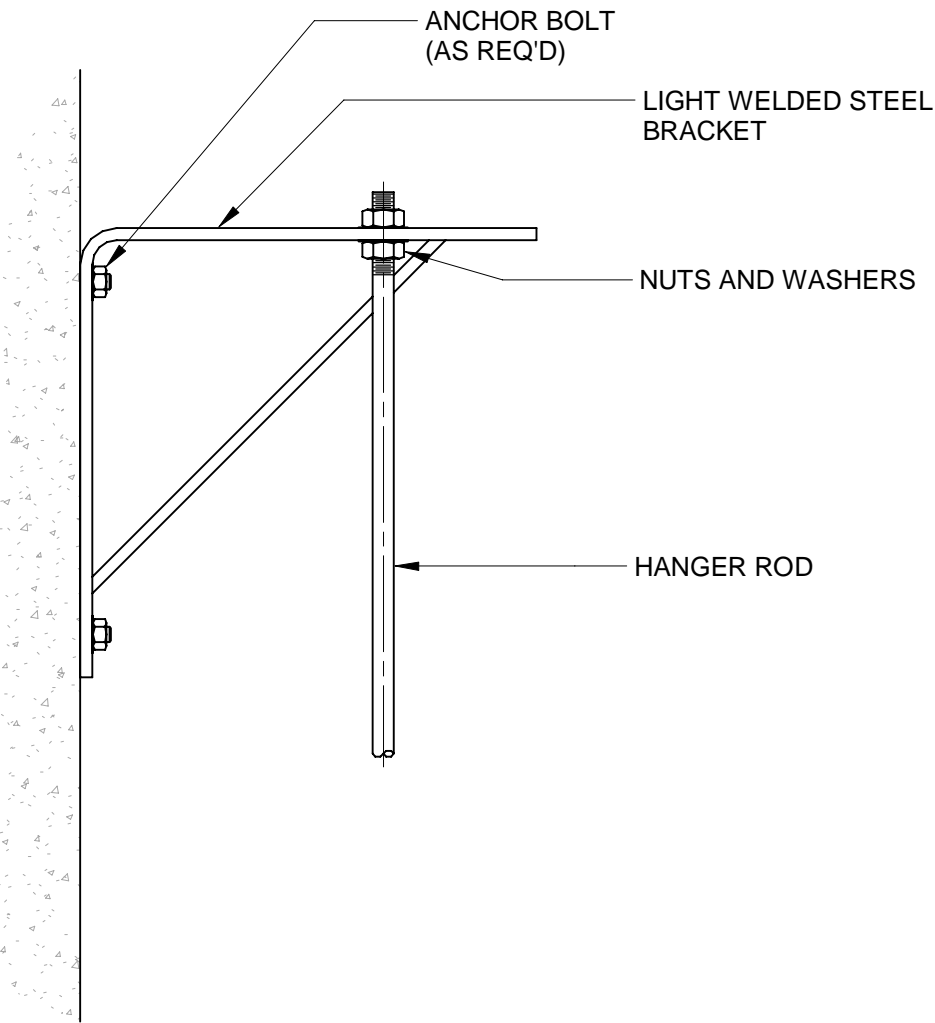
D002 TRAPEZE HANGER - PH-02
NOT TO SCALE



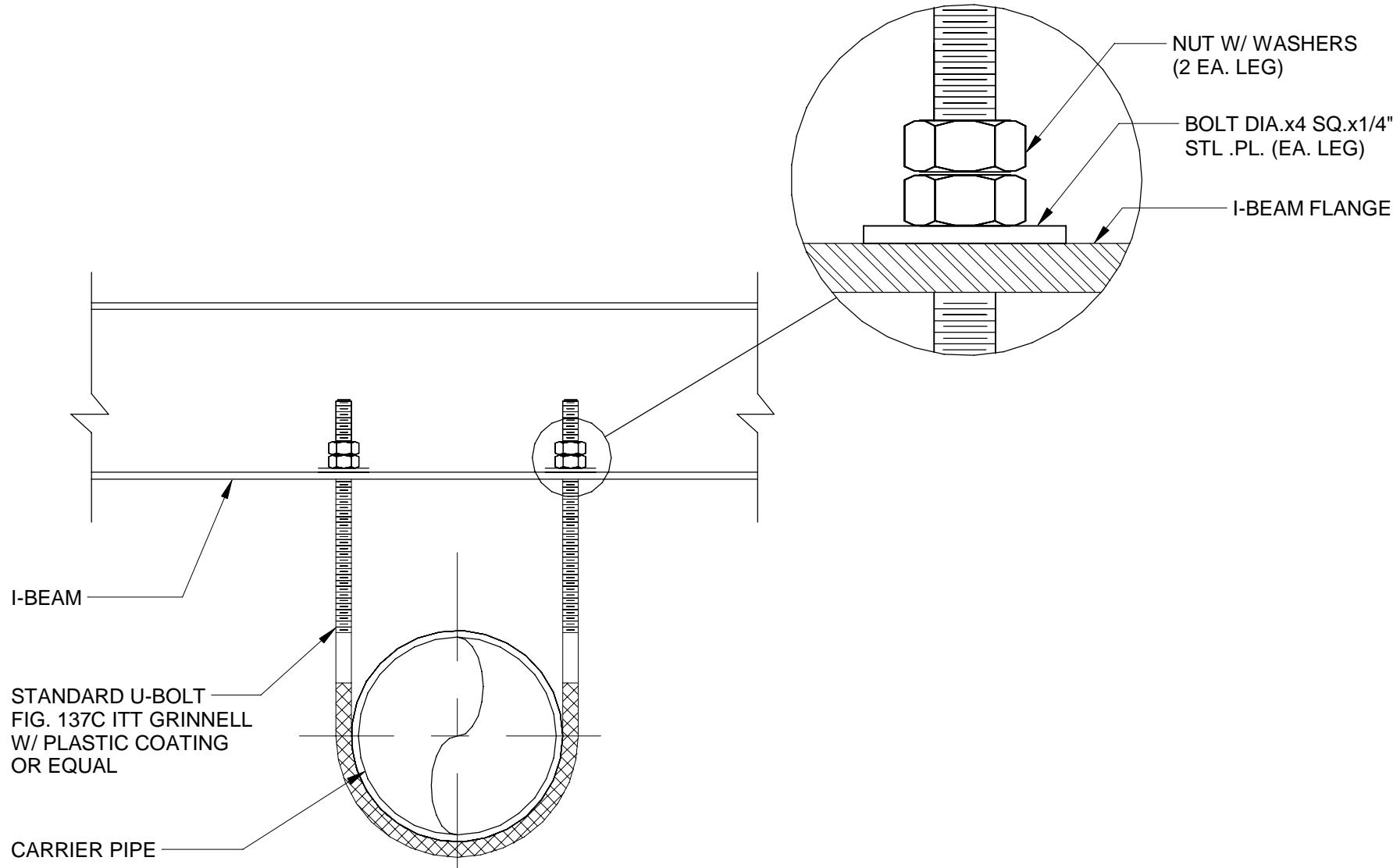
D003 PIPE BAND HANGER - PH-03
NOT TO SCALE



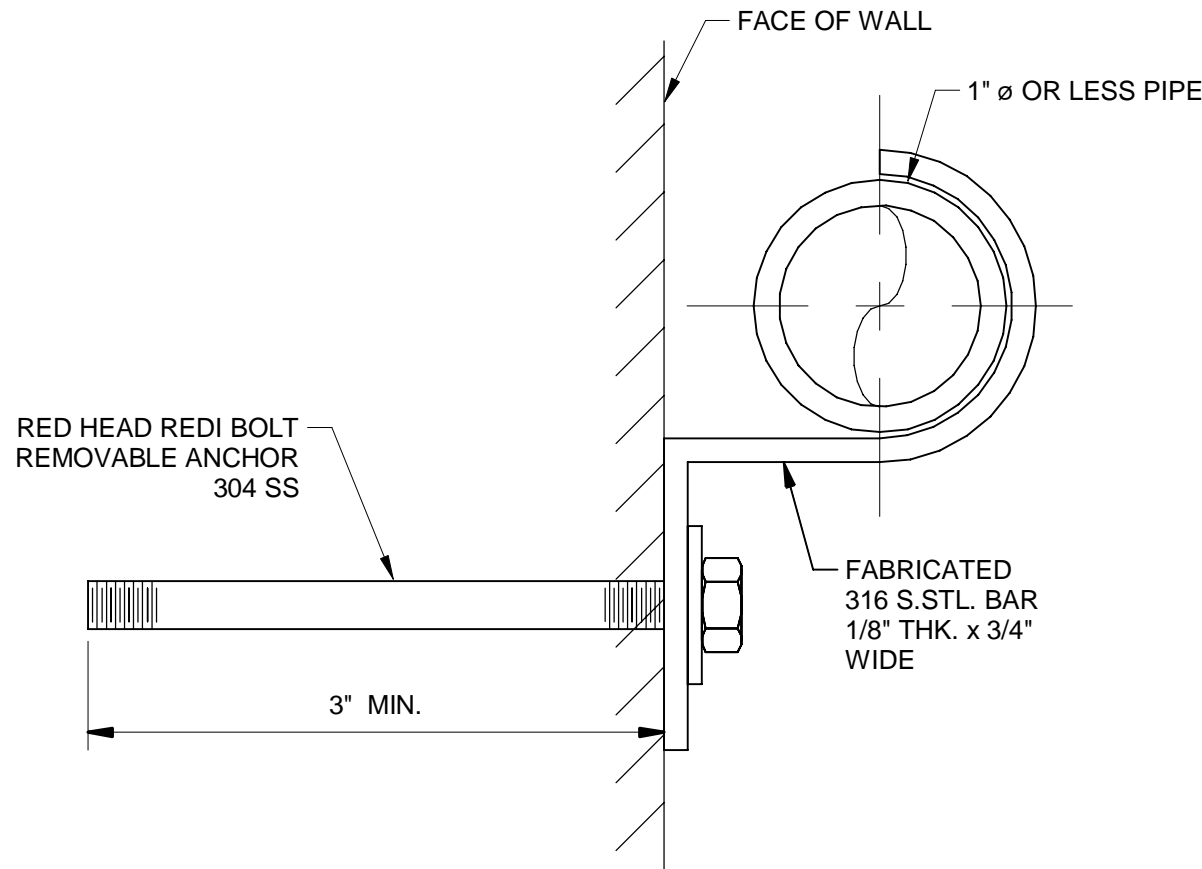
D004 RISER CLAMP - PH-04
NOT TO SCALE



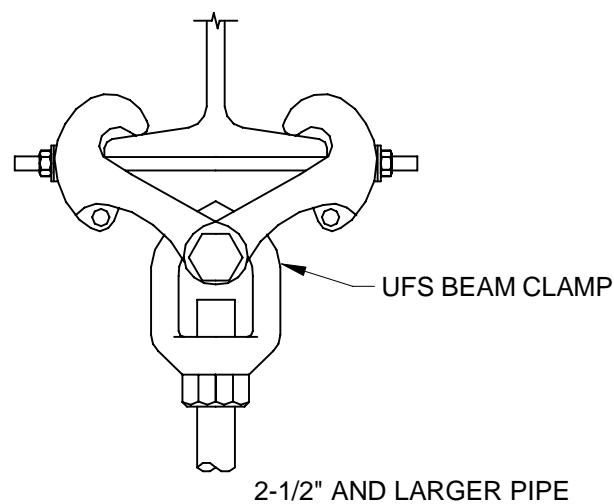
D005 WALL BRACKET HANGER - PH-05
NOT TO SCALE



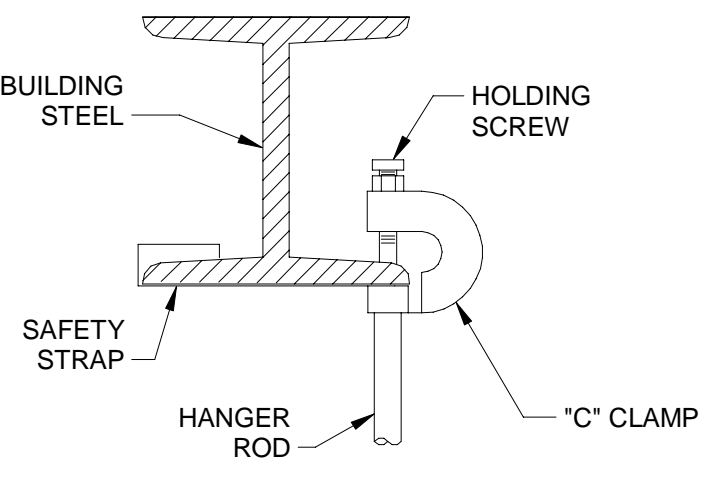
D006 U-BOLT PIPE HANGER - PH-06
NOT TO SCALE



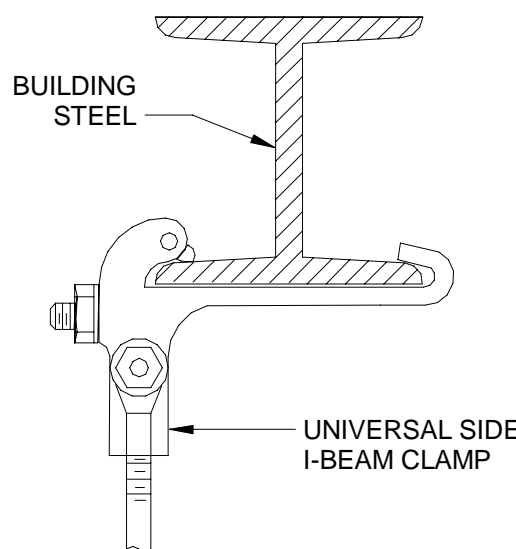
D007 PIPE HANGER FOR INDIVIDUAL PIPES - PH-07
NOT TO SCALE



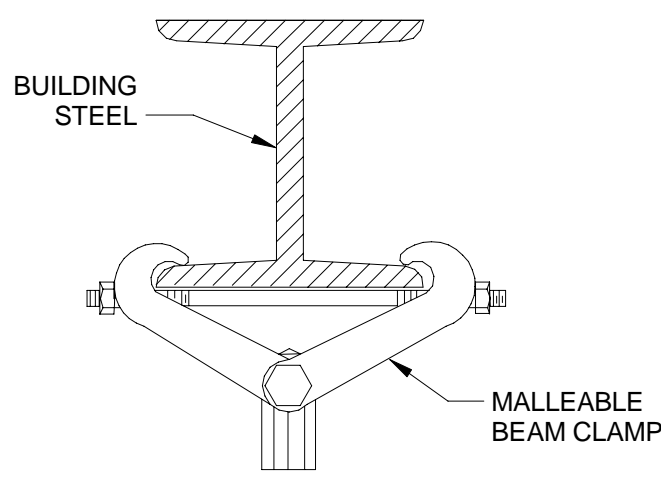
UFS BEAM CLAMP



FOR PIPES 4" AND SMALLER



FOR PIPE DIAMETERS 2" AND SMALLER



FOR PIPE DIAMETERS 2-1/2" AND LARGER

D008 BEAM HANGER CLAMP STYLES
NOT TO SCALE

AECOM
HANSEN
ALLEN
& LUCE inc
ENGINEERS

PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

PROVO CITY
PUBLIC WORKS
1377 South 350 East
Provo, UT 84606
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CONSULTANTS

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REGISTRATION



ISSUE/REVISION

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

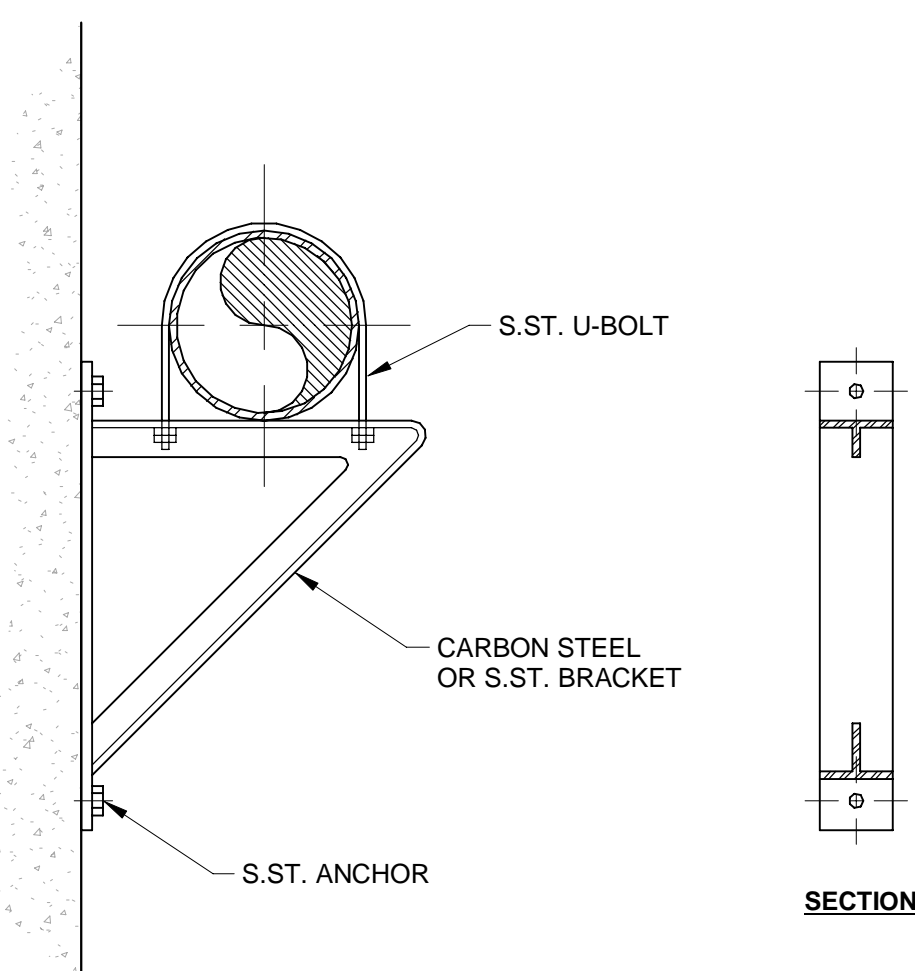
PROCESS MECHANICAL
TYPICAL DETAILS
SHEET 1

DRAWING NUMBER

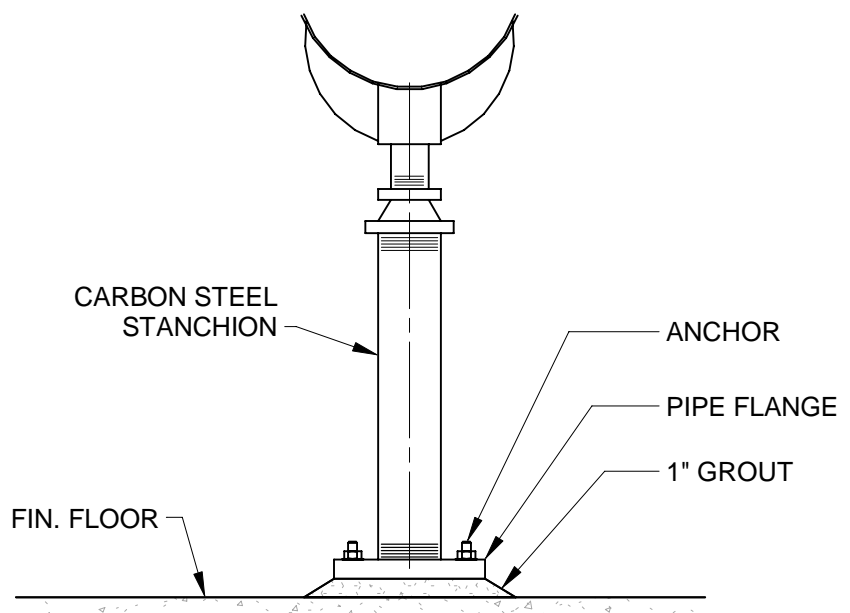
99-D701

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOOS Project Manager: J.KRINKS

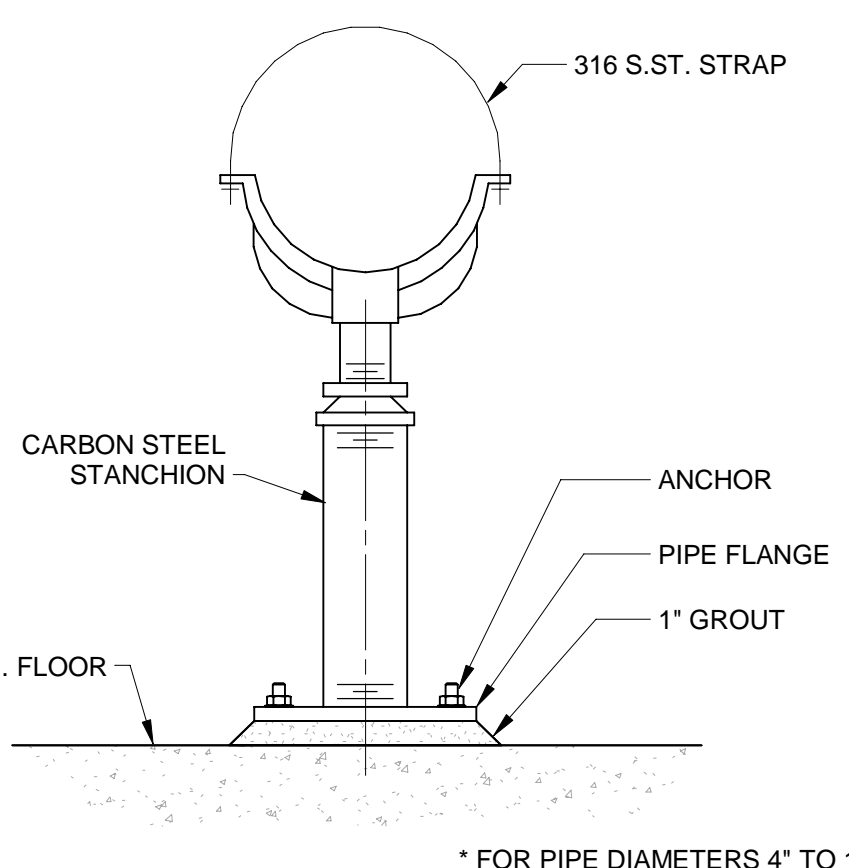
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Filename: BM 3607/CL-AMER (USA) 60570884-Provo River WTP/60570884_10-D001.rvt



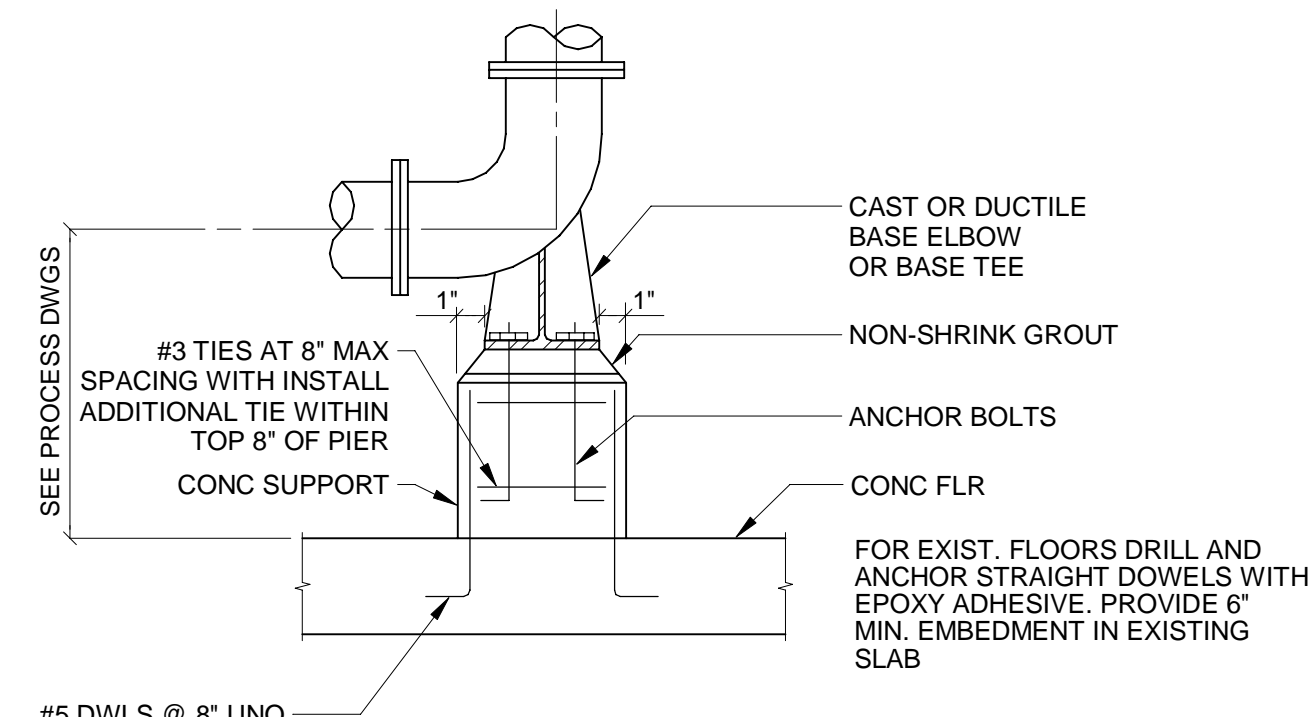
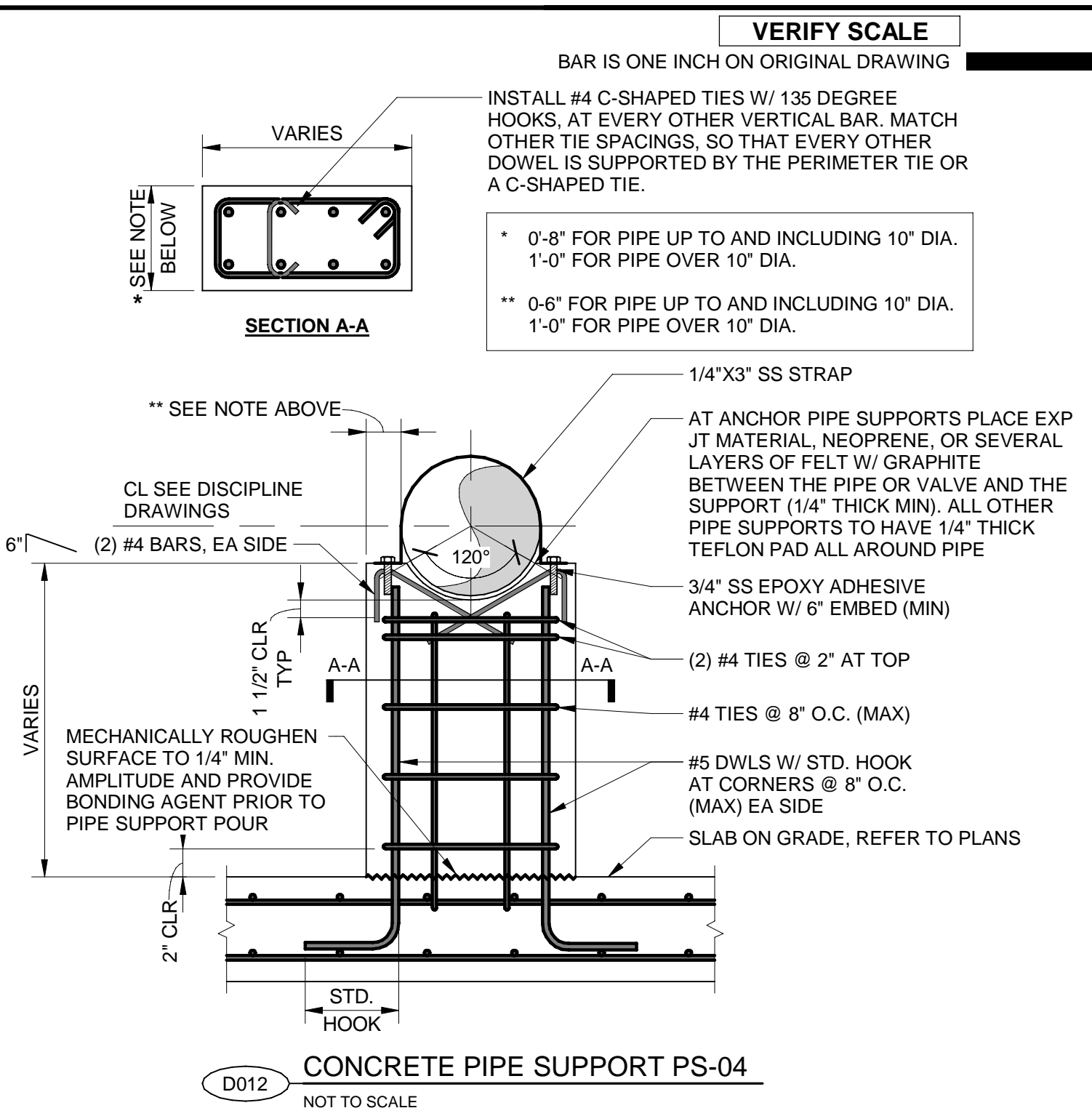
D009 WALL PIPE SUPPORT BRACKET - PS-01
NOT TO SCALE



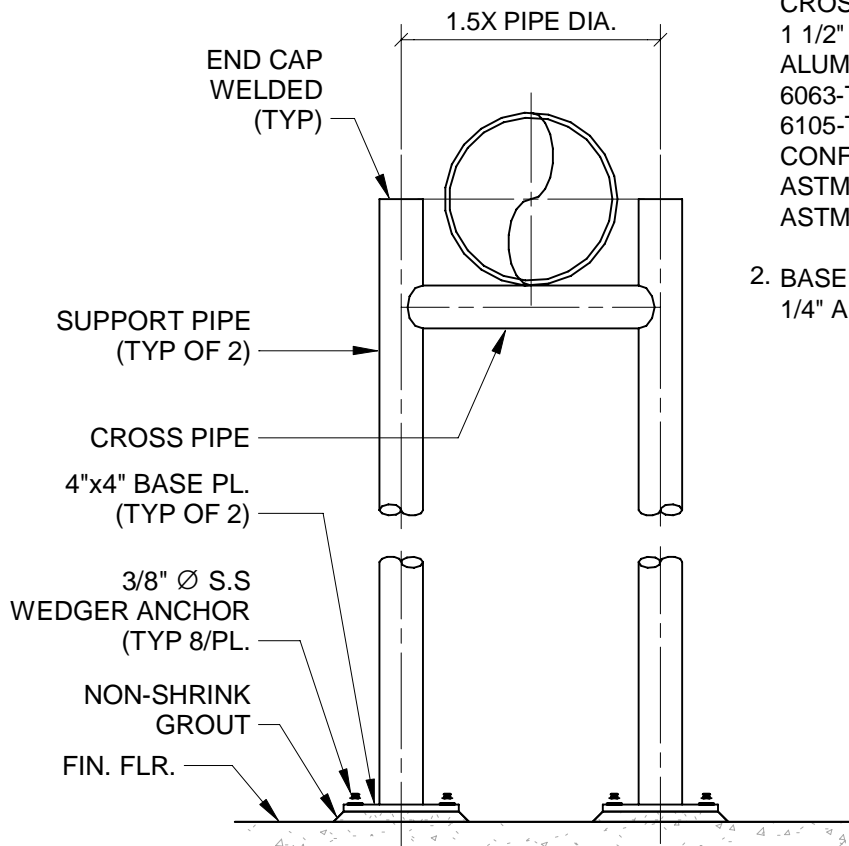
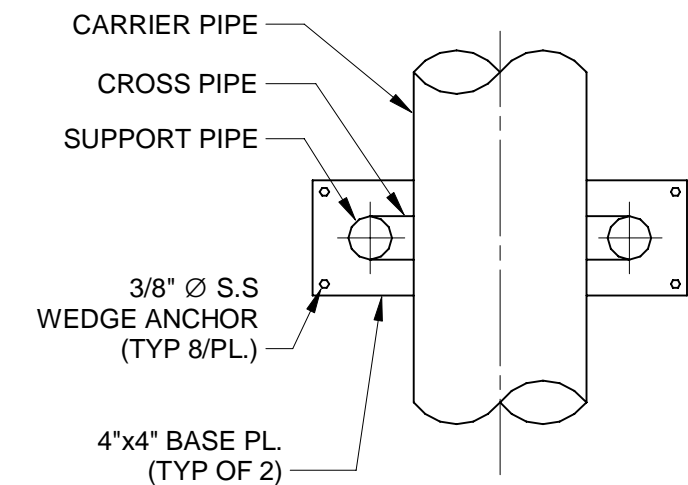
D010 ADJUSTABLE STANCHION SUPPORT - PS-02
NOT TO SCALE



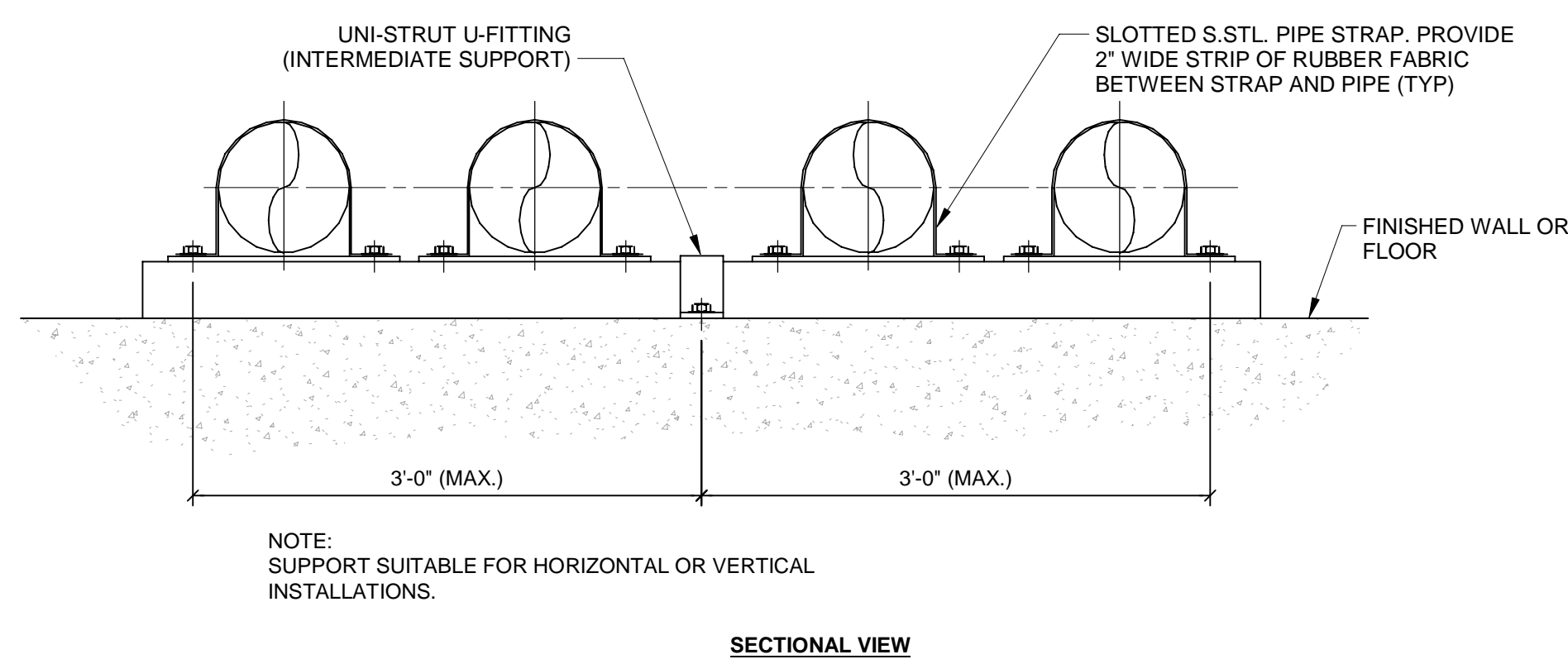
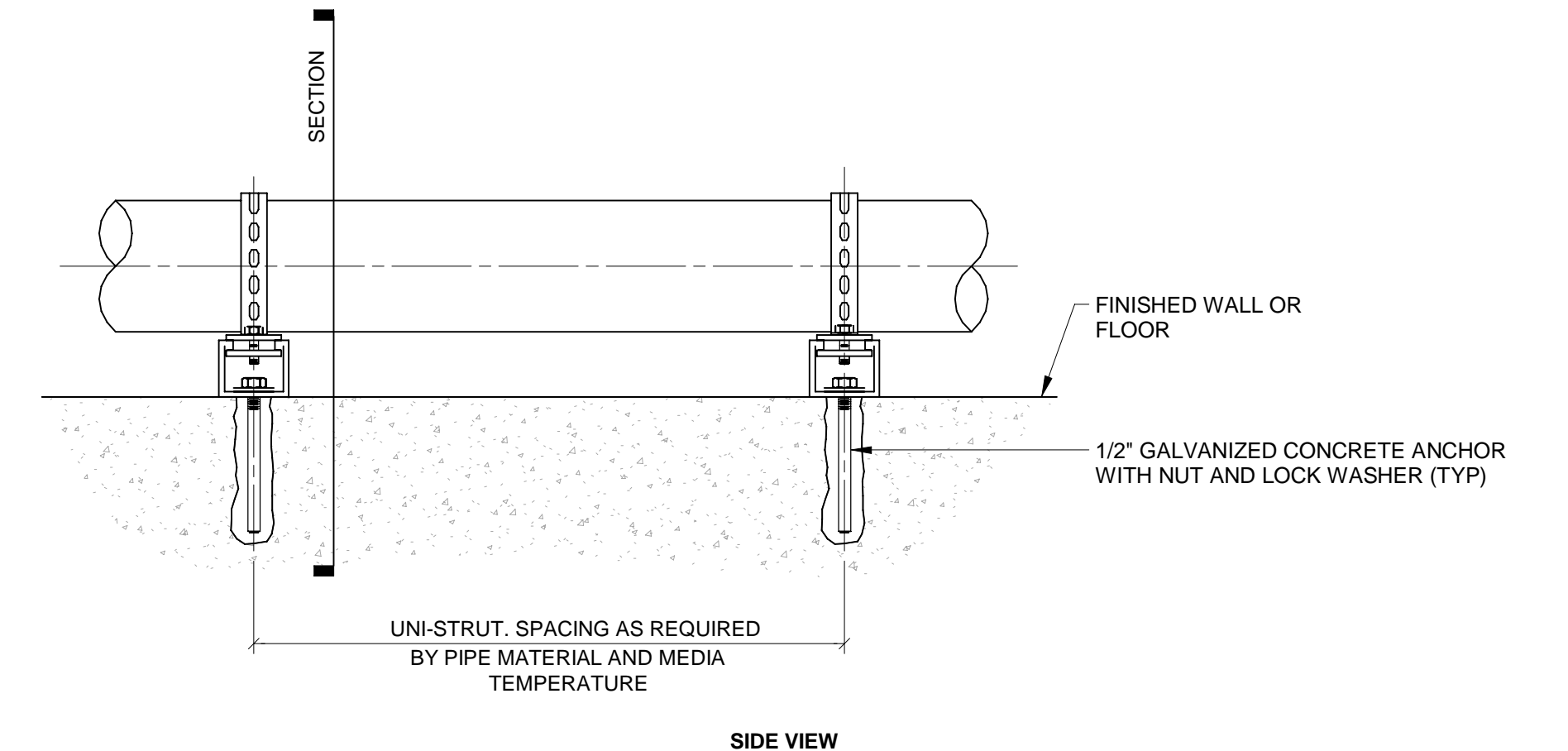
D011 ADJUSTABLE STANCHION SUPPORT WITH SADDLE - PS-03
NOT TO SCALE



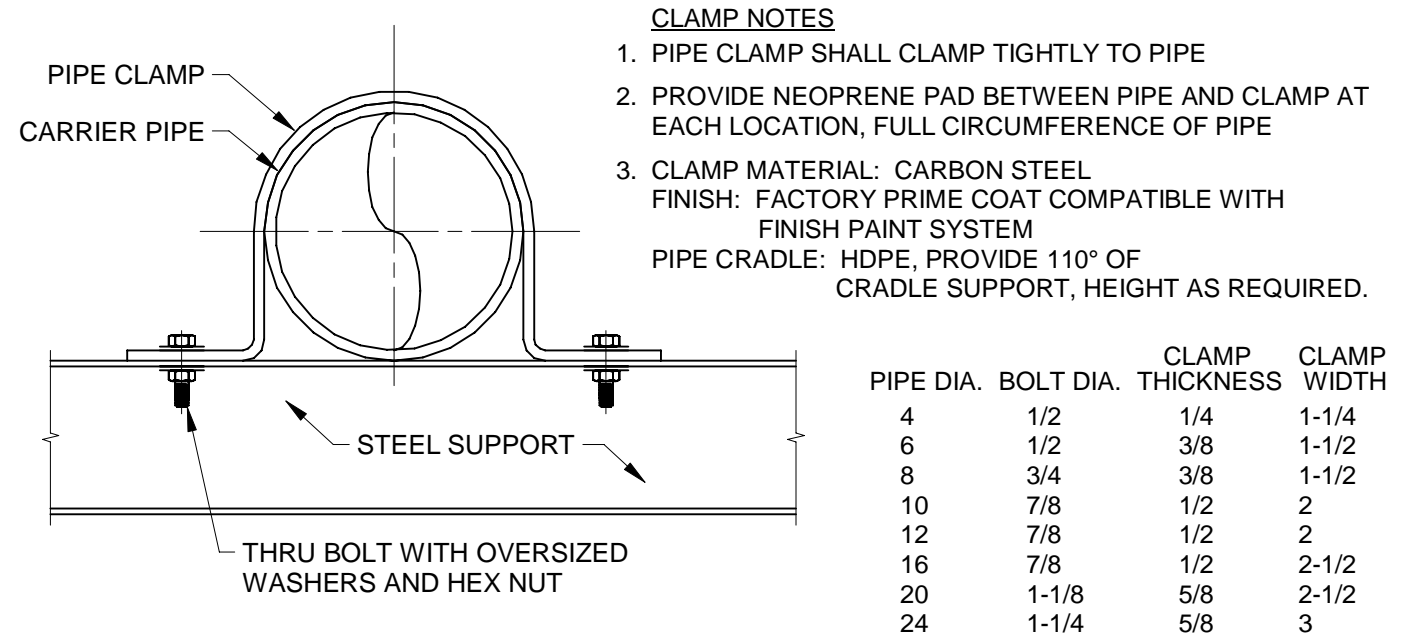
D013 CONCRETE PIPE SUPPORT PS-05
NOT TO SCALE



D015 ADJUSTABLE BRIDGE SUPPORT - PS-07
NOT TO SCALE



D016 FLUSH MOUNTED PIPE SUPPORT - PS-08
NOT TO SCALE



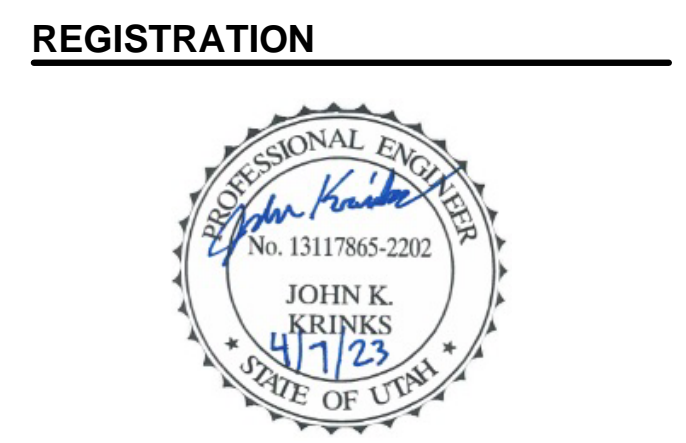
PROJECT
PROVO RIVER WATER TREATMENT PLANT

CLIENT
PROVO CITY PUBLIC WORKS
1377 South 350 East
Provo, UT 84606
Tel: (801) 852-6700



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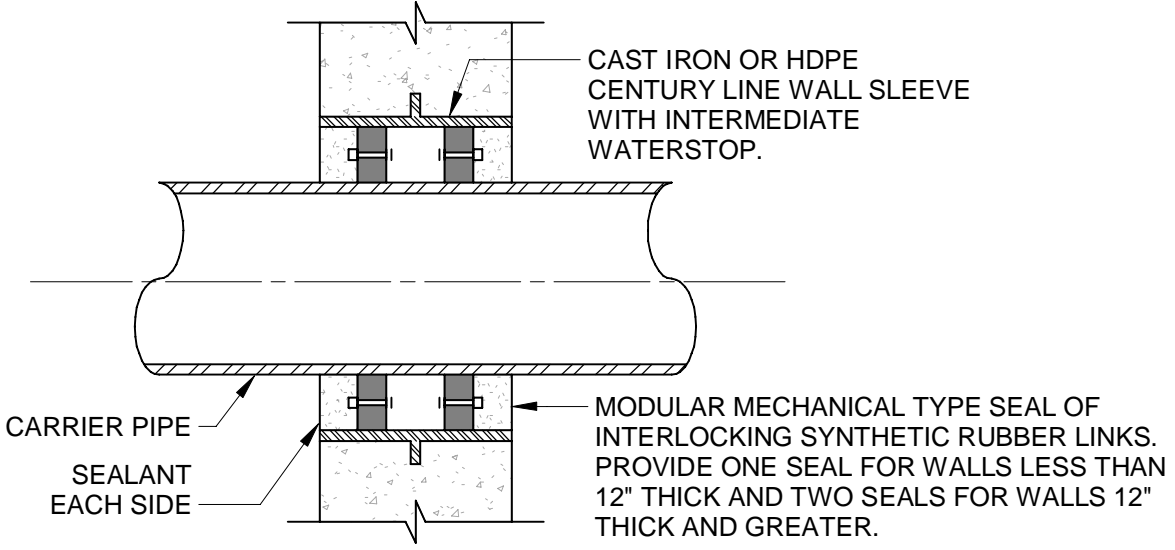
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PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE
PROCESS MECHANICAL TYPICAL DETAILS SHEET 2

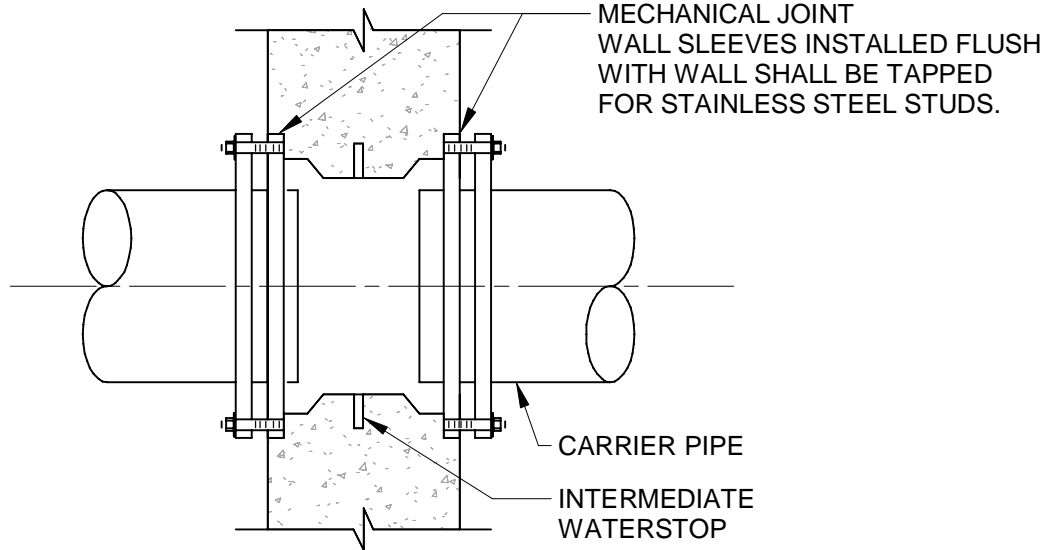
DRAWING NUMBER
99-D702

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOOS Project Manager: J.KRINKS Last Plotted: 4/12/2023 3:01:32 PM Filename: BM 360/CI-AMER-Provo River WTP/60670884_10-D001.rvt



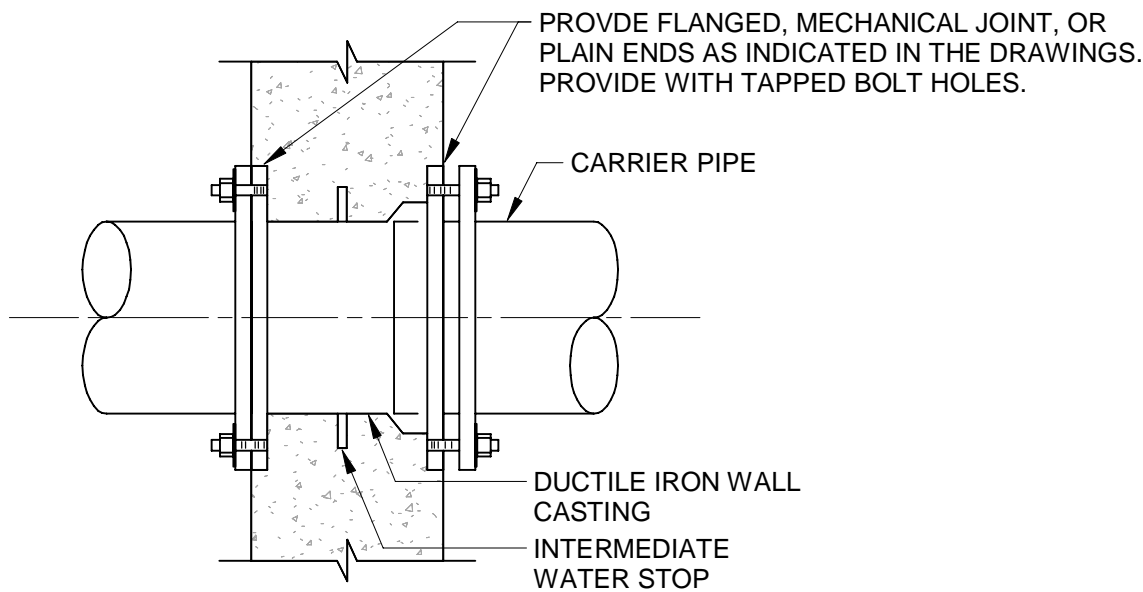
- NOTES:
- 1. CORE DRILL OPENING PER SEAL MANUFACTURER REQUIREMENTS FOR EXISTING WALLS.
 - 2. INSIDE DIAMETER OF SLEEVE ACCORDING TO SEAL MANUFACTURER REQUIREMENTS. DEPENDING UPON CARRIER PIPE OUTSIDE DIAMETER.
 - 3. INTERMEDIATE WATERSTOP TO BE CENTERED WITHIN WALL UNLESS NOTED OTHERWISE.

D017 MECHANICAL SEAL PENETRATION - WP-01 NOT TO SCALE



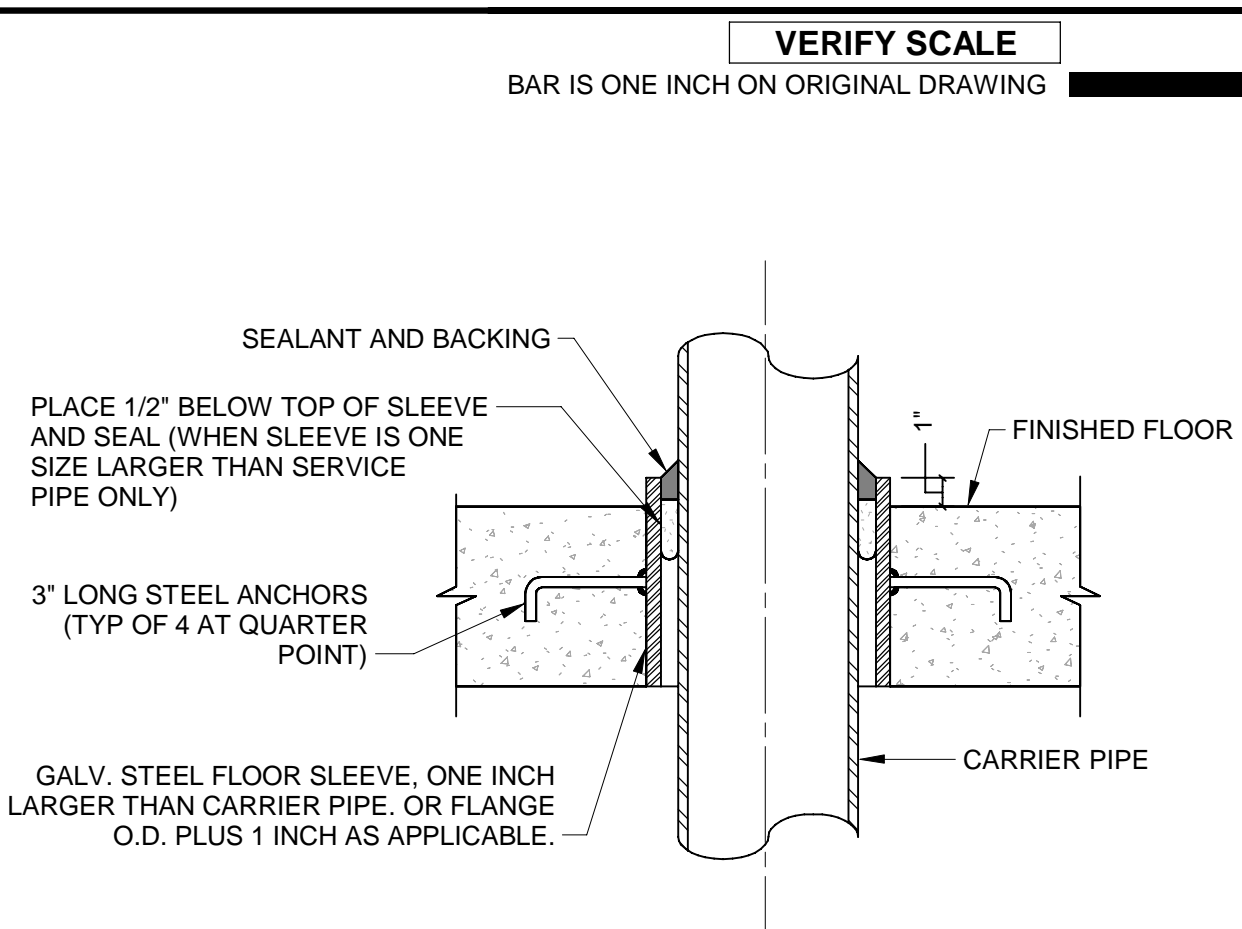
- NOTES:
- 1. PROVIDE TEMPORARY PLUGS FOR TAPPED BOLT HOLES TO PREVENT CONCRETE FILLING IN FLUSH CONSTRUCTION.
 - 2. INTERMEDIATE WATERSTOP TO BE CENTERED WITHIN WALL UNLESS NOTED OTHERWISE.
 - 3. CAST IRON OR DUCTILE IRON WALL PIPES SHALL BE USED FOR 4 INCH DIAMETER AND LARGER PIPING. UNLESS NOTED OTHERWISE.

D018 MJ x MJ PENETRATION - WP-02 NOT TO SCALE



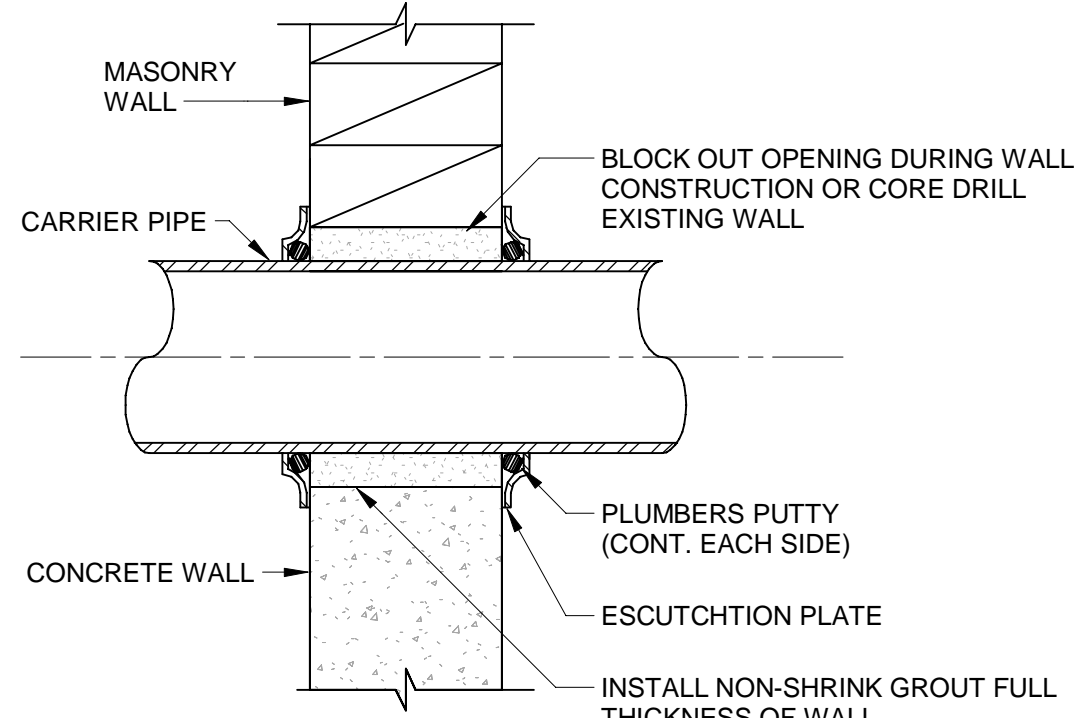
- NOTES:
- 1. PROVIDE TEMPORARY PLUGS FOR TAPPED BOLT HOLES TO PREVENT CONCRETE FILLING IN FLUSH CONSTRUCTION.
 - 2. INTERMEDIATE WATERSTOP TO BE CENTERED WITHIN WALL UNLESS NOTED OTHERWISE.
 - 3. CAST IRON OR DUCTILE IRON WALL PIPES SHALL BE USED FOR 4 INCH DIAMETER AND LARGER PIPING. UNLESS NOTED OTHERWISE.

D019 FL/MJ/PE WALL PIPE - WP-03 NOT TO SCALE



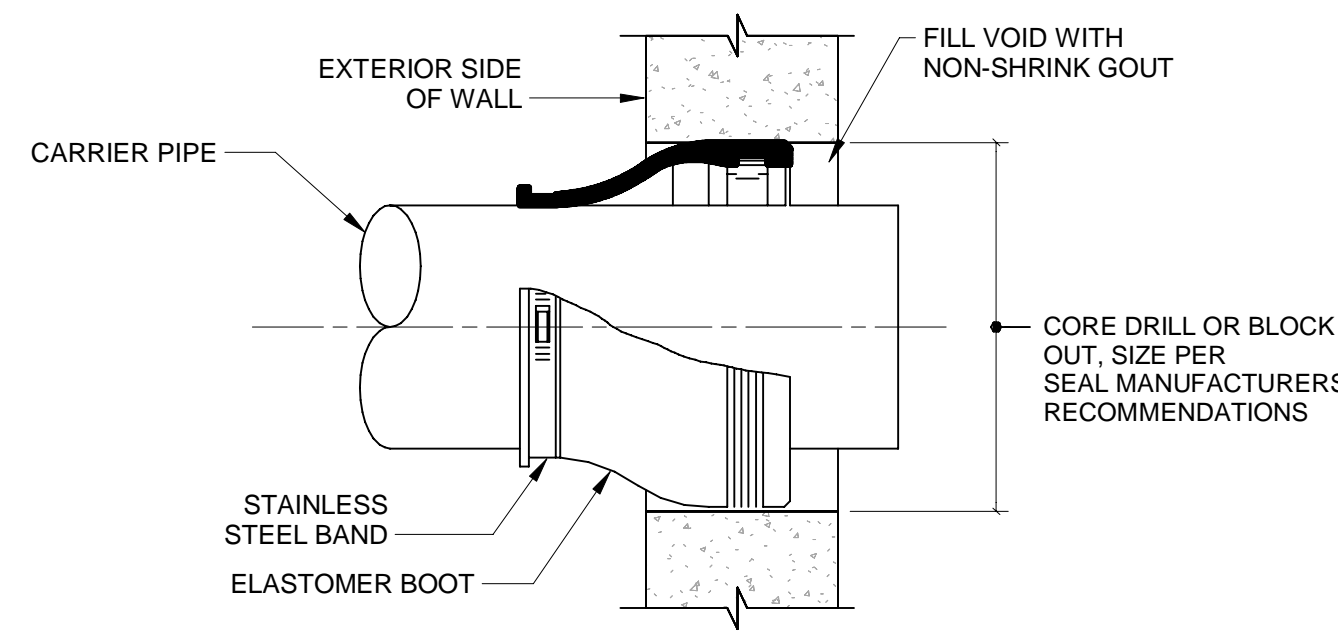
- NOTES:
- 1. THRU EXISTING FLOORS WHERE FLOOR SLEEVES ARE CALLED OUT. THE CONTRACTOR SHALL CORE FLOOR AND SEAL AS SHOWN. ELIMINATING THE STEEL SLEEVE.

D020 FLOOR SLEEVE PENETRATION - WP-04 NOT TO SCALE



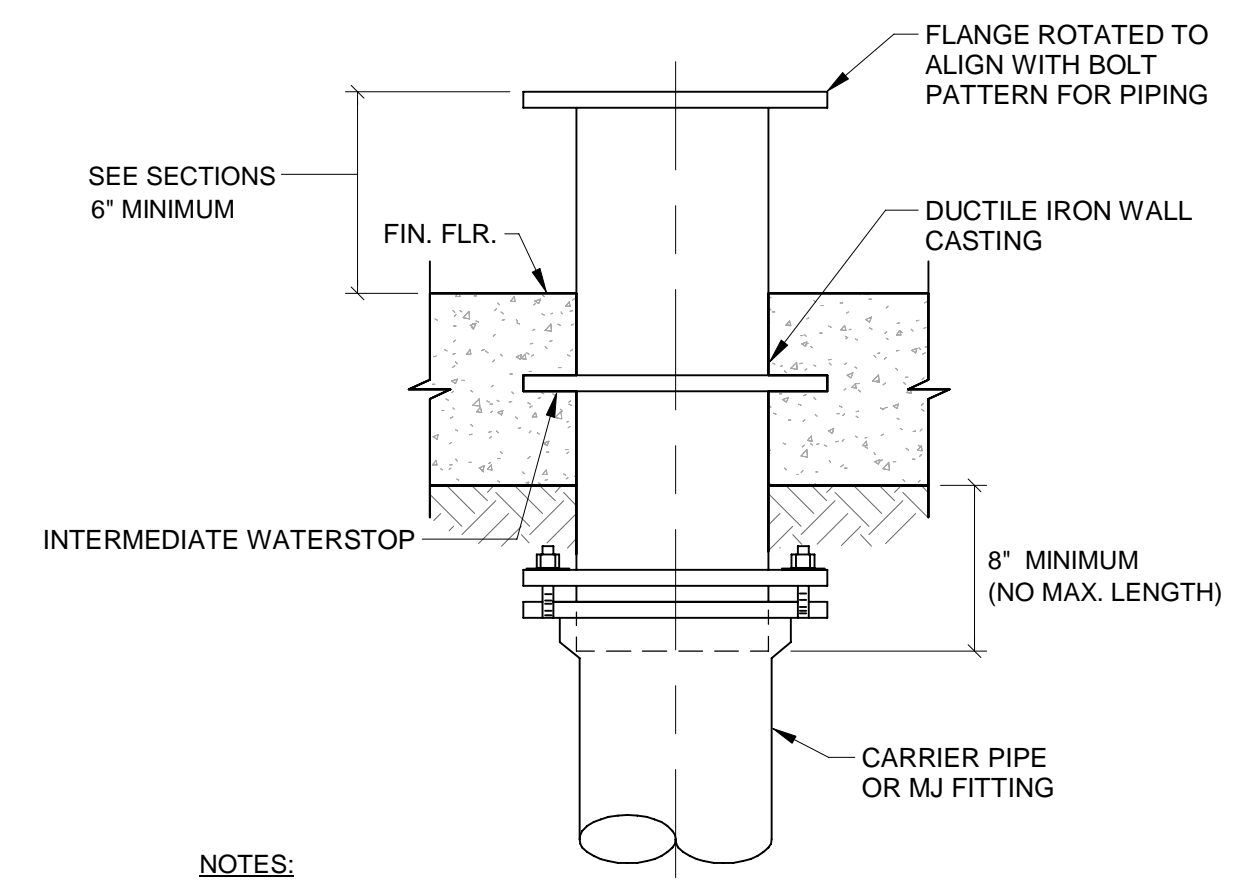
- NOTES:
- 1. ESCUTCHTION PLATE REQUIRED ON PIPING EXPOSED ON THE FINISHED WORK EACH SIDE. UNLESS BELOW FINISHED GRADE.

D021 EXPOSED PIPE PENETRATION - WP-05 NOT TO SCALE



- NOTES:
- 1. WALL PENETRATIONS SHALL BE LOCATED WITHIN A RISER SECTION AND NOT AT A WALL JOINT.

D022 ELASTOMER BOOT PENETRATION - WP-06 NOT TO SCALE



- NOTES:
- 1. INTERMEDIATE WATERSTOP TO BE CENTERED WITHIN FLOOR UNLESS OTHERWISE NOTED.
 - 2. CAST IRON OR DUCTILE IRON WALL PIPES SHALL BE USED FOR 4 INCH DIAMETER AND LARGER PIPING, UNLESS OTHERWISE NOTED.

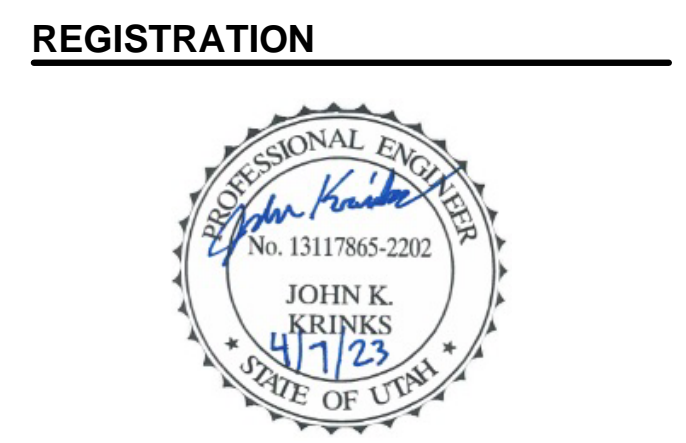
D023 PE x FL FLOOR PENETRATION - WP-07 NOT TO SCALE



PROJECT
**PROVO RIVER
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CLIENT
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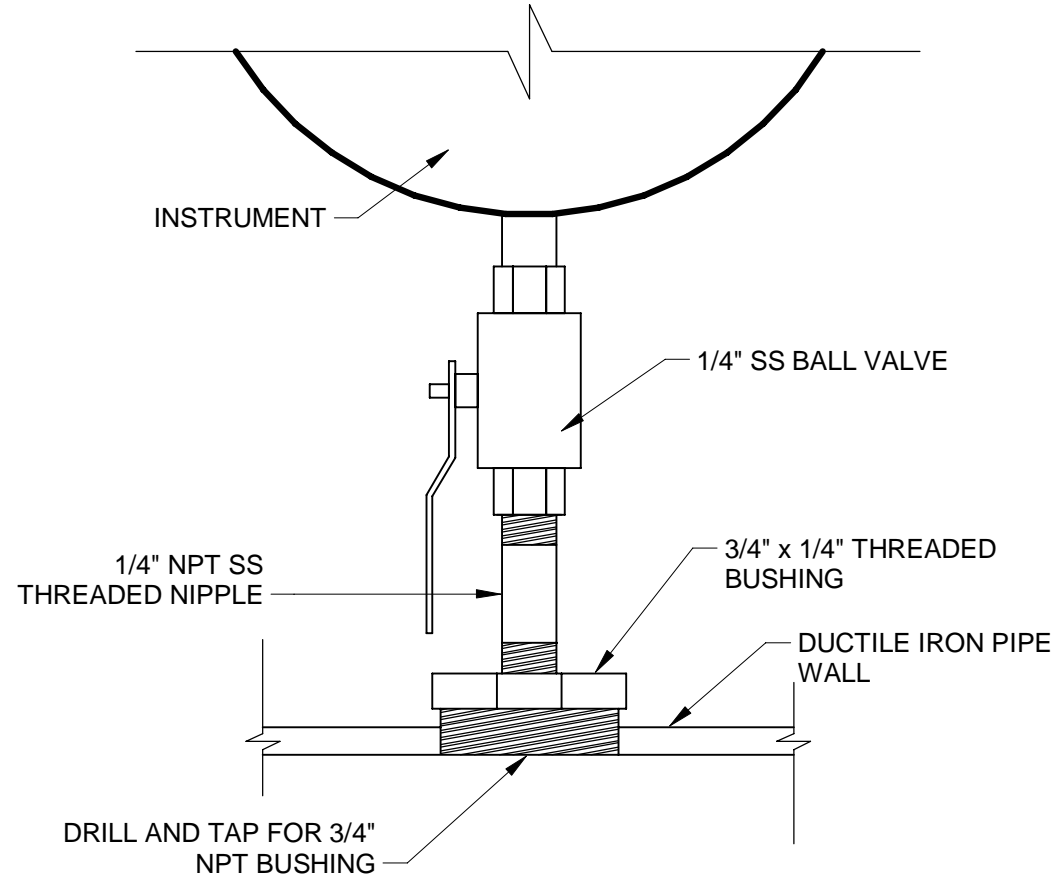
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I/R	DATE	DESCRIPTION

PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420
SHEET TITLE
**PROCESS MECHANICAL
TYPICAL DETAILS
SHEET 3**

DRAWING NUMBER
99-D703

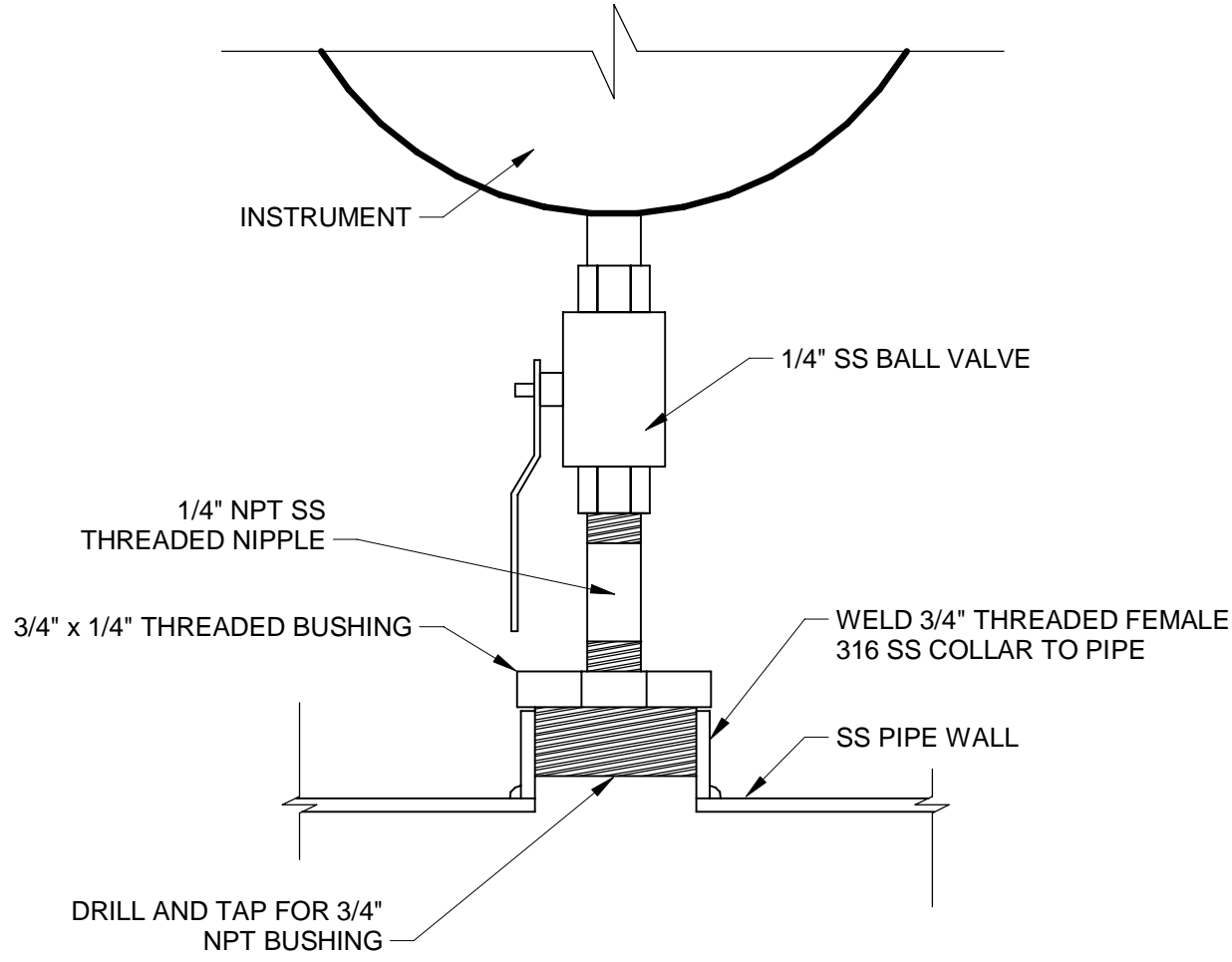
ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOOS Project Manager: J.KRINKS

Last Plotted: 4/4/2023 3:01:32 PM
Filename: BM 3607/CI-AMER (USA) 60670884-Provo River VTP/60670884_10-D001.rvt



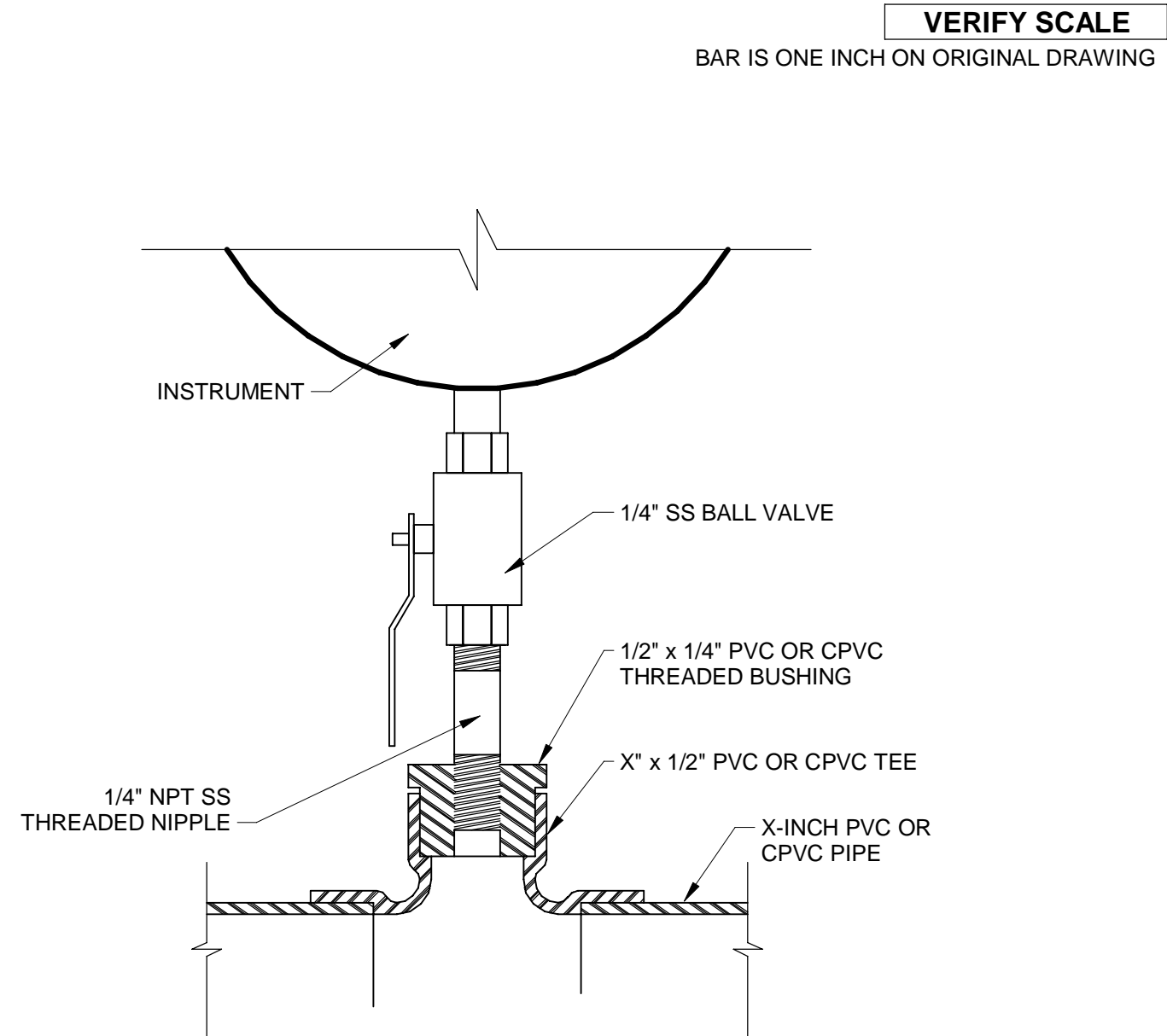
- NOTES:
- BALL VALVE ASSOCIATED WITH GAUGE INSTALLATION NOT LISTED IN VALVE SCHEDULE.
 - PROVIDE A DIAPHRAGM BETWEEN VALVE AND INSTRUMENT IF INDICATED IN THE SCHEDULE

D024 INSTRUMENT TAPS ON DUCTILE IRON PIPE
NOT TO SCALE



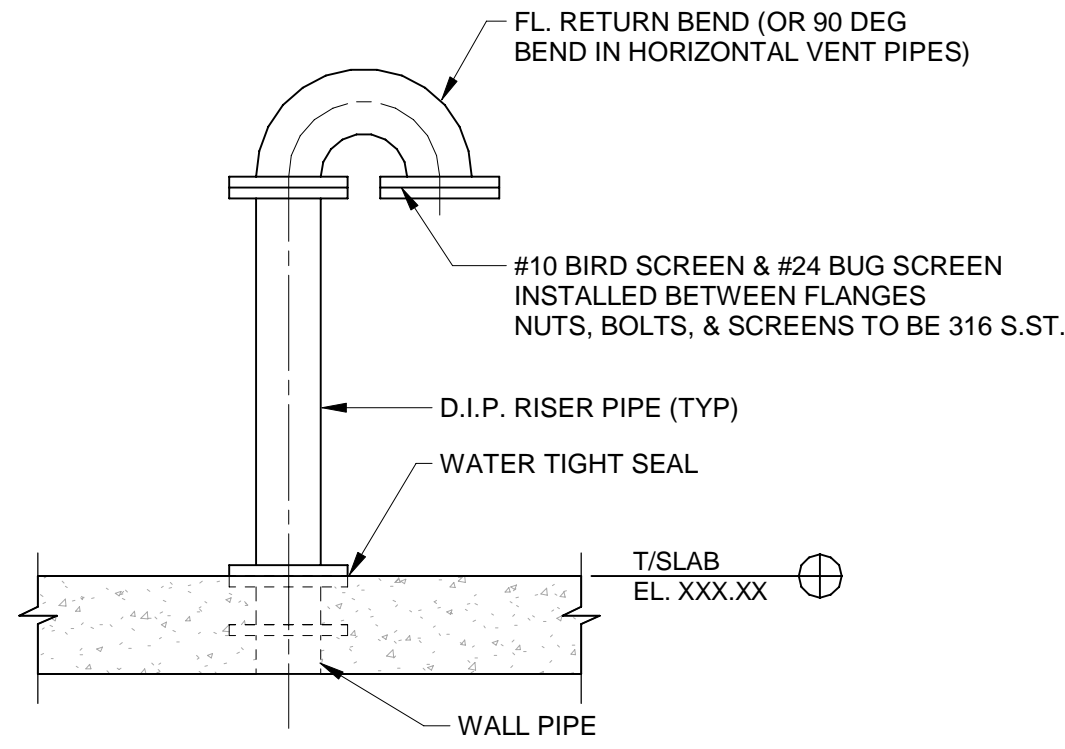
- NOTES:
- BALL VALVE ASSOCIATED WITH GAUGE INSTALLATION NOT LISTED IN VALVE SCHEDULE.
 - PROVIDE A DIAPHRAGM BETWEEN VALVE AND INSTRUMENT IF INDICATED IN THE SCHEDULE

D025 INSTRUMENT TAPS ON STAINLESS STEEL
NOT TO SCALE



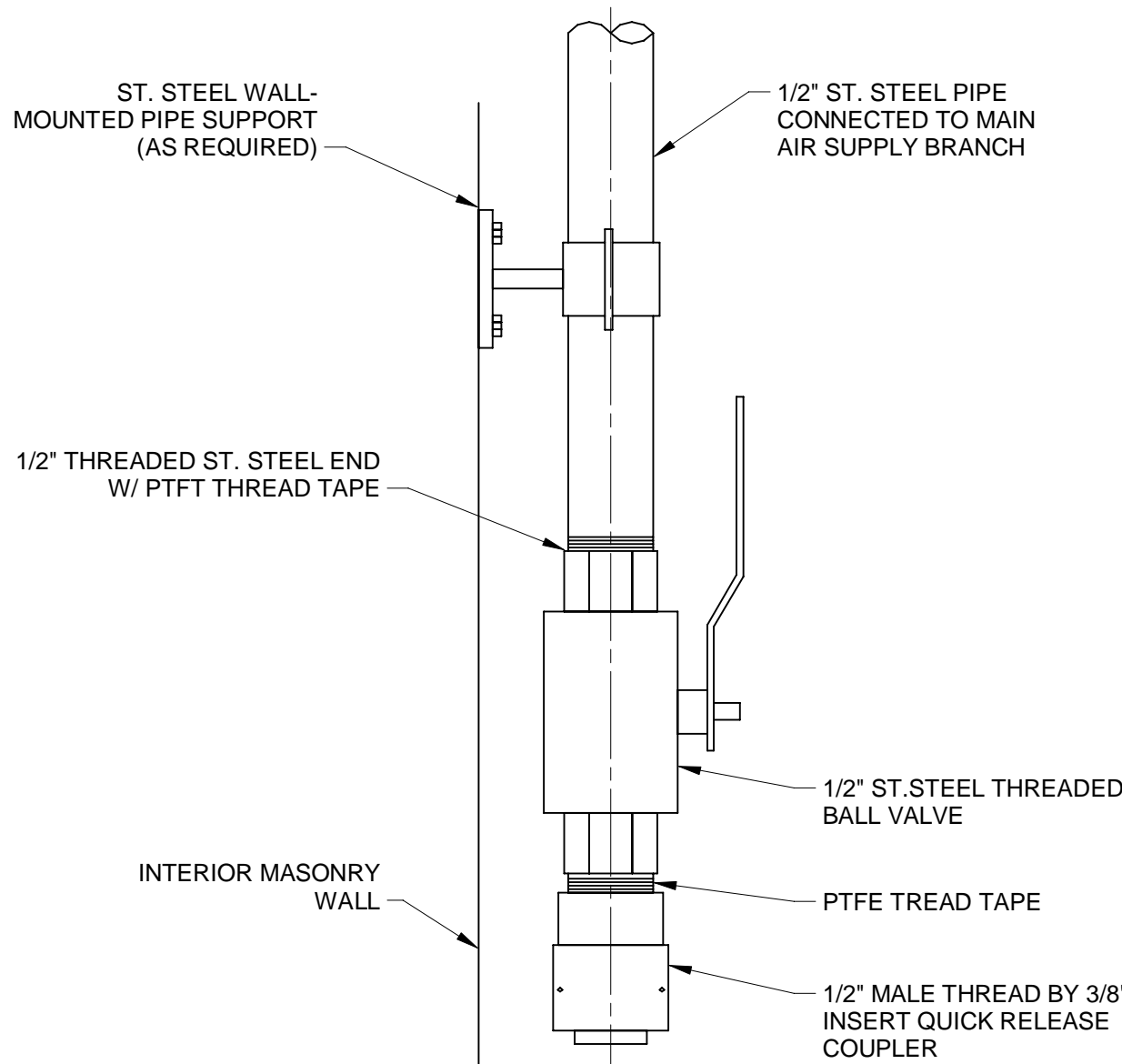
- NOTES:
- BALL VALVE ASSOCIATED WITH GAUGE INSTALLATION NOT LISTED IN VALVE SCHEDULE.
 - PROVIDE A DIAPHRAGM BETWEEN VALVE AND INSTRUMENT IF INDICATED IN THE SCHEDULE

D026 INSTRUMENT TAPS ON PVC AND CPVC
NOT TO SCALE

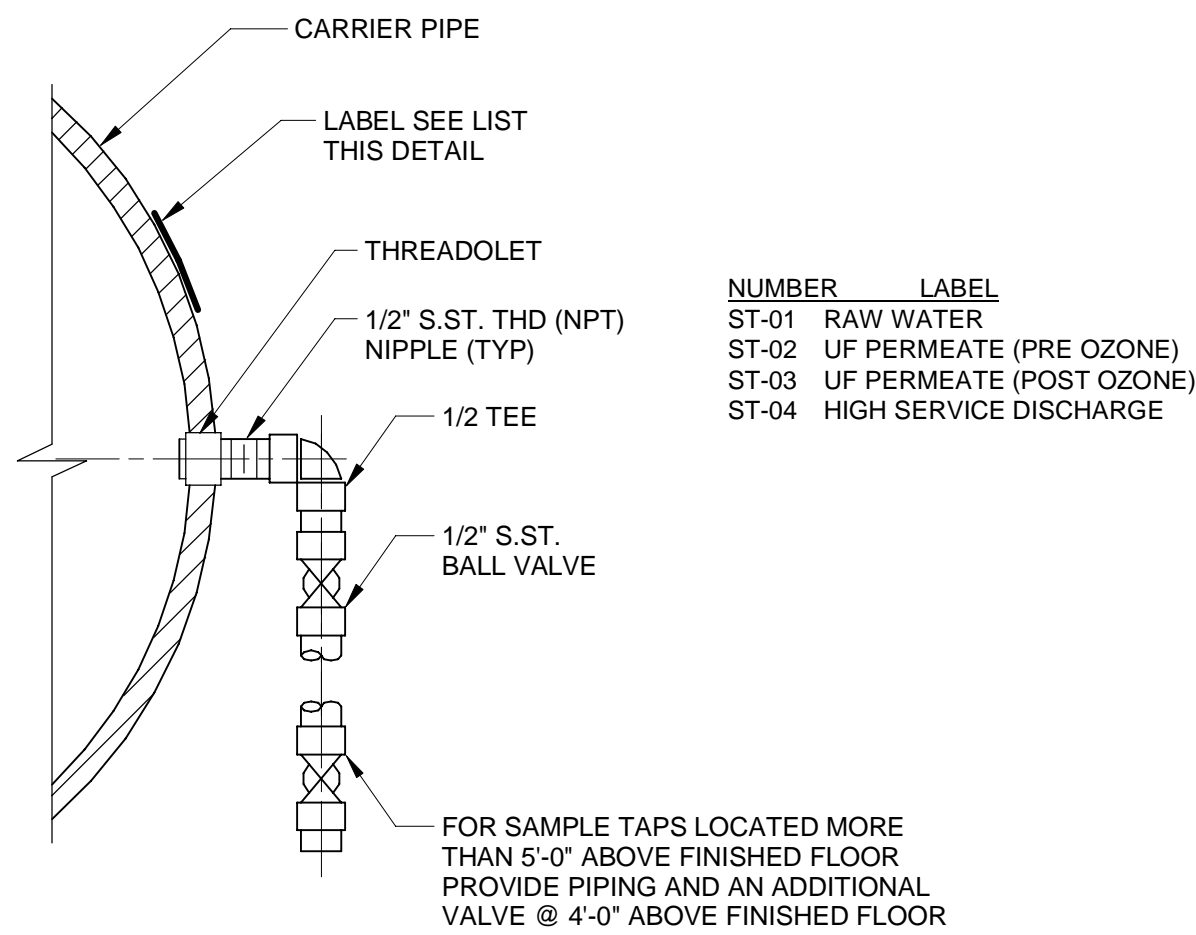


- NOTES:
- PIPE SIZE & HEIGHT AS INDICATED ON DRAWINGS
 - BOTTOM FLANGE OF VENT SHALL BE 24" MIN FROM GRADE

D027 TYPICAL VENT
NOT TO SCALE

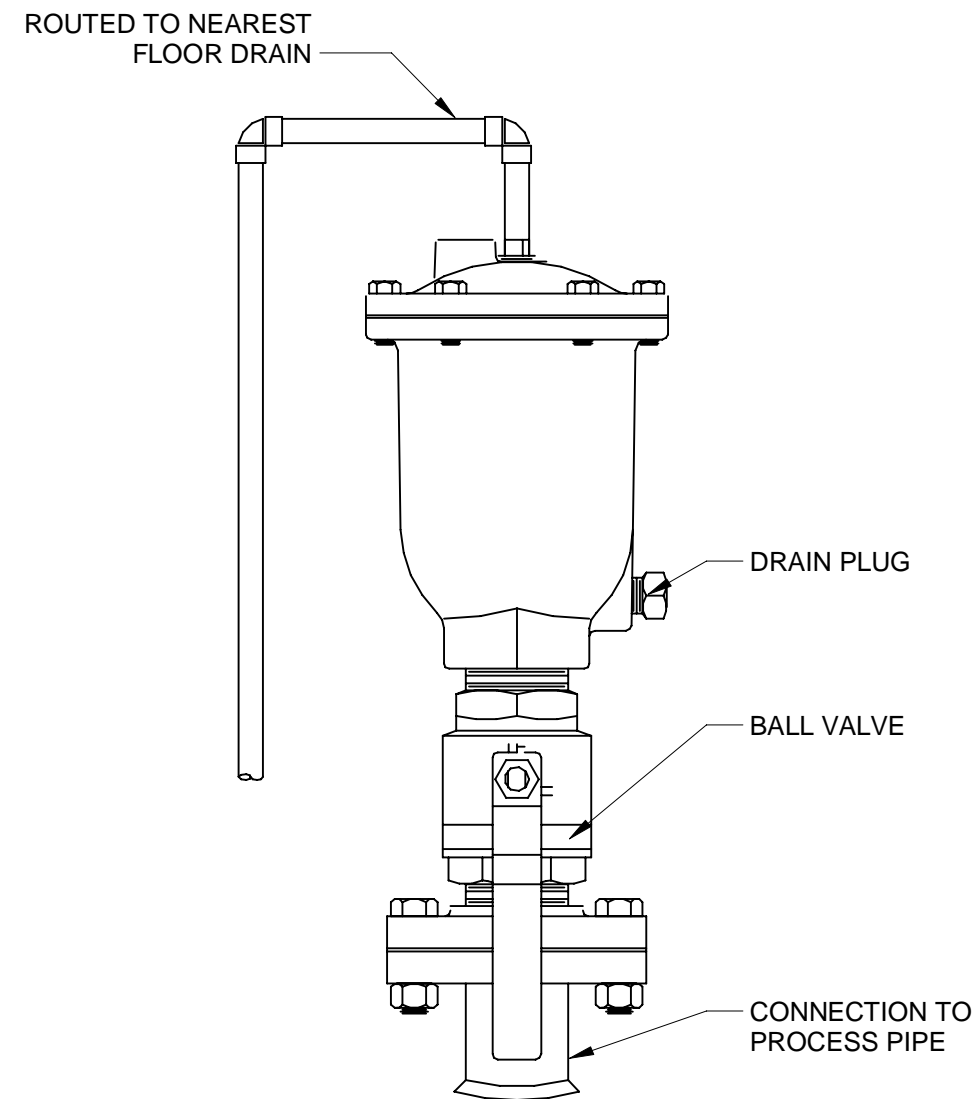


D028 COMPRESSED AIR COUPLER
NOT TO SCALE



- * DOES NOT INCLUDE SAMPLE PORTS PROVIDED BY MEMBRANE MANUFACTURER
* ALL SAMPLE PIPING & VALVES SHALL BE 304 SST AT LOCATION OF TAP

D029 SAMPLE TAP
NOT TO SCALE



D030 AIR RELEASE VALVE
NOT TO SCALE

PROJECT

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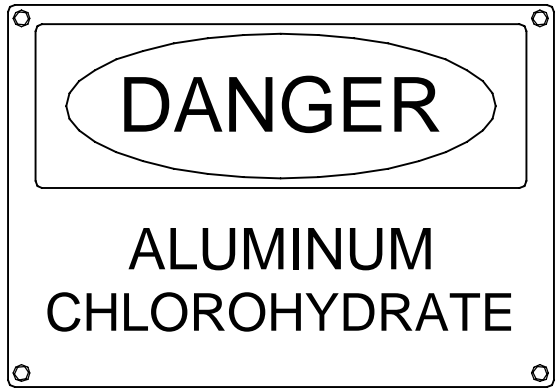
SHEET TITLE

PROCESS MECHANICAL
TYPICAL DETAILS
SHEET 4

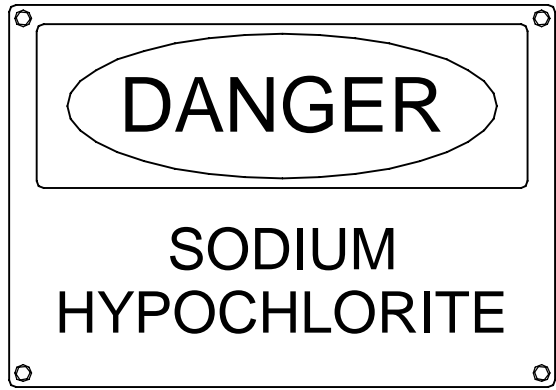
DRAWING NUMBER

99-D704

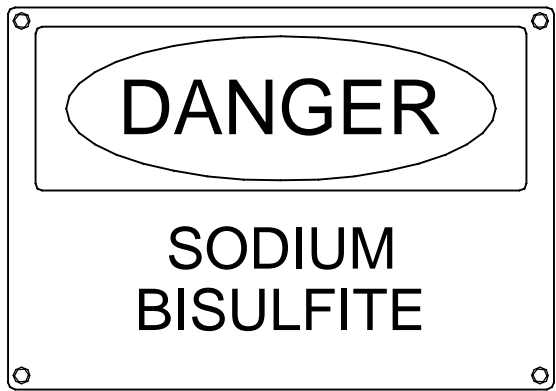
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Checked: J.KRINKS
Designer: J.MIX
Drafter: P.ALCOUS
Project Manager: J.KRINKS
Last Plotted: 4/12/2023 3:01:33 PM
Filename: BM 3607CI-AMER-Provo River WTP/60670884_10-D001.rvt



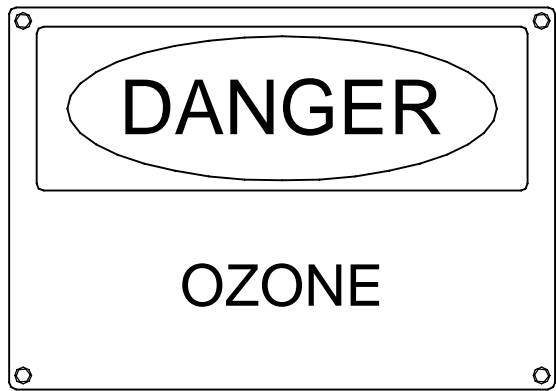
LOCATION: ALUMINUM CHLOROHYDRATE
CHEMICAL ROOM ENTRY DOORS (2)



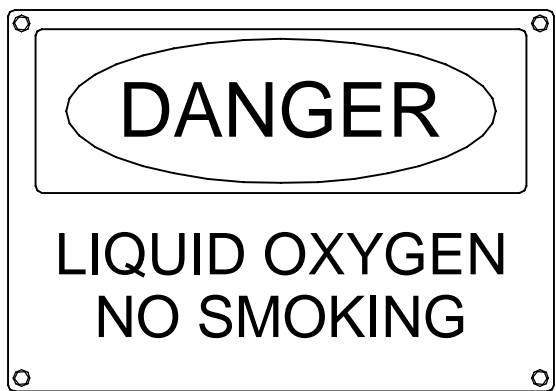
LOCATION: SODIUM HYPOCHLORITE
ROOM 1) WALL AND 2) ENTRY DOOR



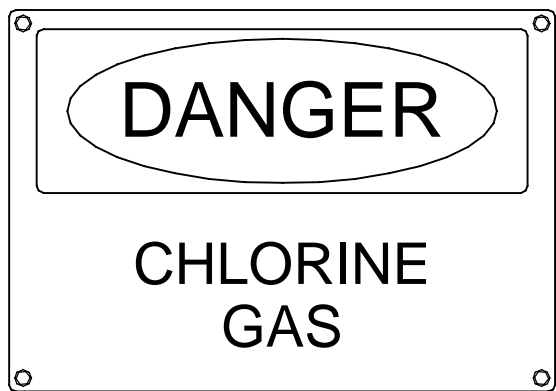
LOCATION: SODIUM BISULFITE
CHEMICAL ROOM ENTRY DOORS (2)



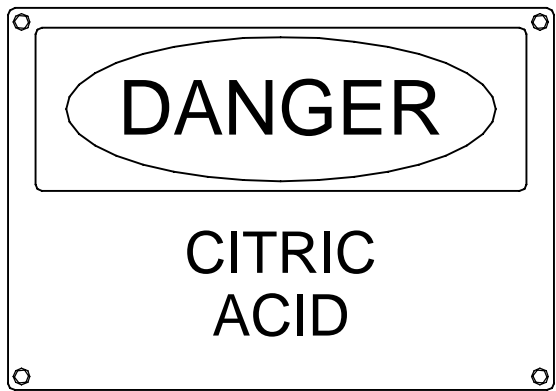
LOCATION: OZONE GENERATOR
ROOM ENTRY DOORS (2)



LOCATION: EXTERIOR WALL NEAR
LIQUID OXYGEN TANK



LOCATION: CHLORINE GAS ROOM
ROOM ENTRY DOOR



LOCATION: CITRIC ACID ROOM
1) WALL AND 2) ENTRY DOOR

SIGN NOTES:

1. TYPE: OSHA "DANGER" SIGN
2. SIZE: 10"Wx7"H
3. MATERIAL: 60 mil PRESS-POLISHED VINYL PLASTIC
4. ROUNDED CORNERS WITH MOUNTING HOLES
5. SETON IDENTIFICATION PRODUCTS OR EQUAL
6. INSTALL IN LOCATIONS APPROVED BY THE OWNER

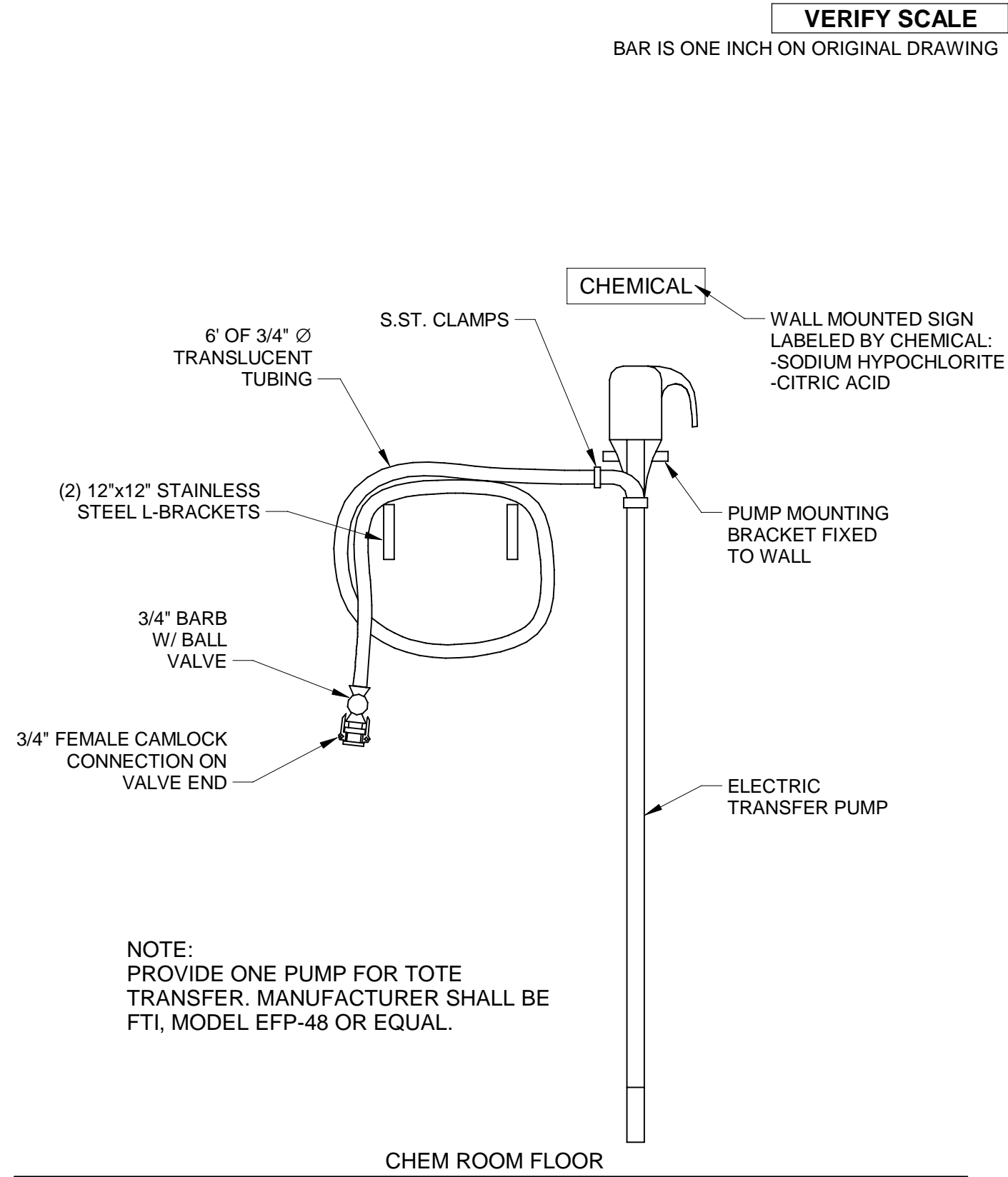
CHEMICAL DANGER SIGNS

D031
NOT TO SCALE



CHEMICAL FILL SIGNS

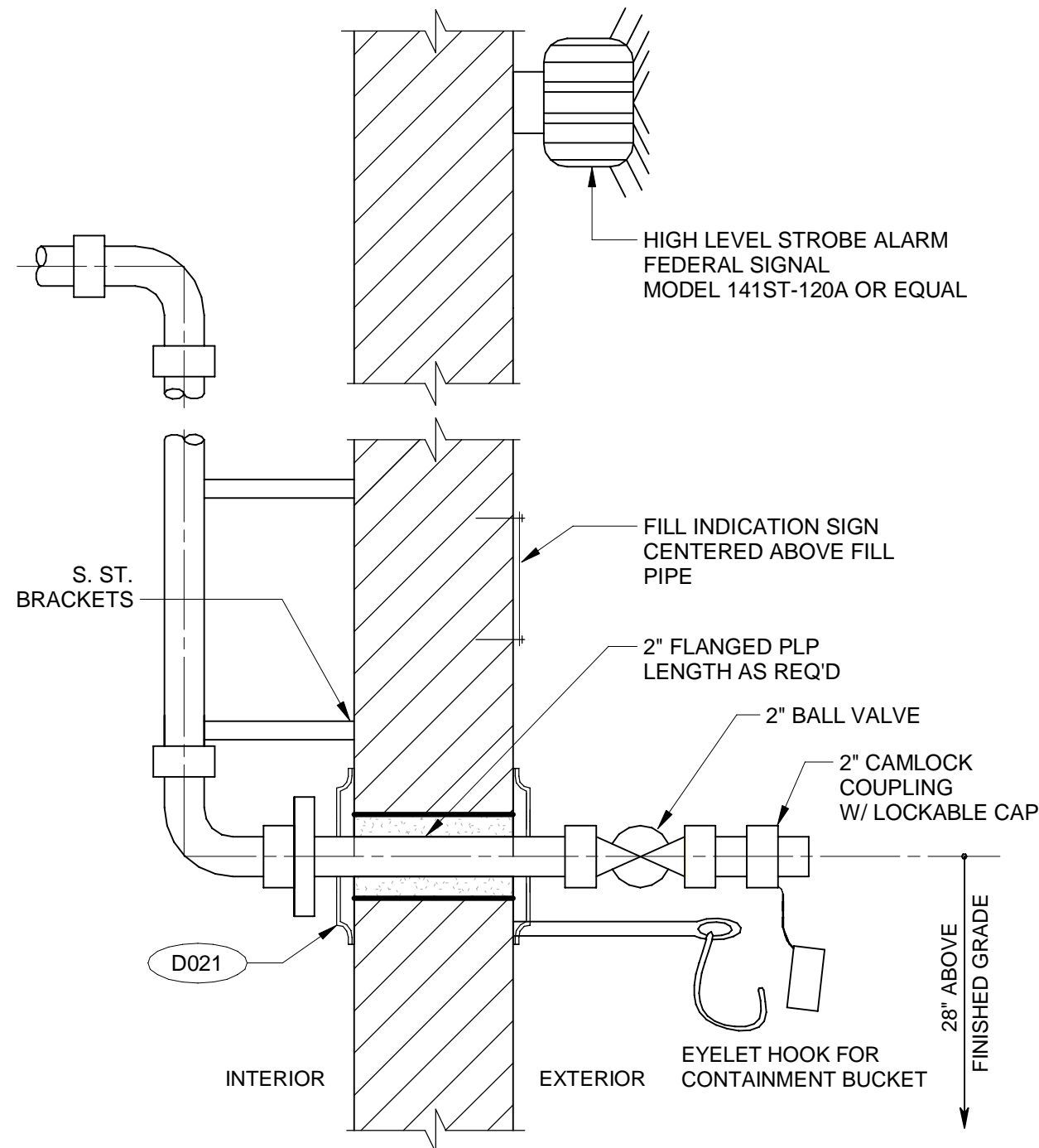
D032
NOT TO SCALE



NOTE:
PROVIDE ONE PUMP FOR TOTE
TRANSFER. MANUFACTURER SHALL BE
FTI, MODEL EFP-48 OR EQUAL.

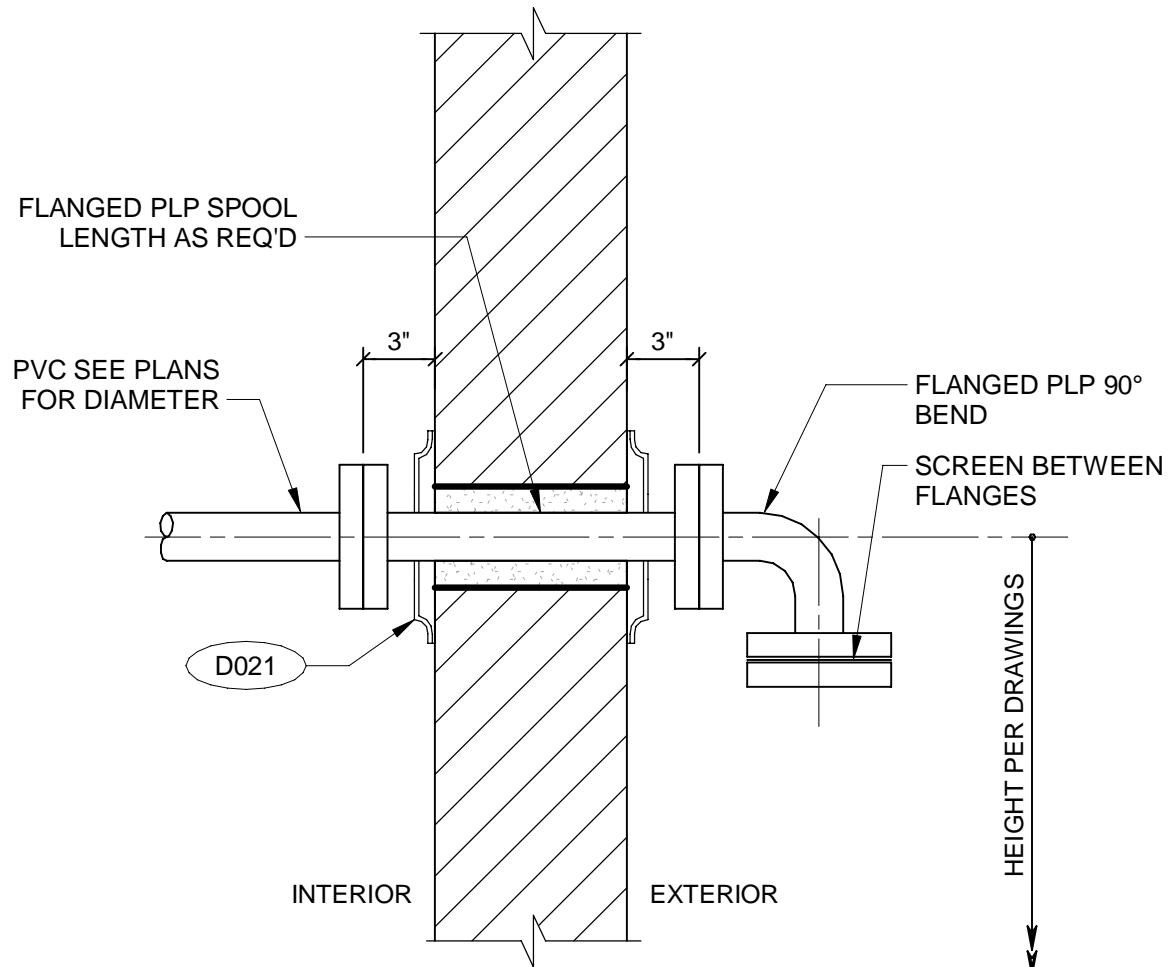
PORTABLE CHEMICAL PUMP

D033
NOT TO SCALE



CHEMICAL FILL PIPE

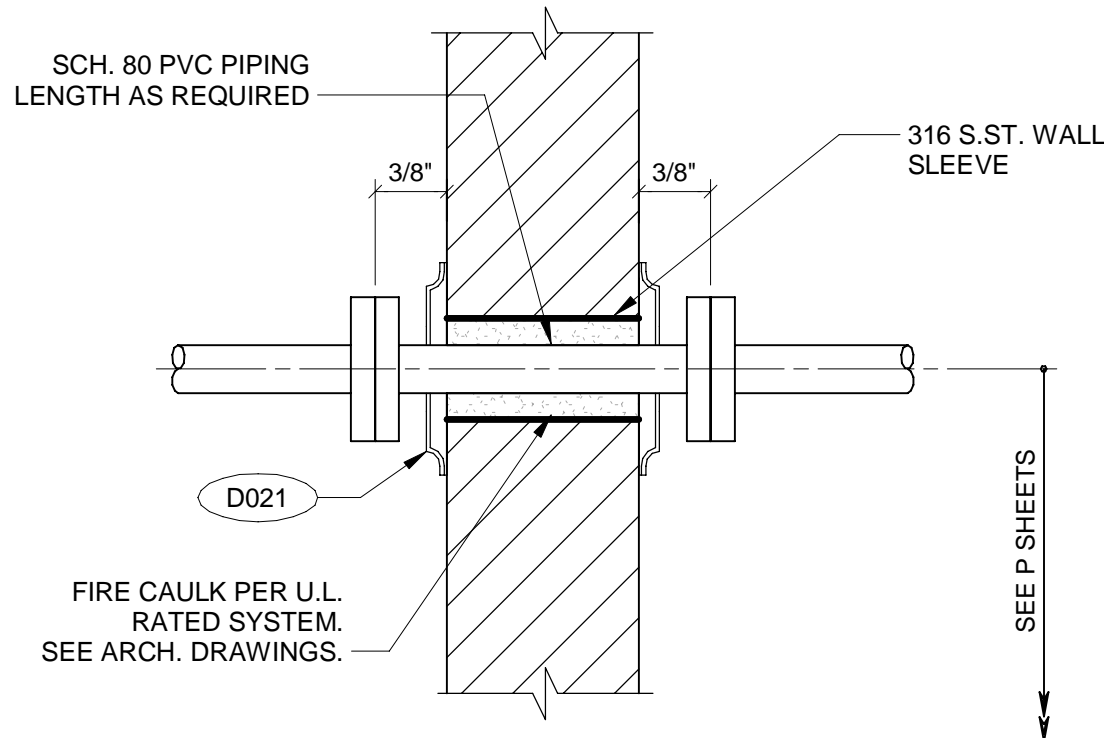
D034
NOT TO SCALE



CHEMICAL VENT

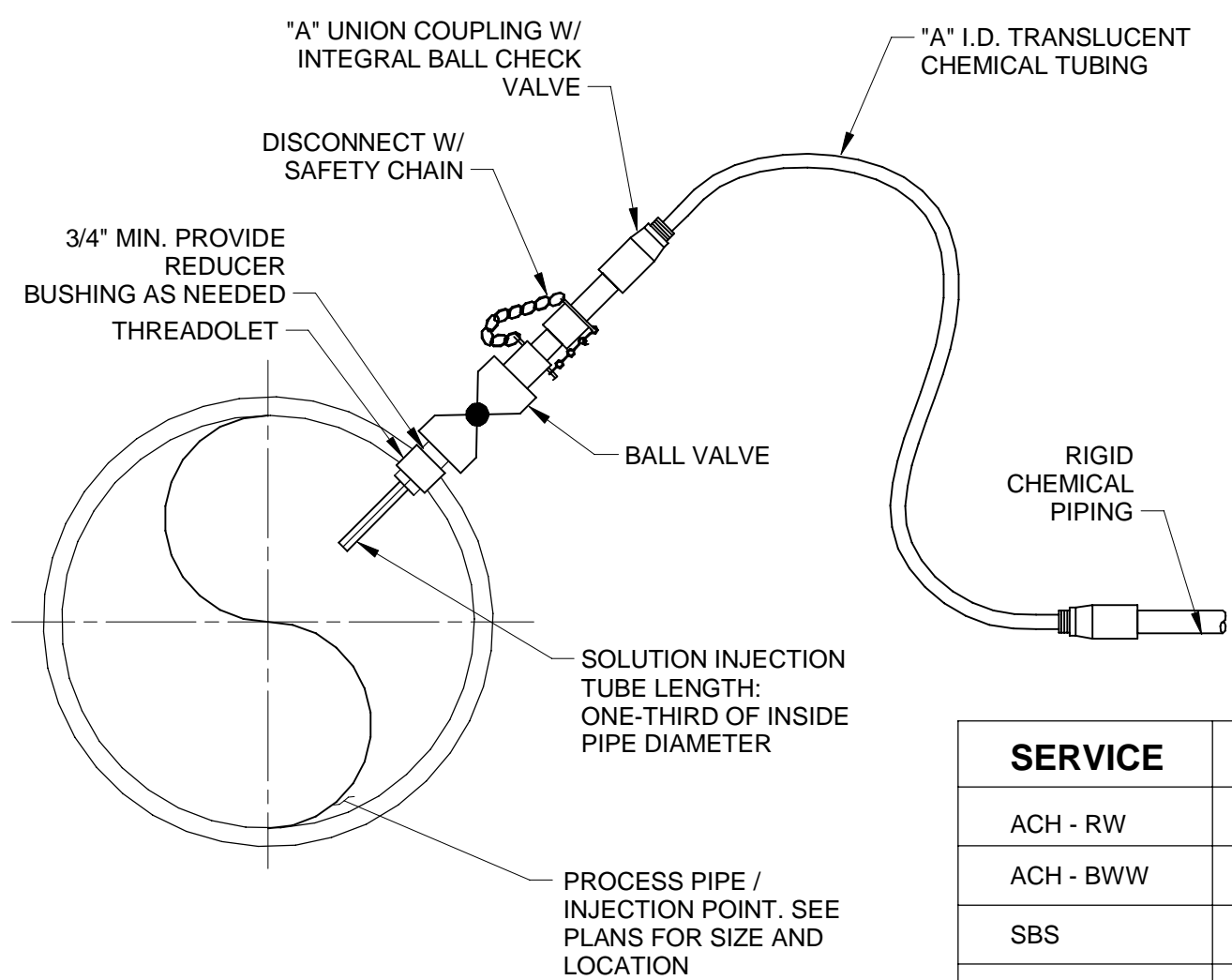
D035
NOT TO SCALE

NOTES:
SCREEN: VINYL ESTER FIBERGLASS, 40 MESH, 0.010 GAUGE
NUTS AND BOLTS: 316 STAINLESS STEEL



INTERIOR WALL CHEMICAL PIPE
PENETRATION

D036
NOT TO SCALE



CHEMICAL INJECTION QUILL

D037
NOT TO SCALE

SERVICE	A
ACH - RW	3/8"
ACH - BWW	1"
SBS	1"
CIT	1"
SH	1"
CLS	1"

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& LUCE inc
ENGINEERS

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I/R	DATE	DESCRIPTION

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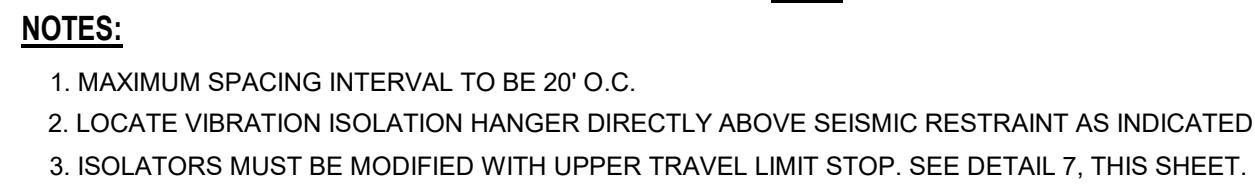
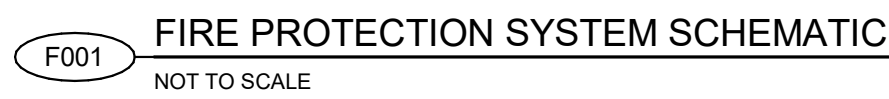
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

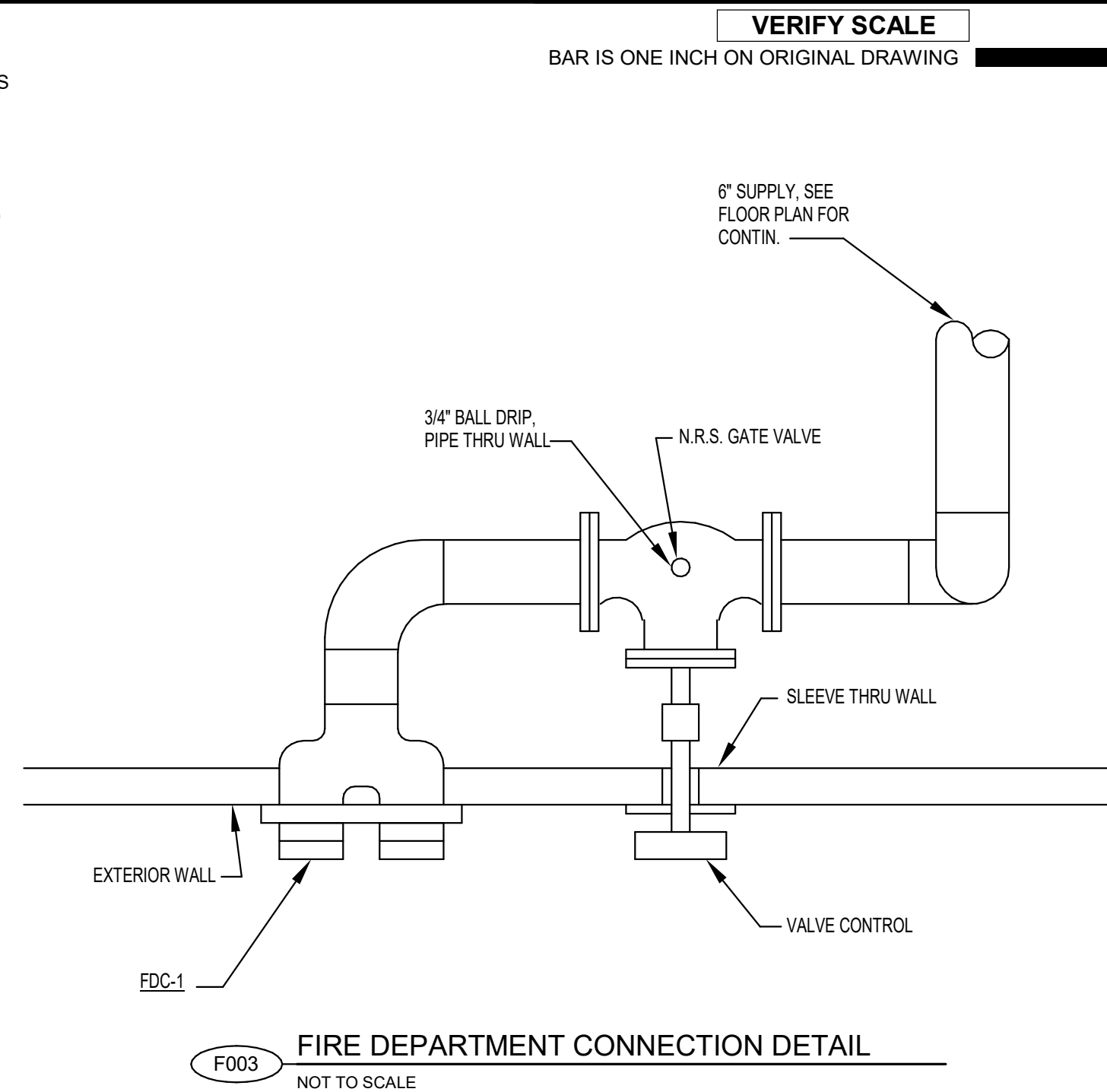
PROCESS MECHANICAL
TYPICAL DETAILS
SHEET 5

DRAWING NUMBER

99-D705



SCHEDULE FOR BRACING PIPES ON TRAPEZE (1,2)							
MAX. DEAD LOAD ON TRAPEZE LBS.	BOLTS TO ANGLE DIA.	VERTICAL DIAGONAL & LONGITUDINAL ANGLES	MAX. TRAPEZE SPAN	TRAPEZE SIZE	TOP CONN. OF DIAG. & LONGITUDINAL ANGLE	ROD SIZE DIA.	MAX. LENGTH FOR RODS
320	3/8"	2"X2"X16 GA.	3'-4"	1 5/8" X3 1/4" X121 GA.	TYPE - 3	1/2"	25
440	3/8"	2"X2"X16 GA.	3'-4"	1 5/8" X3 1/4" X121 GA.	TYPE - 4	1/2"	25
540	3/8"	2"X2"X16 GA.	3'-4"	1 5/8" X3 1/4" X121 GA.	TYPE - 4	5/8"	31
660	3/8"	2"X2"X16 GA.	4'-0"	1 5/8" X3 1/4" X121 GA.	TYPE - 5	5/8"	31
940	3/8"	2"X2"X16 GA.	4'-0"	1 5/8" X3 1/4" X121 GA.	TYPE - 6	3/4"	37
945	3/8"	2"X2"X16 GA.	3'-10"	1 5/8" X3 1/4" X121 GA.	TYPE - 6	3/4"	37



ANSI D 22" x 34"

Approved: Approver

Checked: Checker

Designer: Designer

Drafter: Author

Project Manager:

Last Plotted: 4/6/2023 12:19:53 PM
Filename: BM 5807CI-AMER (USA) 60670884-Provo River WTP60670884_10-P001.rvt

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

DRAWING INDEX	
HVAC TYPICAL DETAILS INDEX	
99-P701	
P001	ROOF DRAIN
P002	GAS FIRED HIGH EFFICIENCY WATER HEATER
P003	CLEANOUT
P004	HOSE BIB
P005	WATER SERVICE SLEEVE
P006	SURFACE CLEANOUT (SCO)
99-P702	
P007	GAS ENTRY
P008	EMERGENCY SHOWER
P009	TEMPERATURE MIXING VALVE (TMV)
P010	TWO WAY CLEAN OUT
P011	FLOOR DRAIN FLASHING
P012	BUILDING WATER SERVICE PIPING
99-P703	
P013	COLLECTION SUMP
P014	VENT THROUGH ROOF FLASHING
P015	DOMESTIC HOT WATER CIRC. IN-LINE PUMP PIPING
P016	FLUSH MOUNTED WALL HYDRANT
P017	MOP SINK
P018	FLOOR SINK



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

PROVO CITY
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http:// www.hansenallenluce.com

REGISTRATION



ISSUE/REVISION

A	2023-04-07	ISSUED FOR BID
I/R	DATE	DESCRIPTION

PROJECT NUMBER

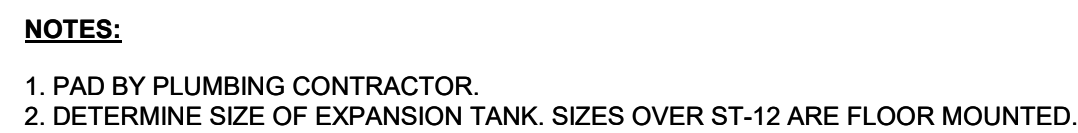
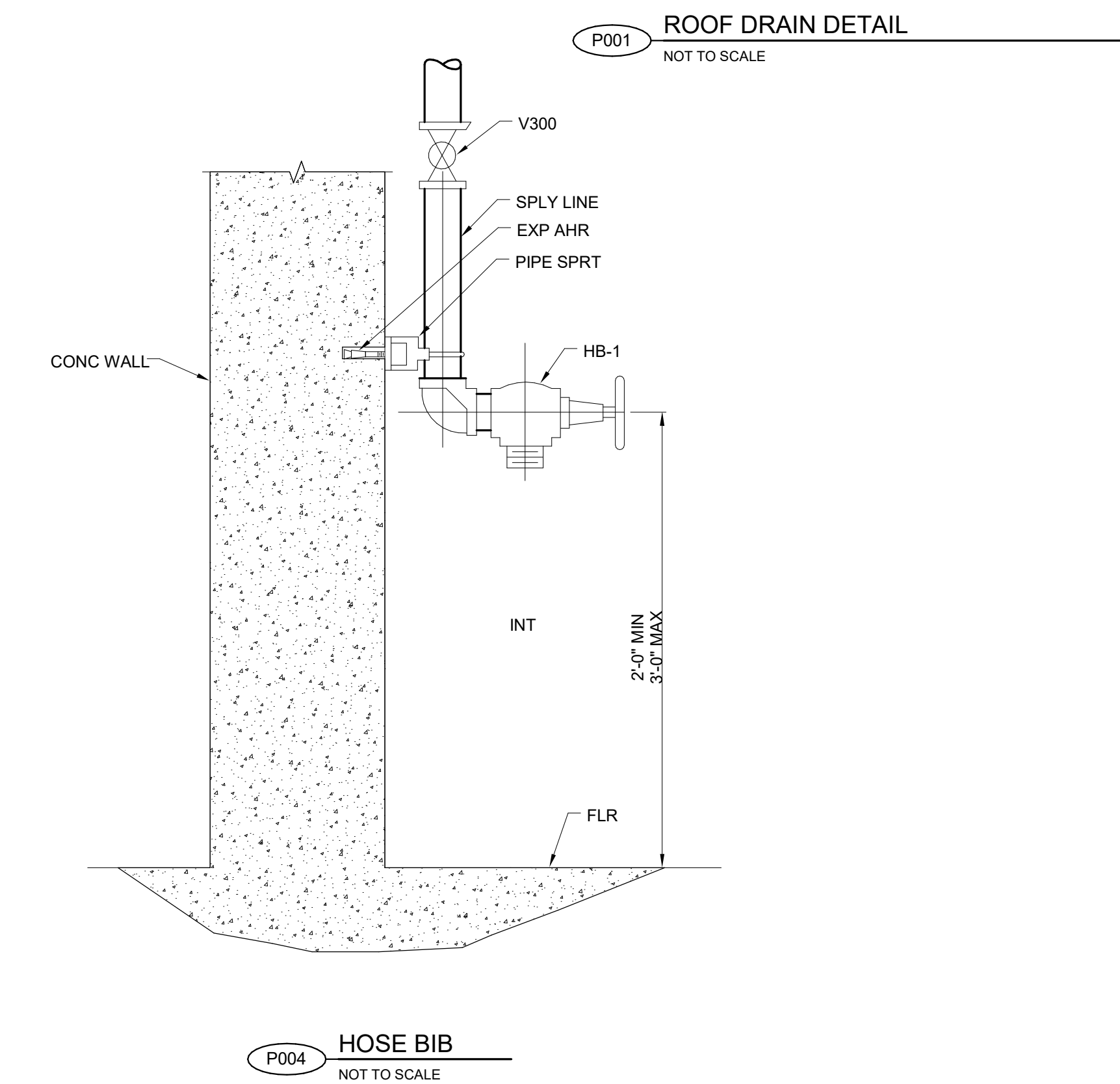
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

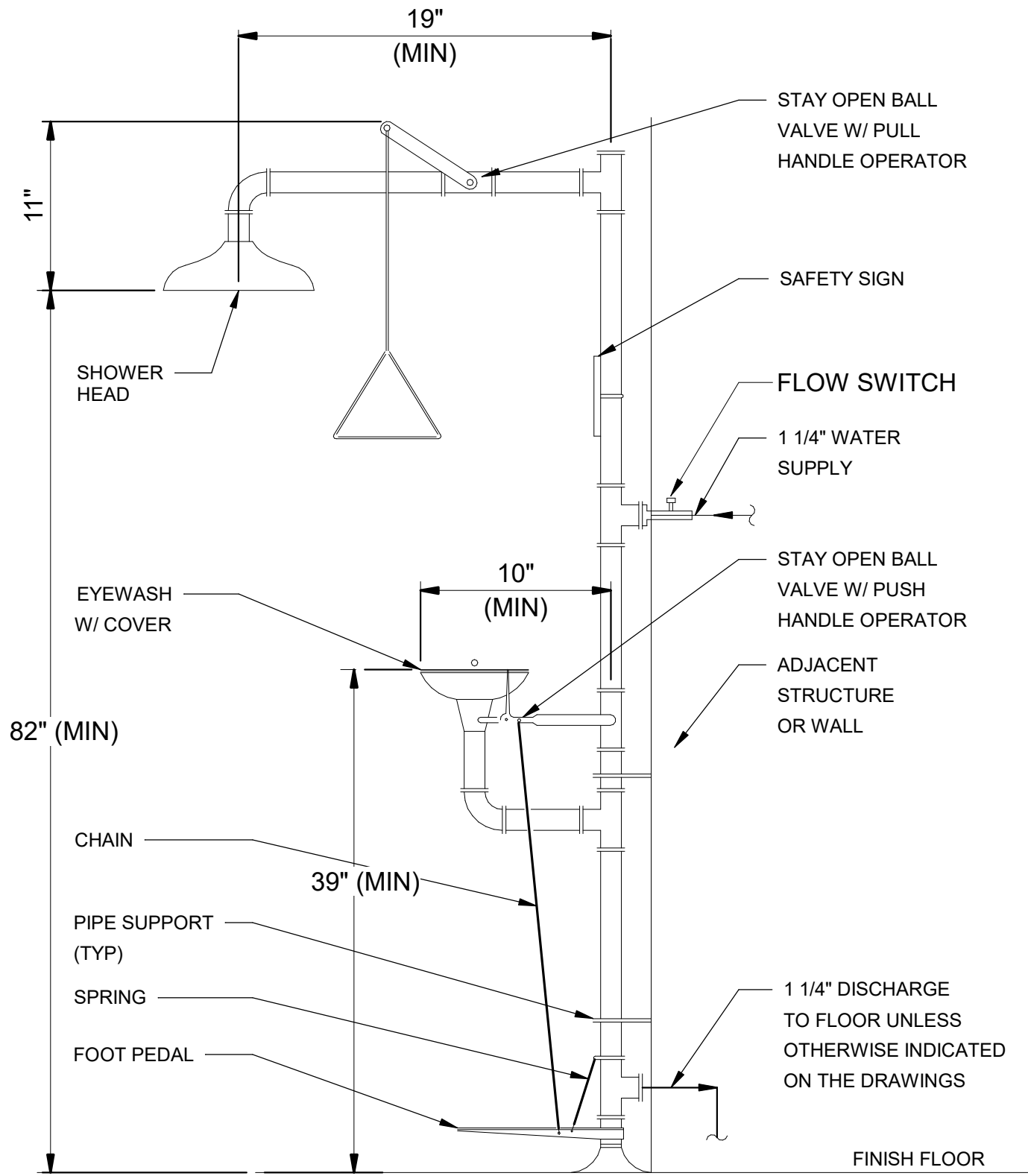
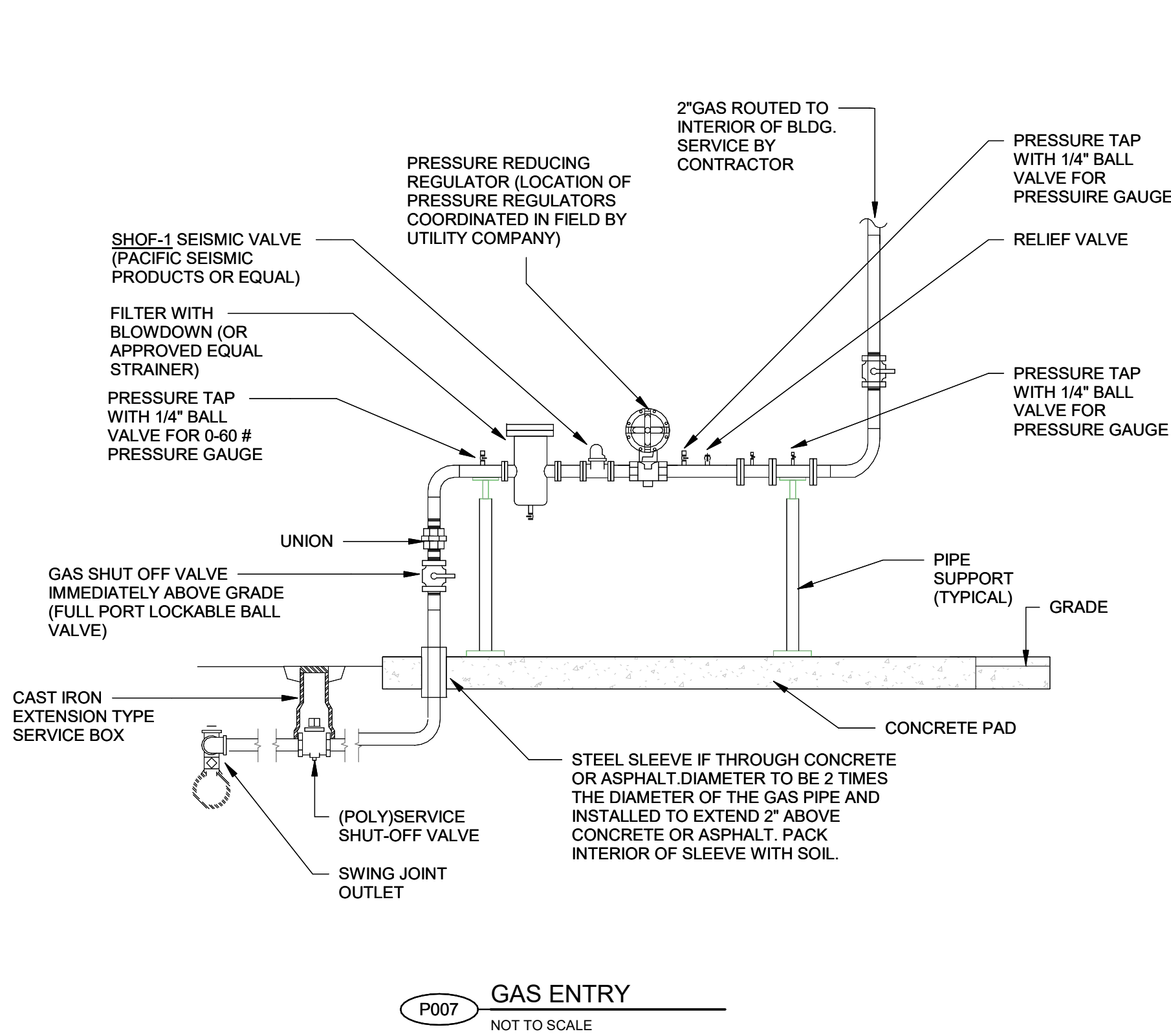
PLUMBING
TYPICAL DETAILS
INDEX

DRAWING NUMBER

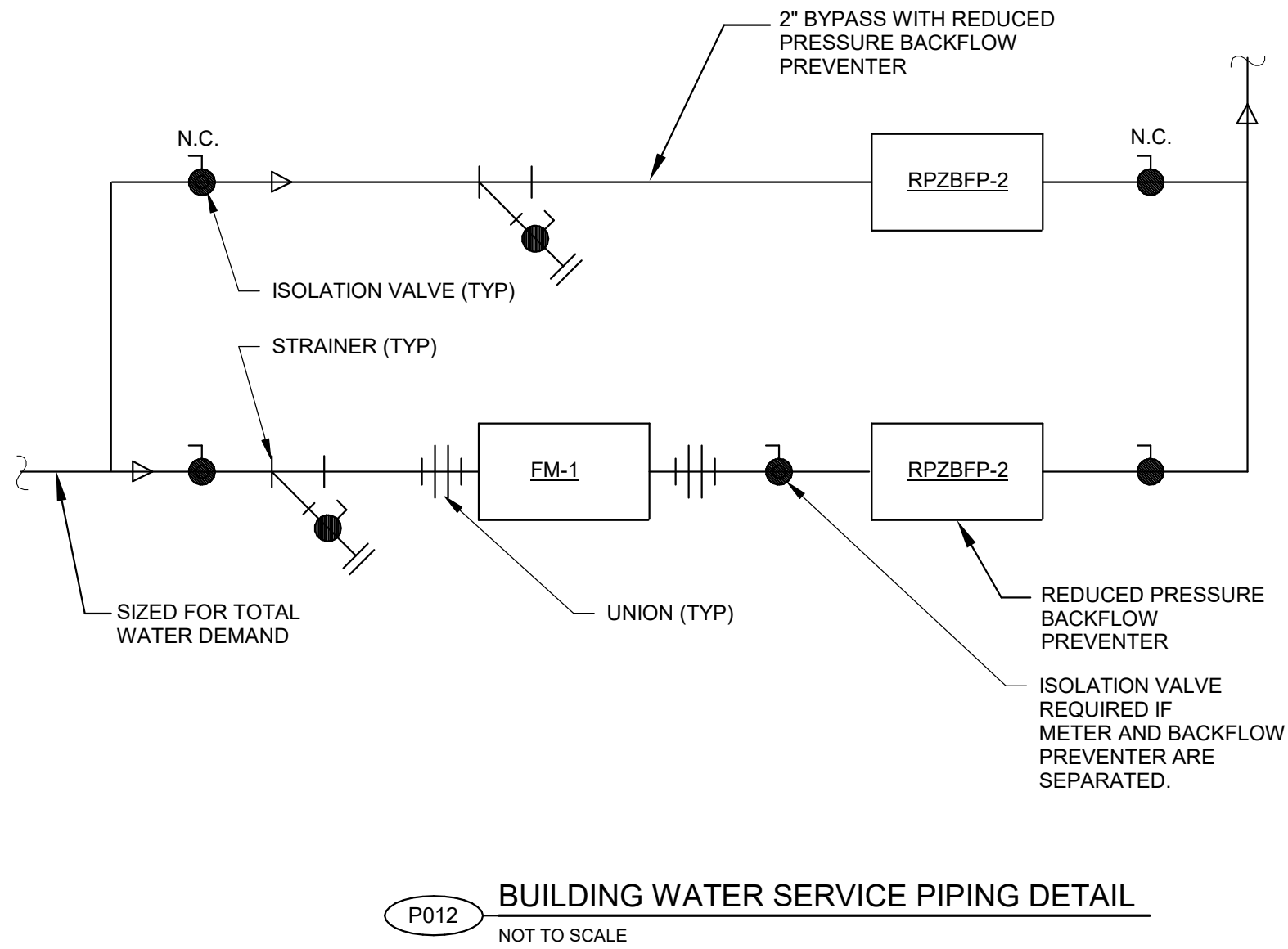
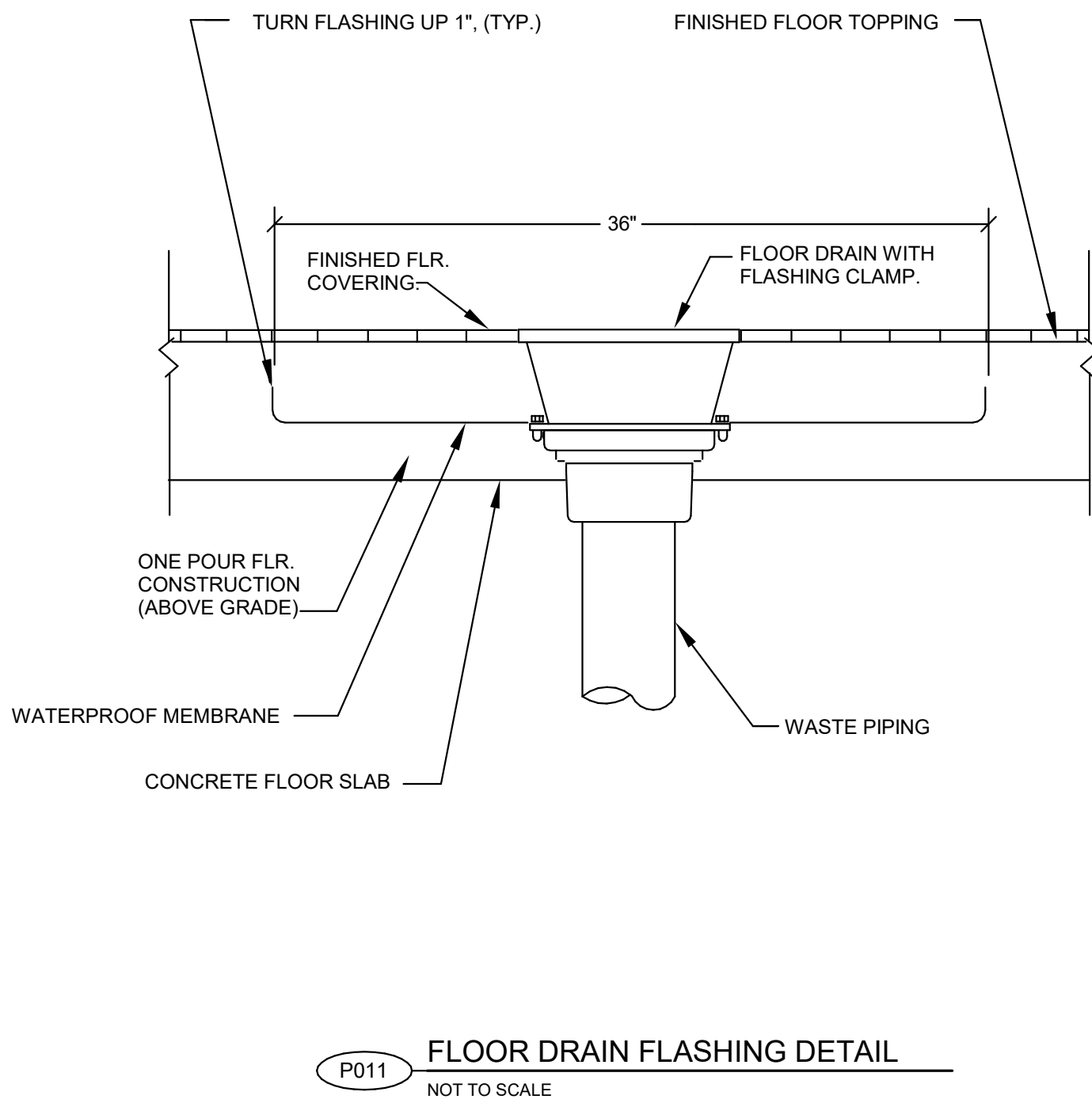
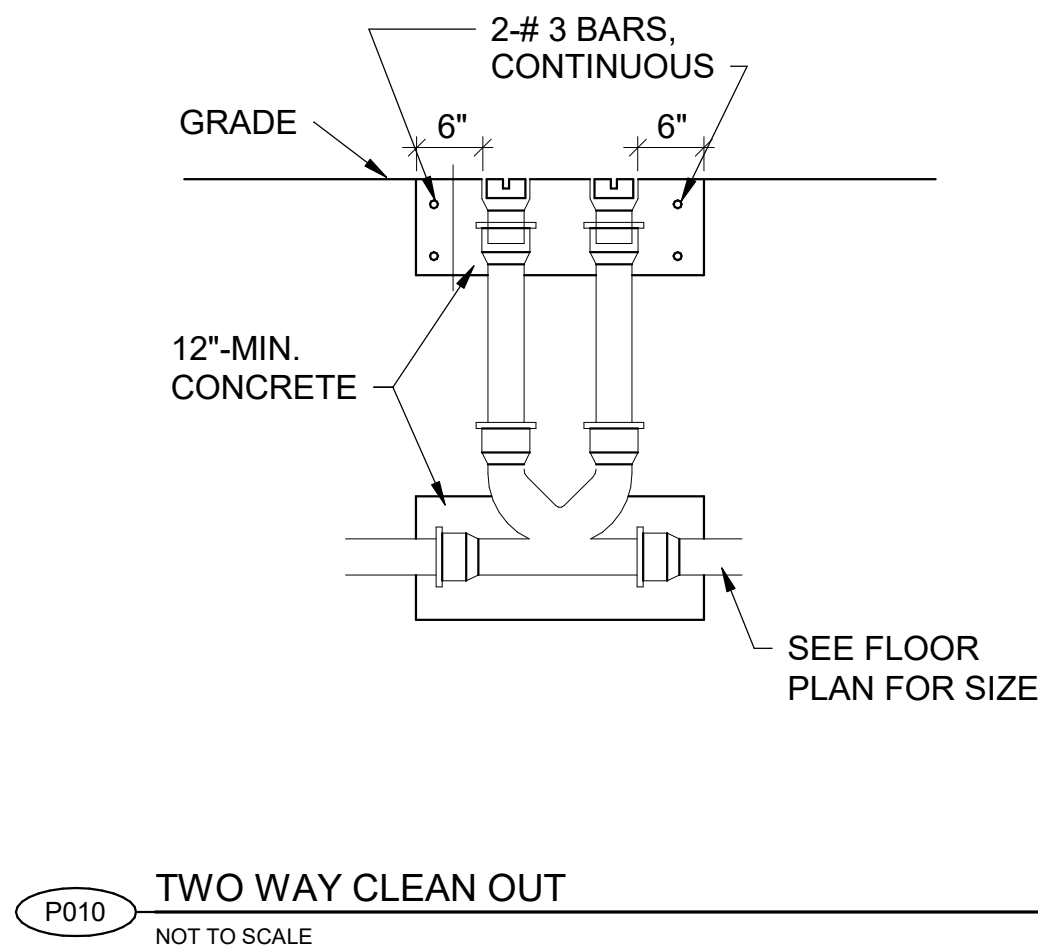
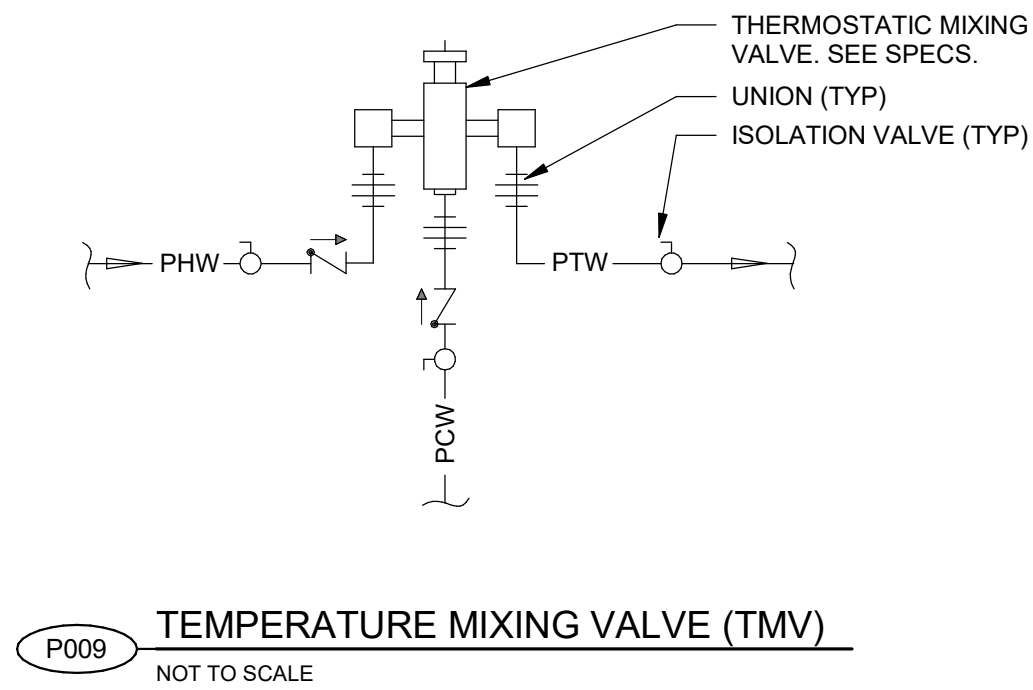
99-P700



ANSI D 22" x 34" Approved: B.HODGSON Checked: R.MEADOR Designer: A.DROZD Drafter: A.DROZD Project Manager: J.KRINKS
Last Plotted: 4/6/2023 12:19:54 PM
Filename: BM 5807/CI-AMER (USA) 6067/0884-Provo River WTP/6067/0884_10-P001.rvt



- NOTES:
- SEE SPECIFICATION SECTION 22 45 00 FOR APPROVED MANUFACTURERS / MODEL NO'S.
 - DETAIL PROVIDES GENERAL ARRANGEMENT OF EMERGENCY SHOWER AND EYEWASH SYSTEM ONLY. PROVIDE ADDITIONAL FEATURES AND APPURTENANCES AS INDICATED IN SPECIFICATION 22 45 00.
 - PROVIDE 1 1/4" BALL VALVE FOR SHOWER ISOLATION AT 1 1/4" WATER SUPPLY CONNECTION.



PROJECT

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REGISTRATION



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NO.	DATE	DESCRIPTION
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A	2022-10-24	ISSUED FOR 60%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

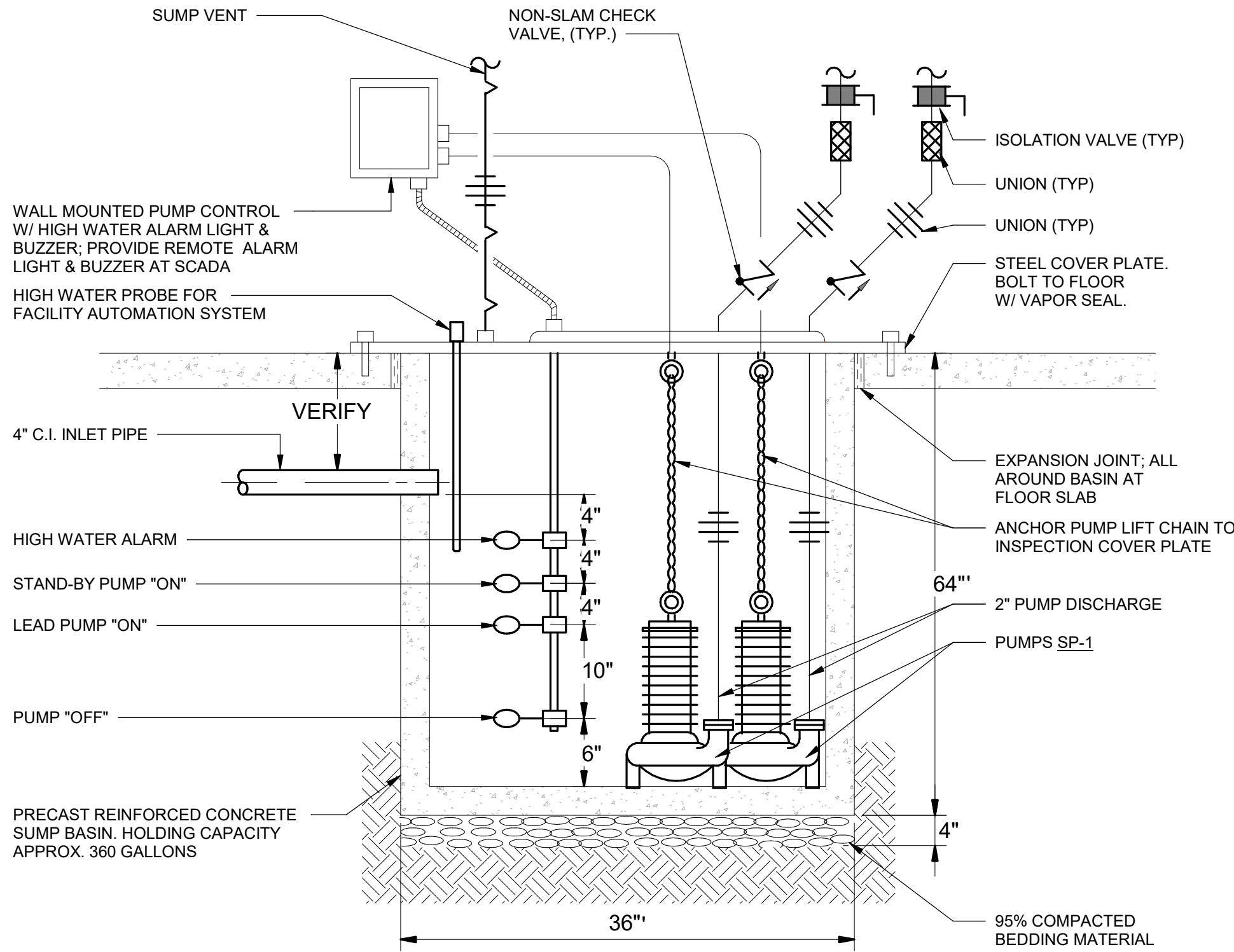
SHEET TITLE

PLUMBING
TYPICAL DETAILS
SHEET 2

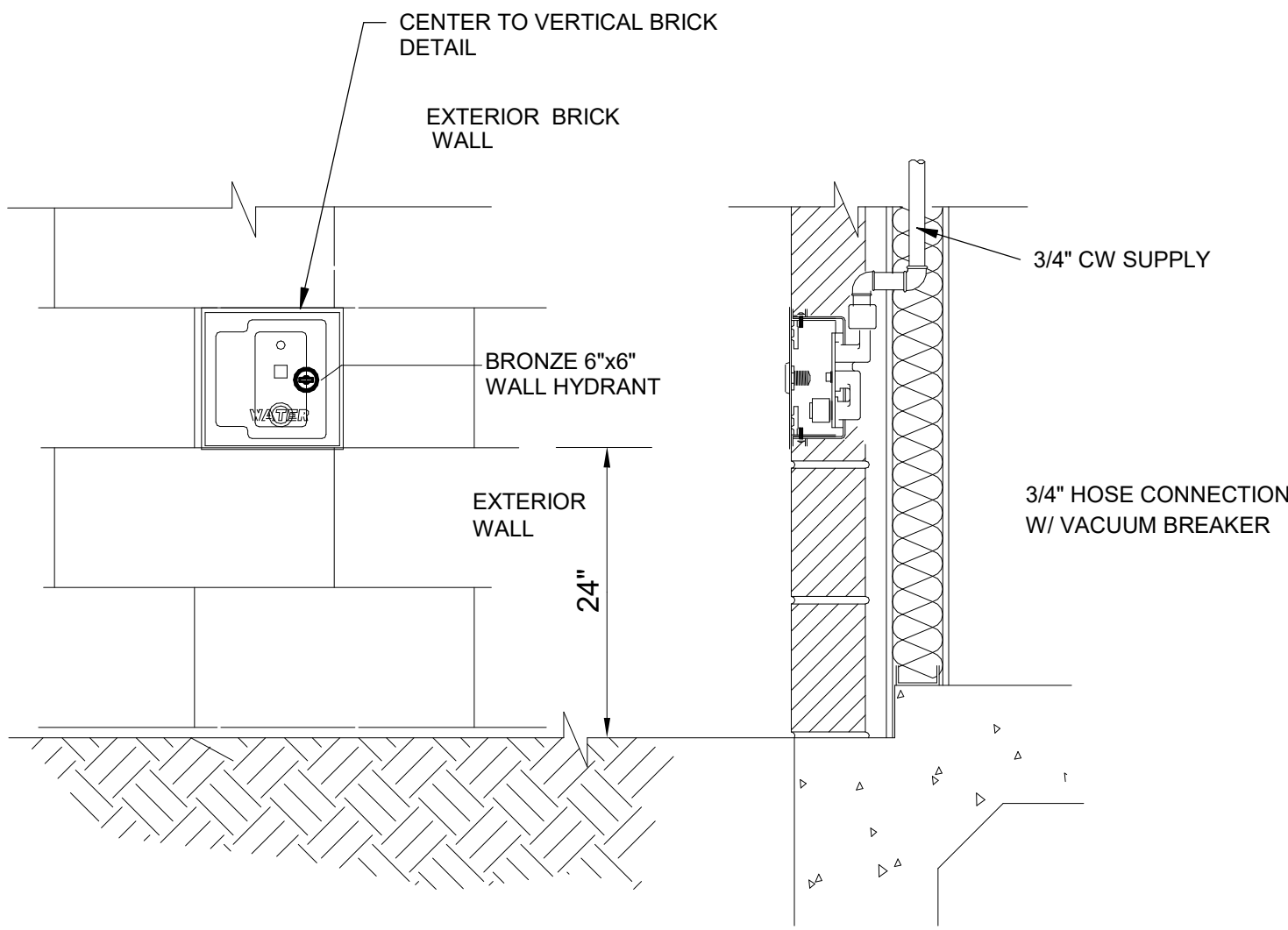
DRAWING NUMBER

99-P702

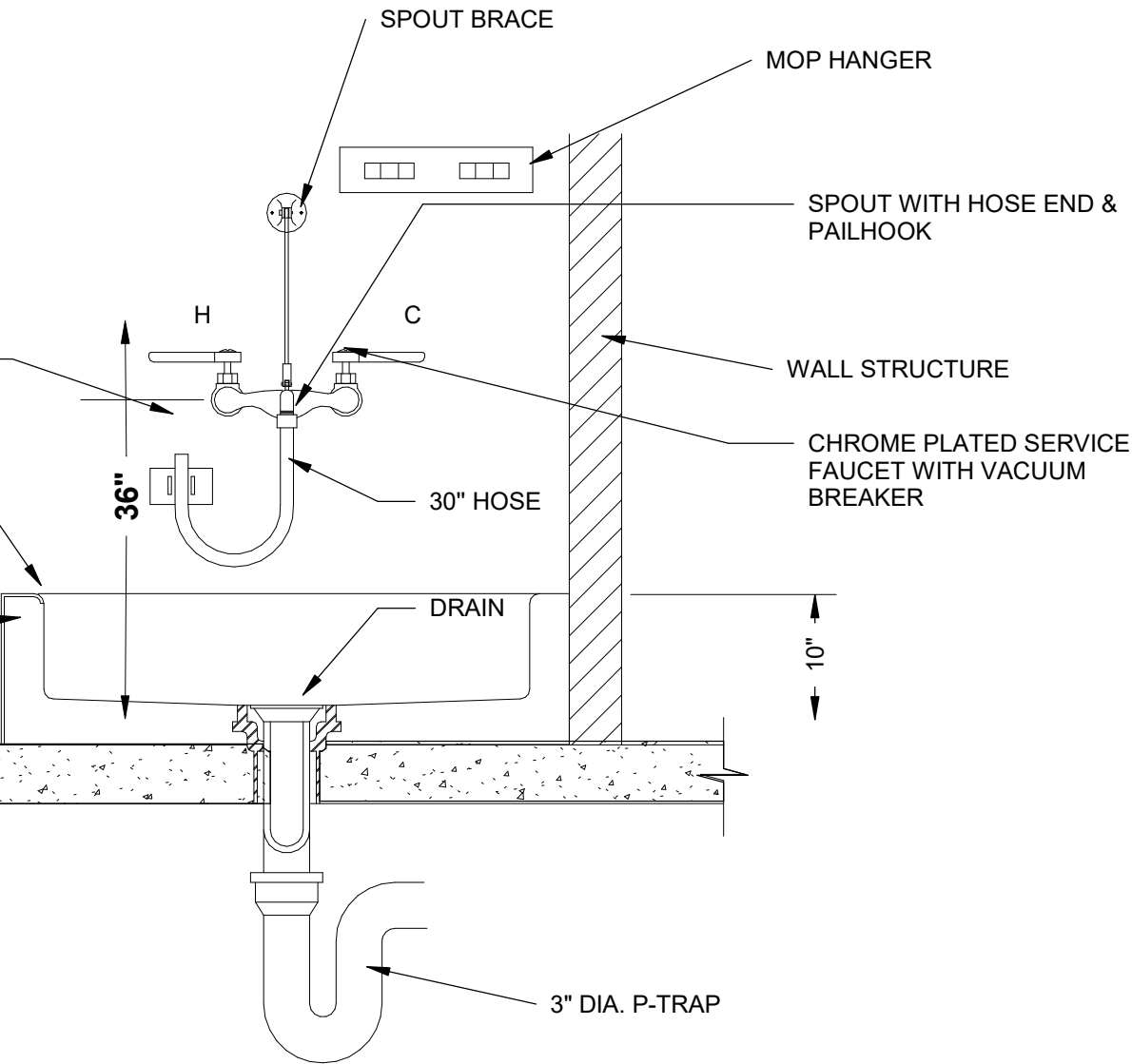
ANSI D 22" x 34" Approved: B.HODGSON Checked: R.MEADOR Designer: A.DROZD Drafter: A.DROZD Project Manager: J.KRINKS
Last Plotted: 4/6/2023 12:19:55 PM
Filename: BM 3607/CI-AMER (USA) 6067/0884-Provo River WTP/6067/0884_10-P001.rvt
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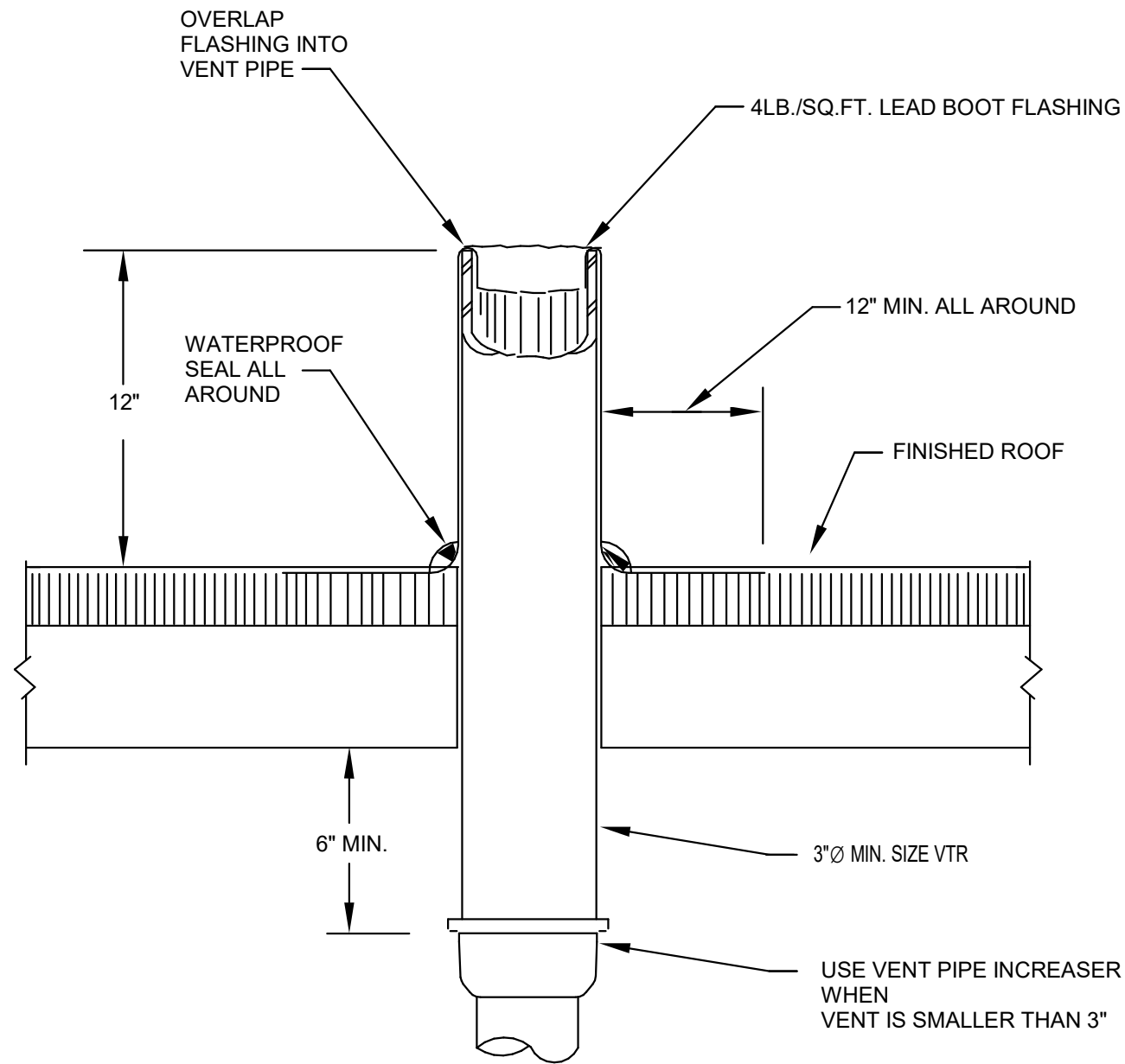
P013 COLLECTION SUMP DETAIL
NOT TO SCALE



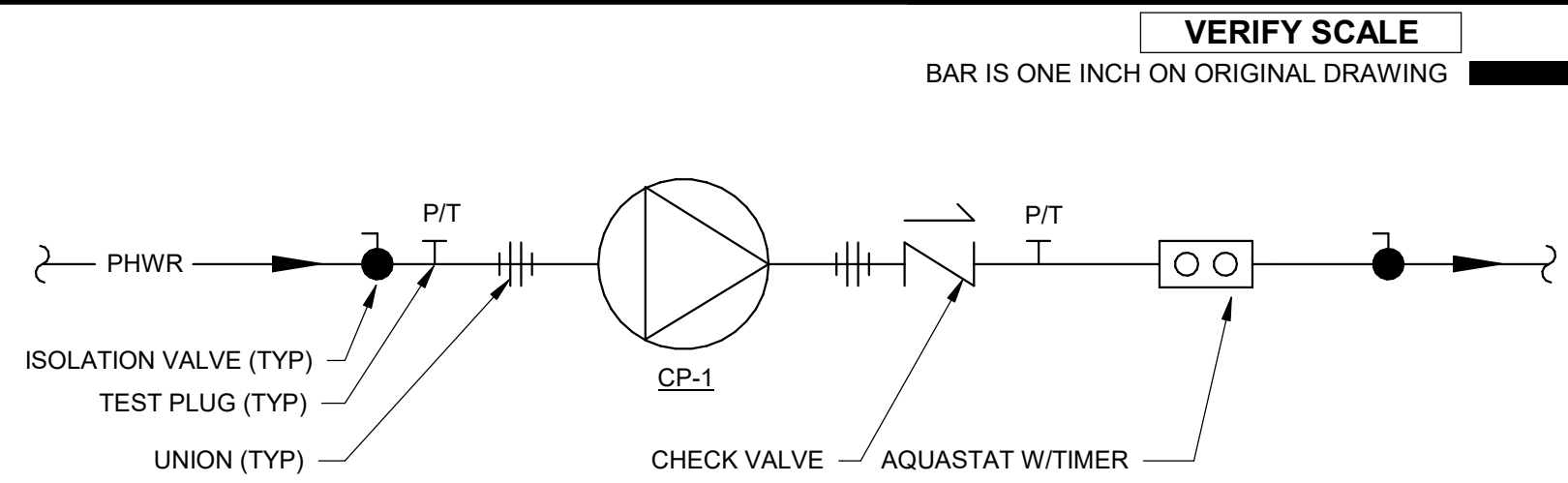
P016 FLUSH MOUNTED WALL HYDRANT
NOT TO SCALE



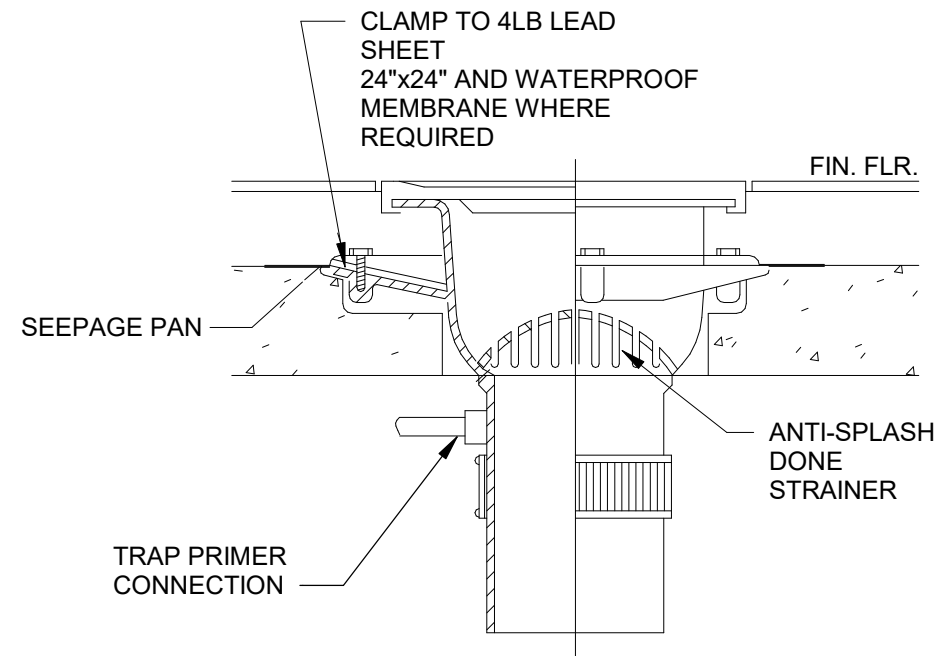
P017 MOP SINK
NOT TO SCALE



P014 VENT THROUGH ROOF FLASHING DETAIL
NOT TO SCALE



P015 DOMESTIC HOT WATER CIRC. IN-LINE PUMP PIPING DETAIL
NOT TO SCALE



P018 FLOOR SINK
NOT TO SCALE

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ALLEN
& LUCE inc
ENGINEERS

PROJECT

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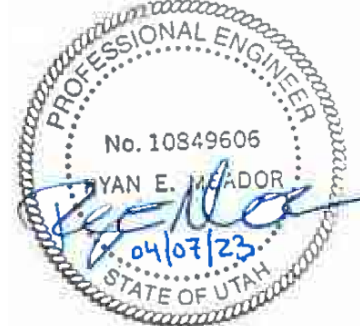
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

PLUMBING
TYPICAL DETAILS
SHEET 3

DRAWING NUMBER

99-P703

ANSI D 22" x 34"

Approved: Approver

Checked: Checker

Designer: Designer

Drafter: Author

Project Manager:

Last Plotted: 4/5/2023 9:32:47 AM
Filename: BM 9807/CI-AMER (USA) 6067/0884-Provo River WTP/6067/0884_10-M0101.rvt

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

DRAWING INDEX	
HVAC TYPICAL DETAILS INDEX	
99-M701	
M001	IDENTIFICATION TAG DETAIL
M002	REFRIGERANT SUPPORT DETAIL
M003	UNIT HEATER MOUNTING DETAIL
M004	SUSPENDED REFRIGERANT PIPE SUPPORT DETAIL
M005	REFRIGERANT PIPE PENETRATION AT WALL
M006	INLET LOUVER WITH DAMPER AND FILTER DETAIL
M007	EXHAUST FAN DETAIL
M008	REFRIGERANT PIPE VERTICAL SUPPORT DETAIL
M009	SPLIT SYSTEM HEAT PUMP UNIT DETAIL
99-M702	
M010	REFRIGERANT PIPING SCHEMATIC
M011	GRAVITY RELIEF HOOD DETAIL
M012	SHEET METAL DUCT CONSTRUCTION DETAIL
M013	CHEMICAL FEEDER DETAIL
M014	CHILLED WATER COIL PIPING DETAIL
M015	FIRE DAMPER DETAIL
M016	HORIZONTAL HOT WATER UNIT HEATER DETAIL
M017	EXPANSION TANK DETAIL
99-M703	
M018	HOT WATER REHEAT COIL PIPING DETAIL
M019	LOUVER HOUSING DETAIL
M020	COILING COIL TRAP DETAIL
M021	FIRE DAMPER AT FLOOR DETAIL
M022	CHILLED WATER COIL PIPING DETAIL (3-WAY)
M023	DUPLEX BASE MOUNTED PUMP DETAIL
M024	DRIP PAN ELBOW DETAIL
M025	HEAT TRACE VALVE WRAP
99-M704	
M026	BOILER FLUE DETAIL
M027	NO-LOSS STACK DETAIL
M028	DUCT THRU ROOF PENETRATION DETAIL



PROJECT

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

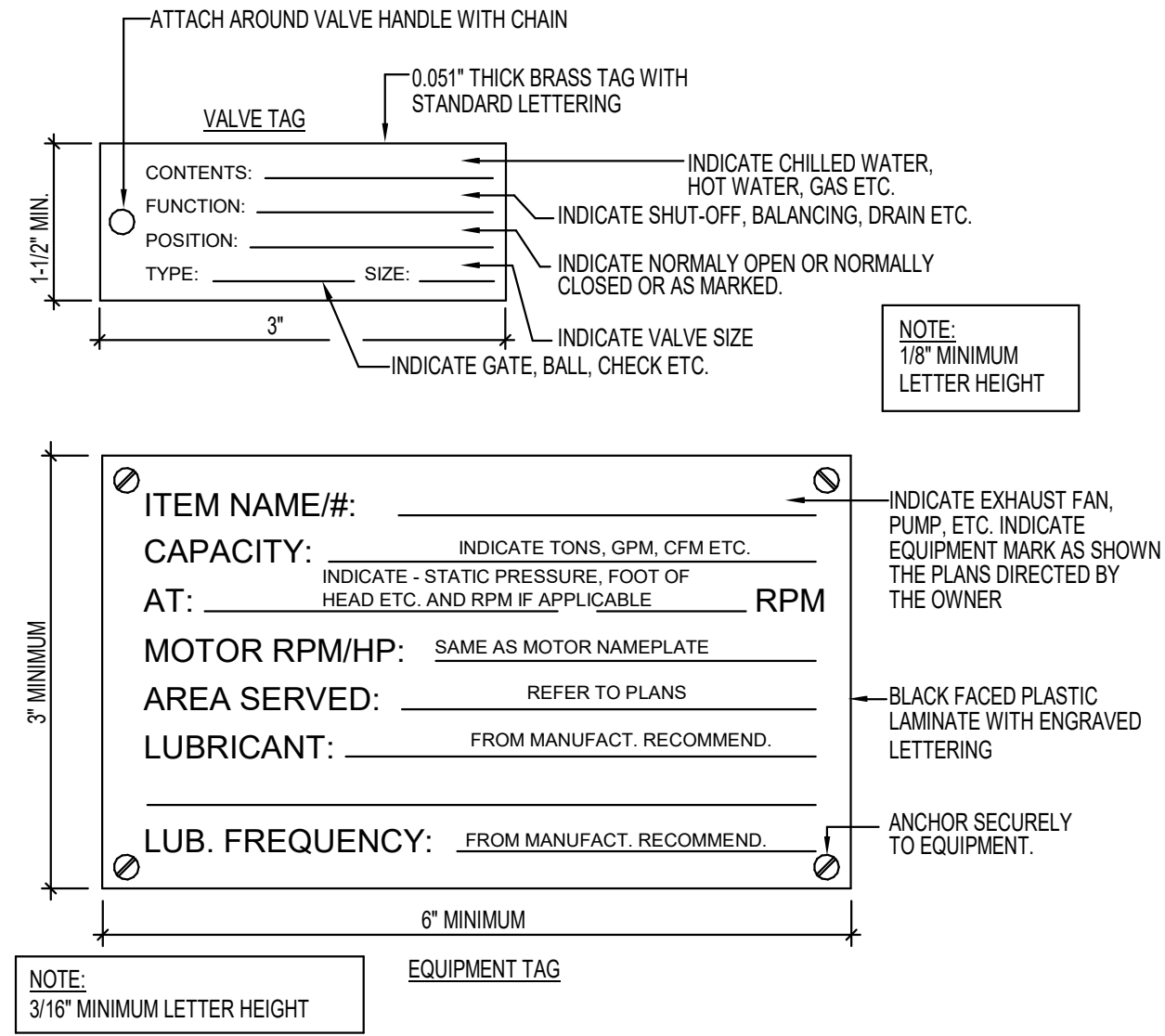
HVAC
TYPICAL DETAIL INDEX

DRAWING NUMBER

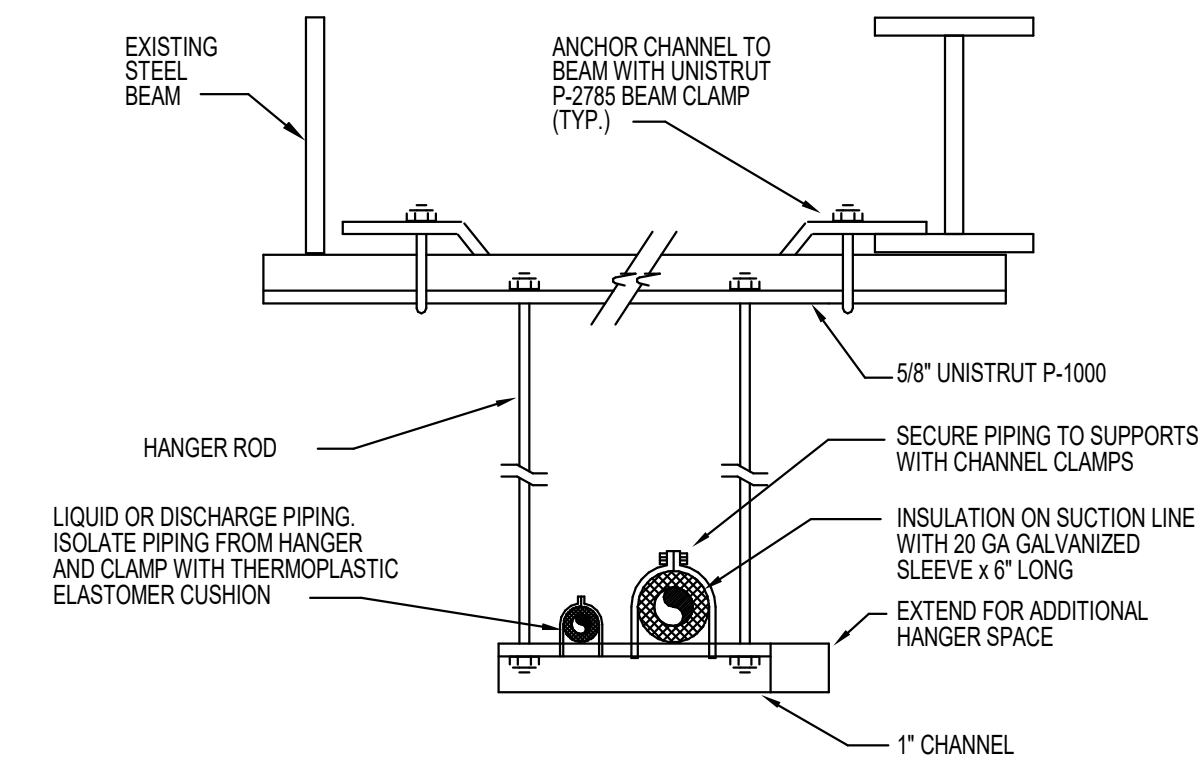
99-M700

ANSI D 22" x 34" Approved: Approver Checked: JBLAHA Designer: D.URBANSKI Drafter: T.COMPTON Project Manager: J.KRINKS

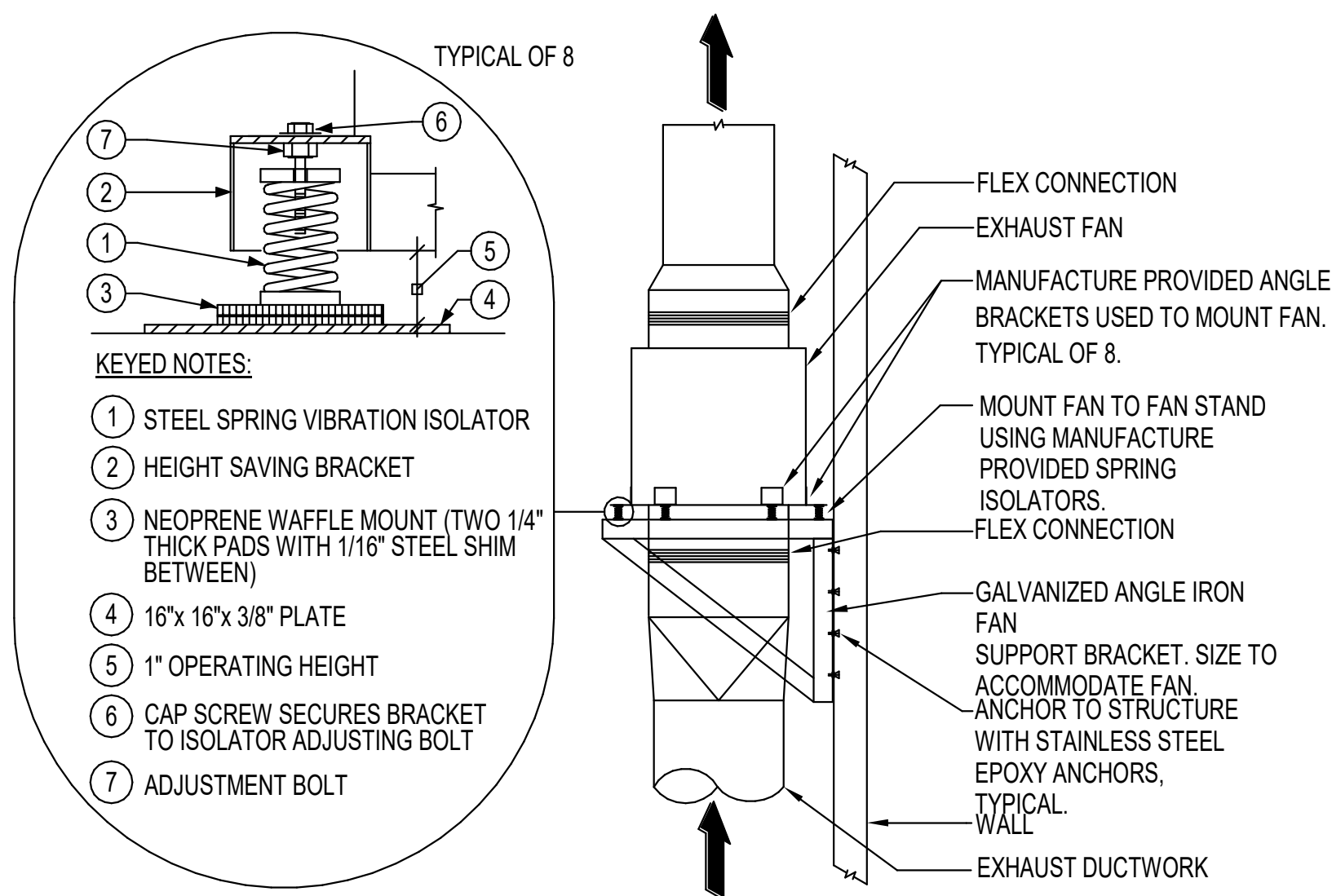
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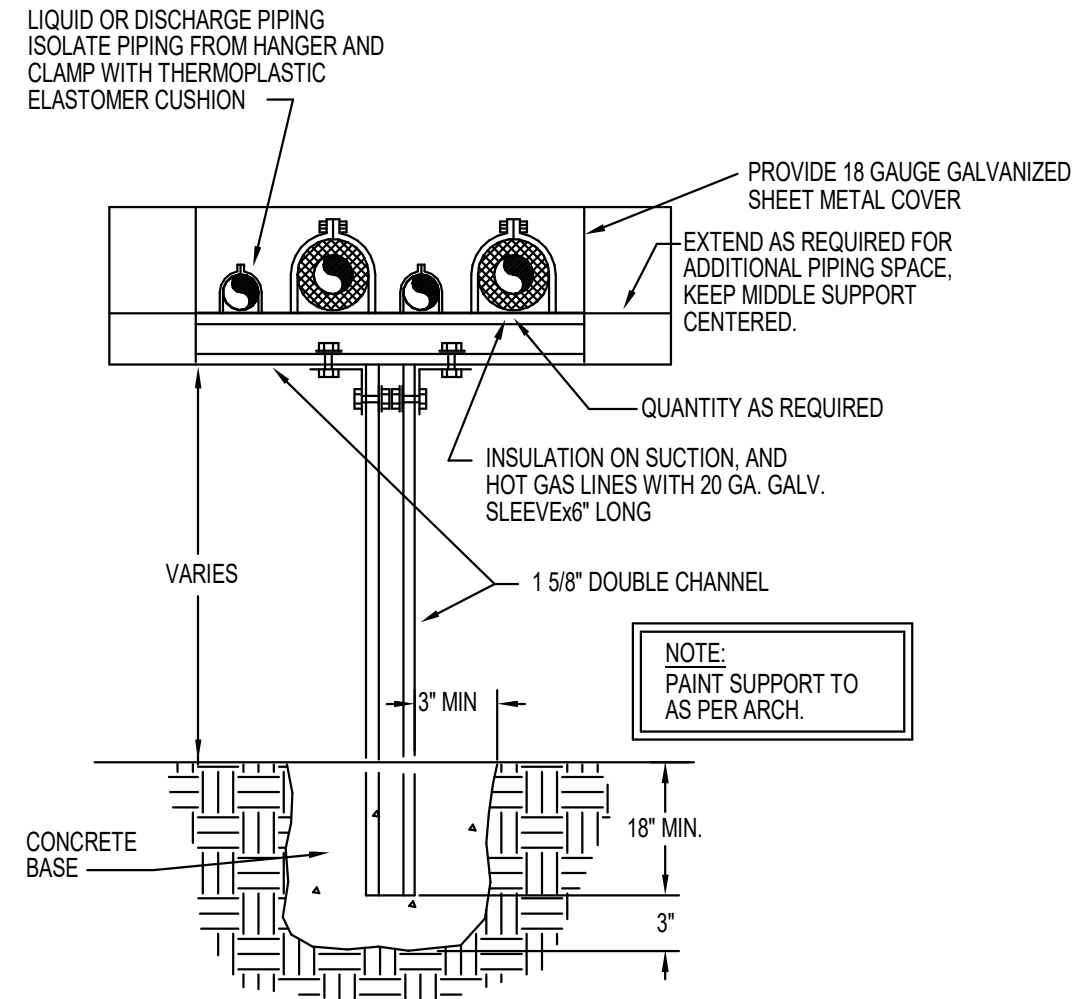
M001 IDENTIFICATION TAG DETAIL
NOT TO SCALE



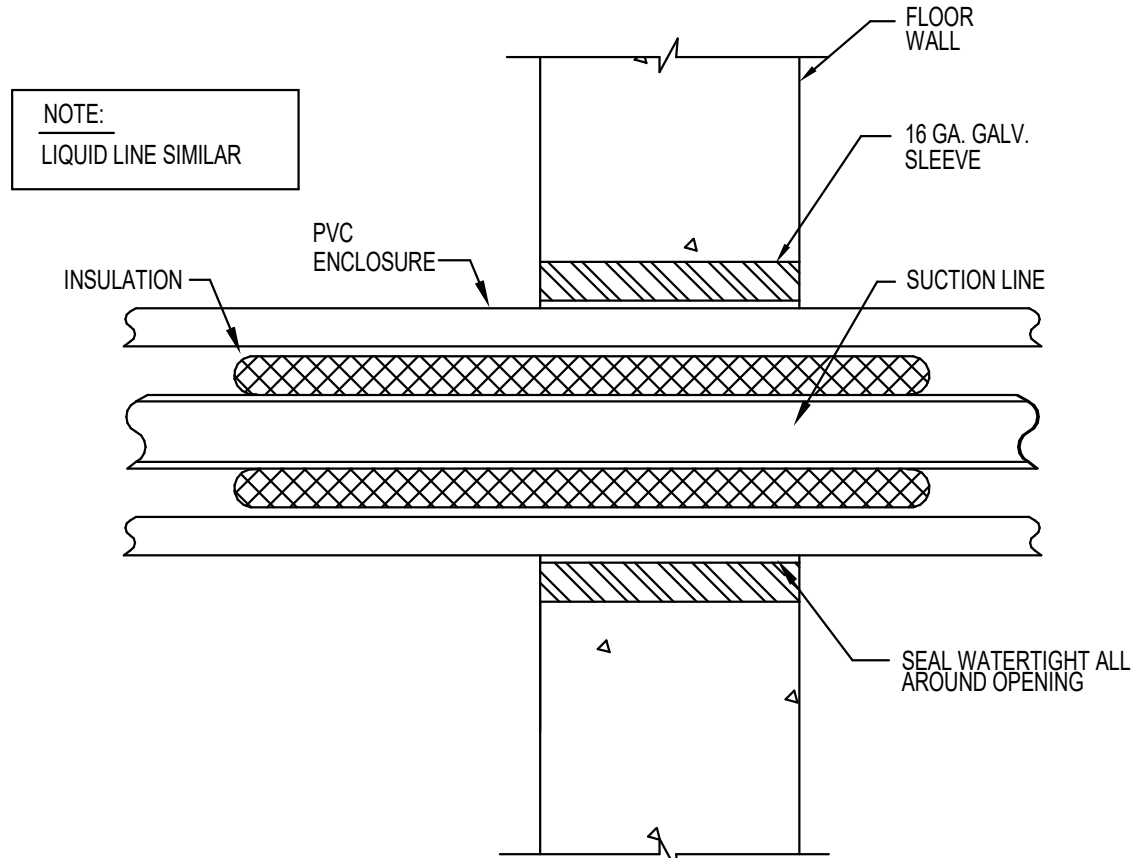
M004 SUSPENDED REFRIGERANT PIPE SUPPORT DETAIL
NOT TO SCALE



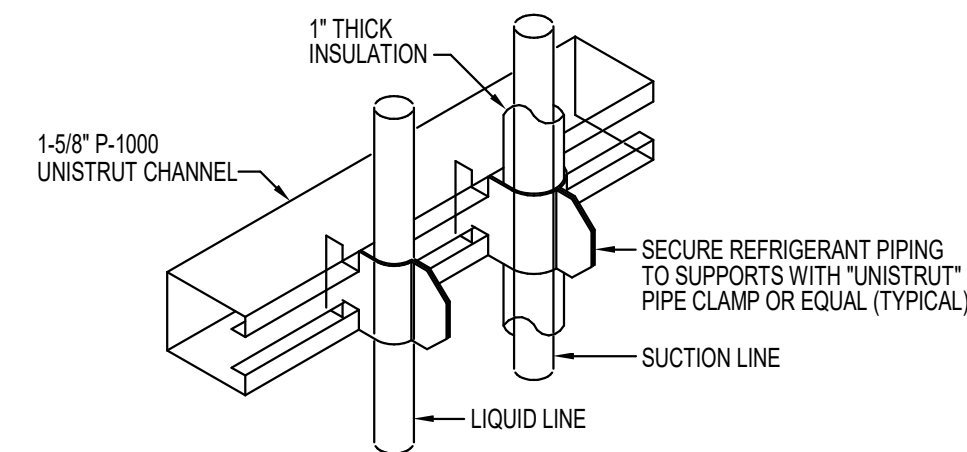
M007 EXHAUST FAN DETAIL
NOT TO SCALE



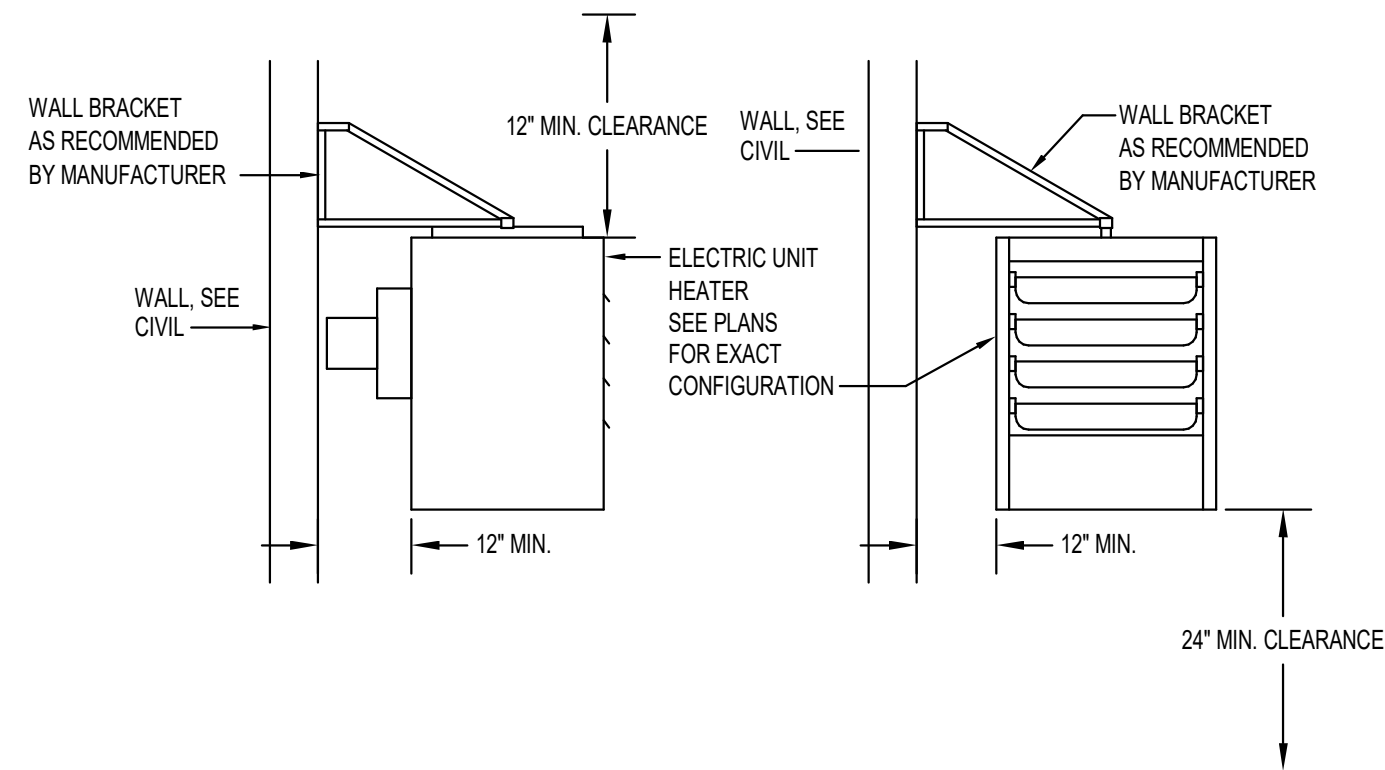
M002 REFRIGERANT SUPPPORT DETAIL
NOT TO SCALE



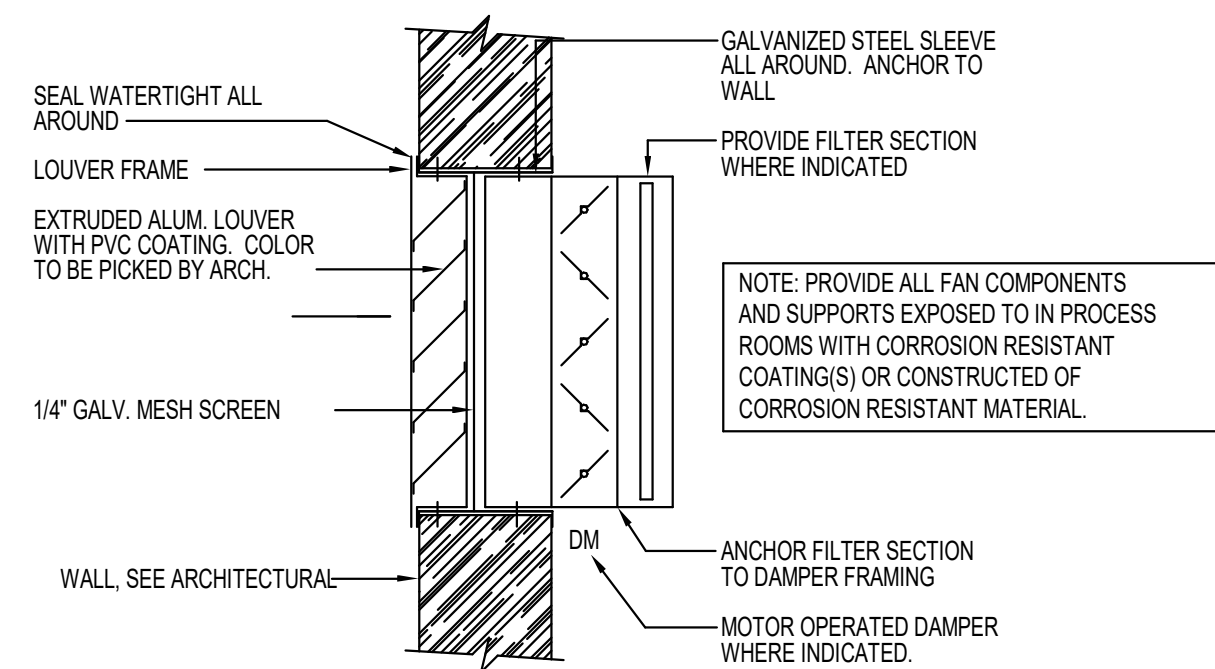
M005 REFRIGERANT PIPE PENETRATION AT WALL
NOT TO SCALE



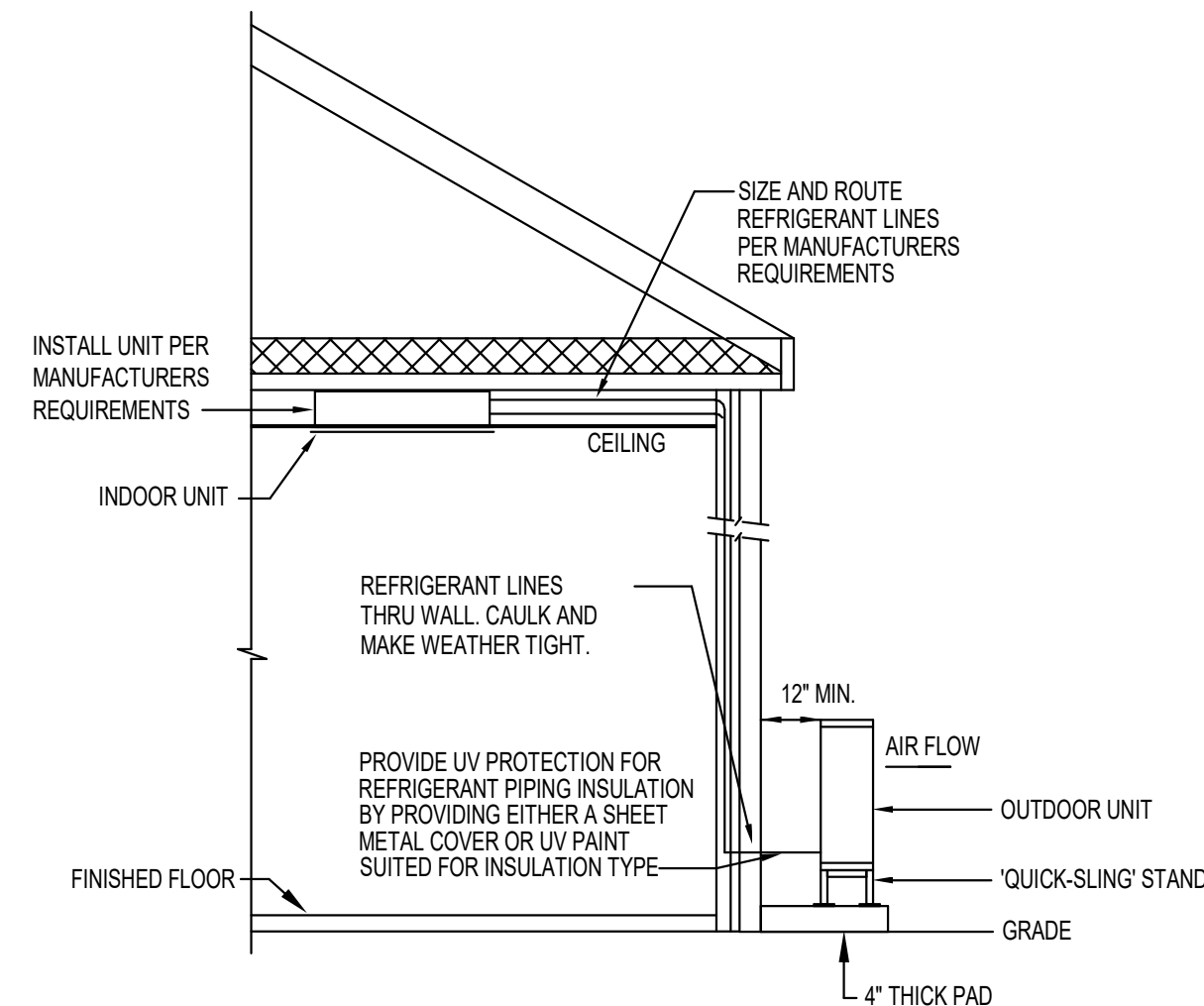
M008 REFRIGERANT PIPE VERTICAL SUPPORT DETAIL
NOT TO SCALE



M003 UNIT HEATER MOUNTING DETAIL
NOT TO SCALE



M006 INLET LOUVER WITH DAMPER AND FILTER DETAIL
NOT TO SCALE



M009 SPLIT SYSTEM HEAT PUMP UNIT DETAIL
NOT TO SCALE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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HANSEN
ALLEN
& LUCE inc
ENGINEERS

PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

PROVO CITY
PUBLIC WORKS

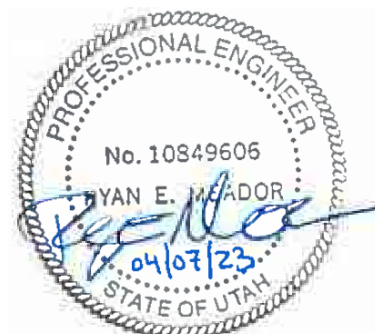
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B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

HVAC
TYPICAL DETAILS
SHEET 1

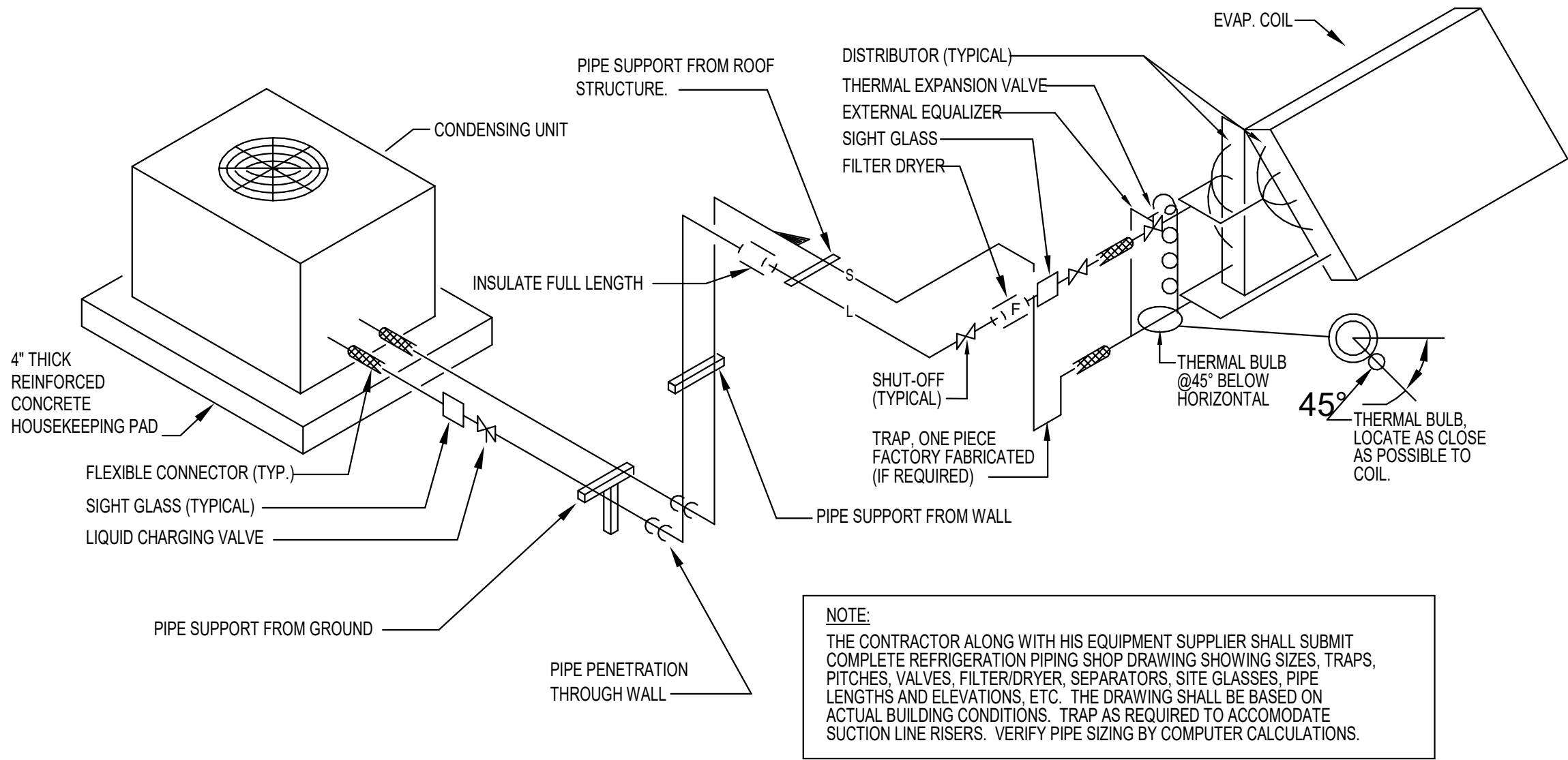
DRAWING NUMBER

99-M701

ANSI D 22" x 34" Approved: Approver Checked: JBLAHA Designer: D.URBANISKI Drafter: T.COMPTON Project Manager: J.KRINKS

Last Plotted: 4/5/2023 9:35:40 AM
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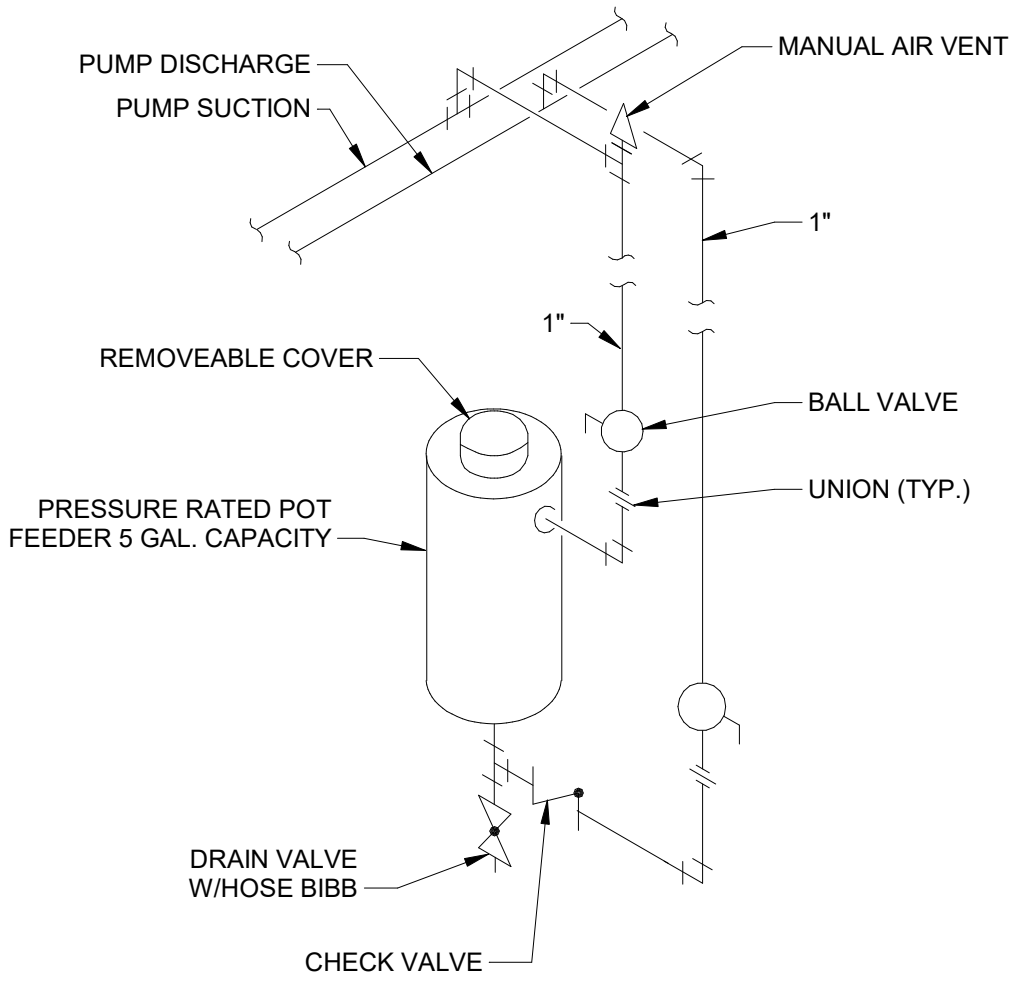
REFRIGERANT PIPING LEGEND	
SYMBOL	DESCRIPTION
	REFRIGERANT SHUT-OFF VALVE
	EXPANSION VALVE
	MOISTURE INDICATING SIGHT GLASS
	FLEXIBLE CONNECTION
	DIRECTION OF SLOPE DOWN
	SUCTION LINE
	LIQUID LINE



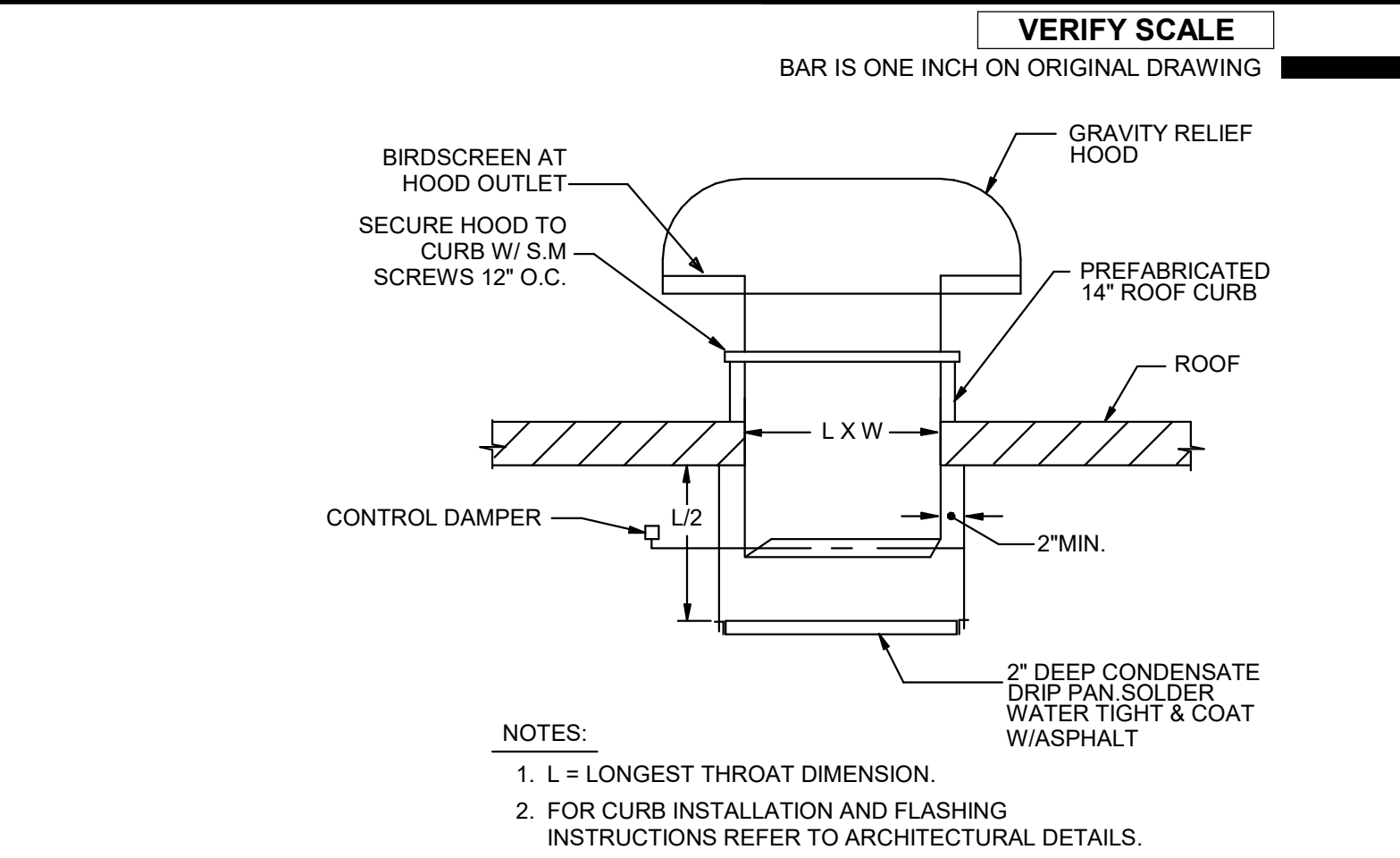
M010
REFRIGERANT PIPING SCHEMATIC
NOT TO SCALE

DIMENSION OF LONGEST SIDE (INCHES)	SHEET METAL GAGE (ALL FOUR SIDES)	MINIMUM REINFORCING ANGLE SIZE & MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS &/OR INTERMEDIATE REINFORCING	TRANSVERSE REINFORCING *									
			AT JOINTS									
			MIN H, IN.	DRIVE SLIP	PLAIN S SLIP	HEMMED S SLIP	ALT. BAR SLIP	REIN. FORCED BAR SLIP	ANGLE SLIP	STD. SEAM	POCKET LOCK	
UP THRU 12	24	NONE REQ.	1	26	26	24	24	24	24	NOT REQ.	NOT REQ.	24
13-18	24	NONE REQ.	1	24	24	24	24	24	24	NOT REQ.	NOT REQ.	24
19-30	24	1x1x1/8" @60in.	1	-	24	24	24	24	24	NOT REQ.	NOT REQ.	24
31-42	22	1x1x1/8" @60in.	1	-	-	22	22	22	22	NOT REQ.	NOT REQ.	22
43-54	22	1-1/2"x1-1/2"x1/8" @60in.	1-1/2	-	-	22	22	22	22	1-1/2"x1-1/2"x1/8"	NOT REQ.	22
55-60	20	1-1/2"x1-1/2"x1/8" @60in.	1-1/2	-	-	-	22	22	22	1-1/2"x1-1/2"x1/8"	NOT REQ.	22
61-84	20	1-1/2"x1-1/2"x1/8" @60in.	1-1/2	-	-	-	22	22	22	1-1/2"x1-1/2"x1/8"	1-1/2"x1-1/2"x1/8"	22

* TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

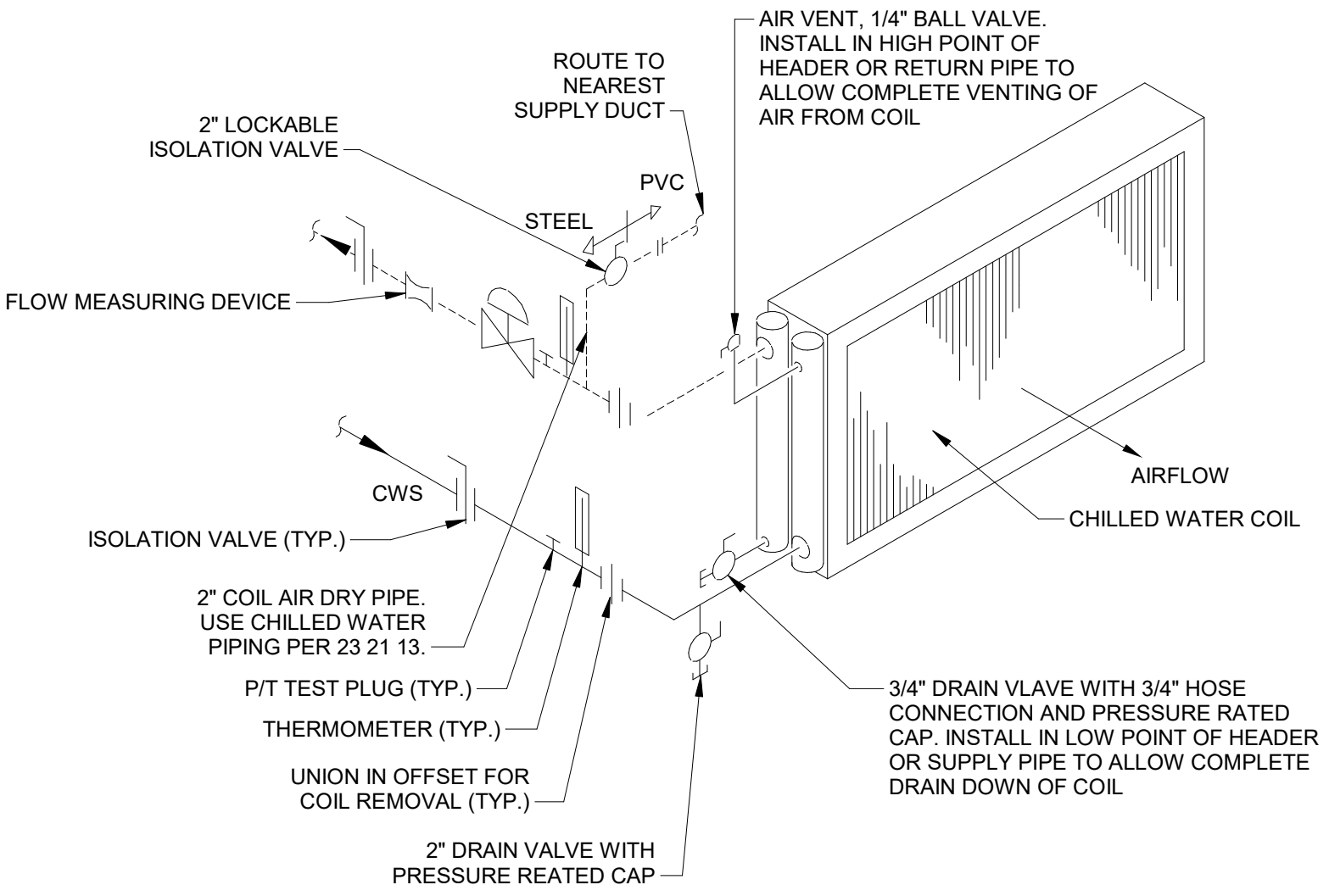


M013
CHEMICAL FEEDER DETAIL
NOT TO SCALE

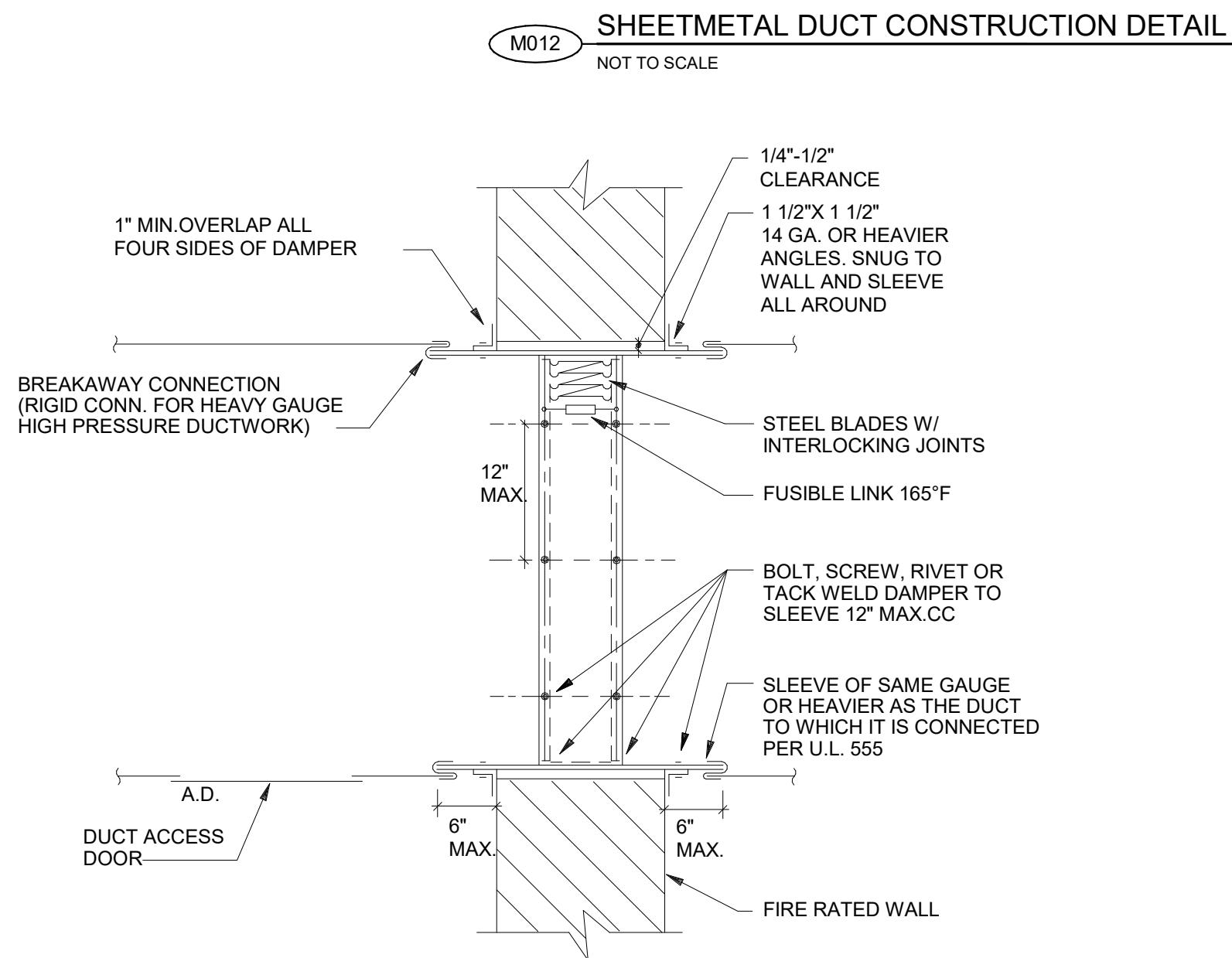


NOTES:
1. L = LONGEST THROAT DIMENSION.
2. FOR CURB INSTALLATION AND FLASHING INSTRUCTIONS REFER TO ARCHITECTURAL DETAILS.

M011
GRAVITY RELIEF HOOD DETAIL
NOT TO SCALE

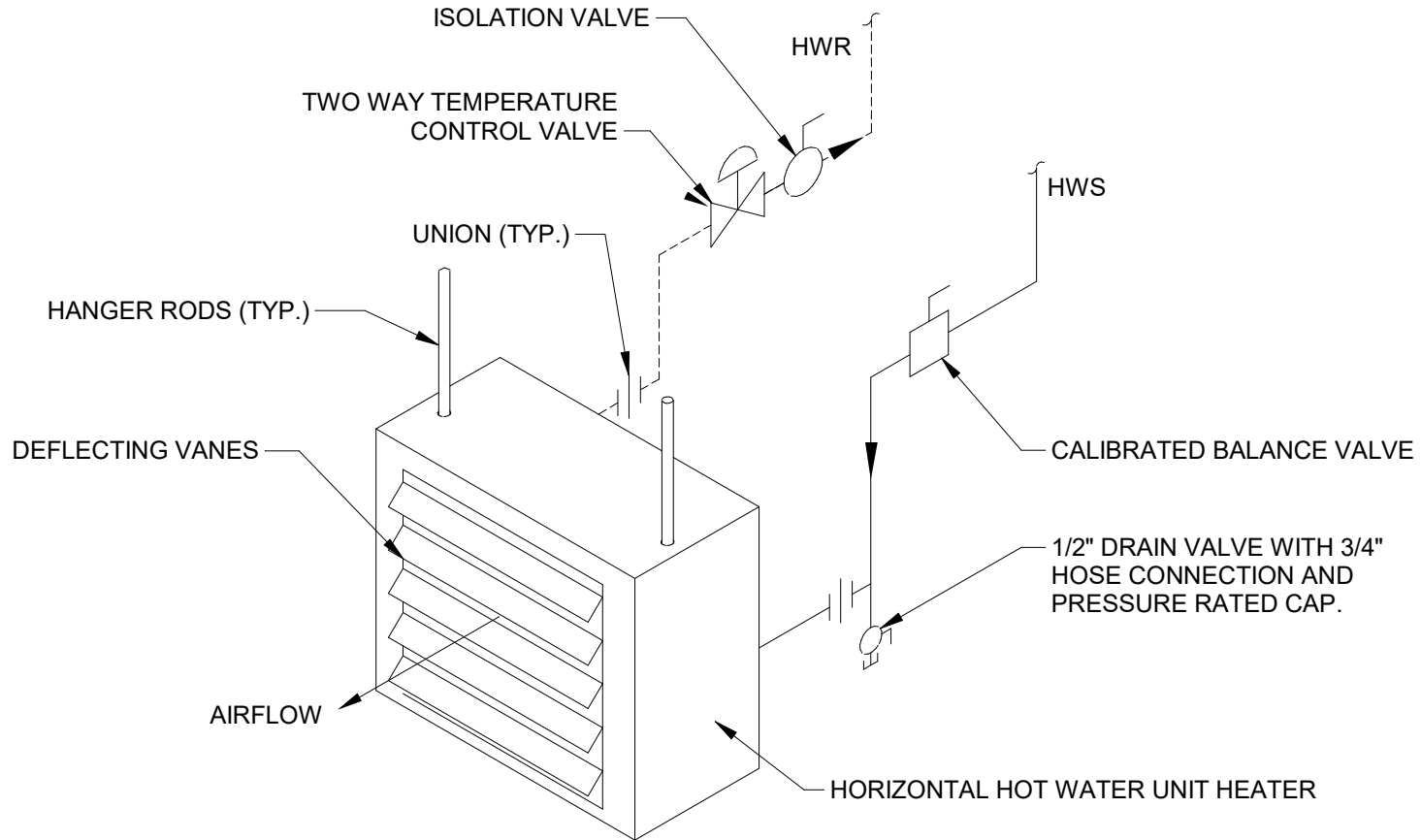


M014
CHILLED WATER COIL PIPING DETAIL
NOT TO SCALE

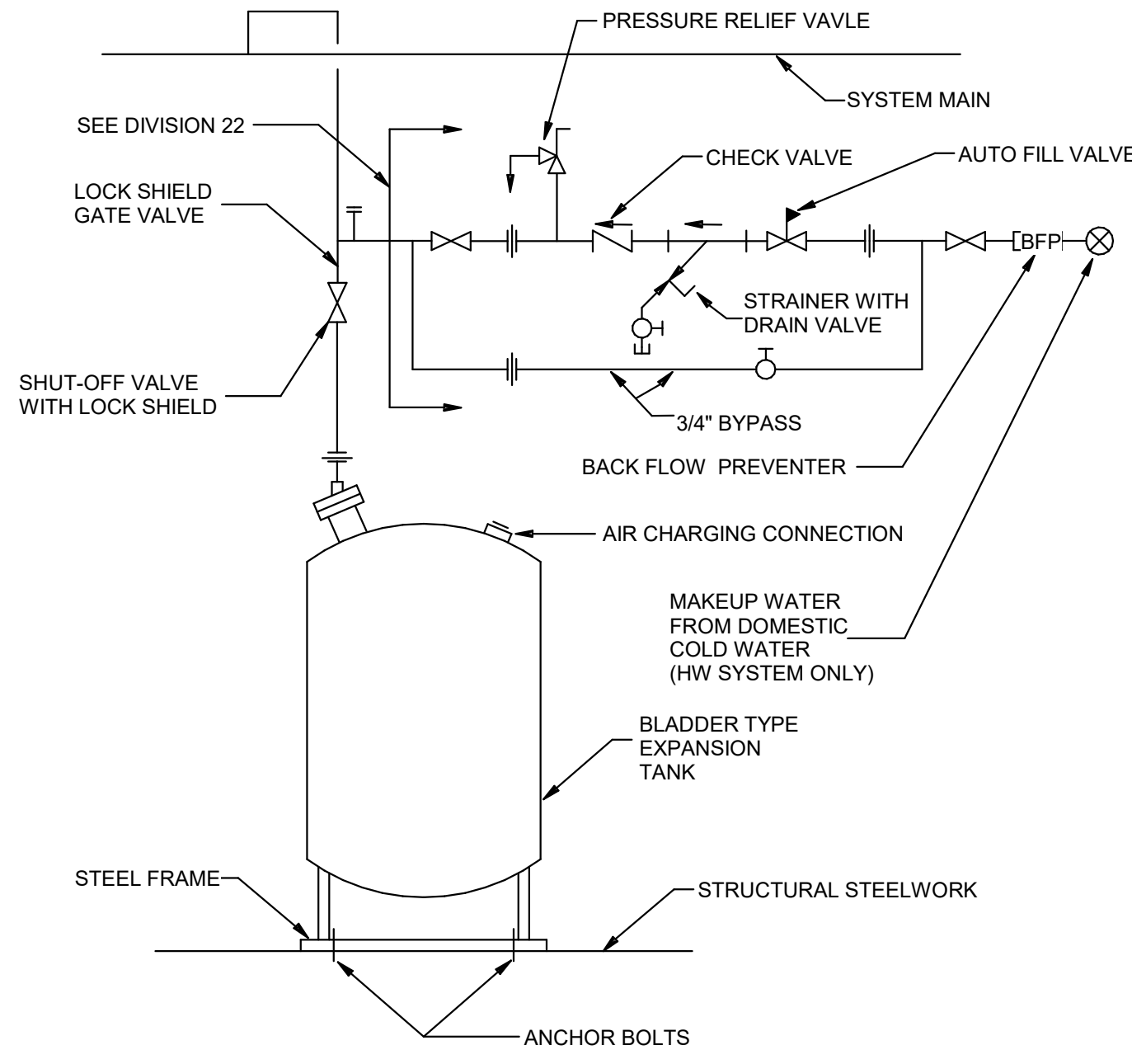


DETAIL APPLICABLE WHERE SYMBOLIZED AS
DETAIL APPLICABLE WHERE SYMBOLIZED AS
ON DRAWINGS (VERTICAL) AS SHOWN
ON DRAWINGS (HORIZONTAL) AS SHOWN
F1 = 1-1/2 HOUR, F3 = 3 HOUR

M015
COMBINATION SMOKE AND FIRE DAMPER DETAIL
NOT TO SCALE



M016
HORIZONTAL HOT WATER UNIT HEATER DETAIL
NOT TO SCALE



M017
EXPANSION TANK DETAIL
NOT TO SCALE

AECOM HANSEN ALLEN & LUCE, Inc ENGINEERS

PROJECT

PROVO RIVER WATER TREATMENT PLANT

CLIENT

PROVO CITY PUBLIC WORKS

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Provo, UT 84606
Tel: (801) 852-6700



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B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

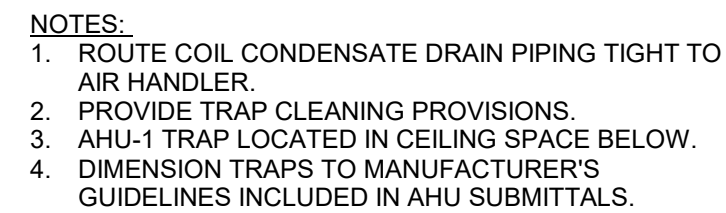
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

HVAC TYPICAL DETAILS SHEET 2

DRAWING NUMBER

99-M702



M020 COILING COIL TRAP DETAIL
NOT TO SCALE



PROJECT

PROVO RIVER WATER TREATMENT PLANT

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<http://www.aecom.com>
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REGISTRATION



ISSUE/REVISION

D	2023-04-07	ISSUED FOR BID
C	2023-01-20	ISSUED FOR 90%
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A	2022-07-01	ISSUED FOR 30%
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

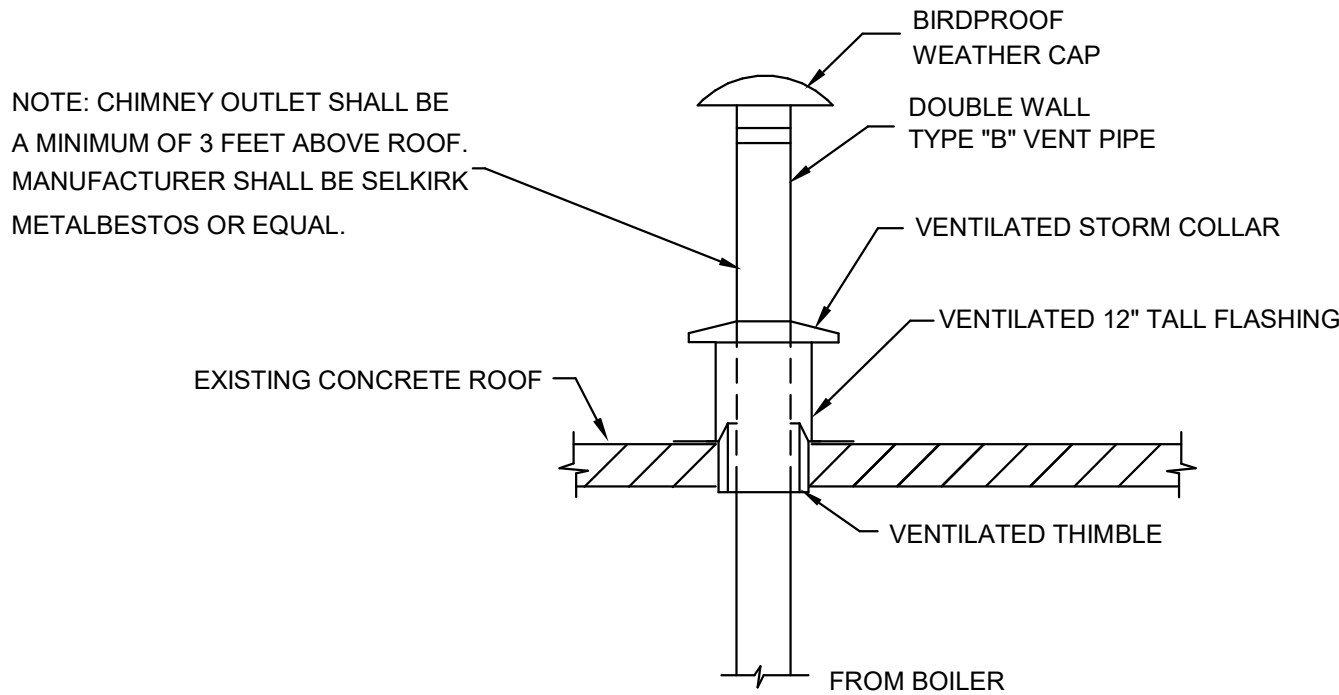
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HVAC TYPICAL DETAILS SHEET 3

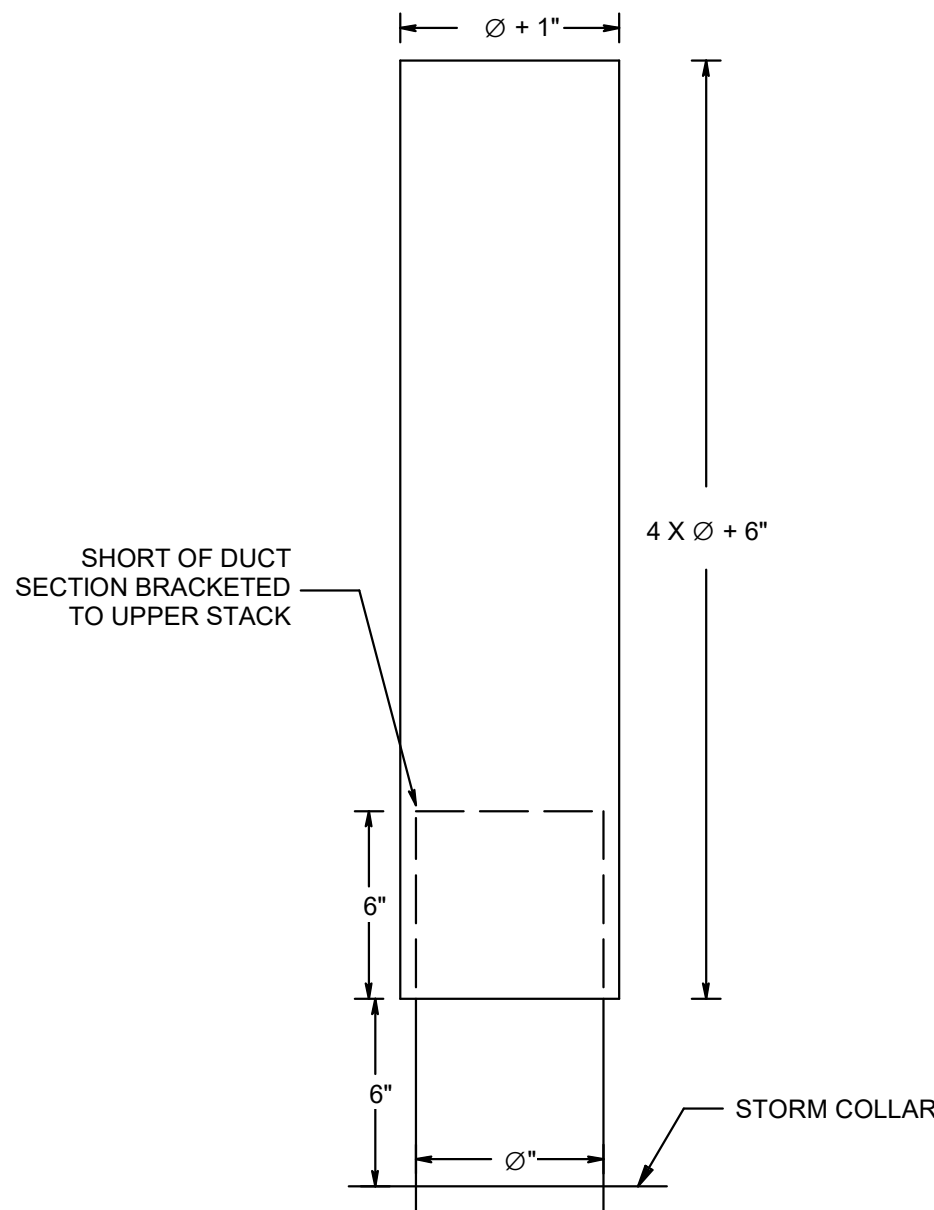
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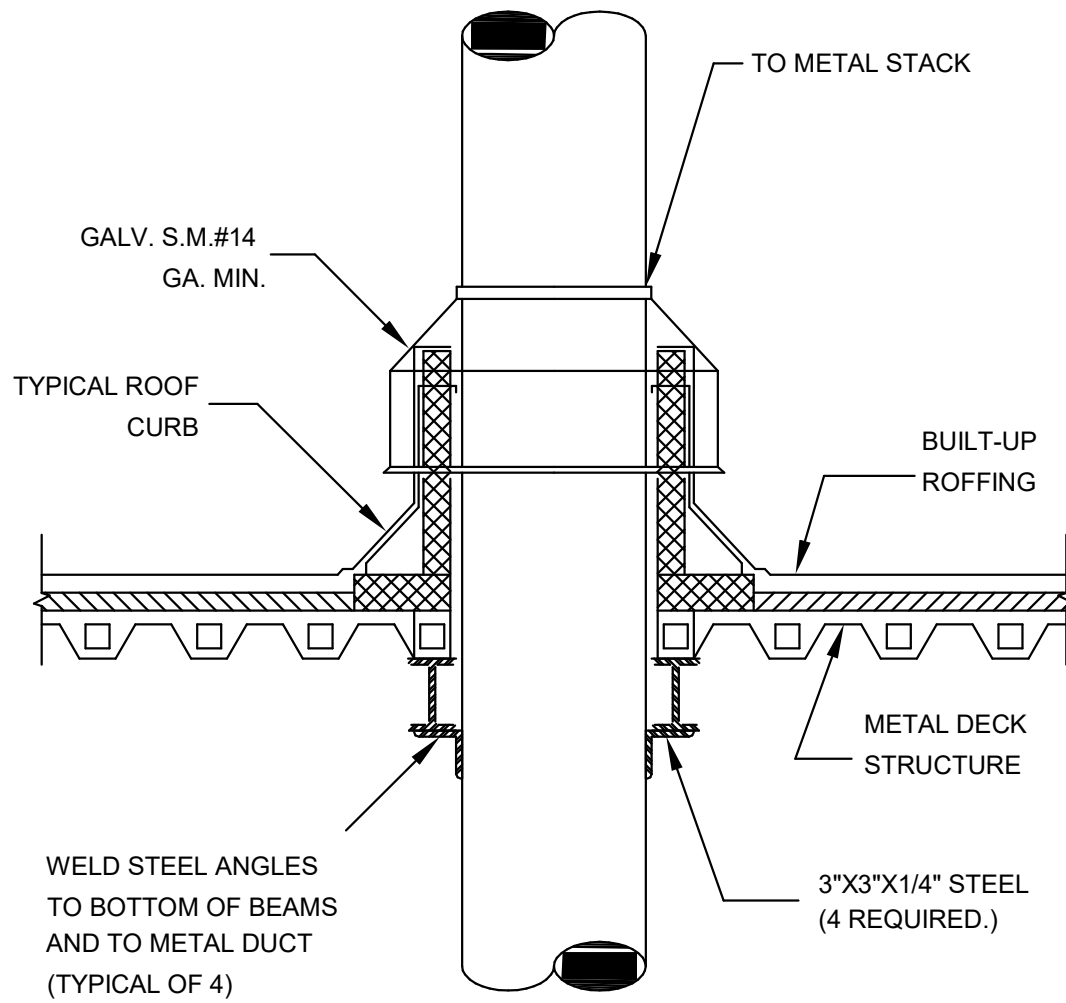
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NOT TO SCALE



M027 NO-LOSS STACK DETAIL
NOT TO SCALE



M028 DUCT THROUGH ROOF PENETRATION DETAIL
NOT TO SCALE

AECOM HANSEN ALLEN & LUCE inc ENGINEERS

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SHEET TITLE

HVAC
TYPICAL DETAILS
SHEET 4

DRAWING NUMBER

99-M704

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

DRAWING INDEX

TYPICAL DETAILS INDEX

99-1701

I001	CONCRETE VESSEL - RADAR LEVEL TRANSMITTER
I002	CONCRETE VESSEL - LEVEL SWITCH
I003	ELECTROMAGNETIC FLOW METER
I004	PRESSURE SWITCH OR GAUGE, PIPE MOUNTED
I005	MOUNTING - INSTRUMENT/EQUIPMENT, PEDESTAL

99-1702

I006	CHEMICAL STORAGE VESSEL - RADAR LEVEL TRANSMITTER
I007	CHEMICAL STORAGE VESSEL - LEVEL SWITCH
I008	HIGH SERVICE PUMP STATION - PRESSURE TRANSMITTER
I009	HIGH SERVICE PUMP STATION - LOW PRESSURE SWITCH
I010	UF STRAINER DIFFERENTIAL PRESSURE SWITCH

99-1703

I011	GAS DETECTION SENSOR AND ANALYZER
I012	CLEARWELL DRAIN VAULT - PRESSURE MONITORING



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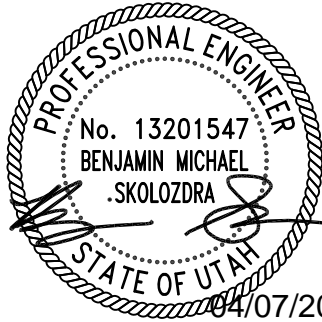


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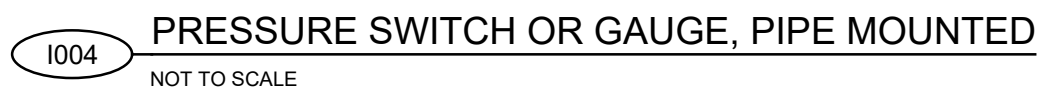
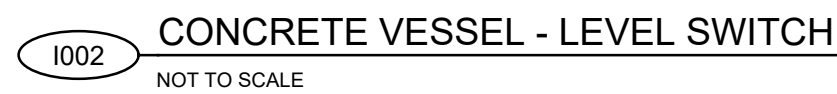
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

I&C INSTRUMENTATION
TYPICAL DETAILS
INDEX

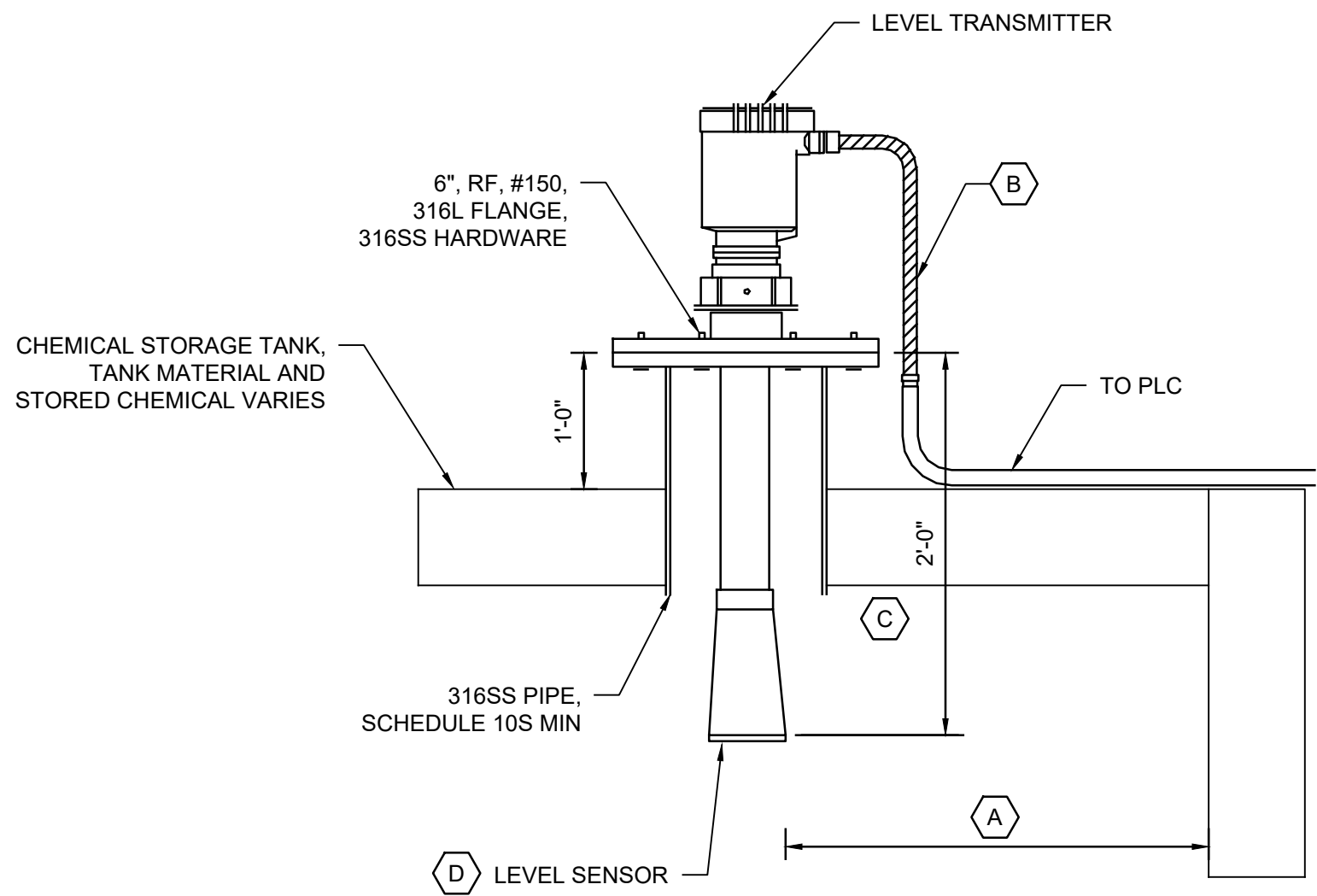
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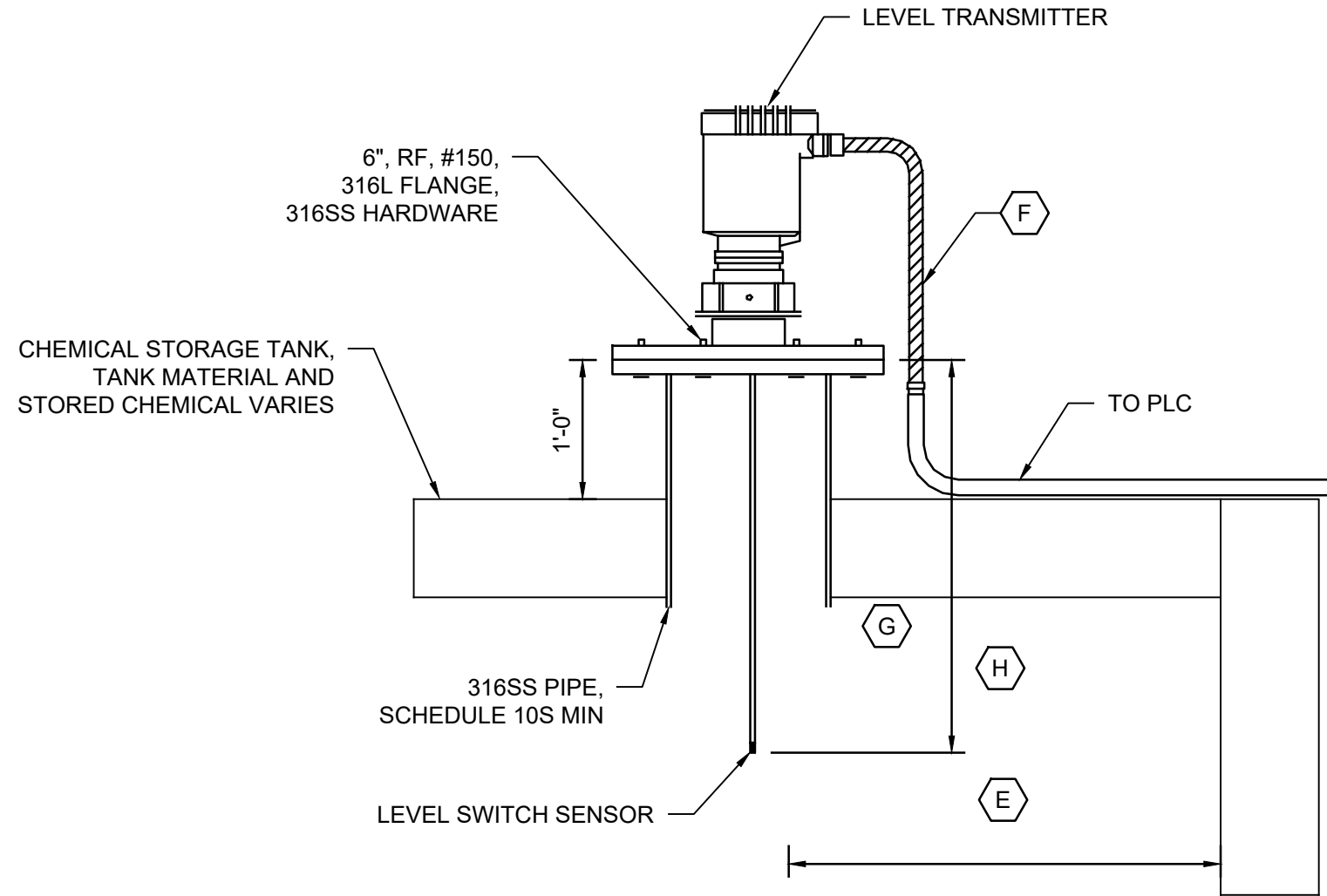


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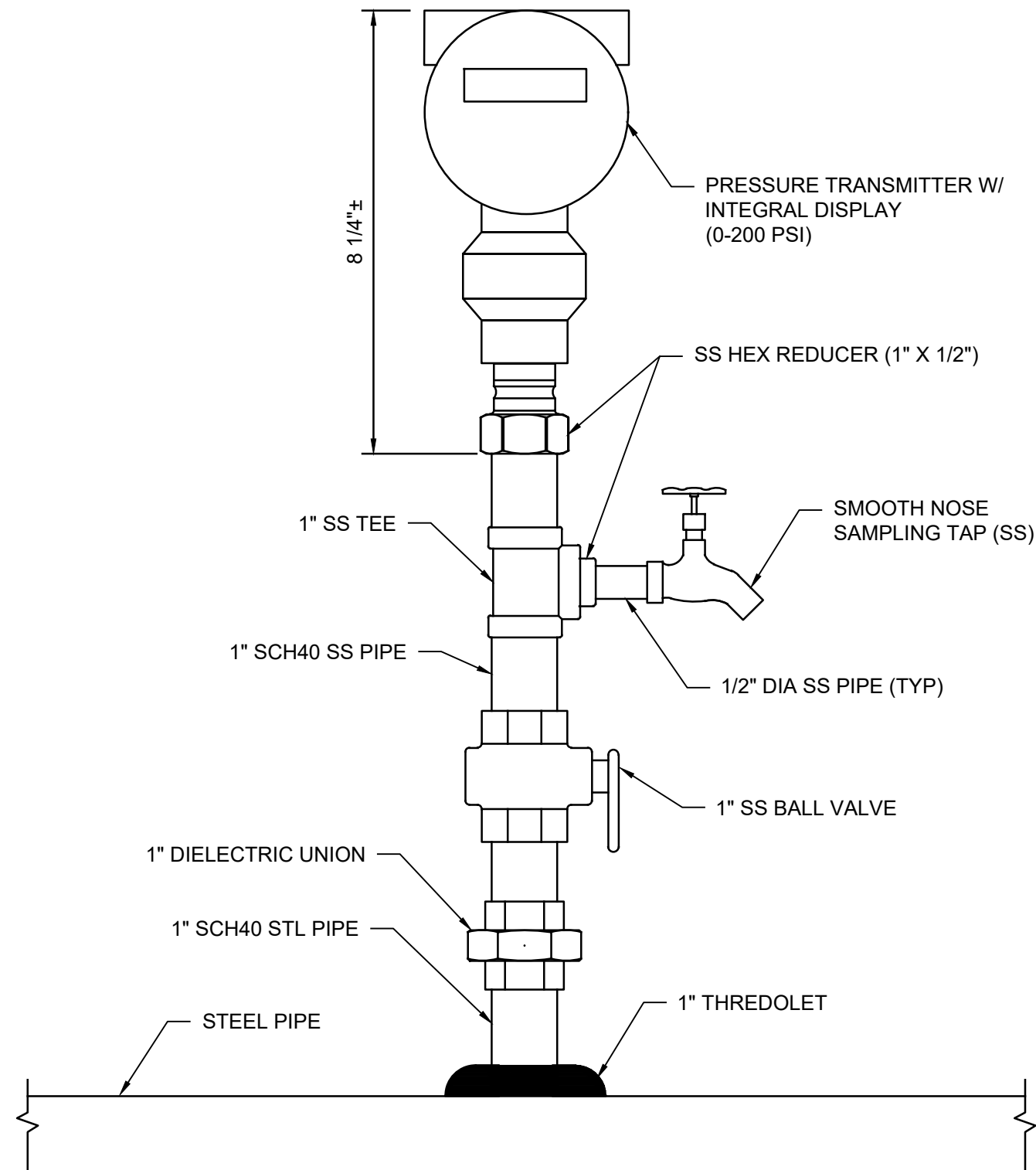
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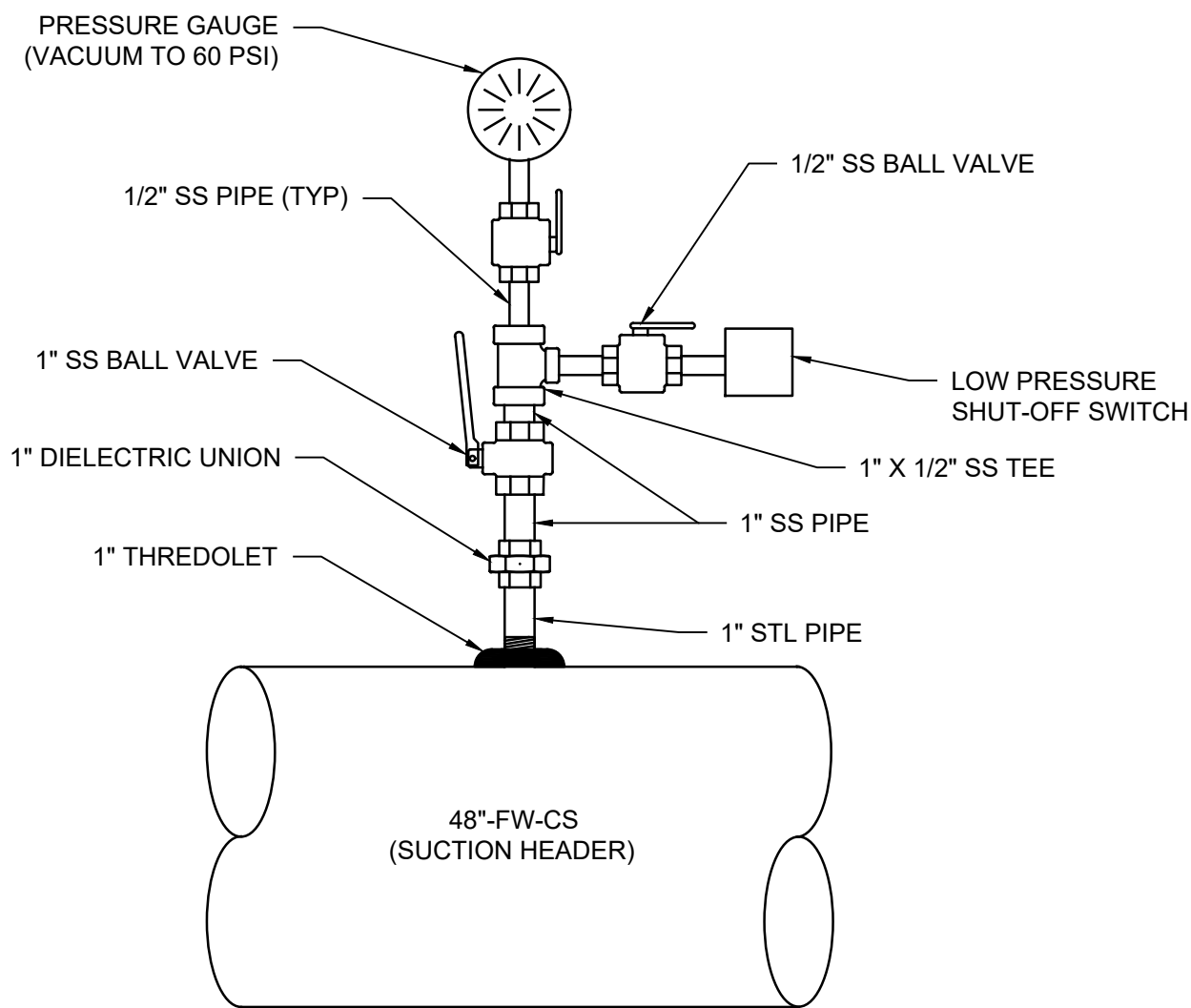
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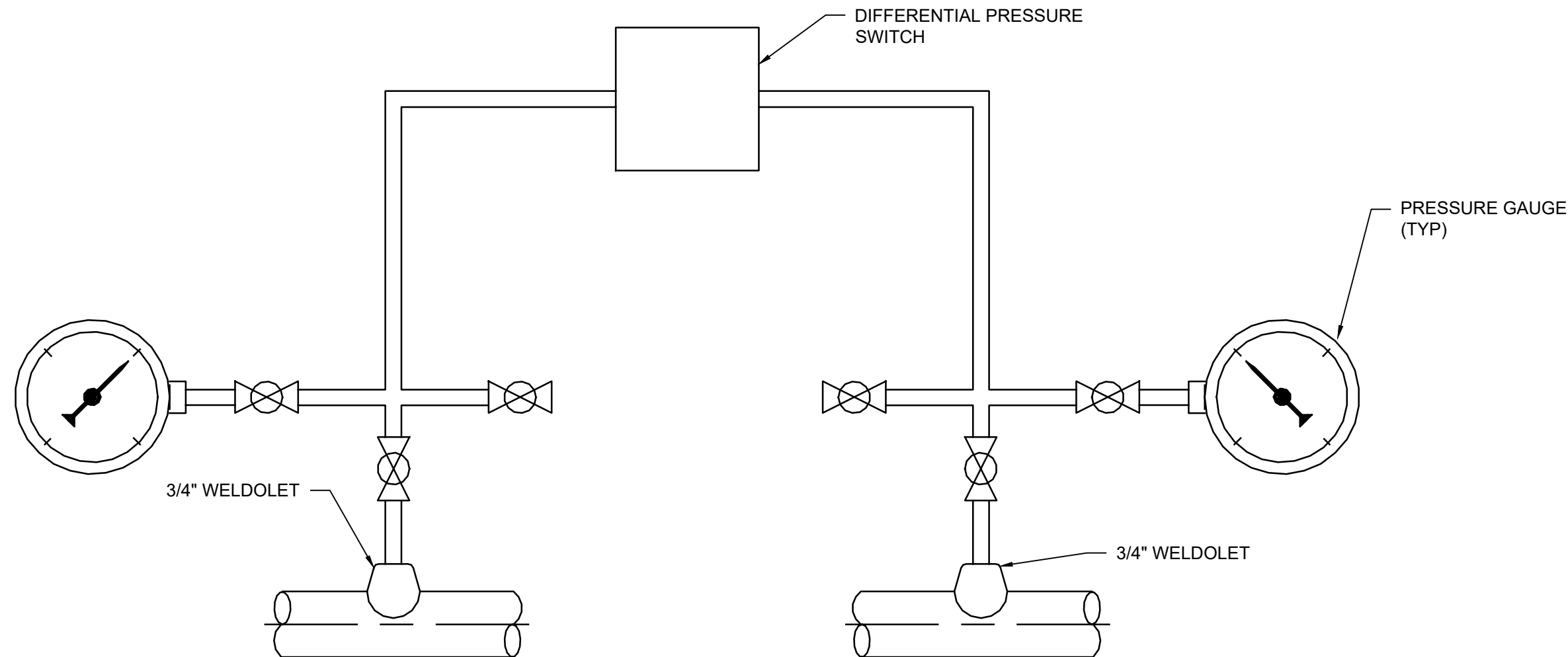
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NOT TO SCALE



1008 HIGH SERVICE PUMP STATION - PRESSURE TRANSMITTER
NOT TO SCALE



1009 HIGH SERVICE PUMP STATION - LOW PRESSURE SWITCH
NOT TO SCALE



1010 UF STRAINER DIFFERENTIAL PRESSURE SWITCH
NOT TO SCALE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

KEYNOTES

- A MAINTAIN MANUFACTURER'S REQUIRED MINIMUM CLEARANCE FROM WALLS AND OTHER VESSEL APPURTENANCES.
- B FURNISH SUFFICIENT LENGTH OF LIQUID TIGHT CONDUIT AND CABLE TO REMOVE THE INSTRUMENT FOR MAINTENANCE AND PROVIDE CONDUIT SEALS AS REQUIRED BY AREA CLASSIFICATION.
- C REFER TO PROCESS MECHANICAL DRAWINGS FOR VESSEL OPENING LOCATIONS AND ADDITIONAL SIZING DETAILS.
- D CENTER LEVEL SENSOR IN PIPE AND FLANGE.
- E MAINTAIN MANUFACTURER'S REQUIRED MINIMUM CLEARANCE FROM WALLS AND OTHER VESSEL APPURTENANCES.
- F FURNISH SUFFICIENT LENGTH OF LIQUID TIGHT CONDUIT AND CABLE TO REMOVE THE INSTRUMENT FOR MAINTENANCE AND PROVIDE CONDUIT SEALS AS REQUIRED BY AREA CLASSIFICATION.
- G REFER TO PROCESS MECHANICAL DRAWINGS FOR VESSEL OPENING LOCATIONS AND ADDITIONAL SIZING DETAILS.
- H LENGTH OF SENSOR TO BE DETERMINED BY VENDOR IN CONJUNCTION WITH VESSEL SIZE AND CHEMICAL BEING STORED.

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HANSEN
ALLEN
& LUCE Inc
ENGINEERS

PROJECT

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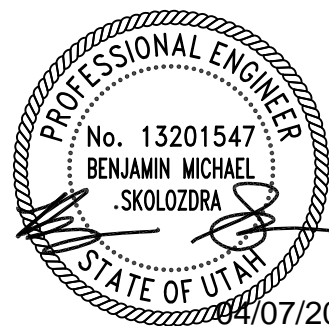
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AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

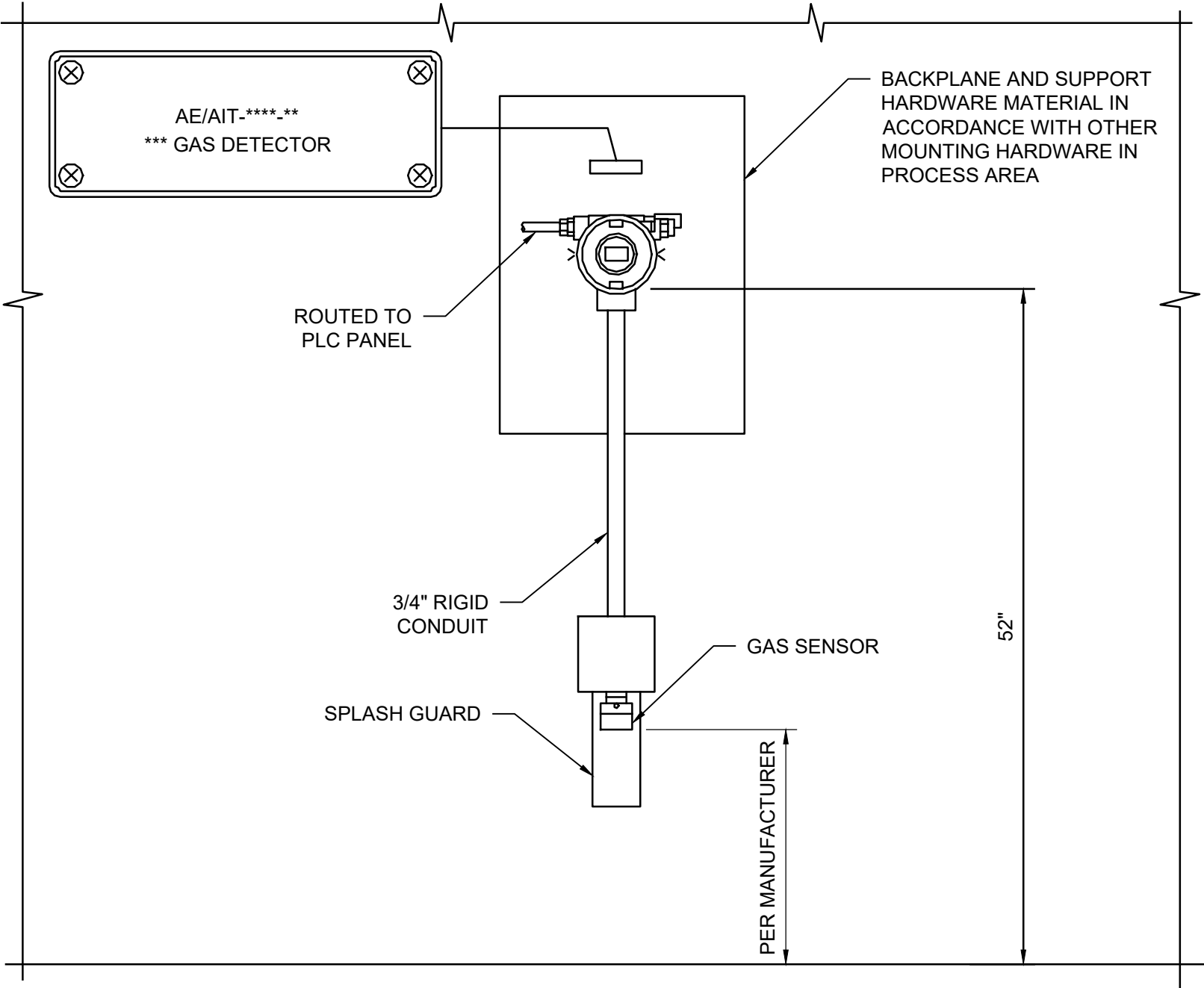
I&C INSTRUMENTATION
TYPICAL DETAILS
SHEET 2

DRAWING NUMBER

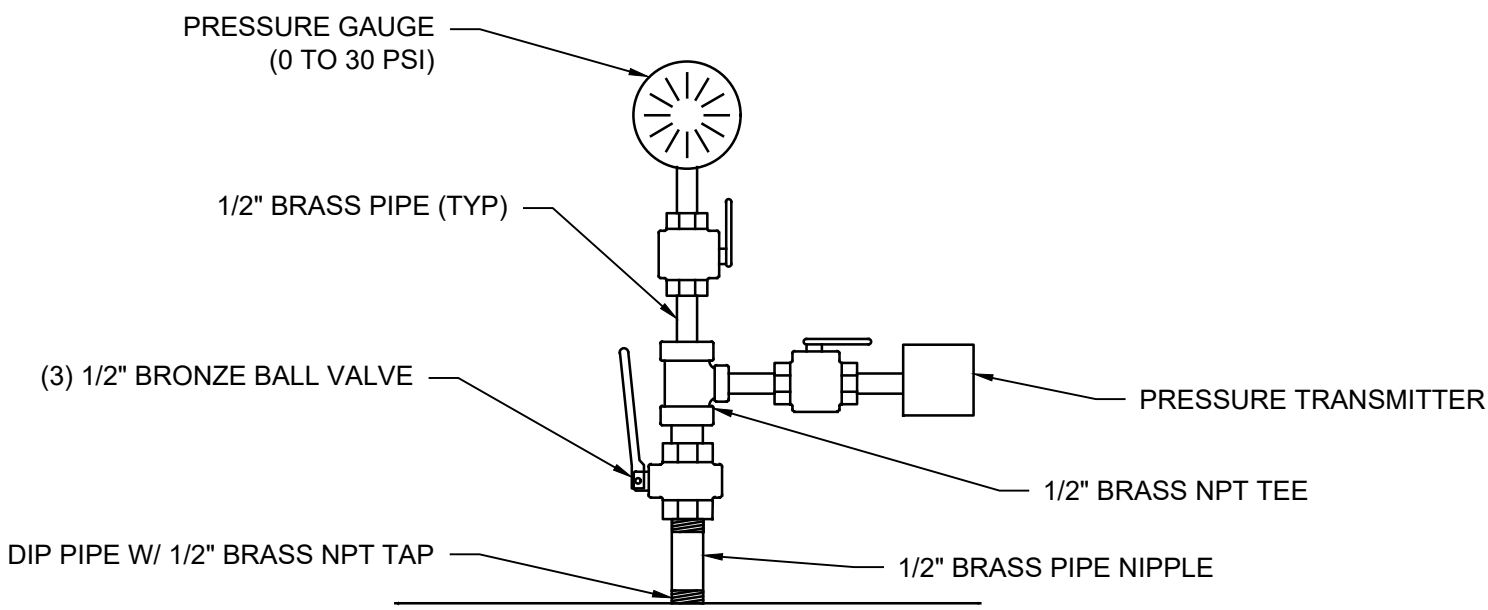
99-1702

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VERIFY SCALE
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I011 GAS DETECTION SENSOR AND ANALYZER
NOT TO SCALE



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NOT TO SCALE



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

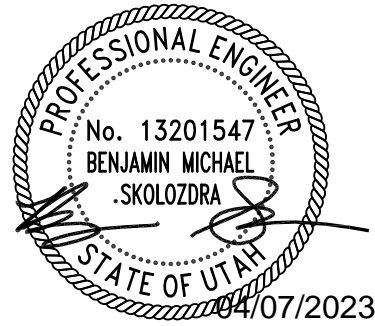
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

I&C INSTRUMENTATION
TYPICAL DETAILS
SHEET 3

DRAWING NUMBER

99-I703

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

ELECTRICAL TYPICAL DETAIL INDEX	
Detail Number	View Name
99-E701	
E001	AIR TERMINAL 1
E002	AIR TERMINAL 2
E003	AIR TERMINAL 3
E004	THRU-ROOF CONNECTION 1
E005	THRU-ROOF CONNECTION 2
E006	VFCWELD EXOTHERMIC WELD MOLD - GT
E007	HANDRAIL BONDING DETAIL 1
E008	HANDRAIL BONDING DETAIL 2
E009	XB36FTTW TESTWELL DETAIL
E010	K2L-10CS2IU-24 XIT GROUND ROD
E011	MISCELLANEOUS
E012	TYPICAL DOWNLEAD DETAIL
E013	COMMON BONDING GROUND BUS
99-E702	
E014	WALL HUNG FIXTURE MOUNTING DETAIL
E015	CONDUIT RISER DETAIL
E016	CONDUIT HORIZONTAL SUPPORT DETAIL
E017	CONTROL PANEL LAYOUT DETAIL
E018	DIN RAIL MOUNTING DETAIL
E019	ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL
E020	CONDUIT VERTICAL SUPPORT DETAIL
E021	EQUIPMENT GROUNDING CONNECTION DETAIL
E022	ABOVE GROUND CONDUIT PENETRATIONS FOR NEW WALLS/FLOORS DETAIL
E023	ELECTRICAL UNIT HEATER CONTROL DIAGRAM
E024	EXISTING WALL/DRY FLOOR PENETRATIONS DETAIL
99-E703	
E025	TYPICAL CONDUIT SEAL DAMMING AND POURING DETAIL
E026	TYPICAL MOTOR LEAD TERMINATION DETAIL
E027	SUSPENDE CONDUIT SUPPORT DETAIL
E028	CONCRETE HOUSEKEEPING CURB DETAIL
E029	CONDUIT MARKING SYSTEM DETAIL
E030	VFD GROUNDING DETAIL
E031	BONDING LUG DETAIL
E032	JUNCTION BOX MOUNTING DETAIL
E033	FLOW METER GROUND RING CONNECTION DETAIL
E034	EQUIPMENT NAMEPLATE DETAIL
99-E704	
E035	TRENCH DETAIL - SOD RESTORATION
E036	TRENCH DETAIL - NATURAL RESTORATION
E037	TRENCH DETAIL - ROADWAY
E038	TERMINAL BLOCK CLEARANCE DETAIL
E039	GROUND INSERT DETAIL
E040	FLOOD FLOAT SWITCH INSTALLATION DETAIL
E041	GROUNDING TEST WELL DETAIL
E042	AREA LIGHTING/SECURITY POLE BASE DETAIL
E043	CONDUIT STUB-UP DETAIL
E044	EQUIPMENT PEDESTAL MOUNTING DETAIL
99-E705	
E045	TRANSFORMER MOUNTING DETAIL



PROJECT

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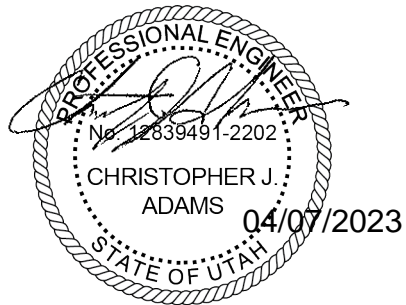


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HAL Project No. - 035.15.420

SHEET TITLE

ELECTRICAL
TYPICAL DETAILS
INDEX

DRAWING NUMBER

99-E700

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Approved: C ADAMS

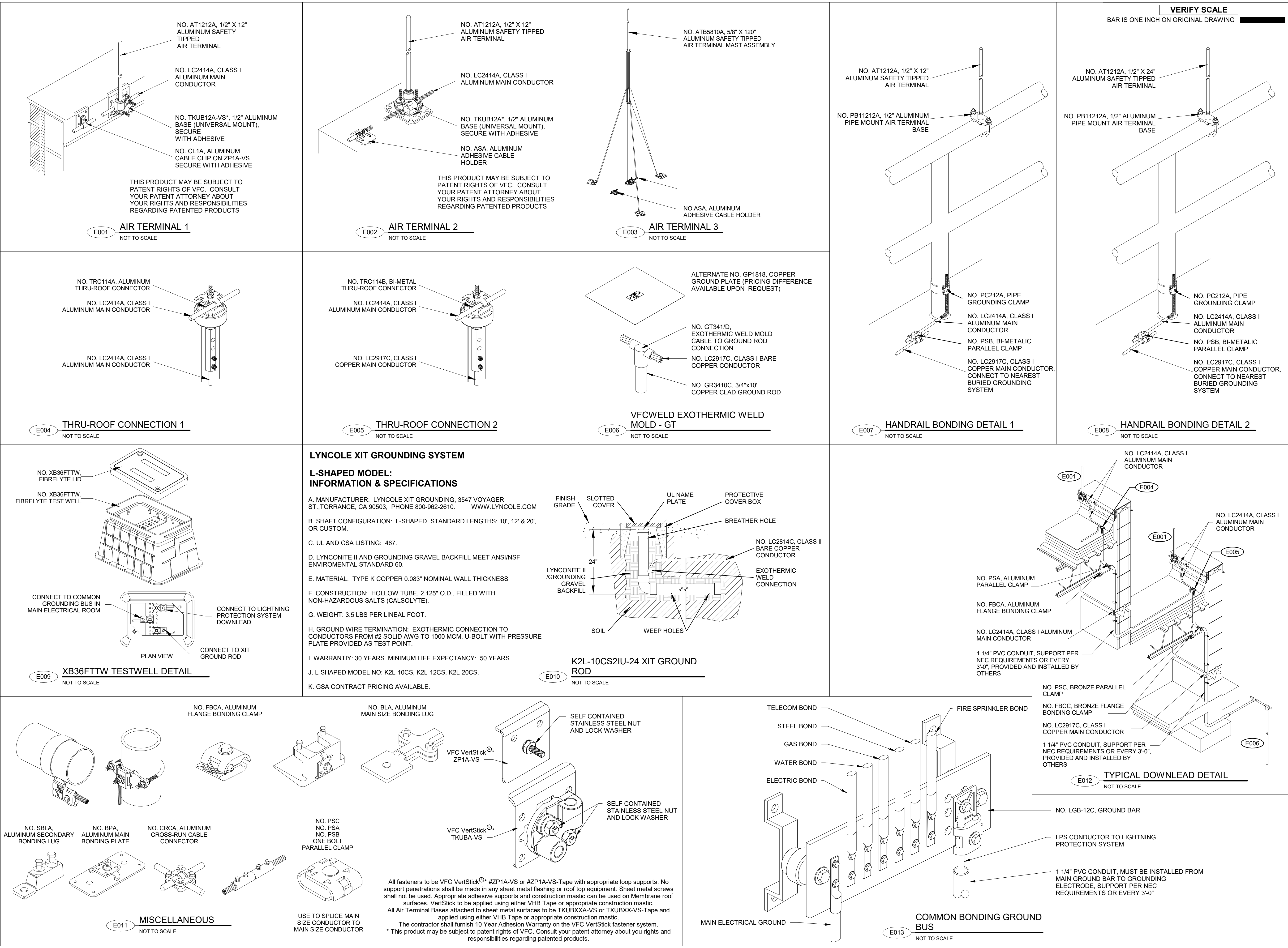
Checked: S SHUGARS

Designer: C ADAMS

Drafter: D BROERMAN

Project Manager: J KRINKS

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PROJECT

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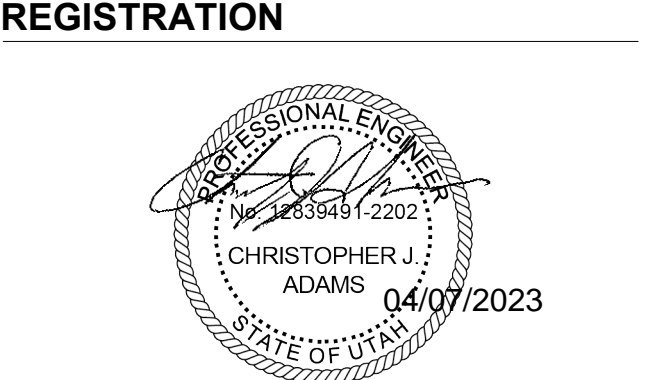
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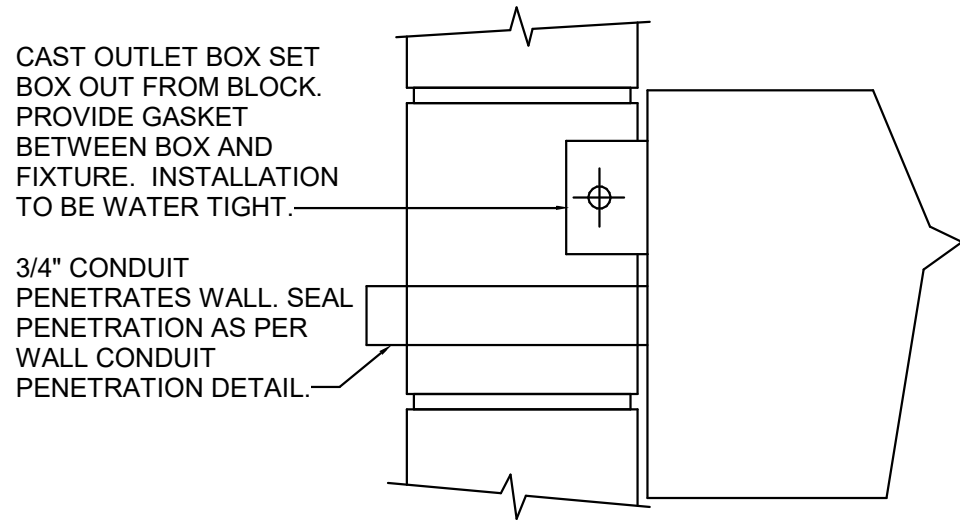
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ELECTRICAL TYPICAL DETAILS SHEET 1

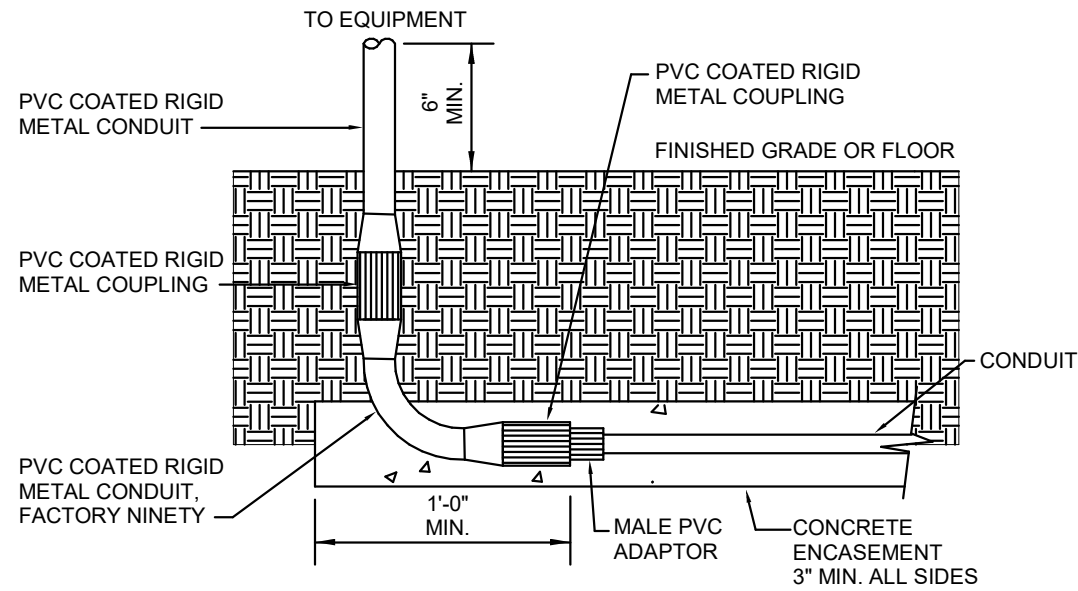
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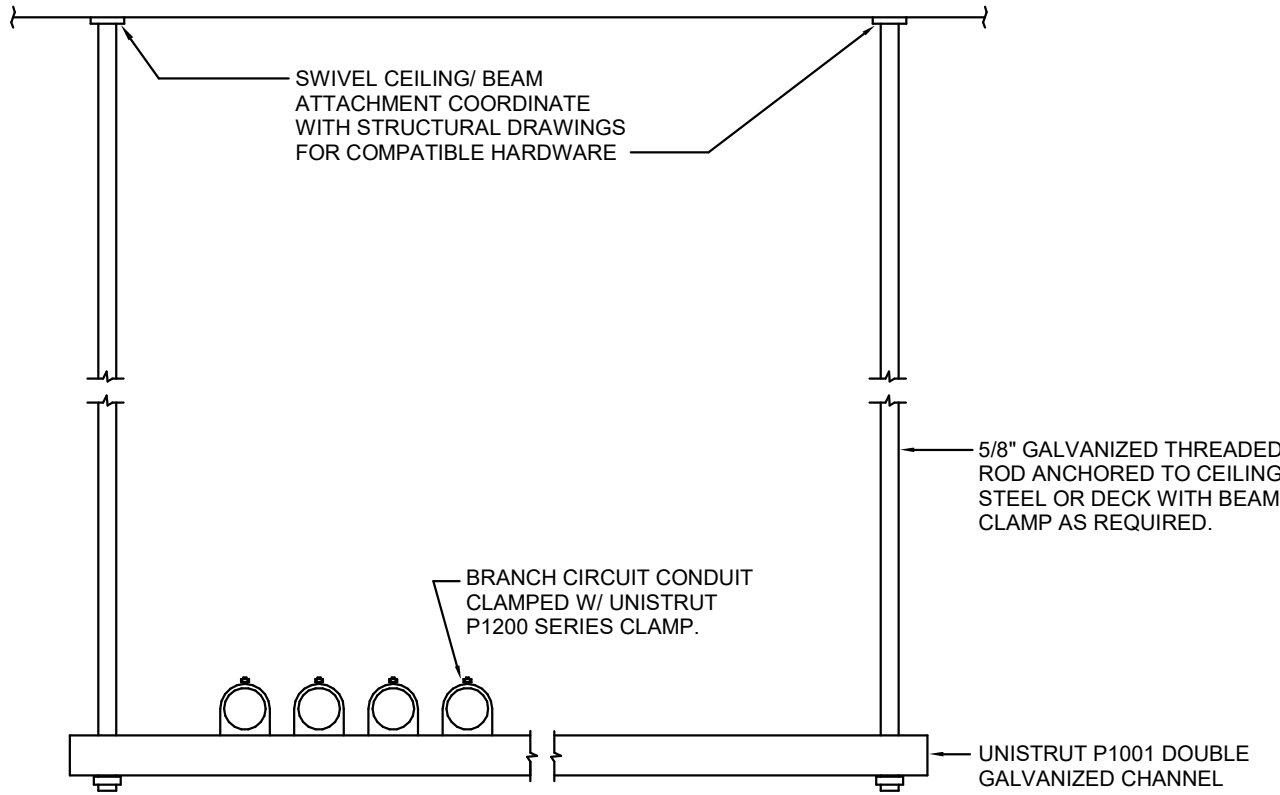
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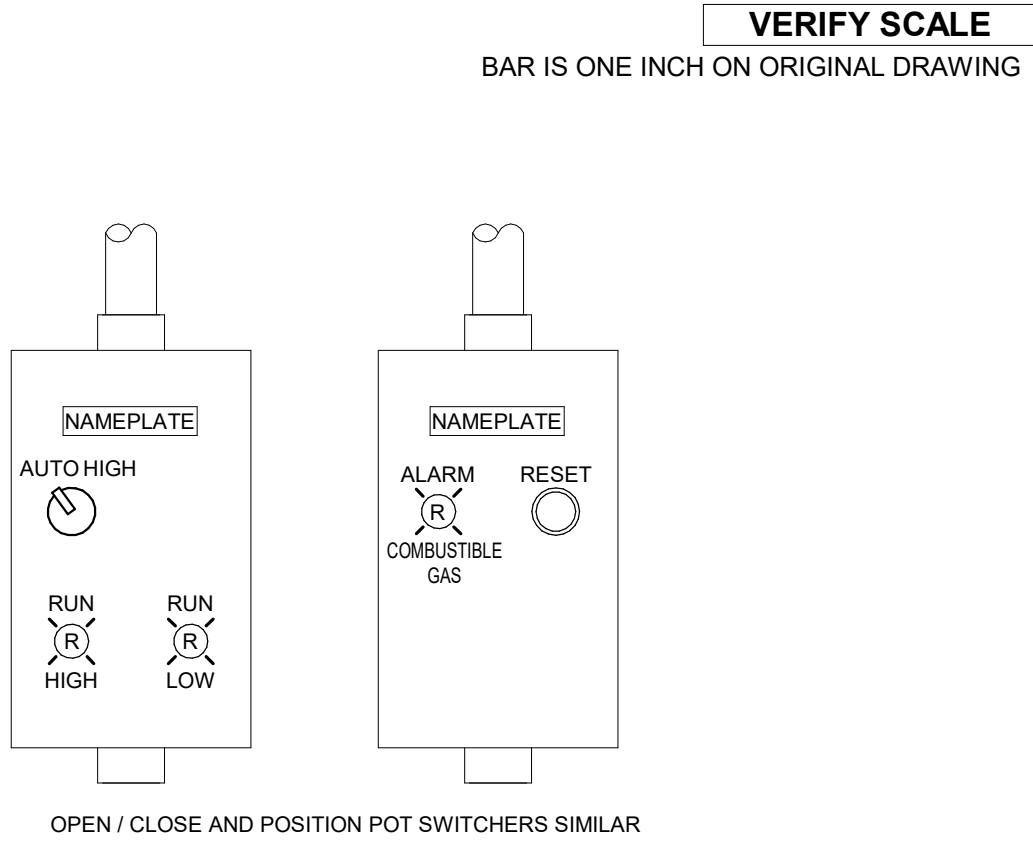
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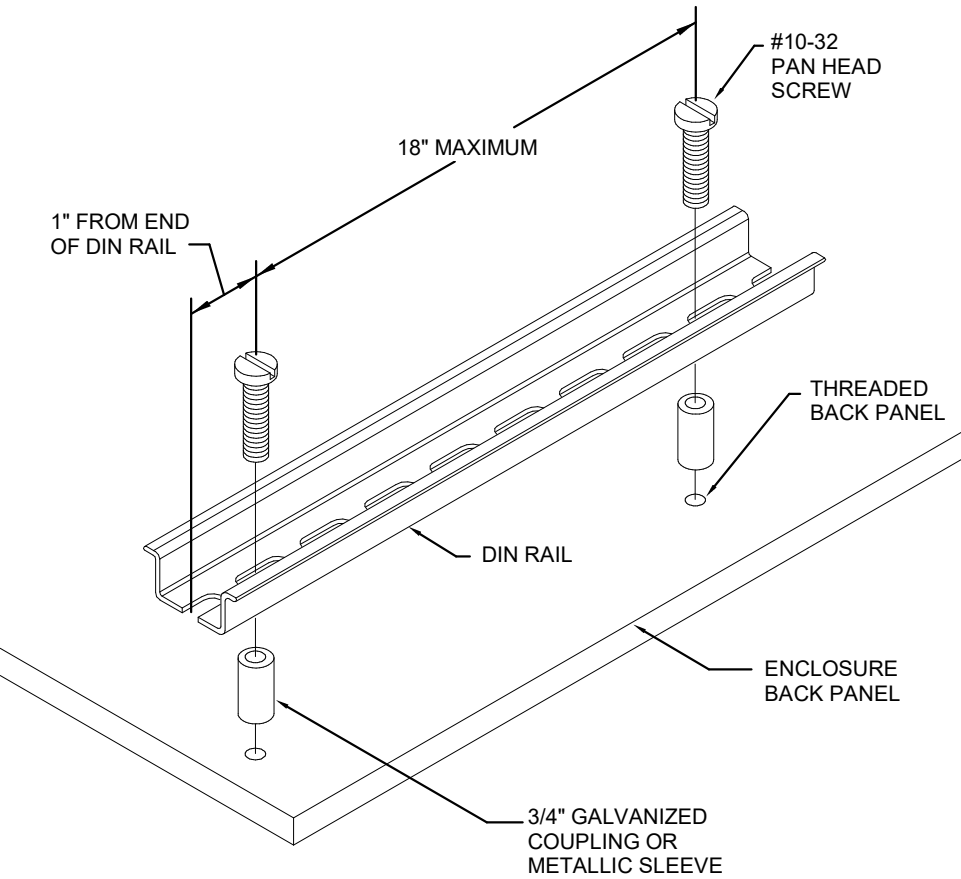
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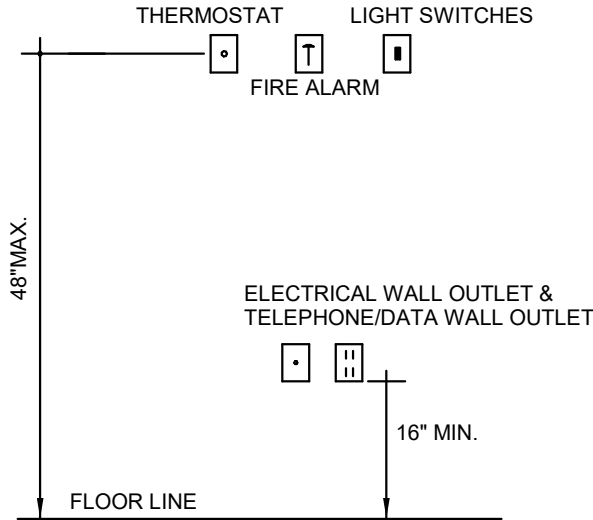
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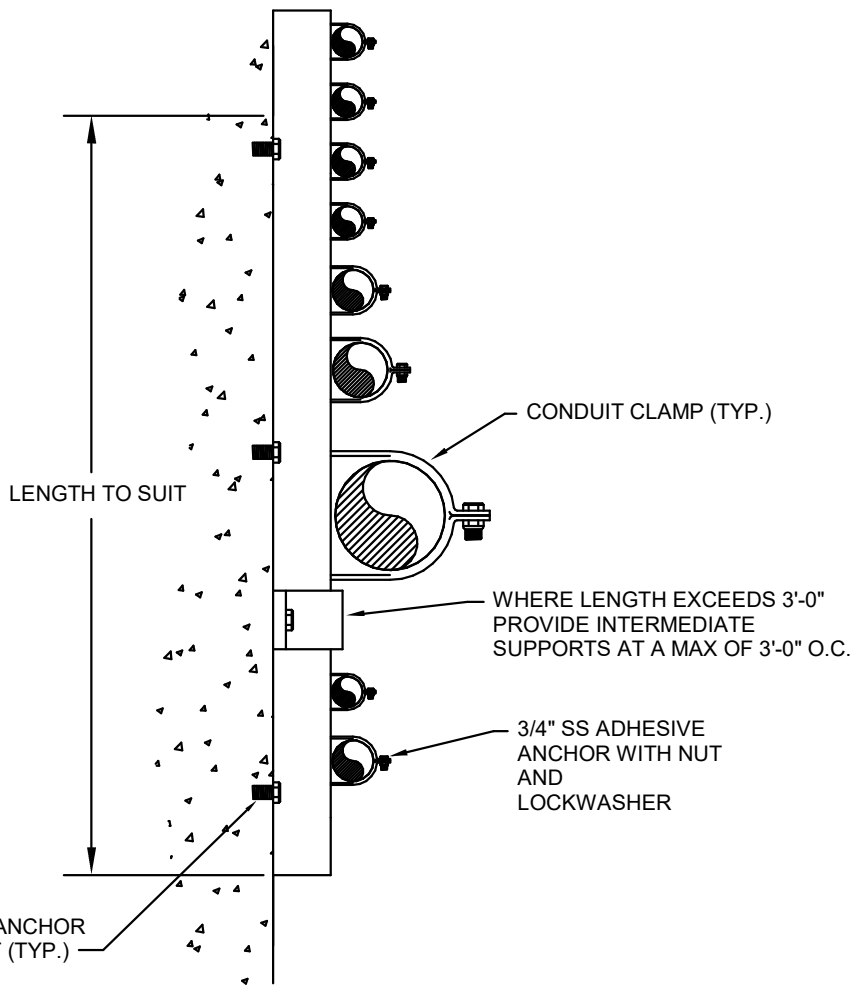
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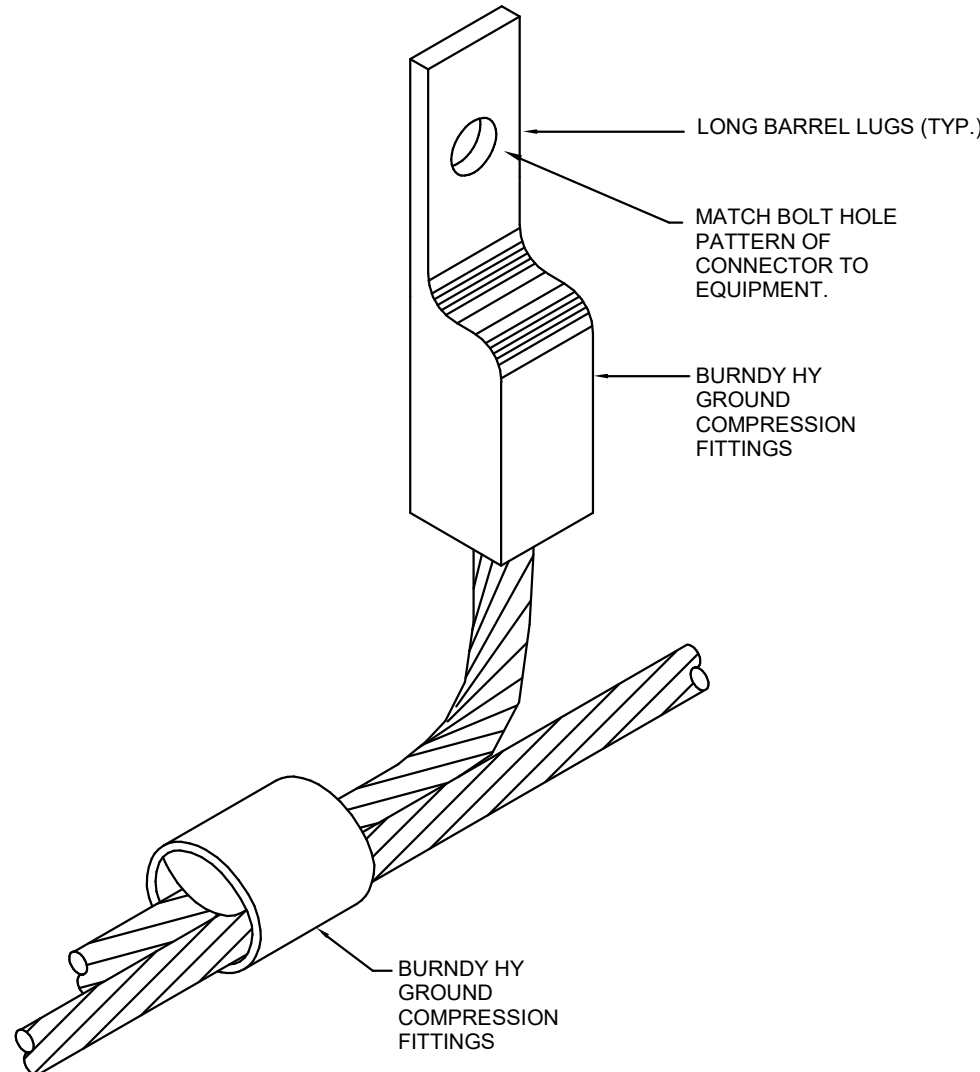
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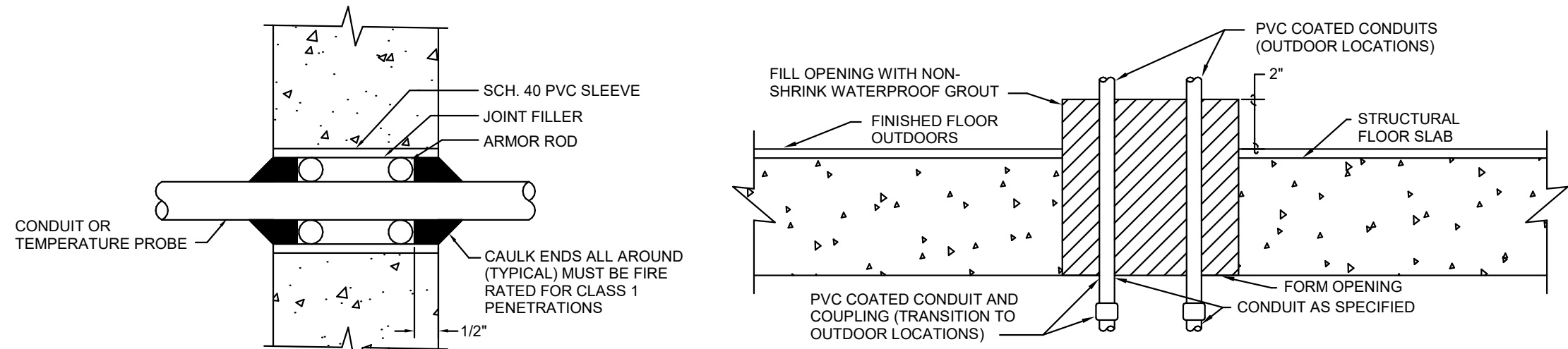
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E020 CONDUIT VERTICAL SUPPORT DETAIL
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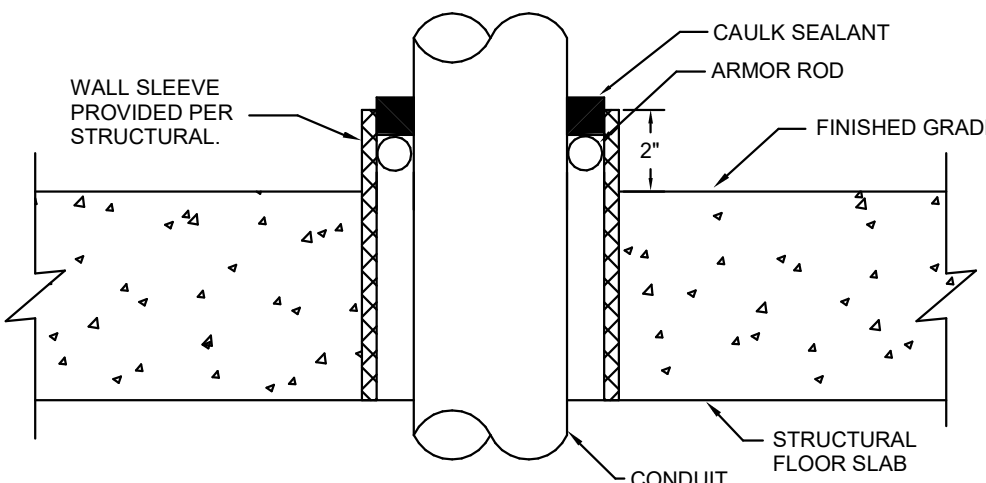


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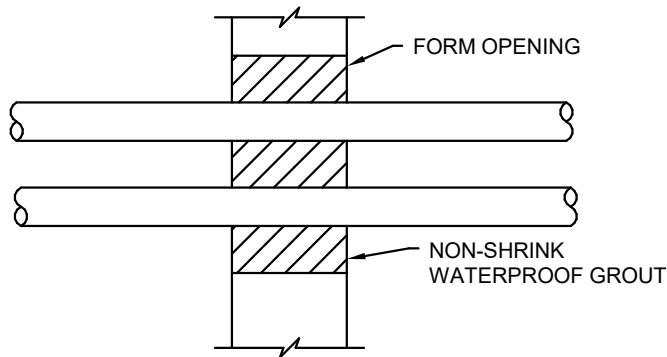


SINGLE CONDUIT PENETRATION FOR ABOVE GRADE PENETRATIONS ONLY

CONCRETE SLAB WET LOCATIONS

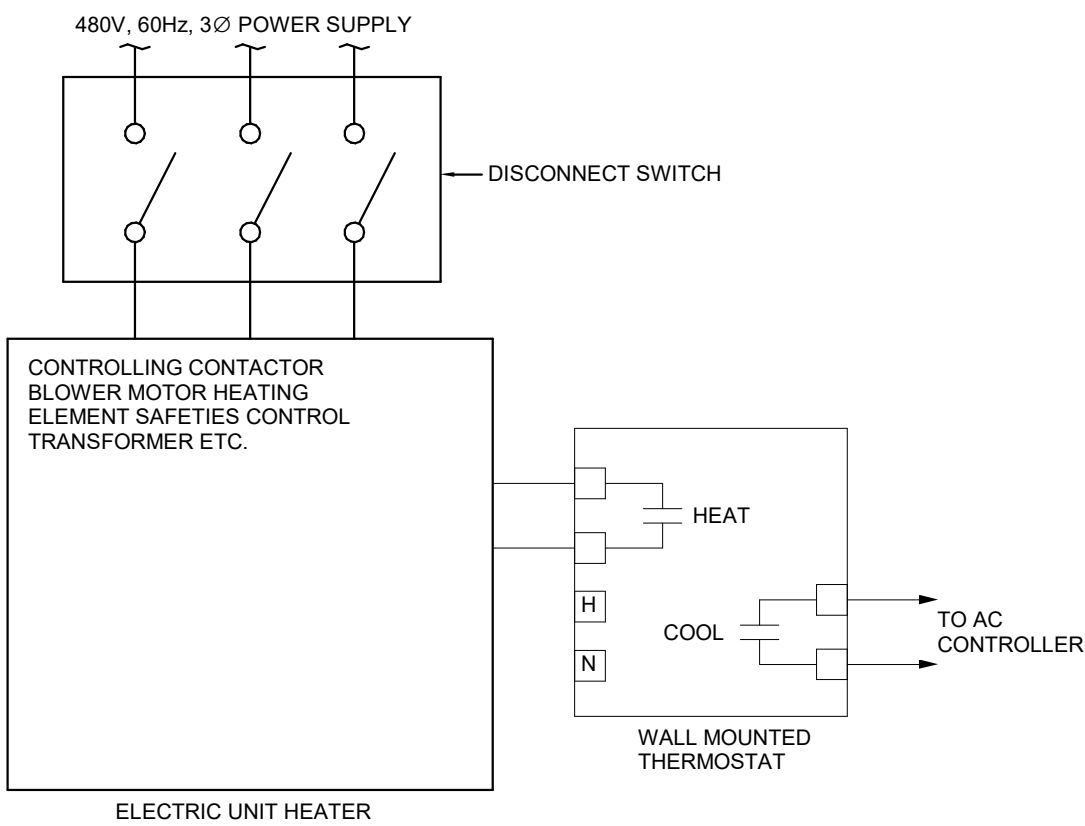


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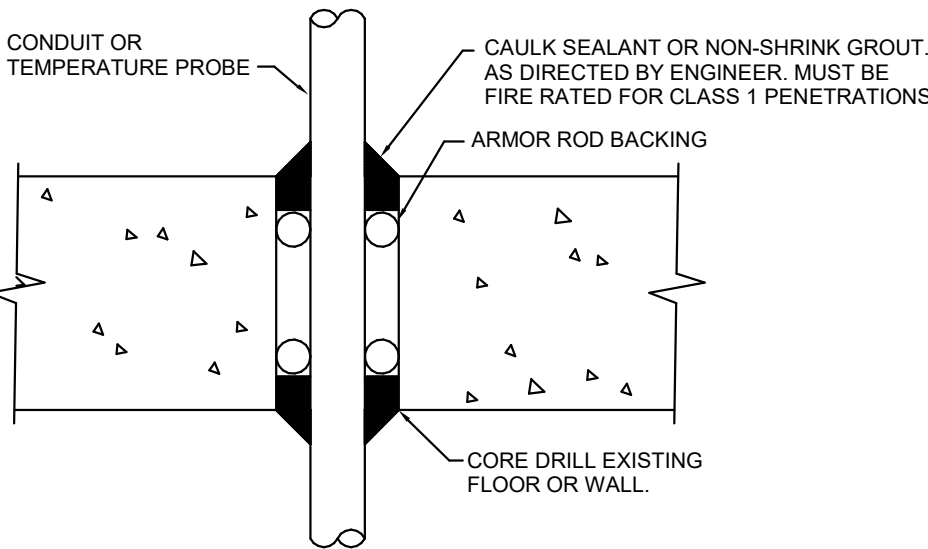


CONCRETE WALL LOCATIONS

E022 ABOVE GROUND CONDUIT PENETRATIONS FOR NEW WALLS/FLOORS DETAIL
NOT TO SCALE



E023 ELECTRICAL UNIT HEATER CONTROL DIAGRAM
NOT TO SCALE



E024 EXISTING WALL/DRY FLOOR PENETRATIONS DETAIL
NOT TO SCALE

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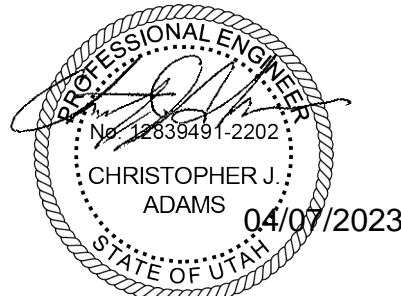


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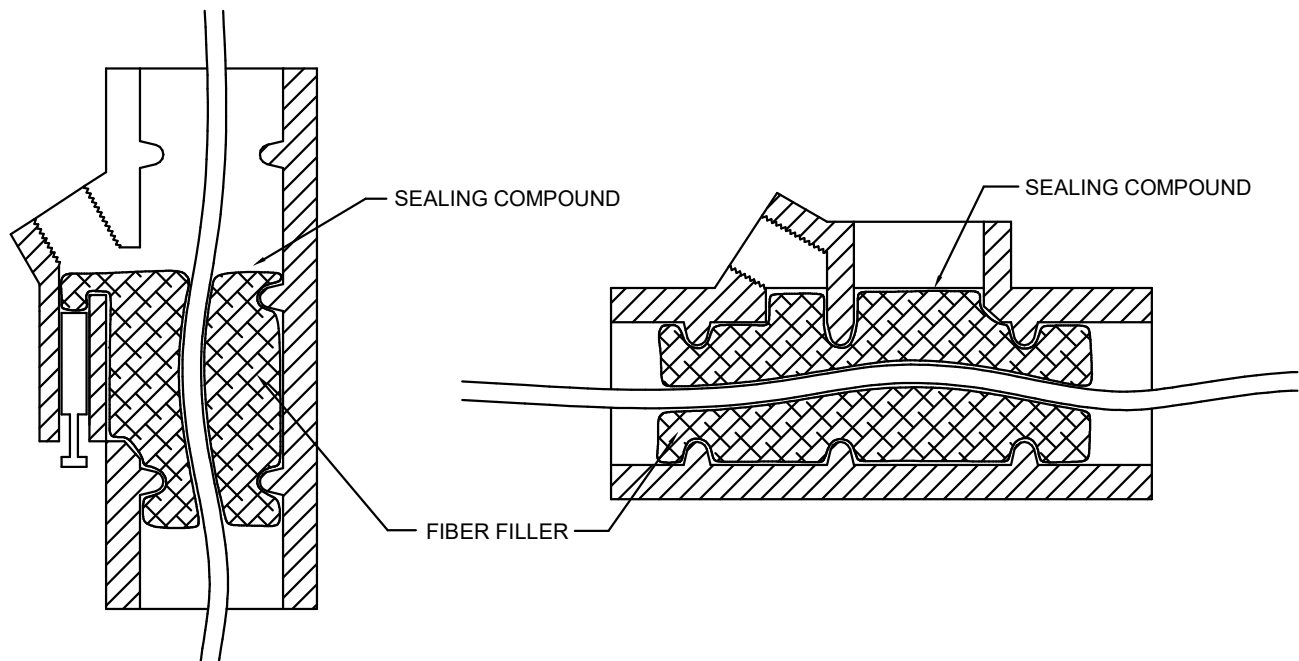
ELECTRICAL
TYPICAL DETAILS
SHEET 2

DRAWING NUMBER

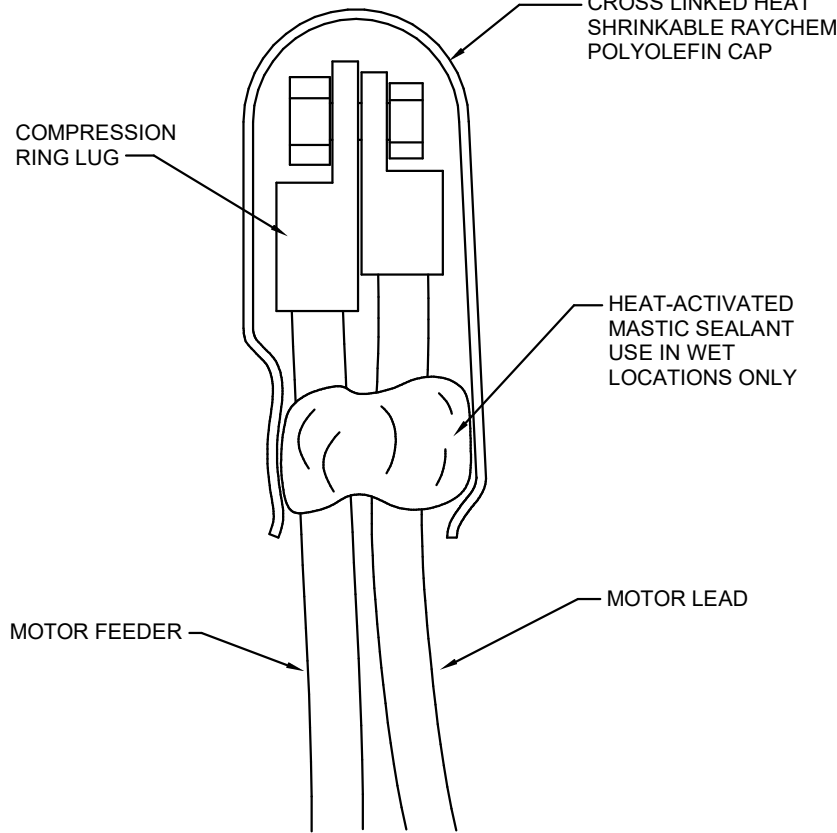
99-E702

ANSI D 22" x 34" Approved: C ADAMS Checked: S SHUGARS Designer: D BROERMAN Drafter: J KRINKS Project Manager: J KRINKS

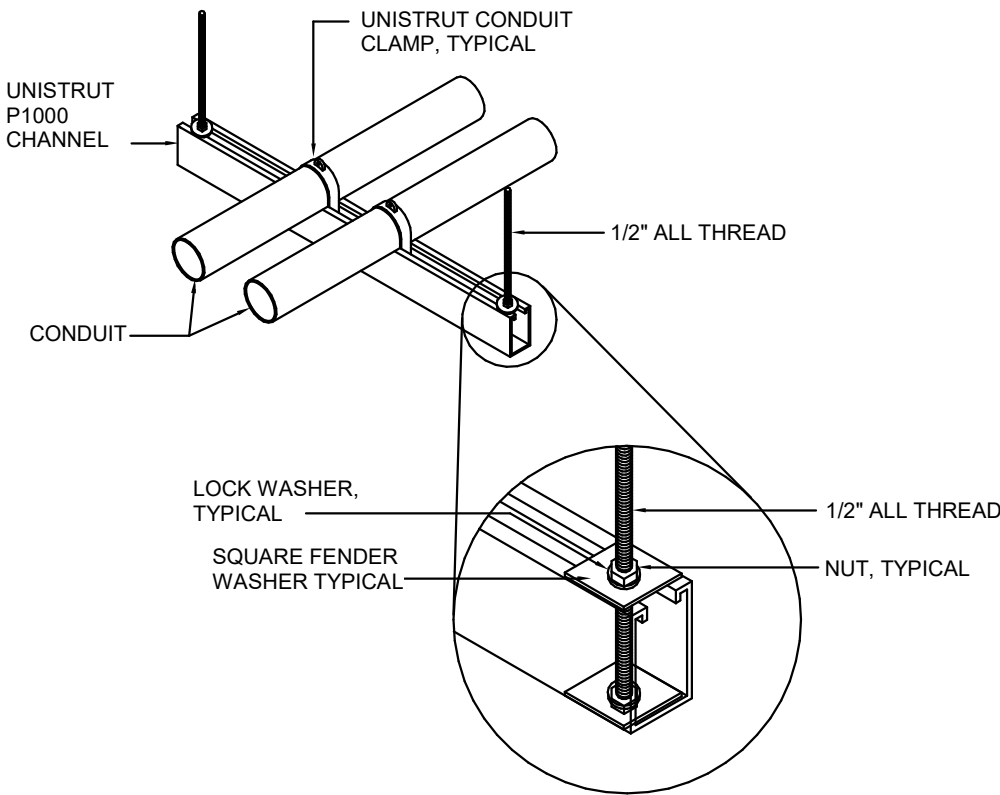
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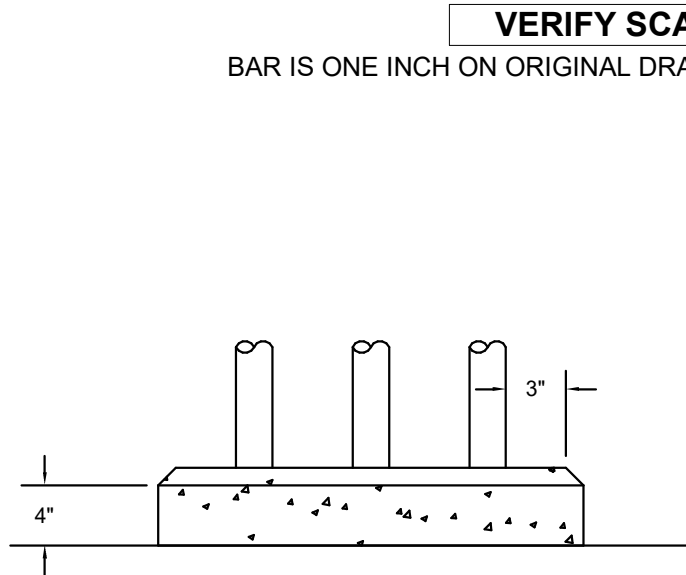
E025
TYPICAL CONDUIT SEAL
DAMMING AND POURING DETAIL
NOT TO SCALE



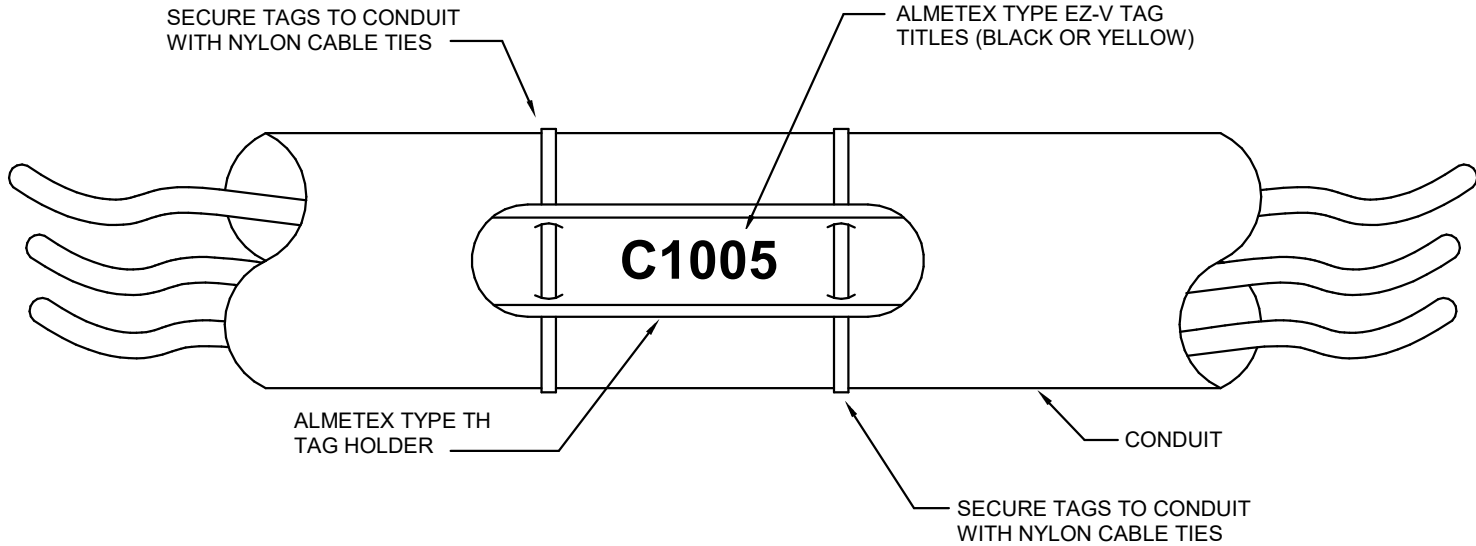
E026
TYPICAL MOTOR LEAD
TERMINATION DETAIL
NOT TO SCALE



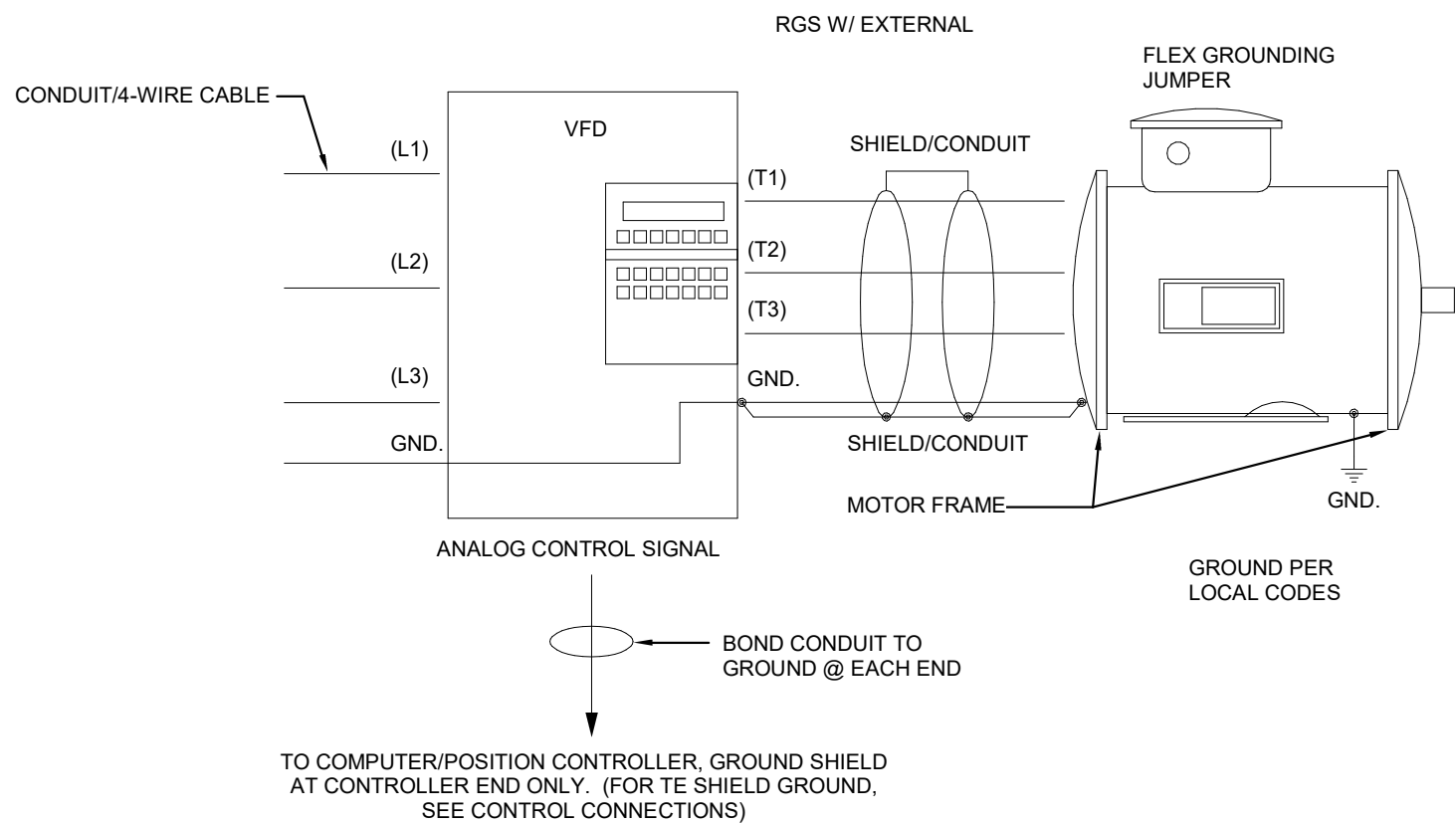
E027
SUSPENDED CONDUIT SUPPORT
DETAIL
NOT TO SCALE



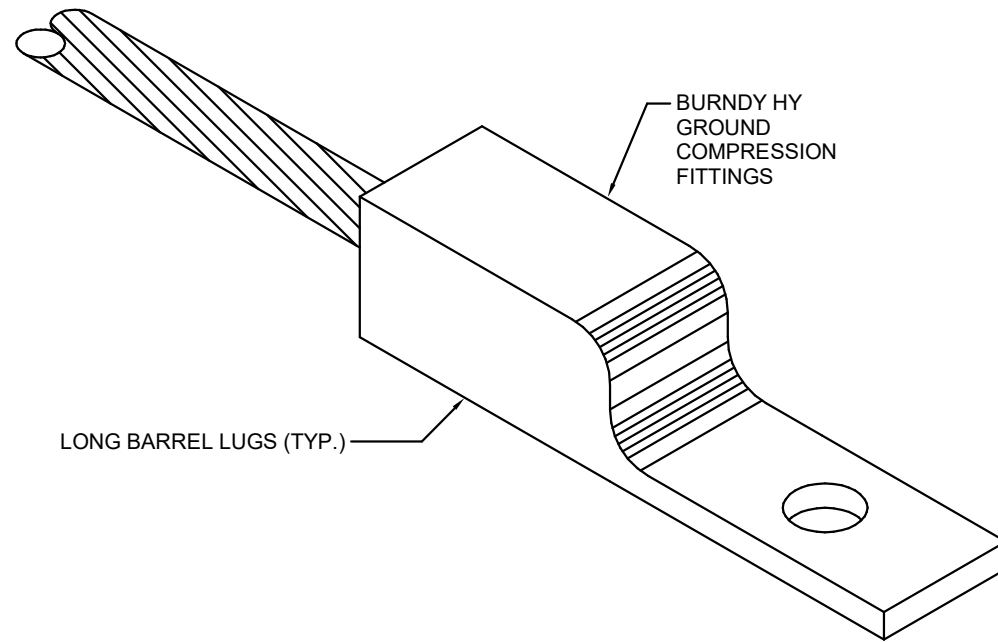
E028
CONCRETE HOUSEKEEPING
CURB DETAIL
NOT TO SCALE



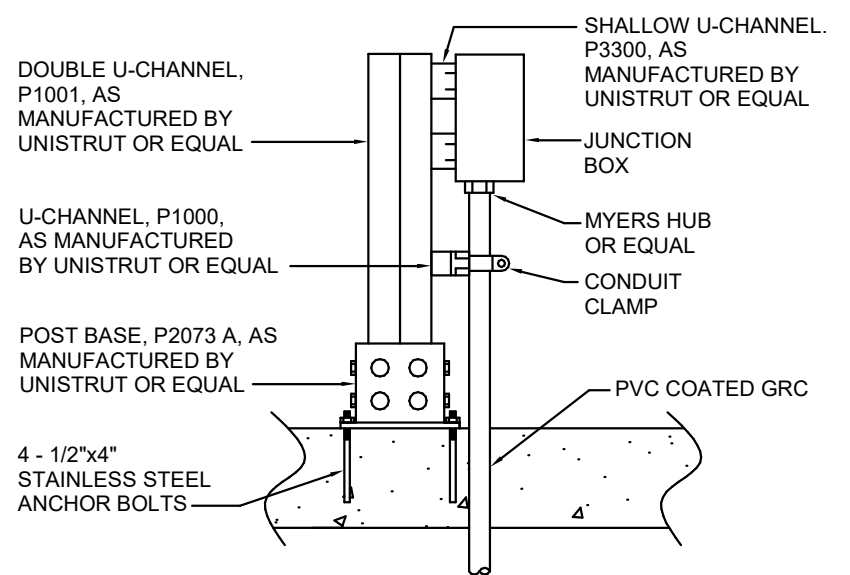
E029
CONDUIT MARKING SYSTEM
DETAIL
NOT TO SCALE



E030
VFD GROUNDING DETAIL
NOT TO SCALE

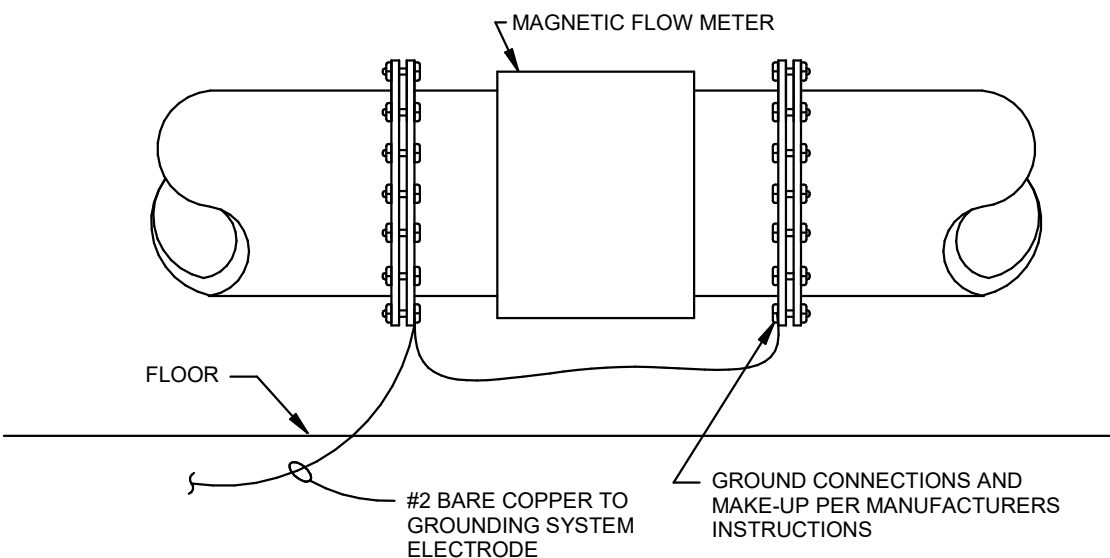


E031
BONDING LUG DETAIL
NOT TO SCALE

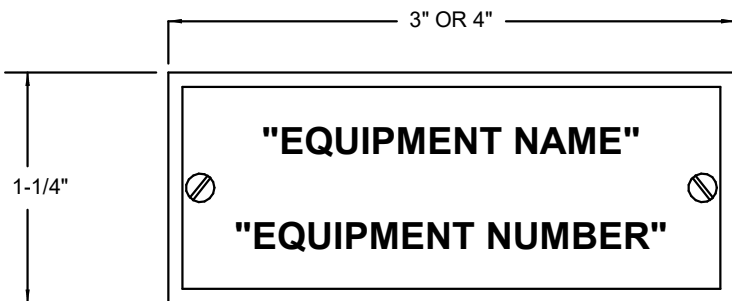


- NOTES:
1. IN CORROSIVE AREAS PROVIDE STAINLESS STEEL U-CHANNEL.
 2. OMIT POST BASE WHEN MOUNTING TO SIDE OF ABOVE GRADE STRUCTURE.
 3. PROVIDE HARDWARE OF SAME MATERIAL AS U-CHANNEL.

E032
JUNCTION BOX MOUNTING
DETAIL
NOT TO SCALE



E033
FLOW METER GROUND RING
CONNECTION DETAIL
NOT TO SCALE



- NOTES:
1. ALL LETTERS TO BE 1/4" UNLESS NOTED OTHERWISE.
 2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
 3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
 4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.

E034
EQUIPMENT NAMEPLATE DETAIL
NOT TO SCALE

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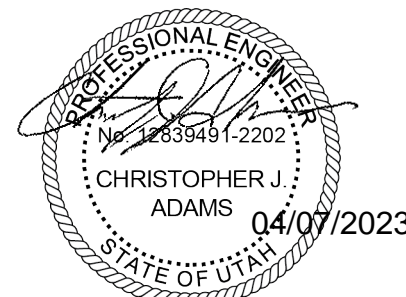
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Provo, UT 84606
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B	2023-04-07	ISSUED FOR BID
A	2023-01-20	ISSUED FOR 90%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

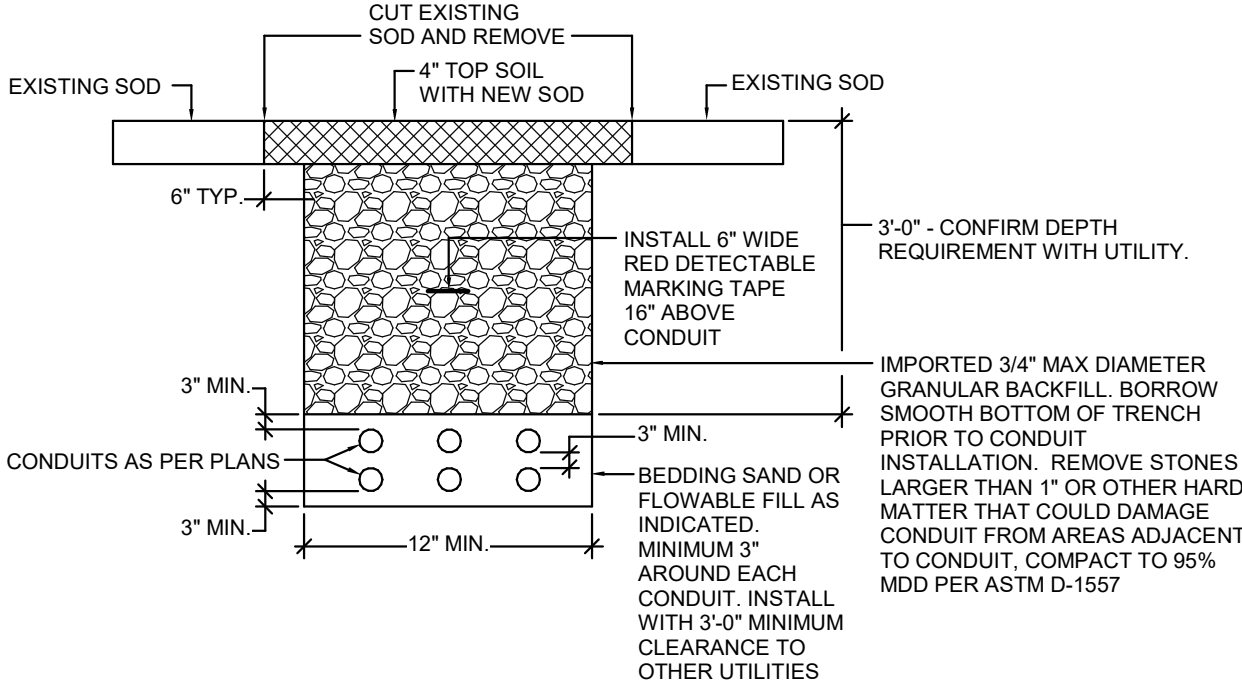
SHEET TITLE

**ELECTRICAL
TYPICAL DETAILS
SHEET 3**

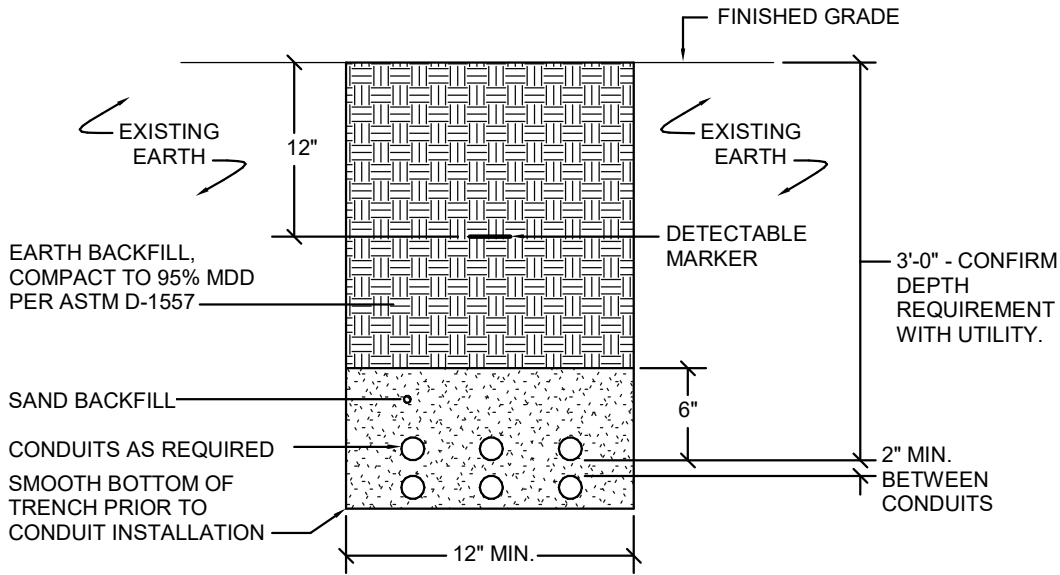
DRAWING NUMBER

99-E703

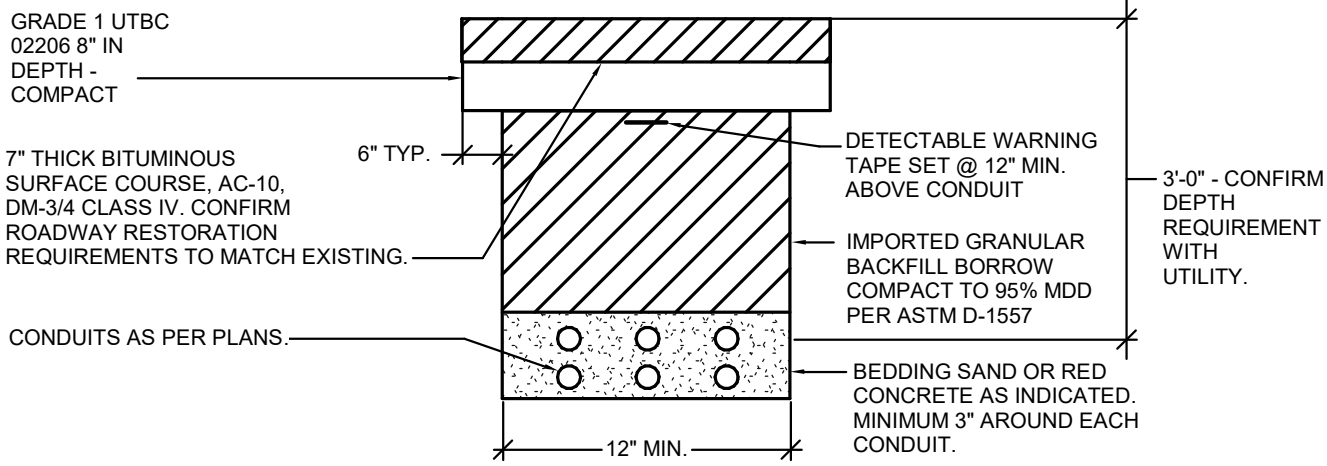
ANSI D 22" x 34" Approved: C.ADAMS Checked: S.SHUGARS Designer: D.BROERMAN Project Manager: J.KRINKS
Last Plotted: 4/5/2023 12:38:15 PM Filename: BM 3607/CADAMER (USA) 6067/0884-Provo River WTP/6067/0884_10-E001.rvt



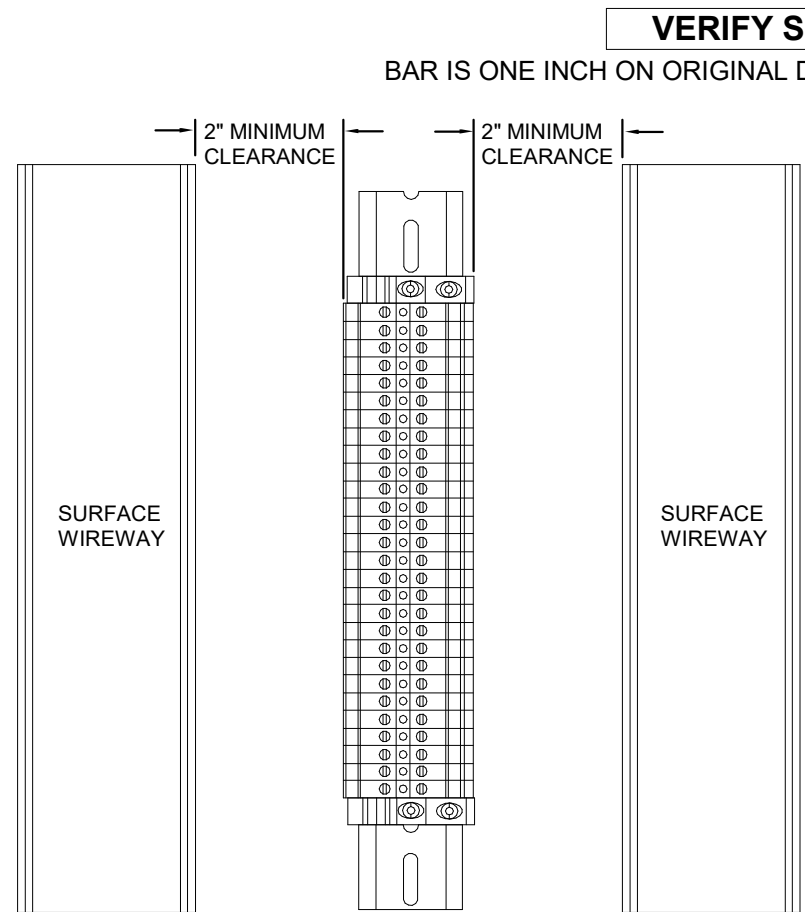
E035 TRENCH DETAIL - SOD RESTORATION
NOT TO SCALE



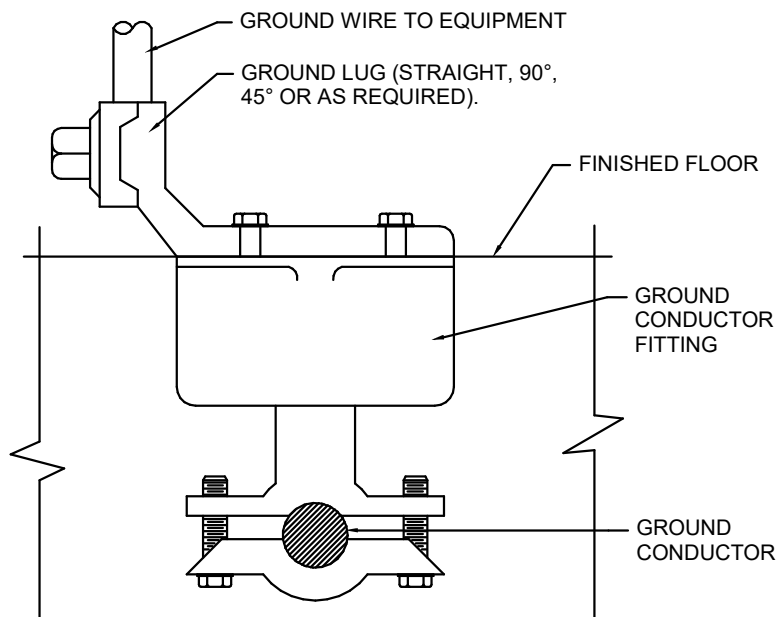
E036 TRENCH DETAIL - NATURAL RESTORATION
NOT TO SCALE



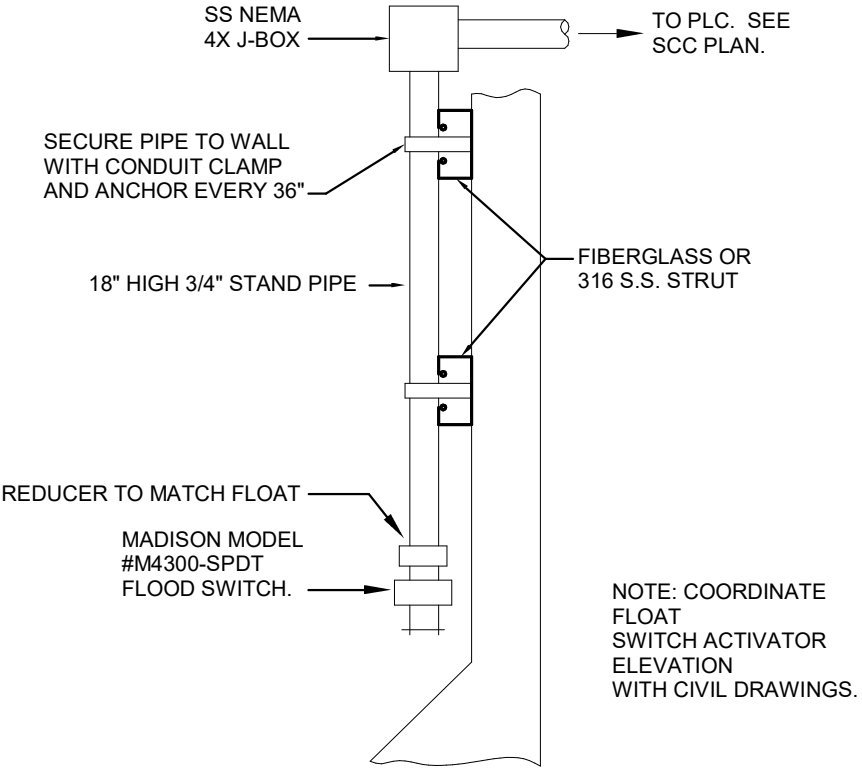
E037 TRENCH DETAIL - ROADWAY
NOT TO SCALE



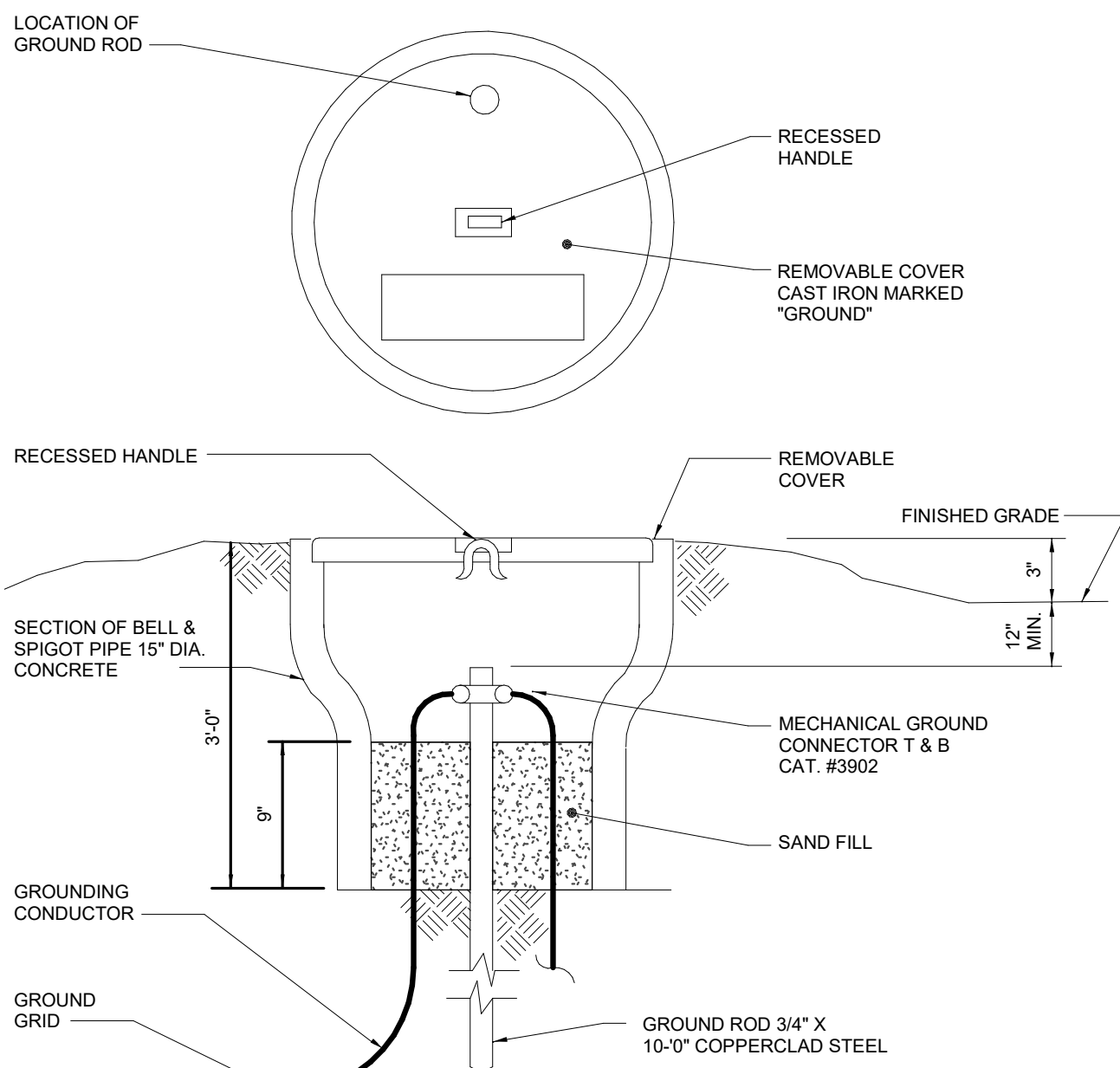
E038 TERMINAL BLOCK CLEARANCE DETAIL
NOT TO SCALE



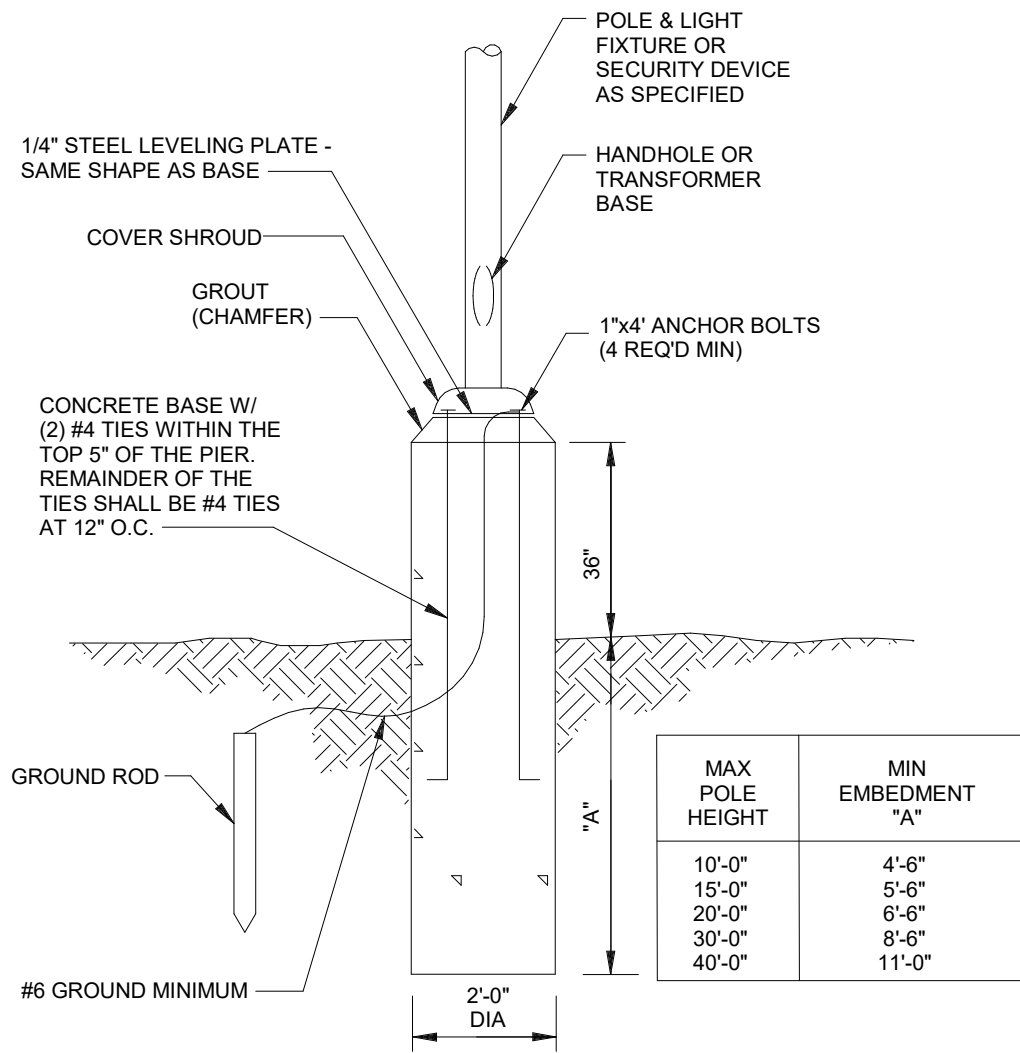
E039 GROUND INSERT DETAIL
NOT TO SCALE



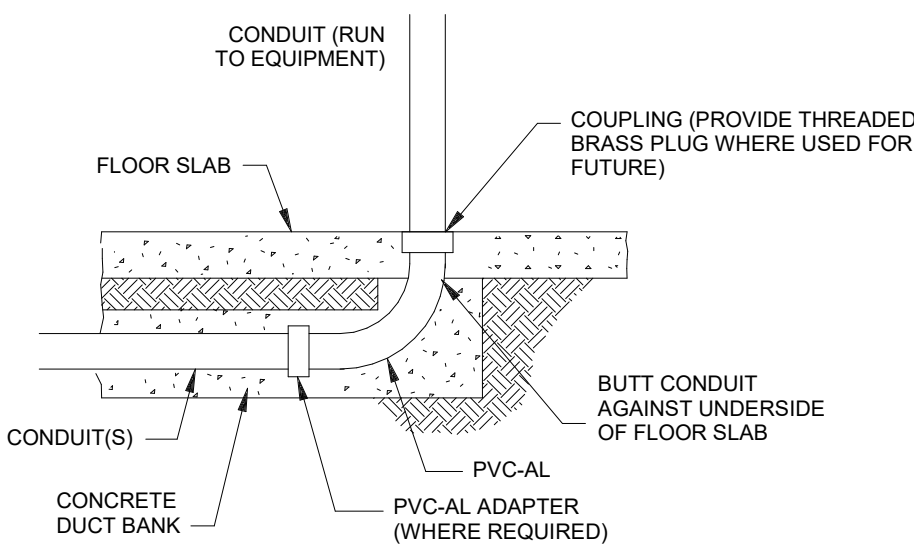
E040 FLOOD FLOAT SWITCH INSTALLATION DETAIL
NOT TO SCALE



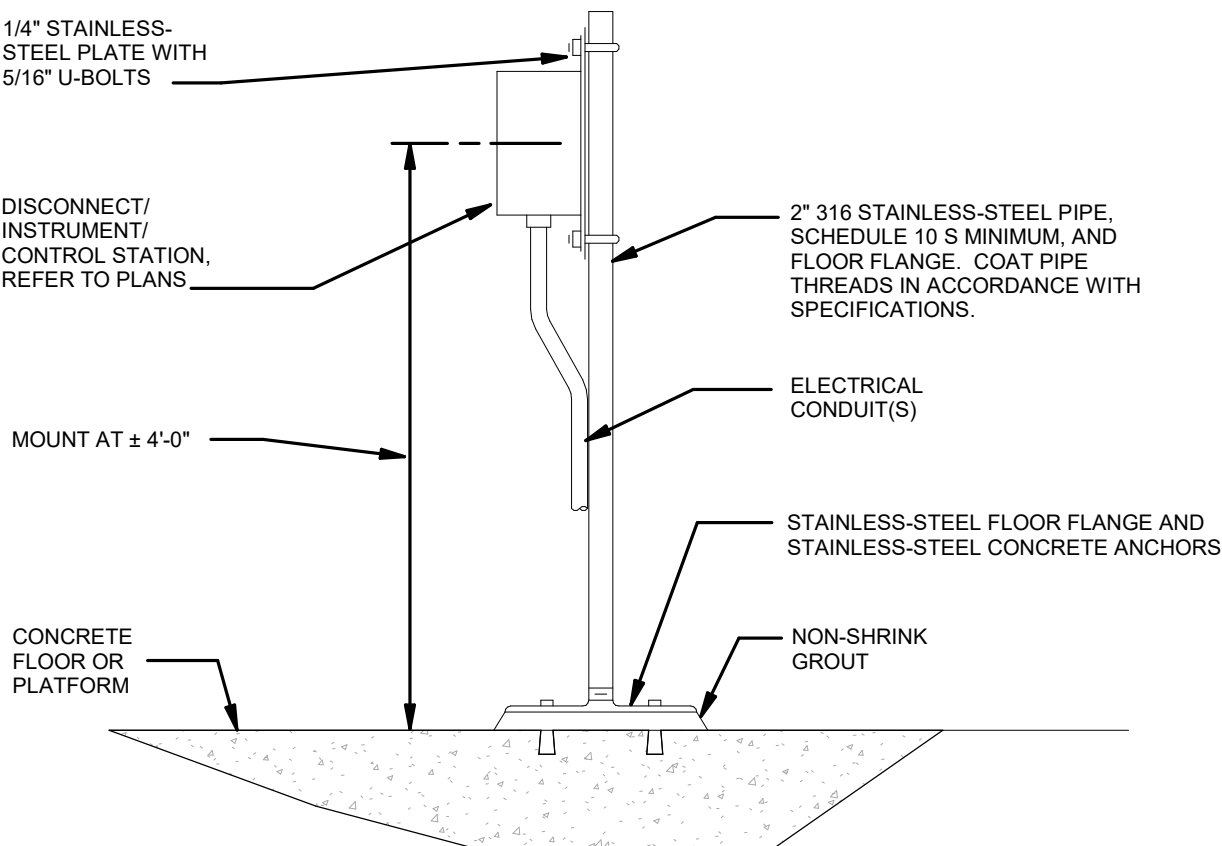
E041 GROUNDING TEST WELL DETAIL
NOT TO SCALE



E042 AREA LIGHTING/SECURITY POLE BASE DETAIL
NOT TO SCALE



E043 CONDUIT STUB-UP DETAIL
NOT TO SCALE



E044 EQUIPMENT PEDESTAL MOUNTING DETAIL
NOT TO SCALE

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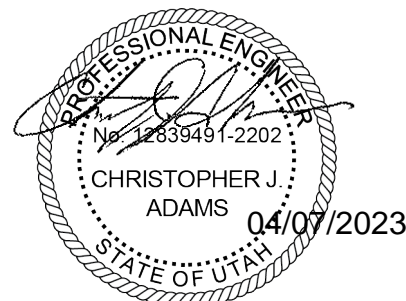
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REGISTRATION



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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

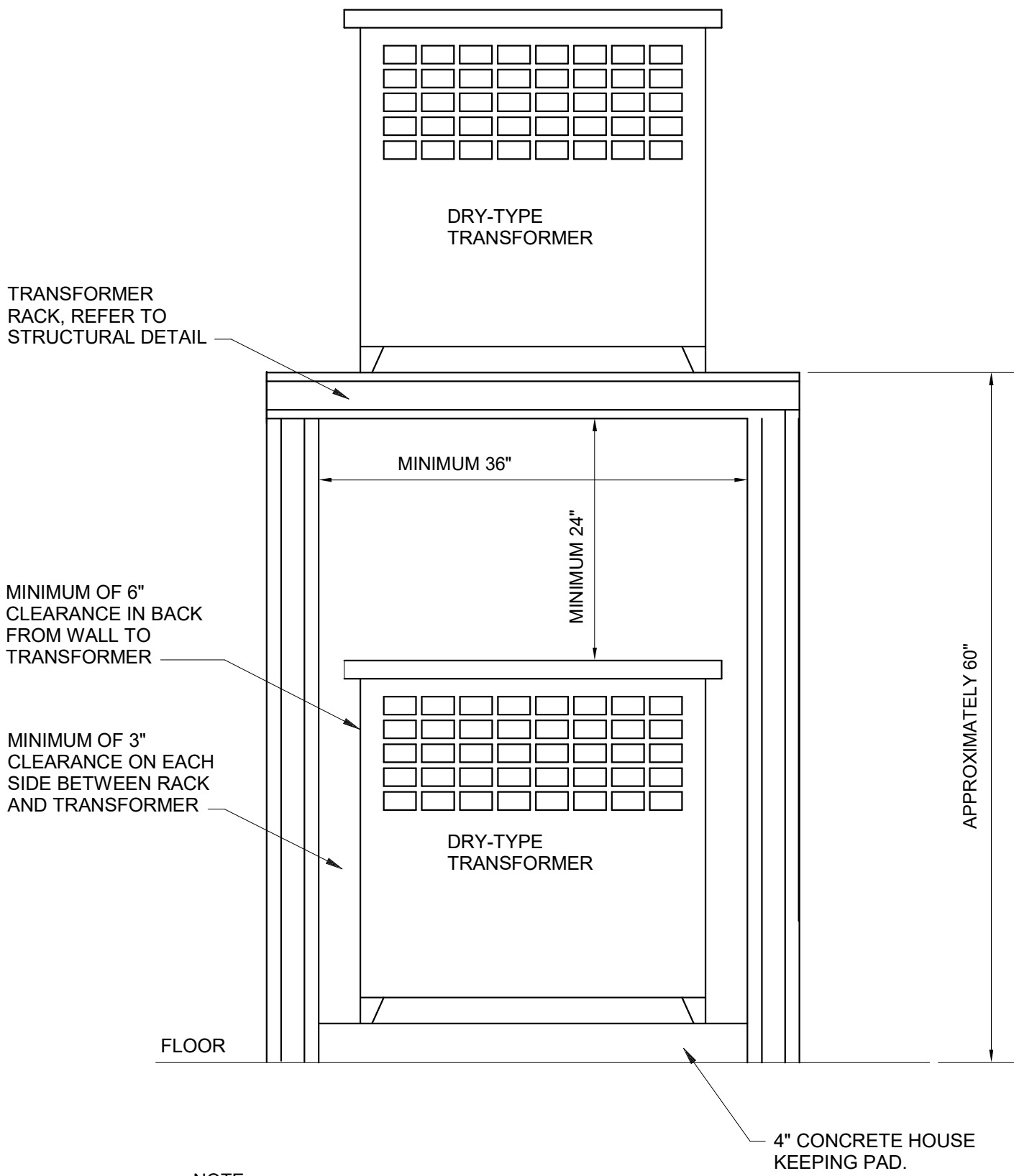
SHEET TITLE

ELECTRICAL
TYPICAL DETAILS
SHEET 4

DRAWING NUMBER

99-E704

ANSI D 22" x 34" Approved: C ADAMS Checked: S SHUGARS Designer: C ADAMS Drafter: D BROERMAN Project Manager: J KRINKS Last Plotted: 4/5/2023 12:38:15 PM Filename: BM 9807/CADMER (USA) 60670884-Provo River WTP/60670884_10-E001.rvt



- NOTE:
1. REFER TO APPROVED SHOP DRAWINGS FOR EXACT TRANSFORMER SIZE AND DIMENSIONS. ADJUST RACK SIZE ACCORDINGLY.

**TRANSFORMER MOUNTING
DETAIL**

E045

NOT TO SCALE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT

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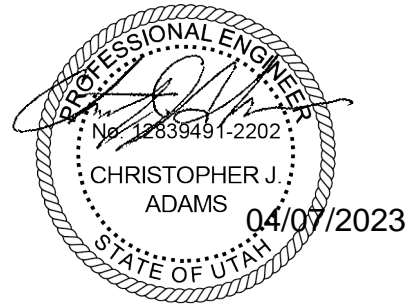
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I/R	DATE	DESCRIPTION

PROJECT NUMBER

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HAL Project No. - 035.15.420

SHEET TITLE

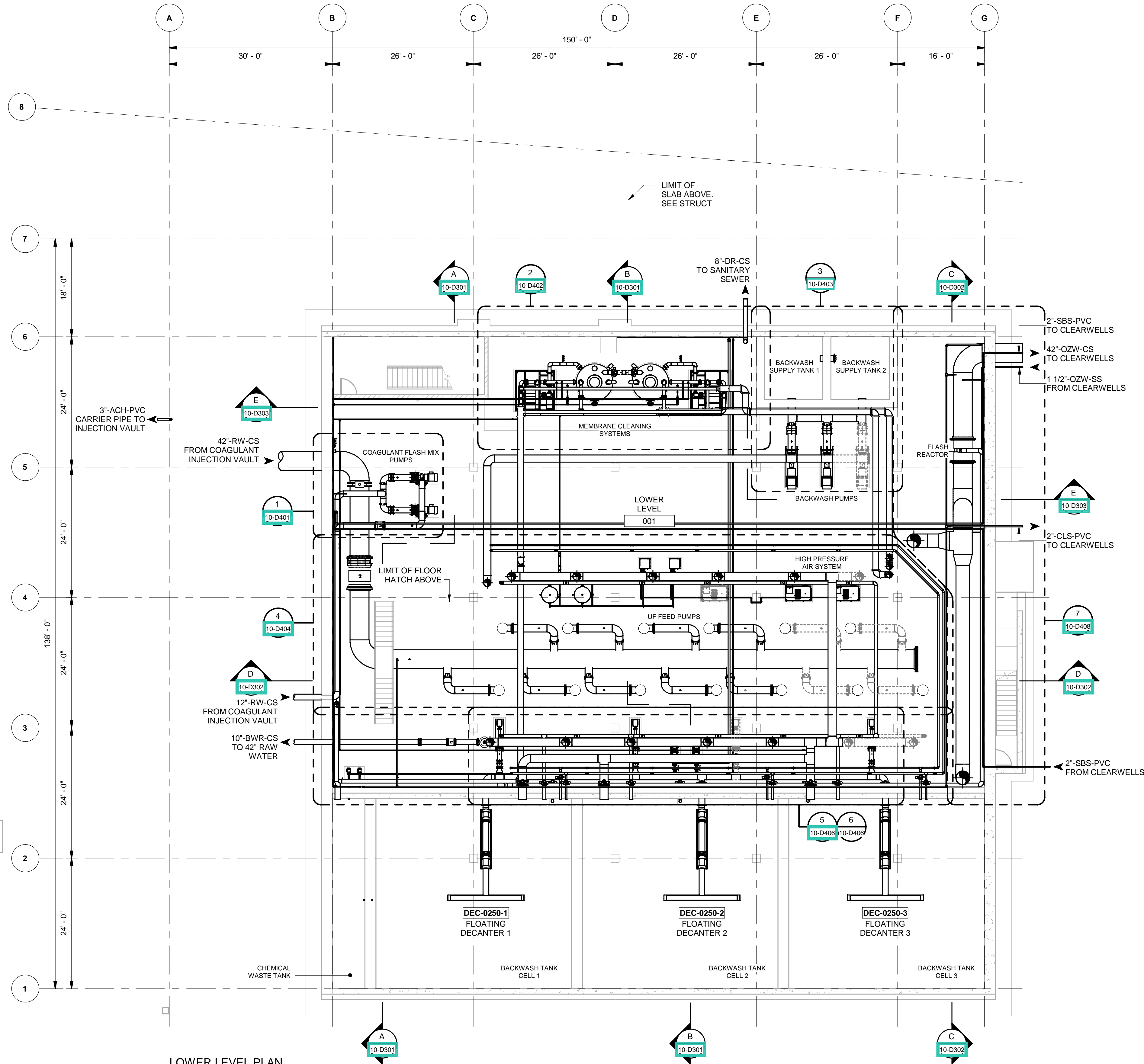
ELECTRICAL
TYPICAL DETAILS
SHEET 5

DRAWING NUMBER

99-E705

ANSI D 22' x 34' Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOES Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:22:01 AM
Filename: BM 3607CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D101.rvt



LOWER LEVEL PLAN
SCALE: 3/32" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT

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B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

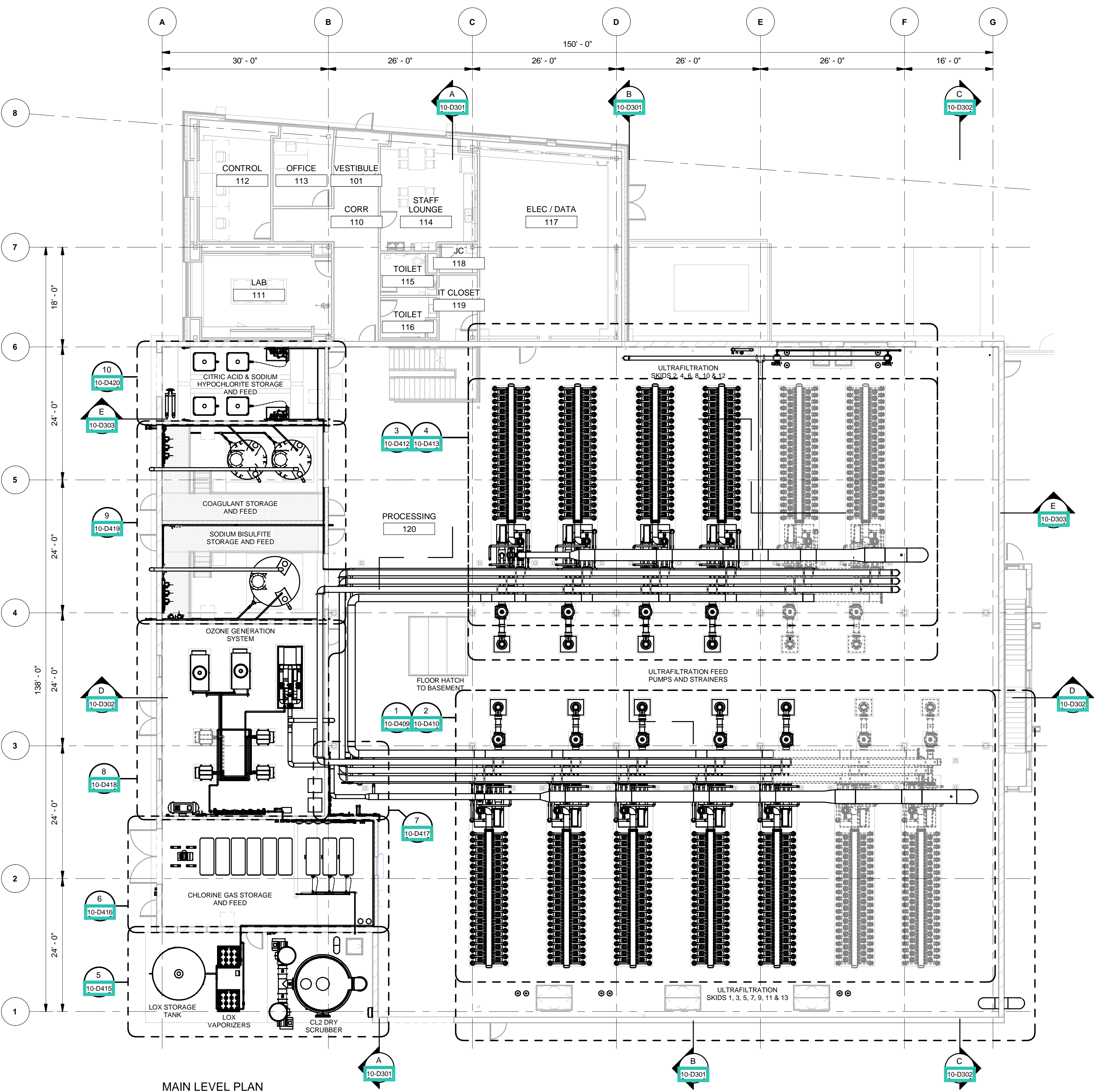
SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
LOWER LEVEL
PROCESS PIPING PLAN

DRAWING NUMBER

10-D101 - D1

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOB Project Manager: J.KRINKS
Last Plotted: 4/14/2023 8:22:24 AM
Filename: BM 360/CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D001.rvt



MAIN LEVEL PLAN
SCALE: 3/32" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

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A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
MAIN LEVEL
PROCESS PIPING PLAN

DRAWING NUMBER

10-D102 - D1

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ANSI D 22' x 34'

Approved: B.HODGSON

Checked: J.KRINKS

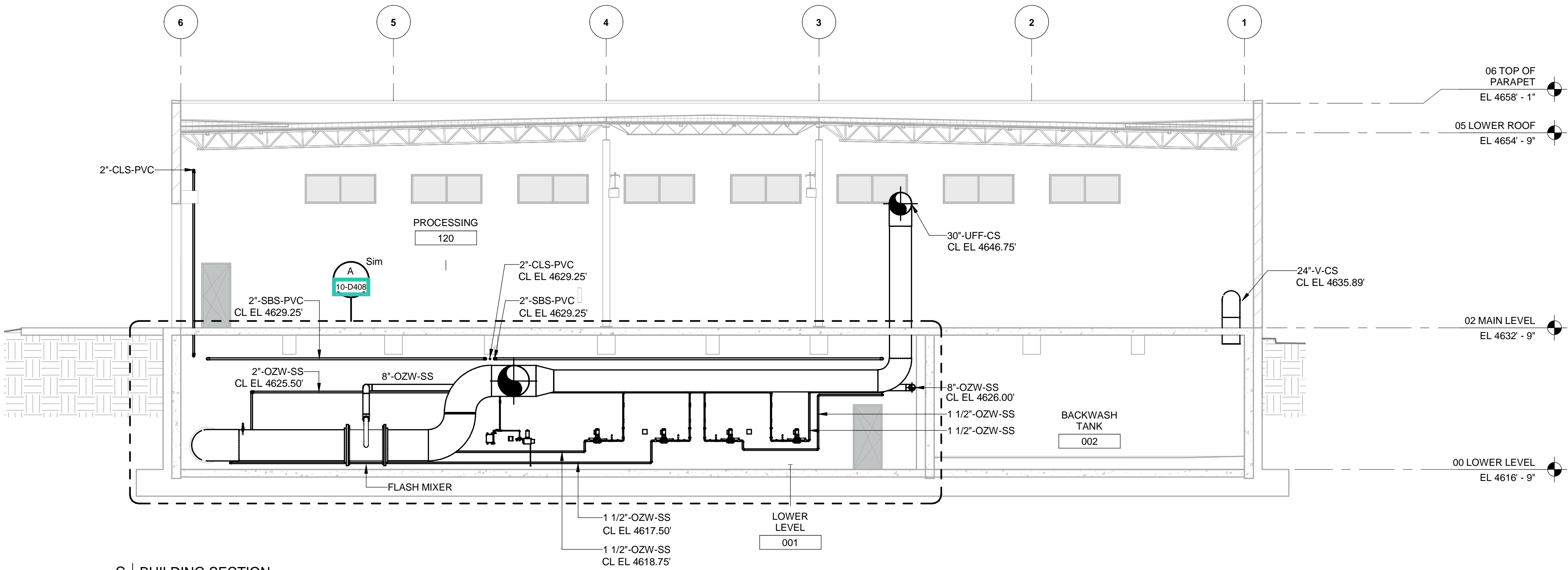
Designer: J.MIX

Drafter: P.ALCOUS

Project Manager: J.KRINKS

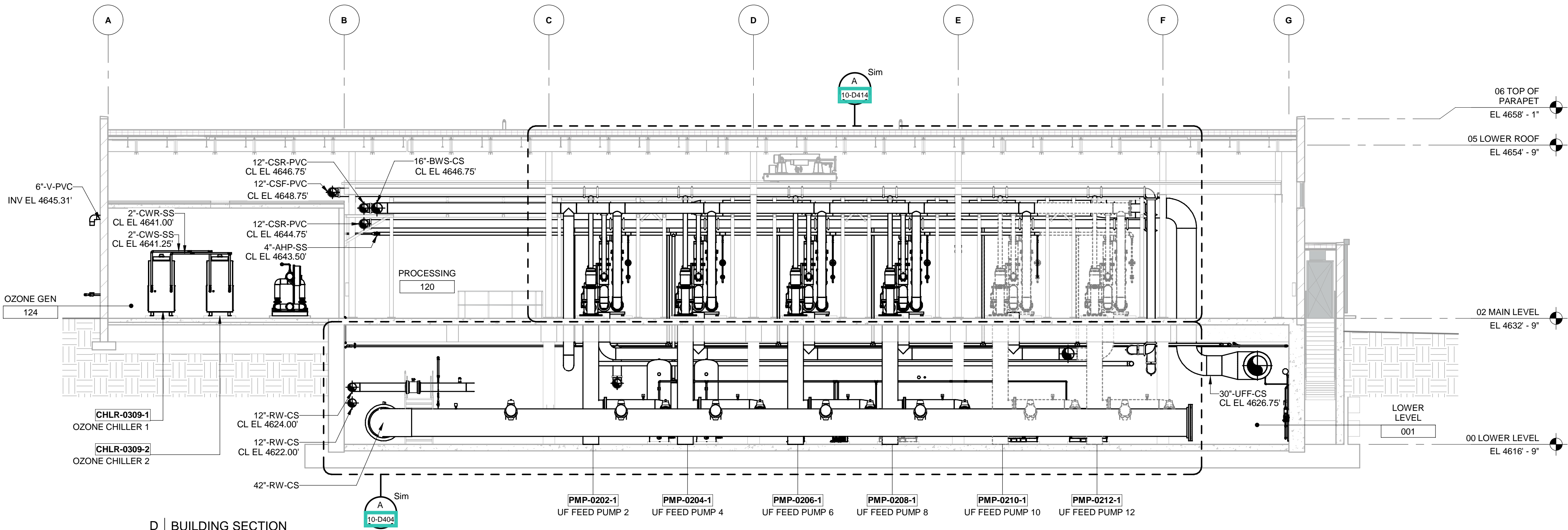
Last Plotted: 4/14/2023 8:22:56 AM
Filename: BM 360/CI-AMER-Provo River WTP/60670884_10-D301.rvt

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



C | BUILDING SECTION

10-D101 SCALE: 1/8" = 1'-0"



D | BUILDING SECTION

10-D101 SCALE: 1/8" = 1'-0"



PROJECT

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A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

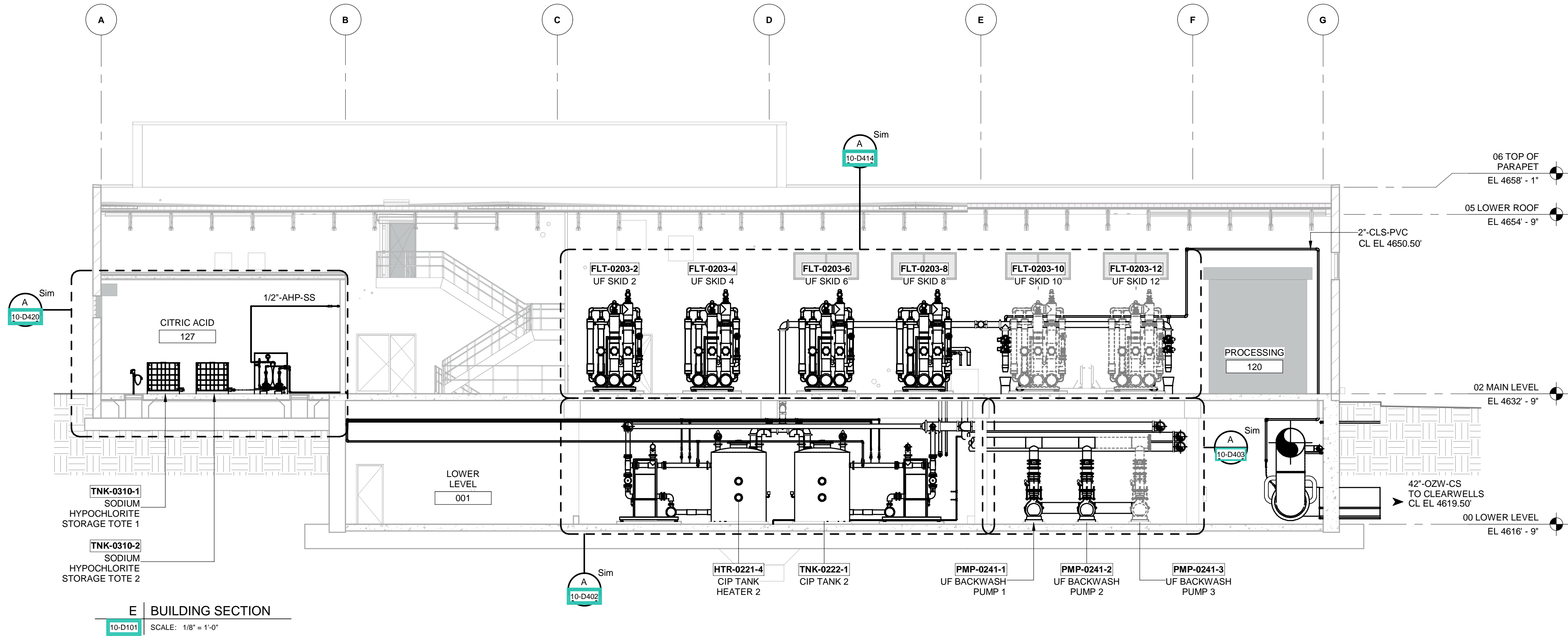
WATER TREATMENT
PROCESS MECHANICAL
BUILDING SECTIONS

DRAWING NUMBER

10-D302 - D1

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOB Project Manager: J.KRINKS
Last Plotted: 4/14/2023 8:23:08 AM
Filename: BM 360/CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D001.rvt

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



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ISSUE/REVISION

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

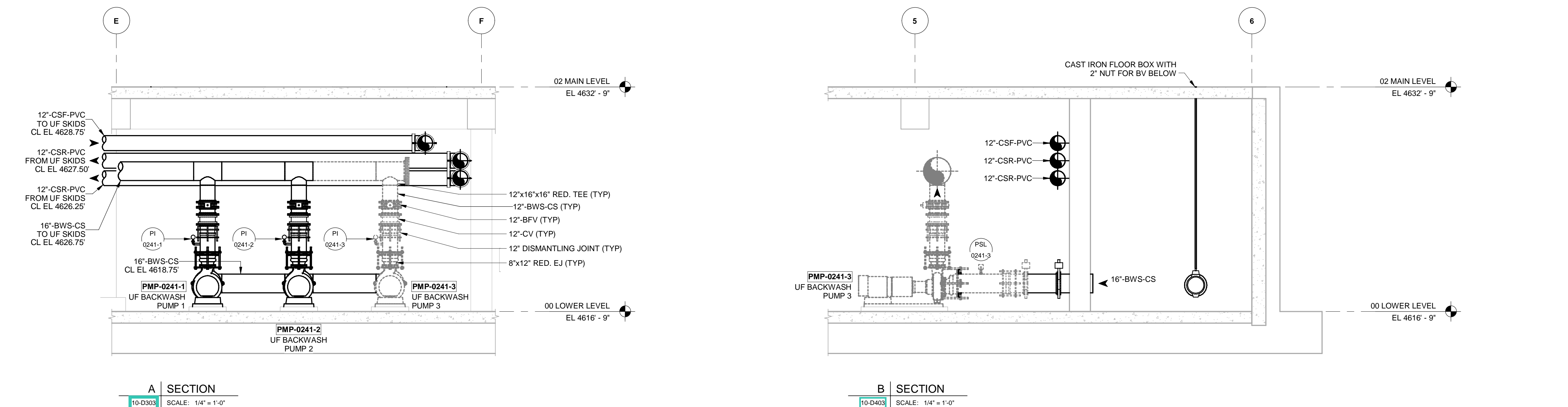
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
BUILDING SECTION

DRAWING NUMBER

10-D303 - D1



ANSI D 22' x 34'

Approved: B.HODGSON

Checked: J.KRINKS

Designer: J.MIX

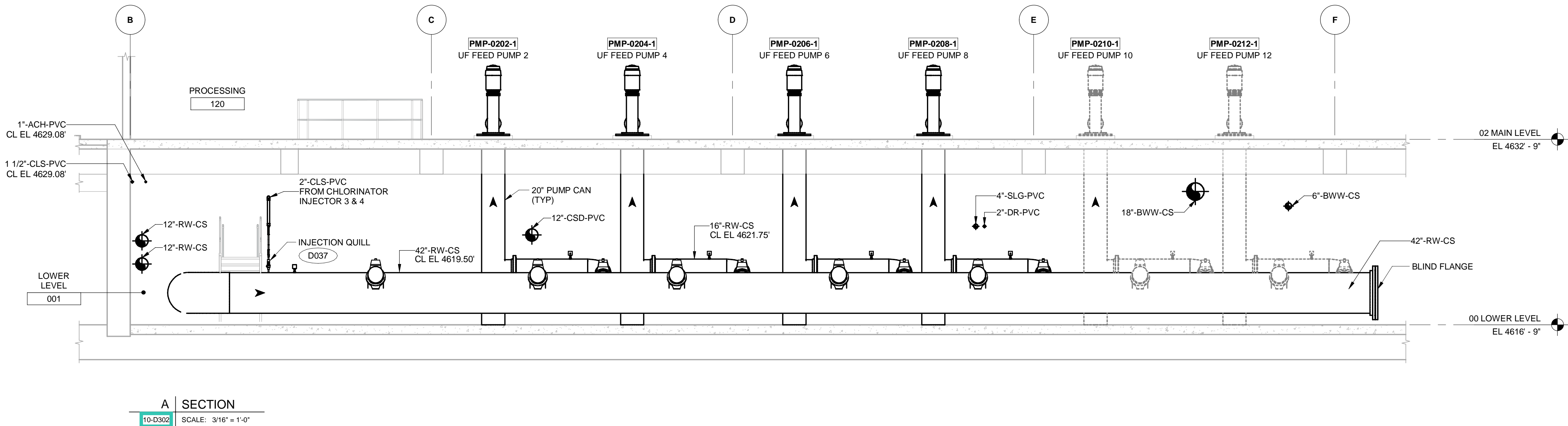
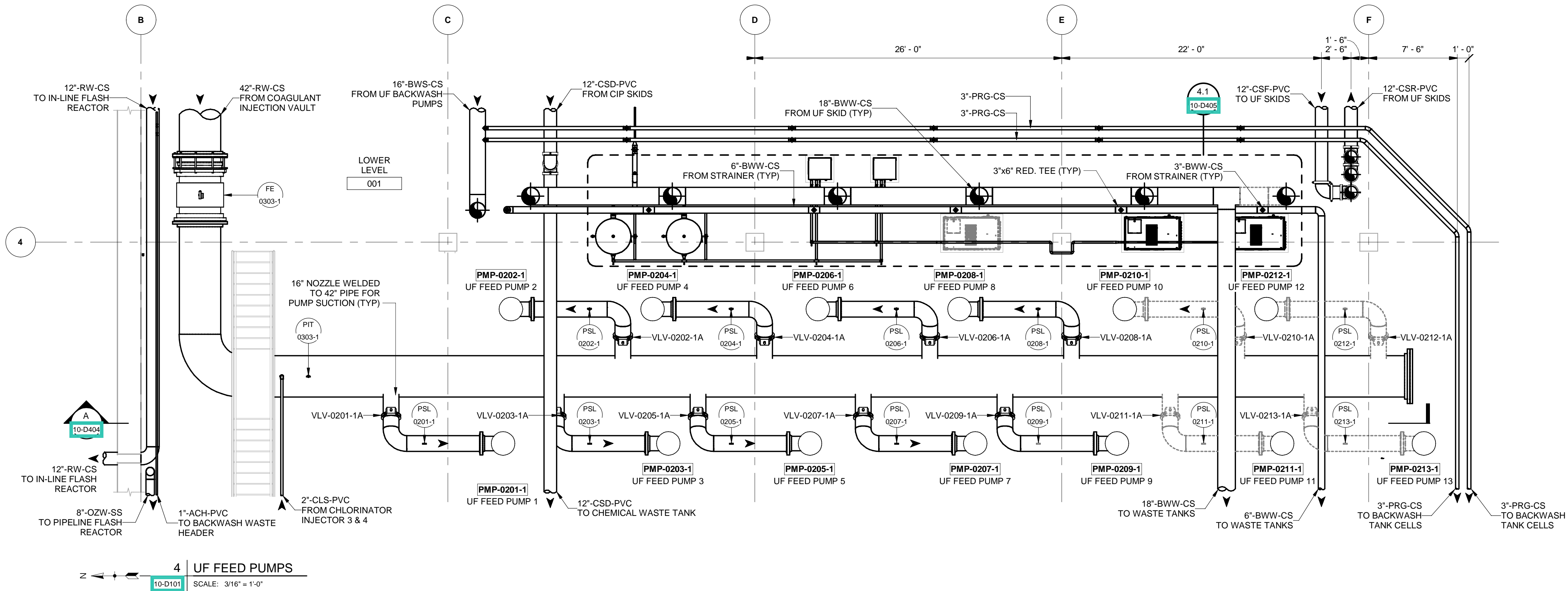
Drafter: P.ALCOUS

Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:23:26 AM
Filename: BM 36070884-Provo River WTP 60670884-10-D001.rvt

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING



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REGISTRATION

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B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
UF FEED PUMPS
ENLARGED PLAN &
SECTION

DRAWING NUMBER

10-D404 - D1

ANSI D 22' x 34'

Approved: B.HODGSON

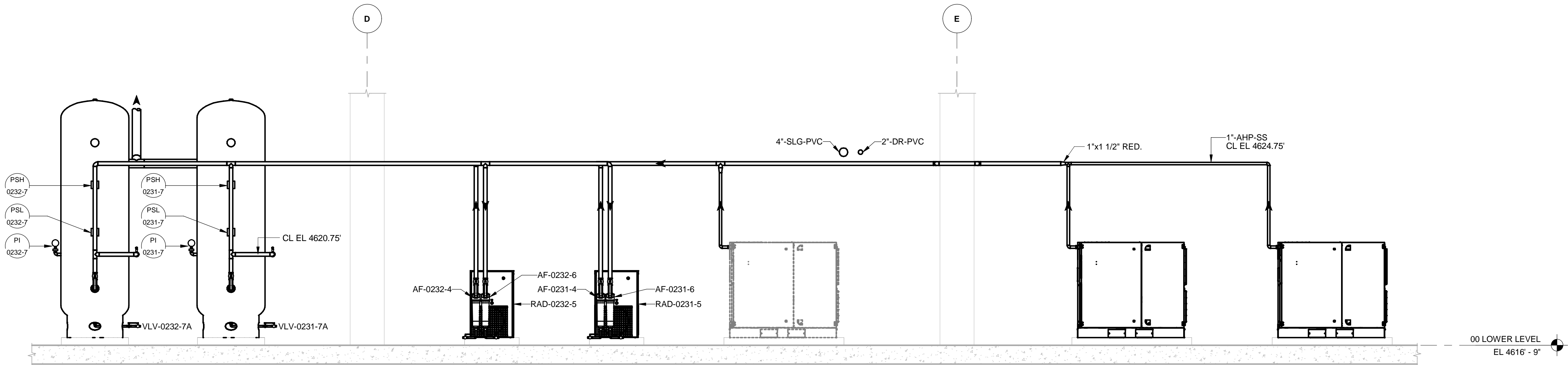
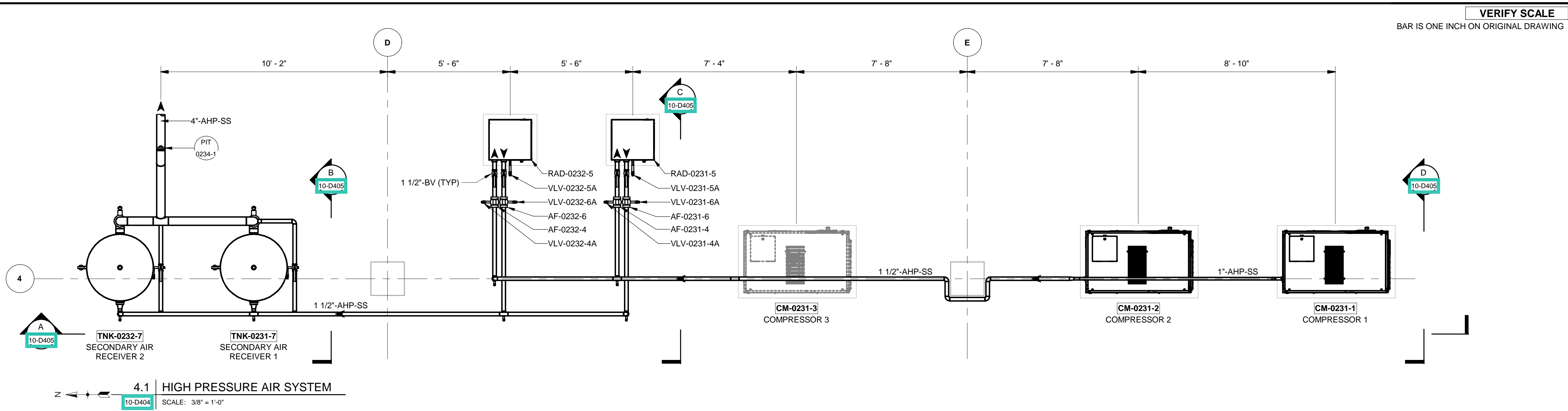
Checked: J.KRINKS

Designer: J.MIX

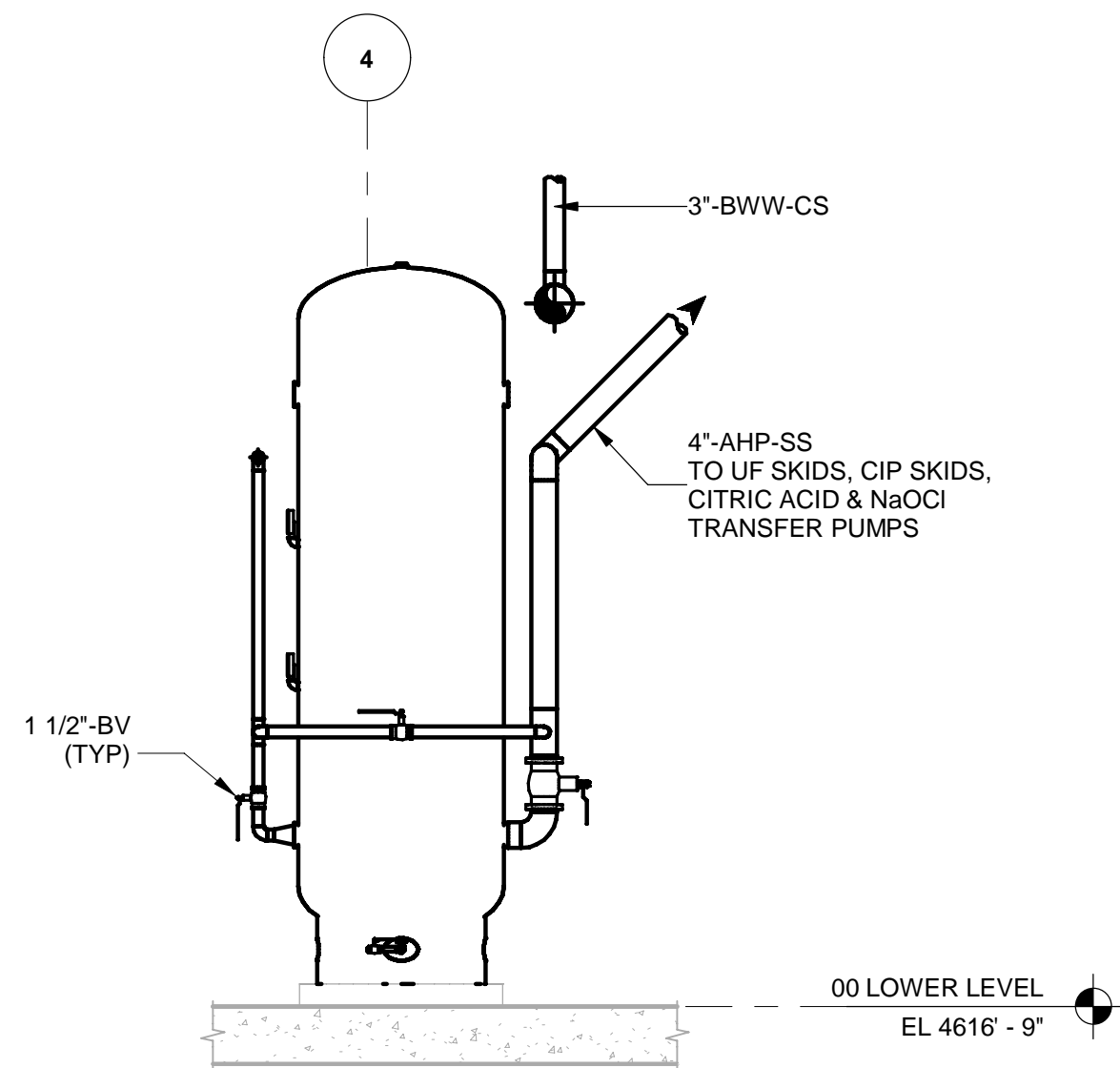
Drafter: P.ALCOO

Project Manager: J.KRINKS

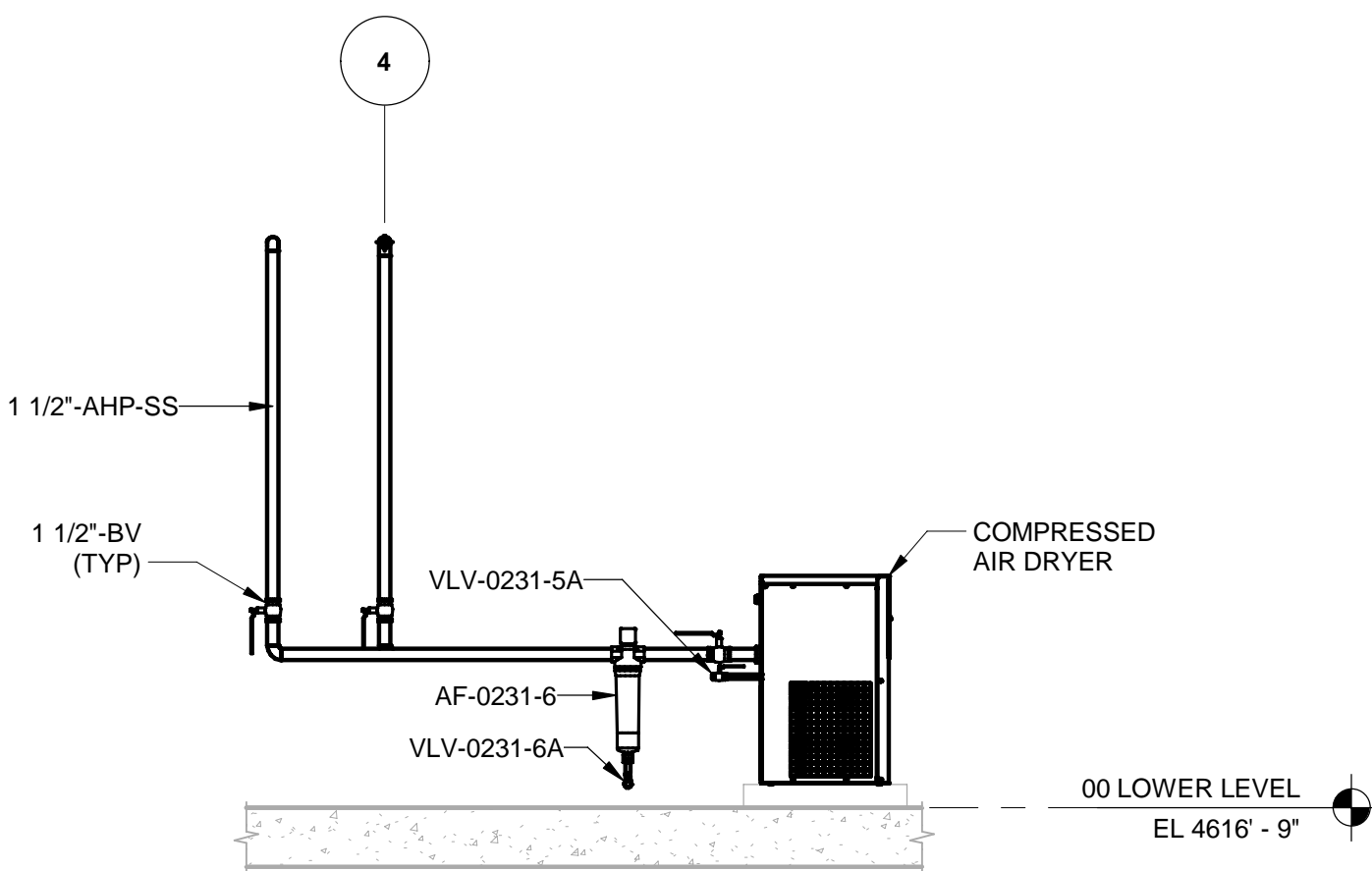
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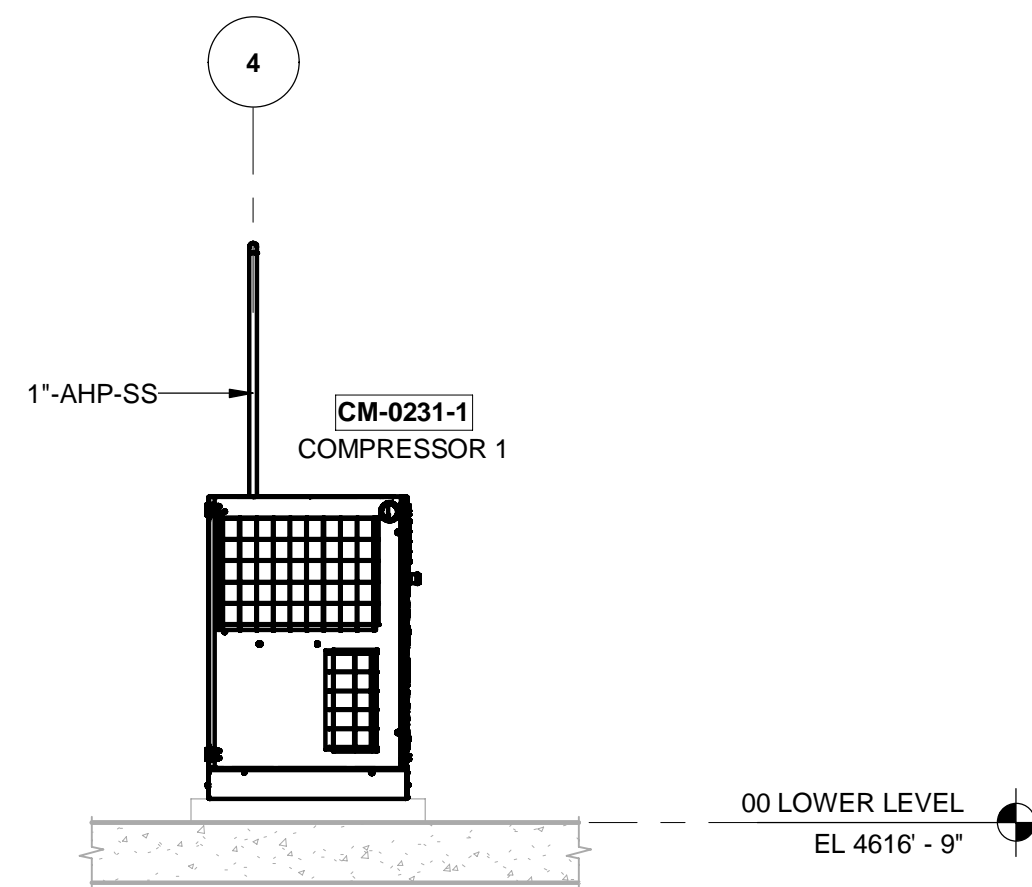
A SECTION
10-D405 SCALE: 3/8" = 1'-0"



B SECTION
10-D405 SCALE: 3/8" = 1'-0"



C SECTION
10-D405 SCALE: 3/8" = 1'-0"



D SECTION
10-D405 SCALE: 3/8" = 1'-0"

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Hansen, Allen & Luce, Inc.
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Tel: (801) 566-5599
http://www.hansenallenluce.com

NOTICE:

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DEDUCTED FOR 20MGD BID ALTERNATIVE.
SEE 00 43 00 BID SCHEDULE FOR DESCRIPTION
OF WORK TO BE EXCLUDED.

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
D	2023-04-07	ISSUED FOR BID
C	2023-01-20	ISSUED FOR 90%
B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
HIGH PRESSURE AIR
SYSTEM ENLARGED
PLAN & SECTIONS

DRAWING NUMBER

10-D405 - D1

ANSI D 22' x 34'

Approved: B.HODGSON

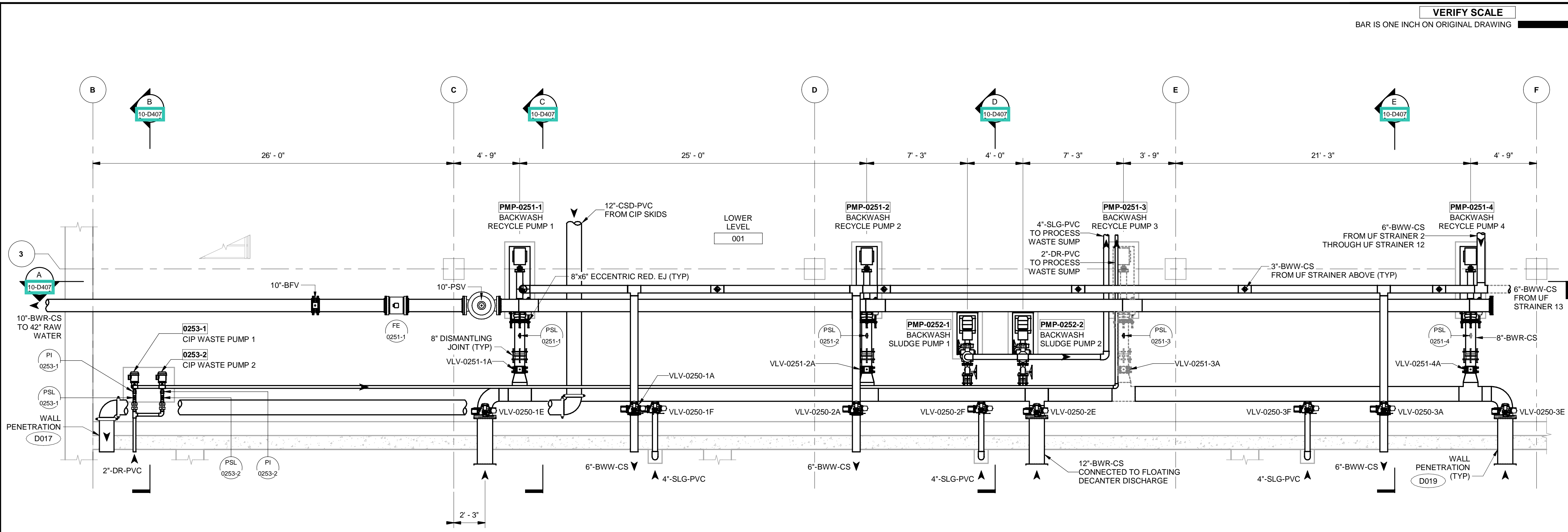
Checked: J.KRINKS

Designer: J.MIX

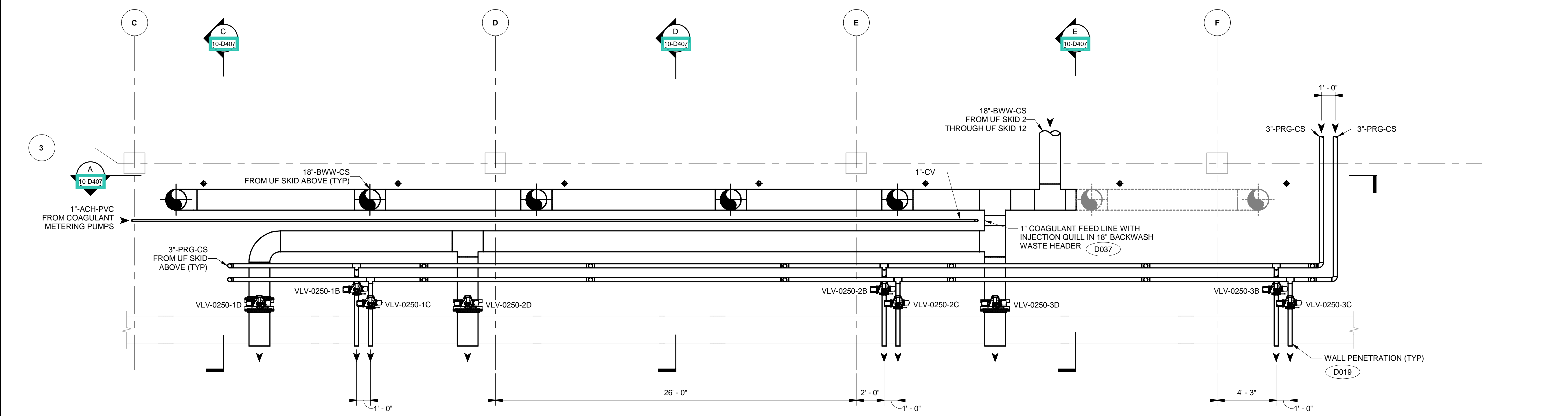
Drafter: P.ALCOUS

Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:23:39 AM
Filename: BM 360/CI-AMER (USA) 60570884-Provo River WTP/60570884_10-D001.rvt



5 ENLARGED PLAN EL 4616.75'
SCALE: 1/4" = 1'-0"



6 ENLARGED PLAN EL 4627.50'
SCALE: 1/4" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT
**PROVO RIVER
WATER TREATMENT
PLANT**

CLIENT
**PROVO CITY
PUBLIC WORKS**
1377 South 350 East
Provo, UT 84606
Tel: (801) 852-6700



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REGISTRATION

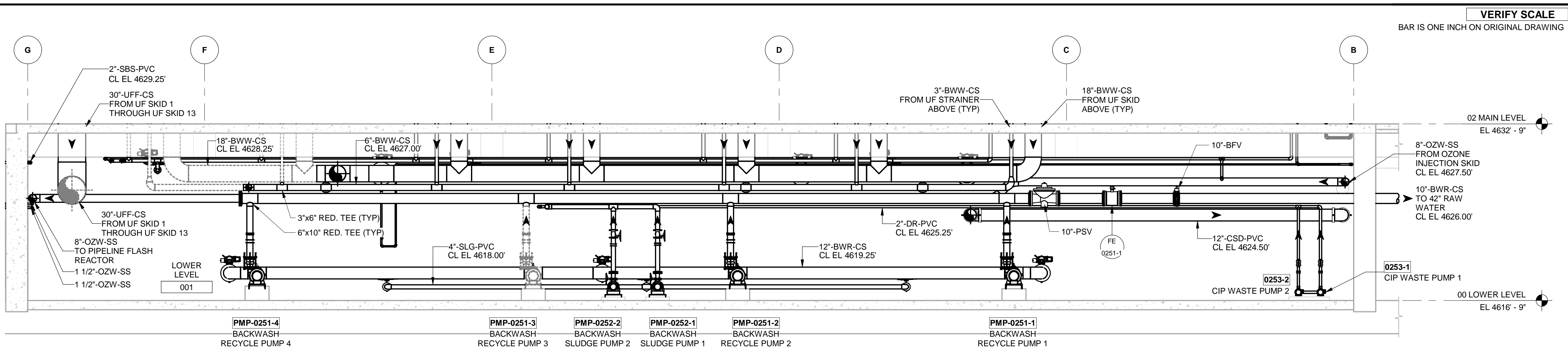
ISSUE/REVISION		
I/R	DATE	DESCRIPTION
D	2023-04-07	ISSUED FOR BID
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PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

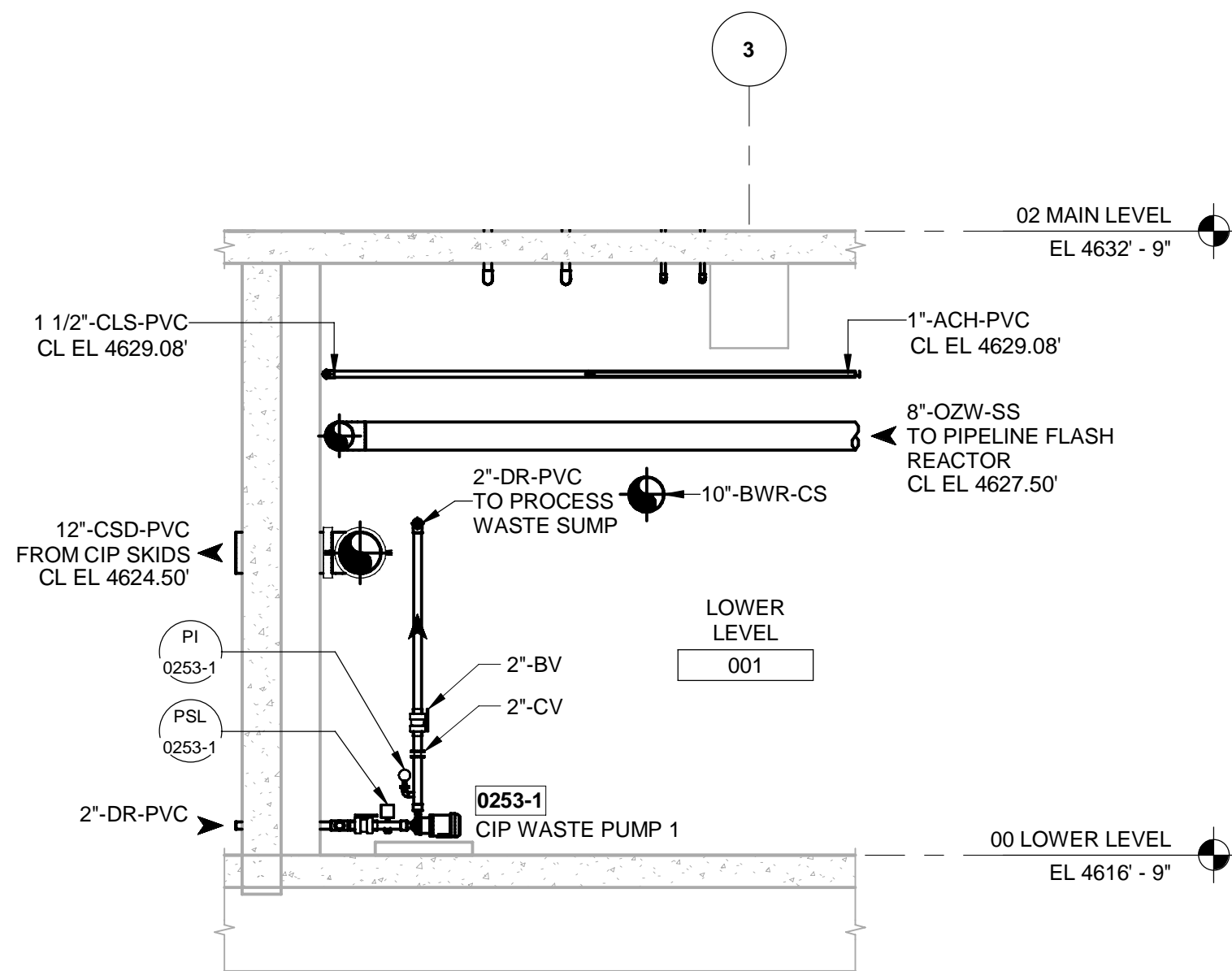
SHEET TITLE
**WATER TREATMENT
PROCESS MECHANICAL
PROCESS PIPING
ENLARGED PLANS**

DRAWING NUMBER
10-D406 - D1

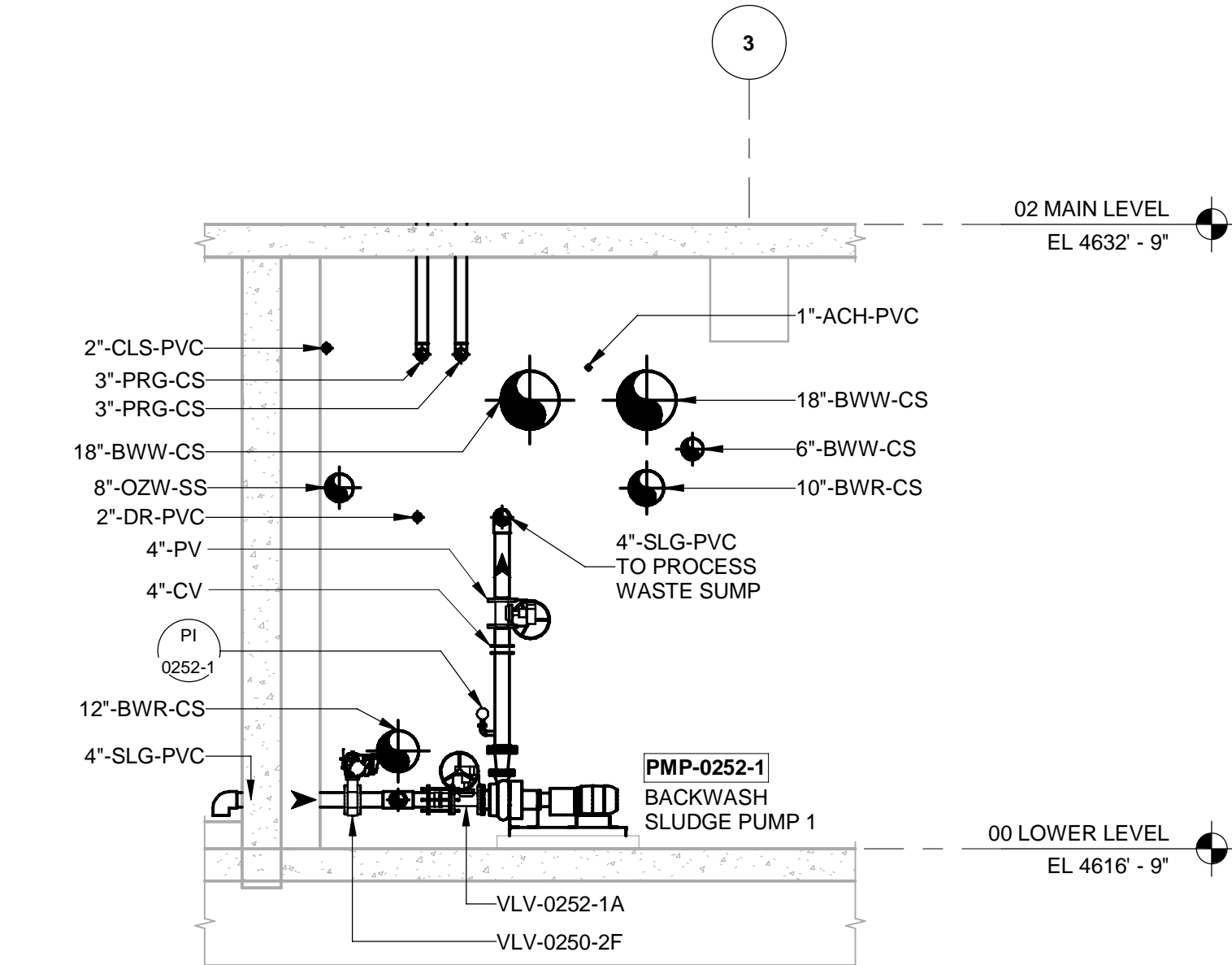
ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOOS Project Manager: J.KRINKS
Last Plotted: 4/14/2023 8:23:44 AM
Filename: BM 360/CI-AMER (USA) 60570884-Provo River WTP/60570884_10-D001.rvt



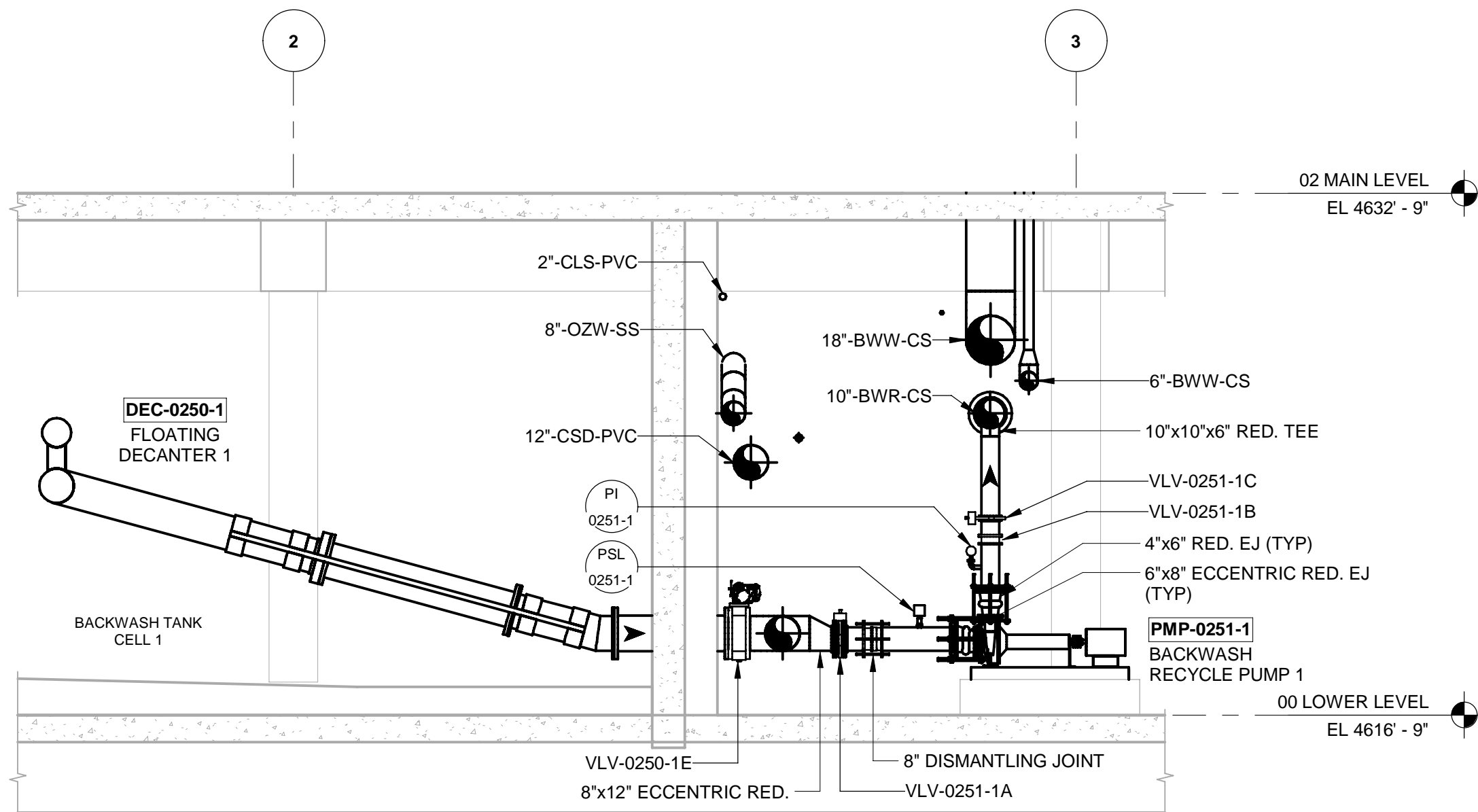
A SECTION
10-D406 SCALE: 3/16" = 1'-0"



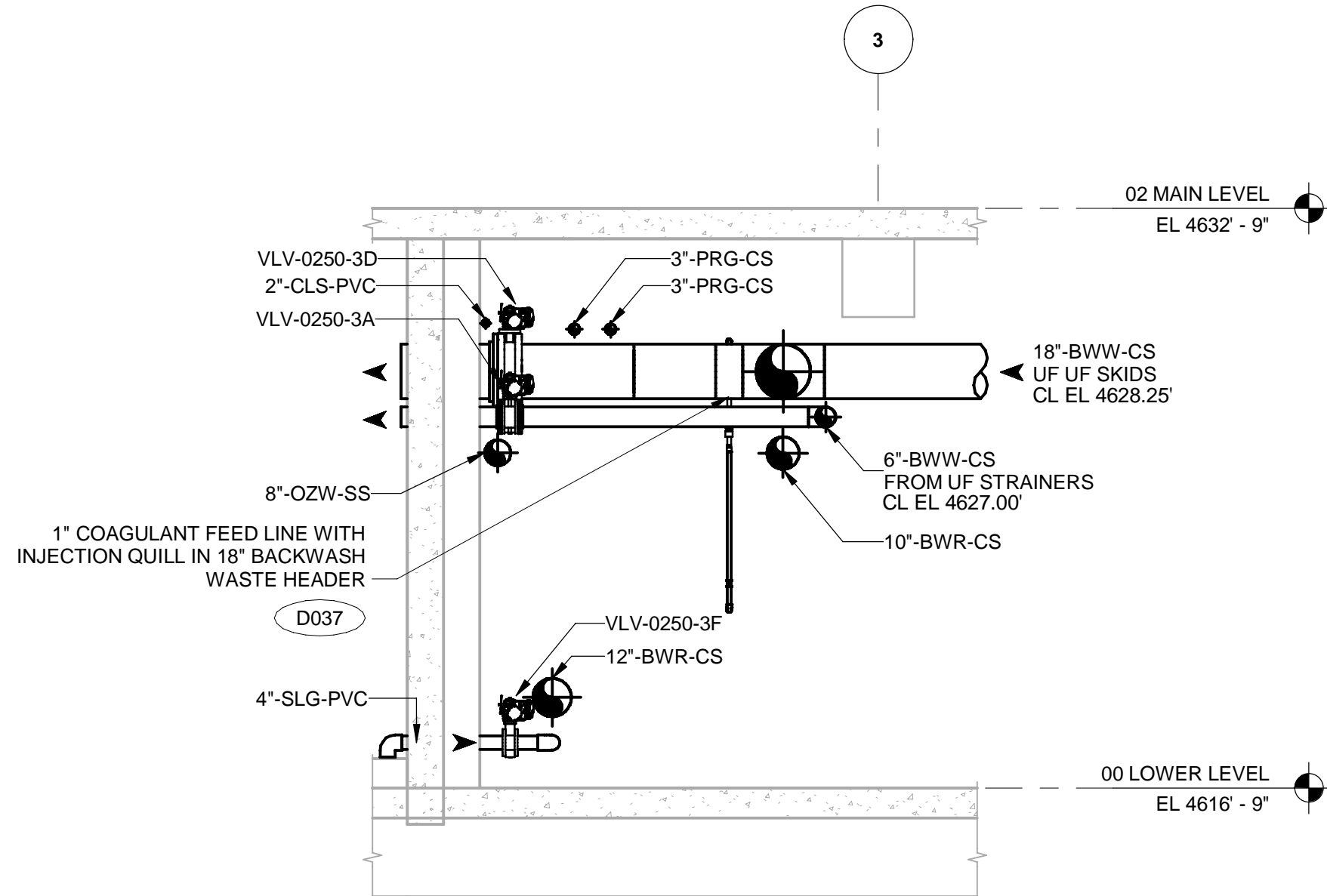
B SECTION
10-D406 SCALE: 1/4" = 1'-0"



D SECTION
10-D406 SCALE: 1/4" = 1'-0"



C SECTION
10-D406 SCALE: 1/4" = 1'-0"



E SECTION
10-D406 SCALE: 1/4" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

AECOM
HANSEN
ALLEN
& LUCE inc
ENGINEERS

PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

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REGISTRATION

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NO.	DATE	DESCRIPTION
B	2023-04-07	ISSUED FOR BID
A	2023-01-20	ISSUED FOR 90%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

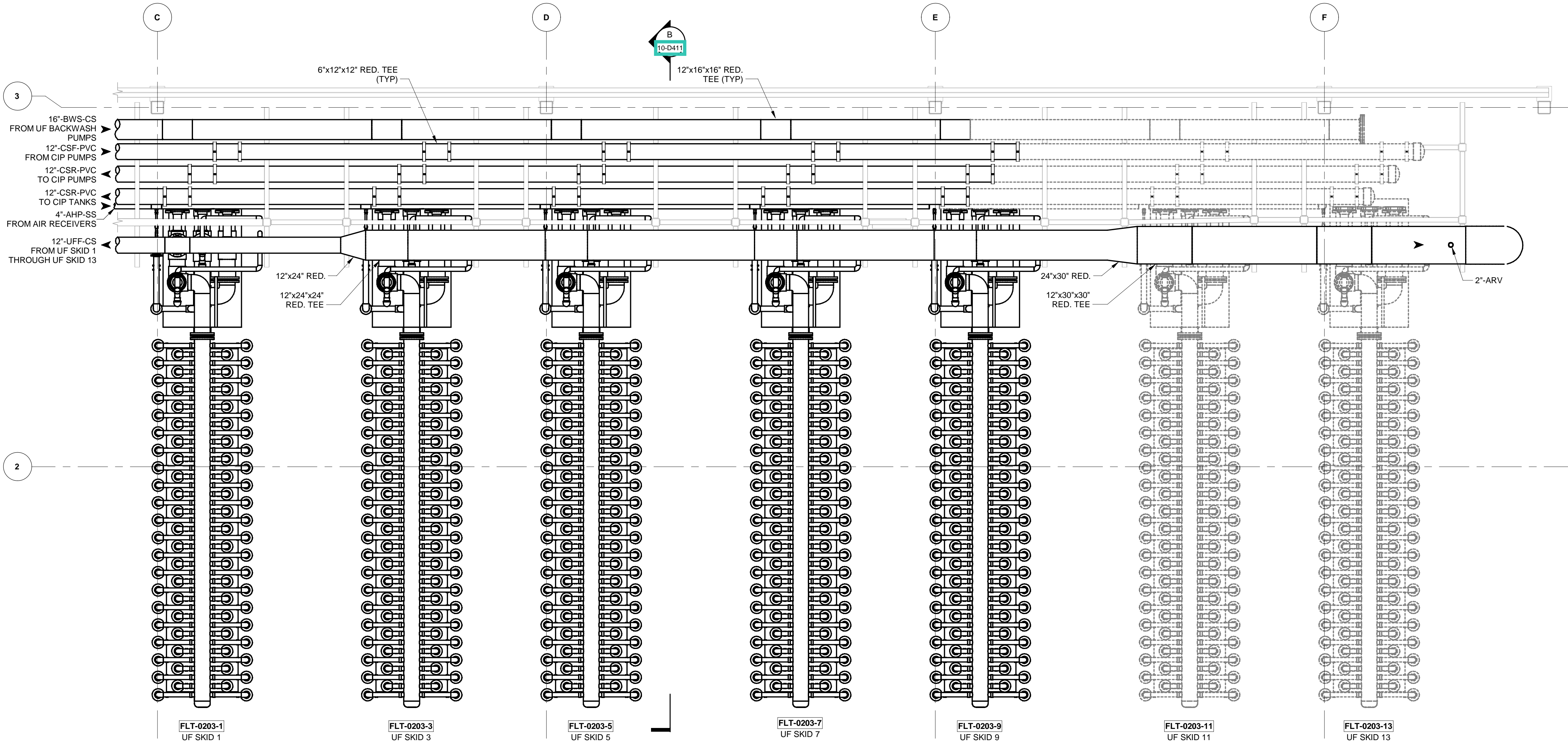
WATER TREATMENT
PROCESS MECHANICAL
PROCESS PIPING
ENLARGED SECTIONS

DRAWING NUMBER

10-D407 - D1

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOB Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:23:53 AM
Filename: BM 360/CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D001.rvt



1 ENLARGED PLAN EL 4643.25'
SCALE: 1/4" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT
PROVO RIVER
WATER TREATMENT
PLANT

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REGISTRATION

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B	2023-04-07	ISSUED FOR BID
A	2023-01-20	ISSUED FOR 90%
I/R	DATE	DESCRIPTION

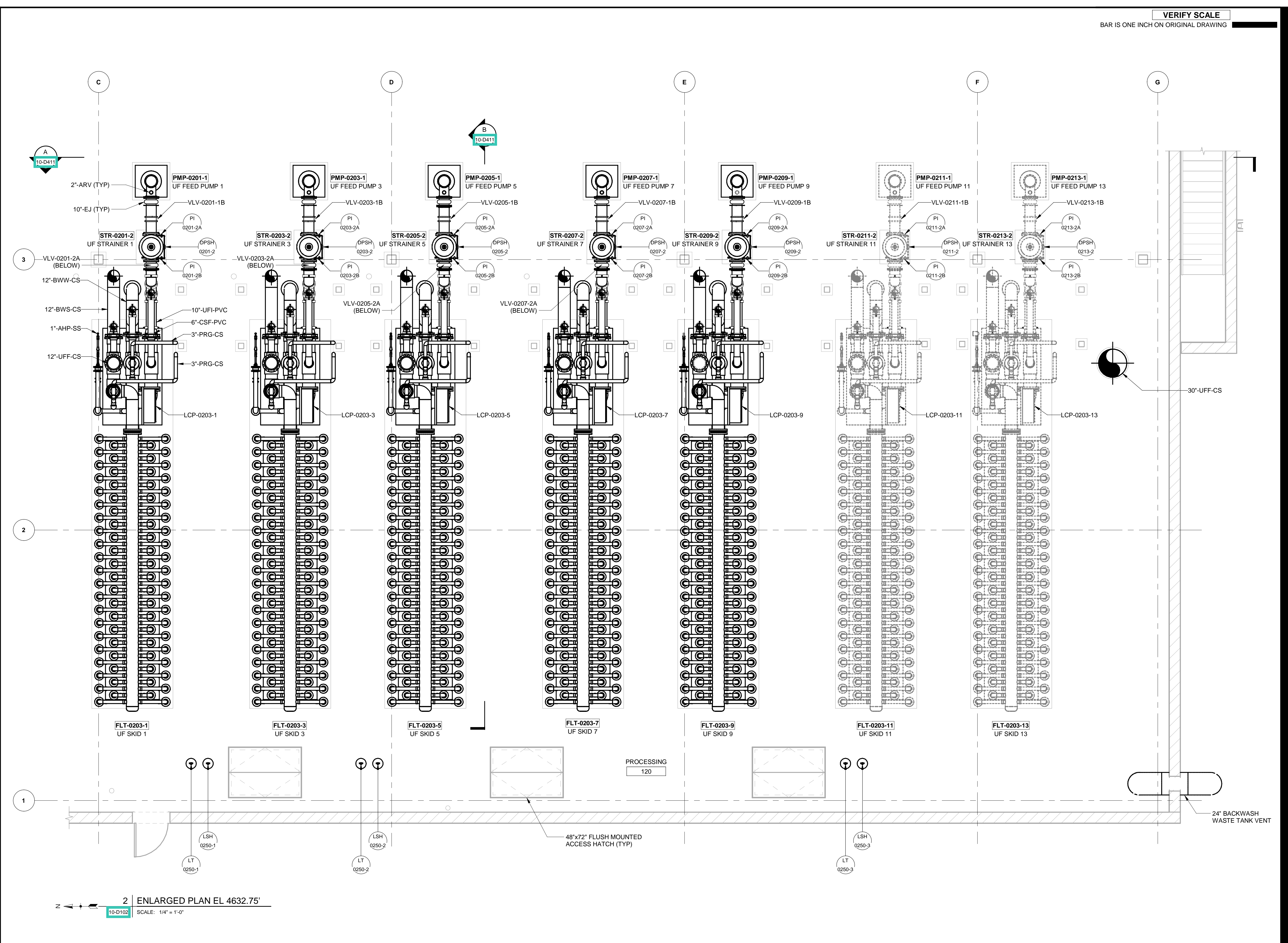
PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE
WATER TREATMENT
PROCESS MECHANICAL
UF SKIDS 1-13
ENLARGED PLAN

DRAWING NUMBER
10-D409 - D1

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOES Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:24:02 AM
Filename: BM 360/CI-AMER-Provo River WTP/60570884_10-D01.rvt



AECOM

HANSEN

ALLEN

& LUCE Inc

ENGINEERS

PROJECT

**PROVO RIVER
WATER TREATMENT
PLANT**

CLIENT

**PROVO CITY
PUBLIC WORKS**
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CONSULTANTS

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REGISTRATION

ISSUE/REVISION

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B	2022-10-24	ISSUED FOR 60%
A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

**WATER TREATMENT
PROCESS MECHANICAL
UF SKIDS 1-13
ENLARGED PLAN**

DRAWING NUMBER

10-D410 - D1



ITEMS DASHED INDICATE EQUIPMENT TO BE DEDUCTED FOR 20MGD BID ALTERNATIVE. SEE 00 43 00 BID SCHEDULE FOR DESCRIPTION OF WORK TO BE EXCLUDED.

10-D411 - D1



ANSI D 22' x 34'

Approved: B.HODGSON

Checked: J.KRINKS

Designer: J.MIX

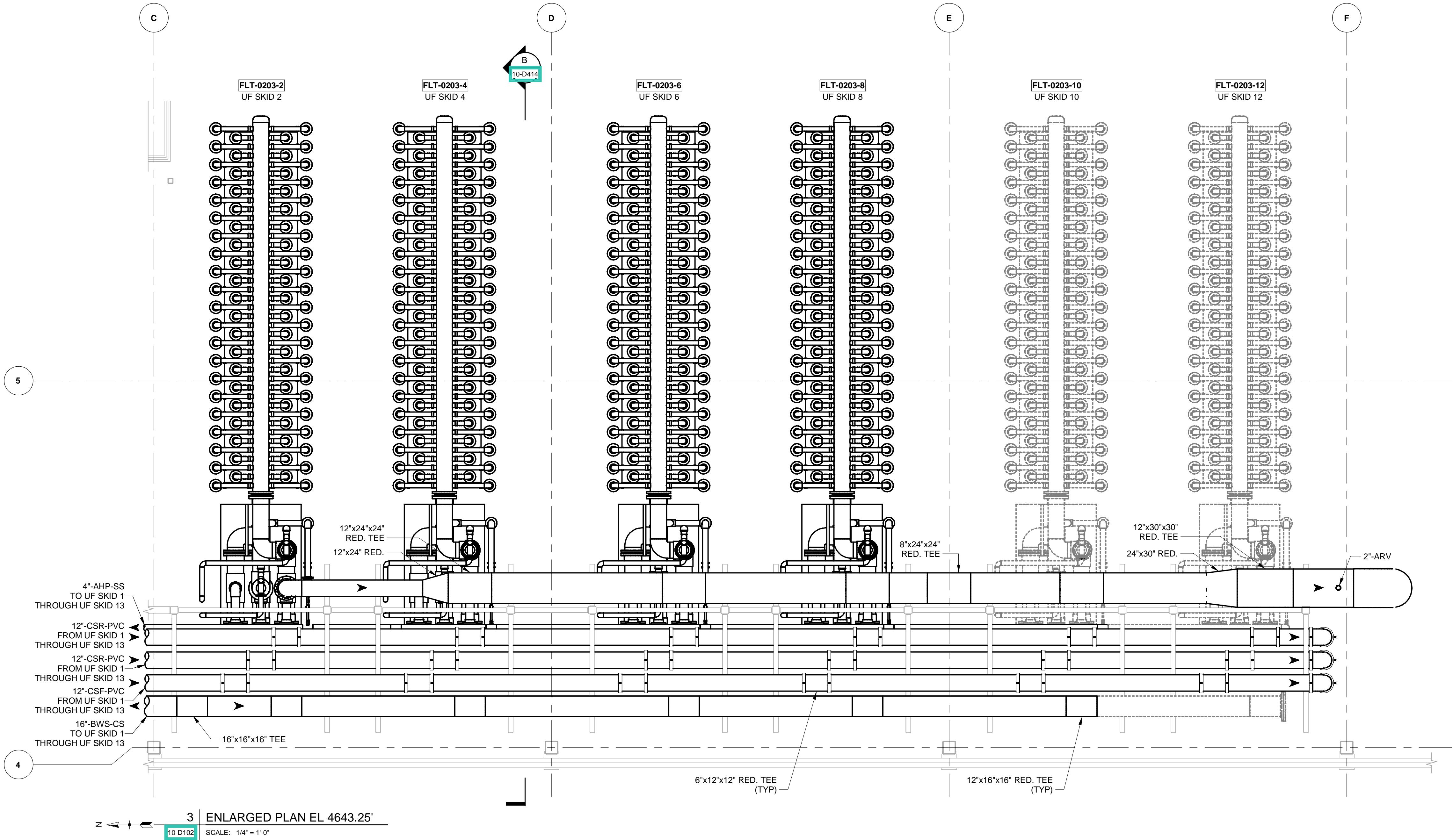
Drafter: P.ALCOUS

Project Manager: J.KRINKS

Last Plotted: 4/14/2023 8:24:21 AM
Filename: BM 3607/CI-AMER (USA) 60670884-Provo River WTP/60670884_10-D001.rvt

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

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REGISTRATION

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

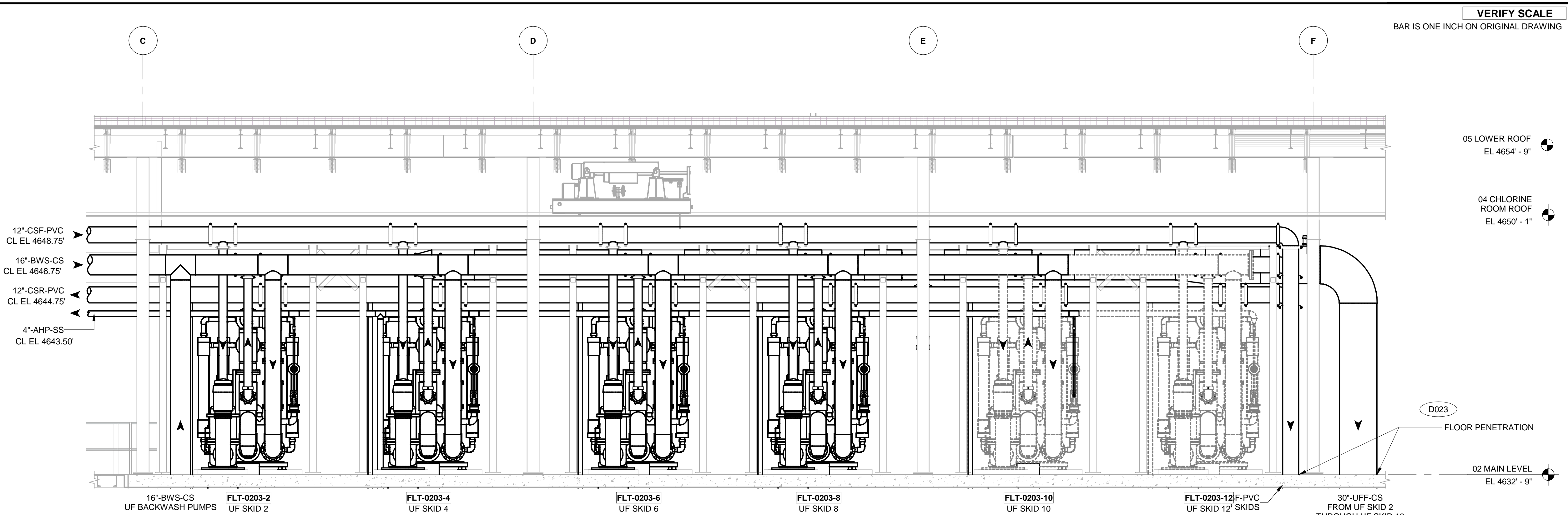
SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
UF SKIDS 2-12
ENLARGED PLAN

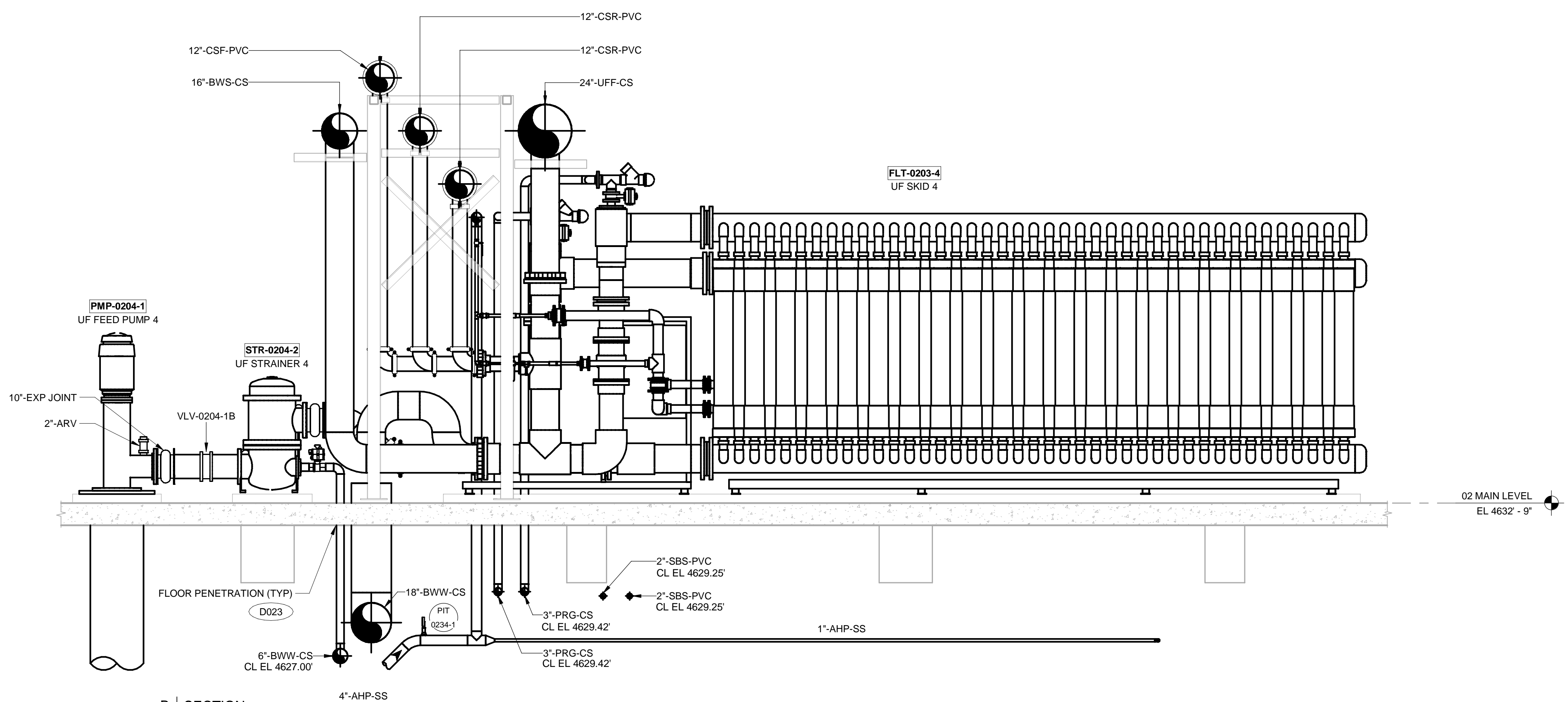
DRAWING NUMBER

10-D412 - D1

ANSI D 22" x 34" Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOES Project Manager: J.KRINKS
Last Plotted: 4/14/2023 8:24:41 AM
Filename: BM 360/CI-AMER-Provo River WTP/60670884_10-D001.rvt



A SECTION
10-D302 SCALE: 1/4" = 1'-0"



B SECTION
10-D301 SCALE: 3/8" = 1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



PROJECT
**PROVO RIVER
WATER TREATMENT
PLANT**

CLIENT
**PROVO CITY
PUBLIC WORKS**
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Provo, UT 84606
Tel: (801) 852-6700



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DEDUCTED FOR 20MGD BID ALTERNATIVE.
SEE 00 43 00 BID SCHEDULE FOR DESCRIPTION
OF WORK TO BE EXCLUDED.

REGISTRATION

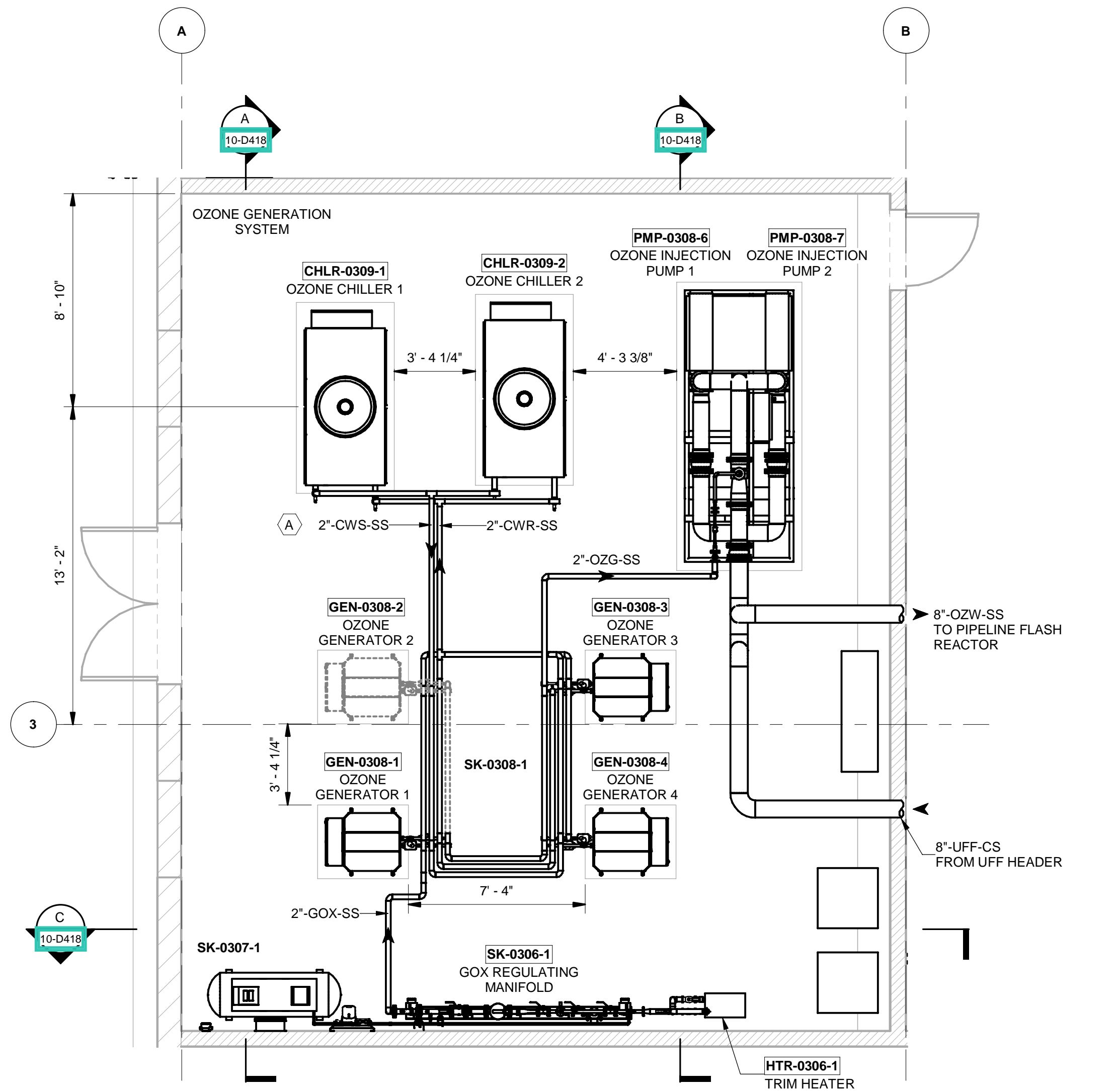
ISSUE/REVISION		
B	2023-04-07	ISSUED FOR BID
A	2023-01-20	ISSUED FOR 90%
I/R	DATE	DESCRIPTION

PROJECT NUMBER
AECOM Project No. - 60670884
HAL Project No. - 035.15.420

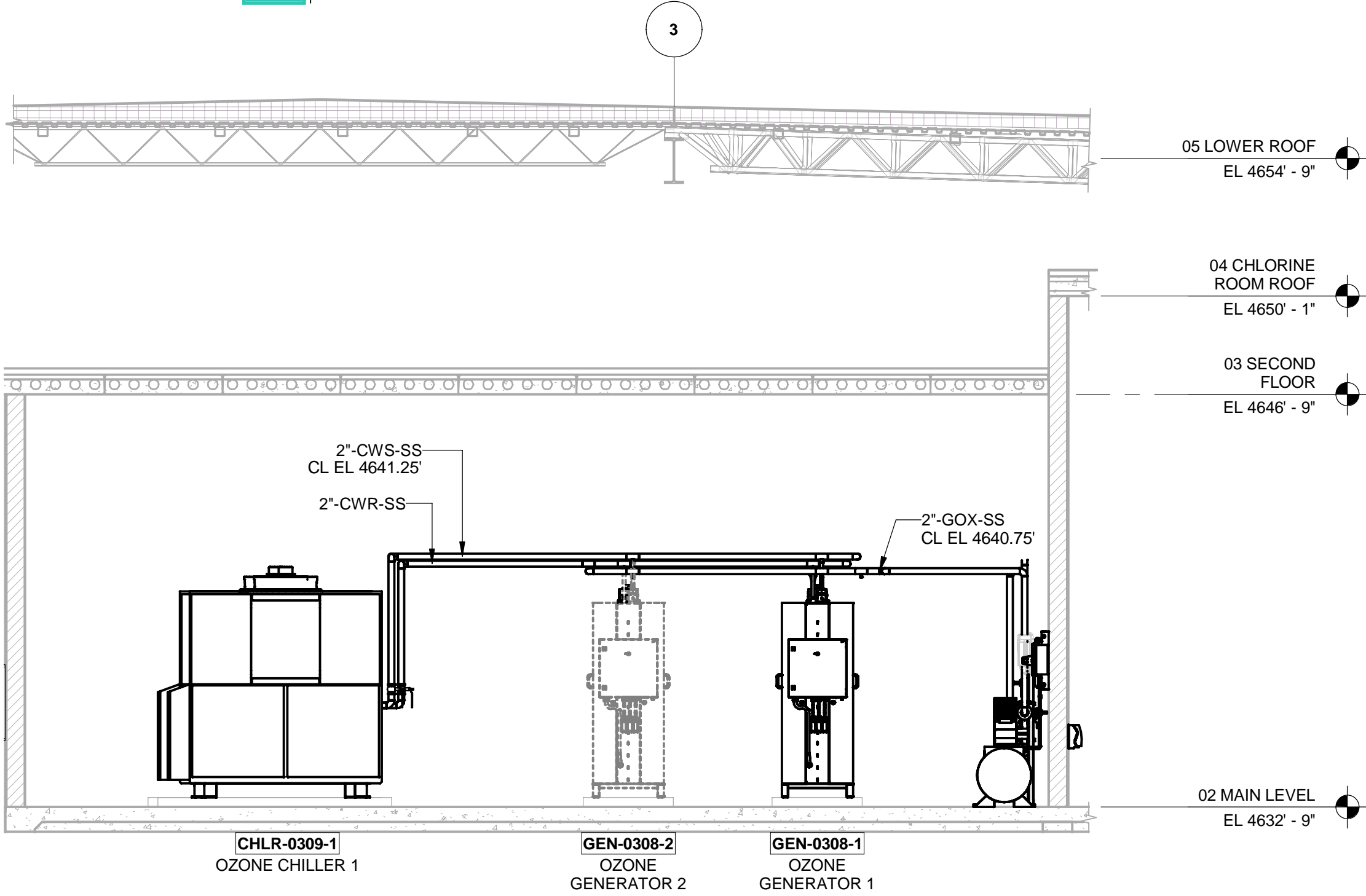
SHEET TITLE
**WATER TREATMENT
PROCESS MECHANICAL
UF SKID 2-12
ENLARGED SECTIONS**

DRAWING NUMBER
10-D414 - D1

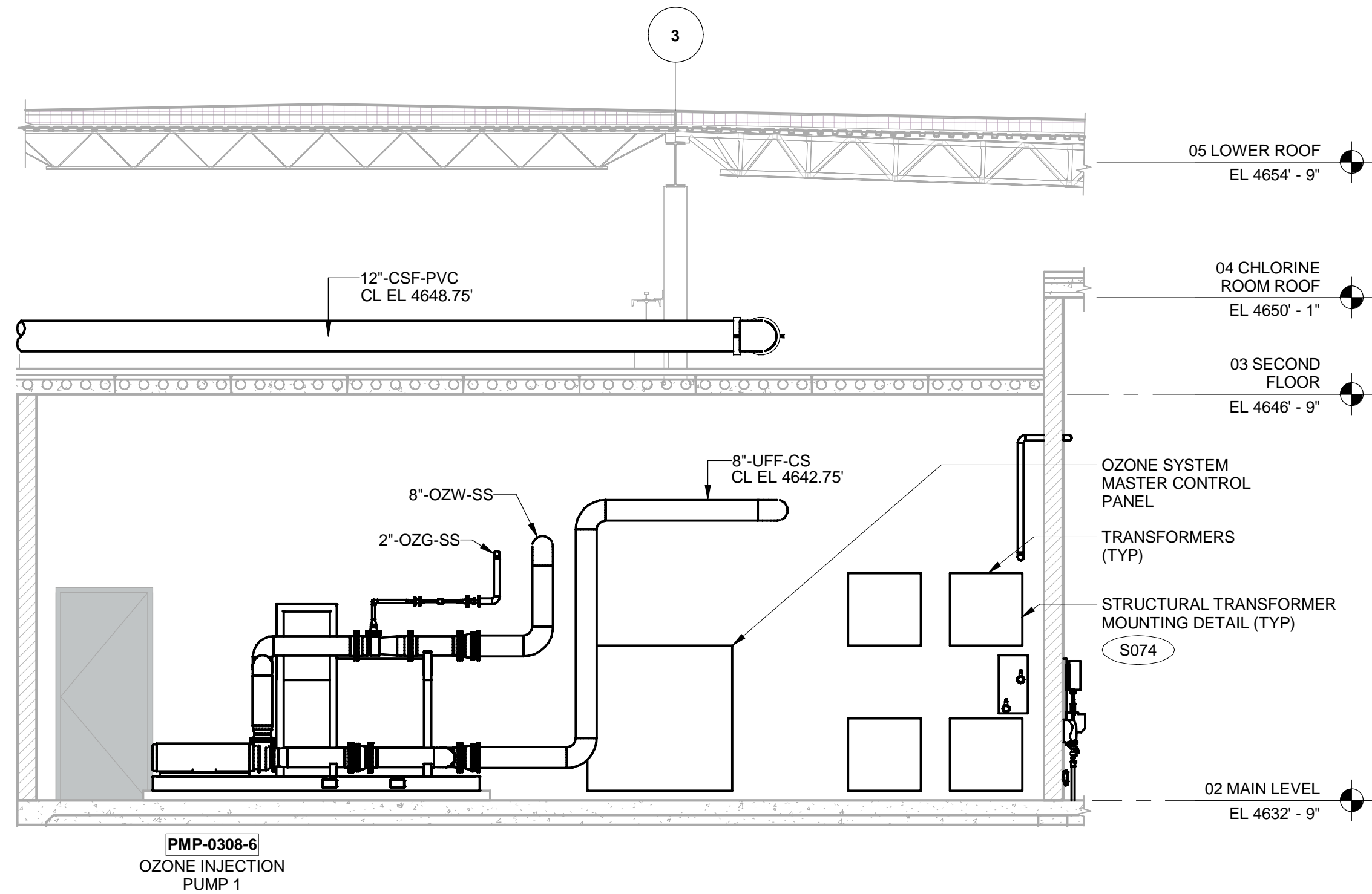
ANSI D 22' x 34' Approved: B.HODGSON Checked: J.KRINKS Designer: J.MIX Drafter: P.ALCOES Project Manager: J.KRINKS
Last Plotted: 4/14/2023 8:25:28 AM
Filename: BM 360/CI-AMER (USA) 60570884-Provo River WTP/60570884_10-D001.rvt



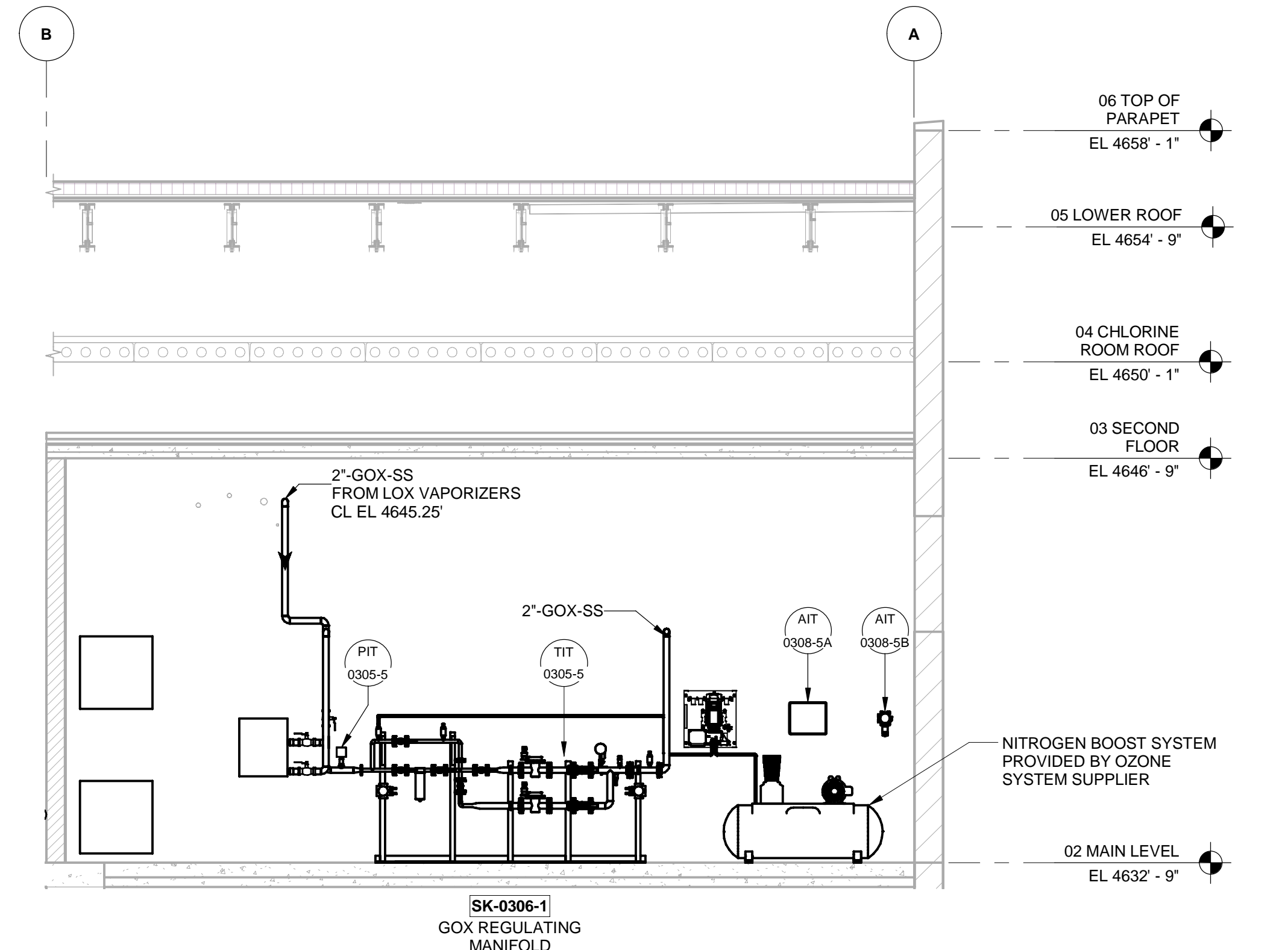
8 OZONE GENERATION
10-D102 SCALE: 1/4" = 1'-0"



A SECTION
10-D418 SCALE: 1/4" = 1'-0"



B SECTION
10-D418 SCALE: 1/4" = 1'-0"



C SECTION
10-D418 SCALE: 1/4" = 1'-0"

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

KEYNOTES

A. ALL COOLING WATER PIPING TO BE INSULATED. INSULATION THICKNESS SHALL BE AS RECOMMENDED BY CHILLER MANUFACTURER.



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

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CONSULTANTS

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http://www.aecom.com
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A	2022-07-01	ISSUED FOR 30%

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

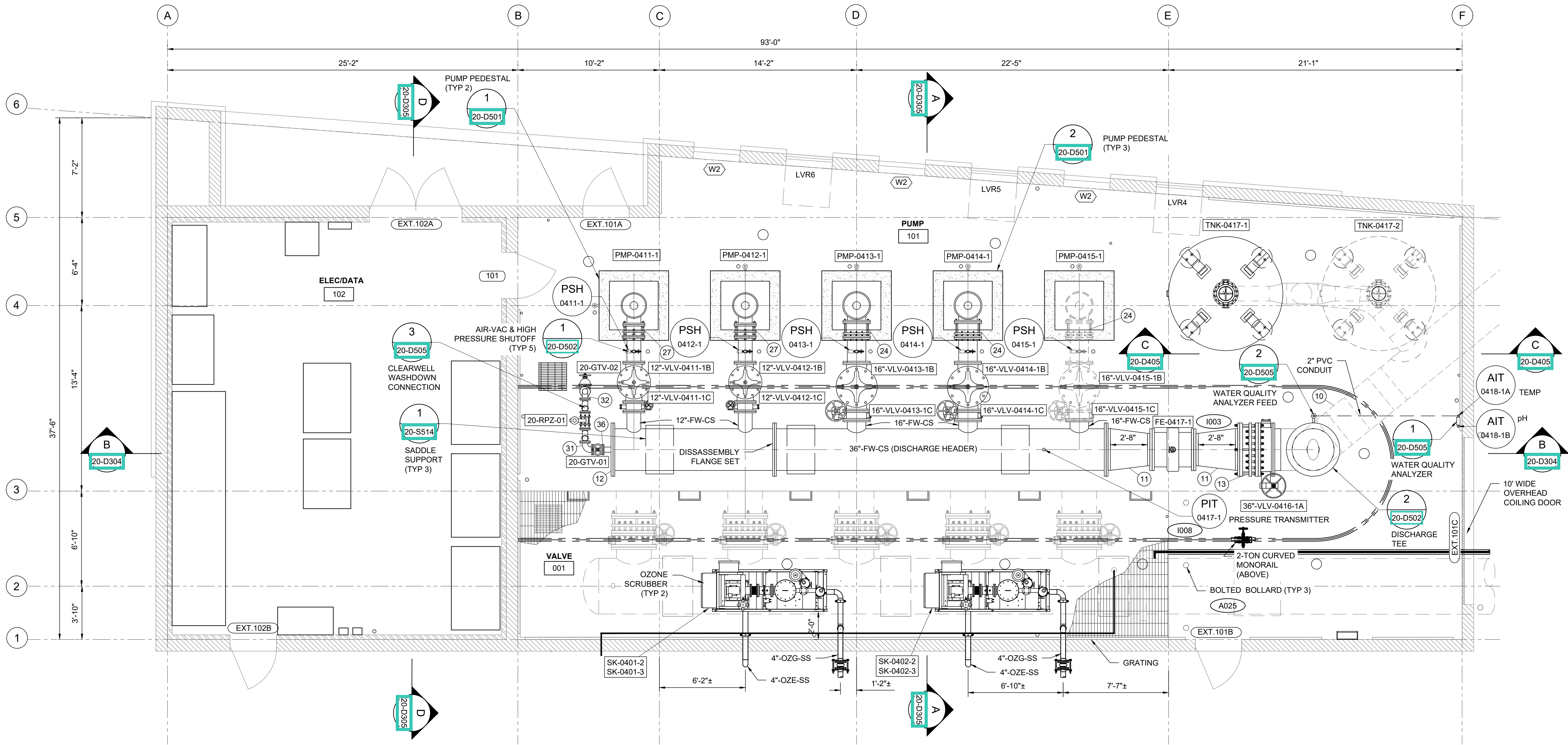
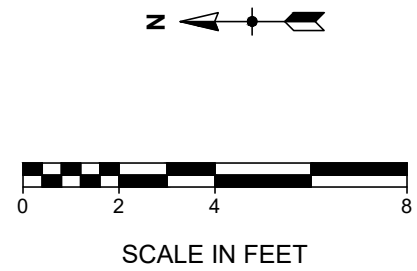
SHEET TITLE

WATER TREATMENT
PROCESS MECHANICAL
OZONE GENERATION
SYSTEM ENLARGED
PLAN & SECTIONS

DRAWING NUMBER

10-D418 - D1

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING



MAIN LEVEL PIPING PLAN
SCALE: 1/4" = 1'-0"



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

CLIENT

PROVO CITY
PUBLIC WORKS
1377 South 350 East
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PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

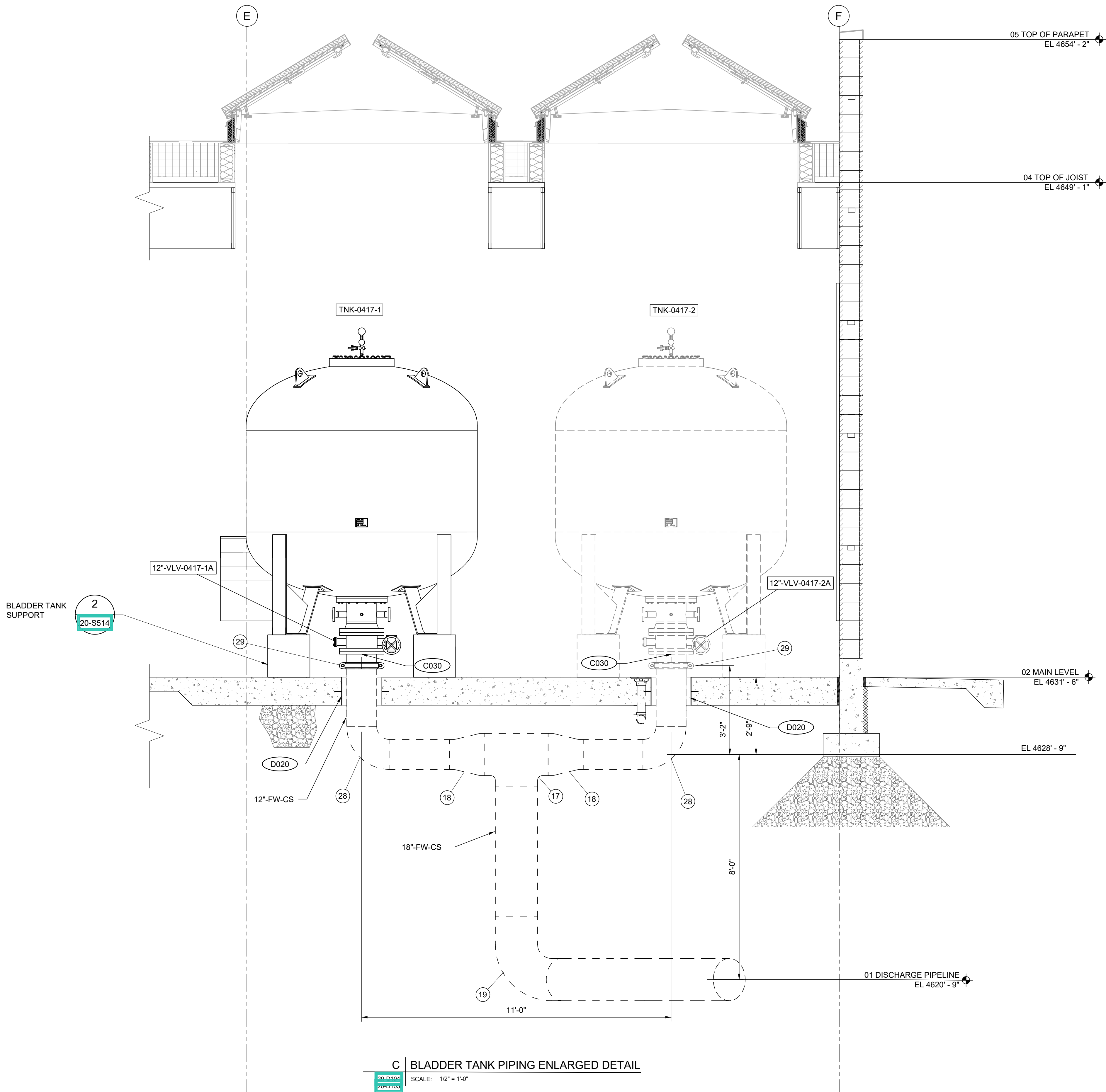
SHEET TITLE

CLEARWELL &
PUMP STATION
PROCESS MECHANICAL
MAIN LEVEL PIPING
PLAN

DRAWING NUMBER

20-D105-D1

ANSI D 22" x 34" Approved: M.ALLEN Checked: Z.STEELE Designer: Z.STEELE Project Manager: M.CHAMBERS Drafter: D.DOLDER
Last Plotted: 11/04/2023 9:03 AM
Filename: H:\Projects\035 - Provo City\15.420 WTP Design\CAD\20-D405-D1 PUMP STATION ENLARGED SECTION.dwg



VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

01234

SCALE IN FEET



PROJECT

PROVO RIVER
WATER TREATMENT
PLANT

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CONSULTANTS

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A	2022-07-01	ISSUED FOR 30%
I/R	DATE	DESCRIPTION

PROJECT NUMBER

AECOM Project No. - 60670884
HAL Project No. - 035.15.420

SHEET TITLE

CLEARWELL &
PUMP STATION
PROCESS MECHANICAL
BLADDER TANK PIPING
ENLARGED DETAIL

DRAWING NUMBER

20-D405-D1