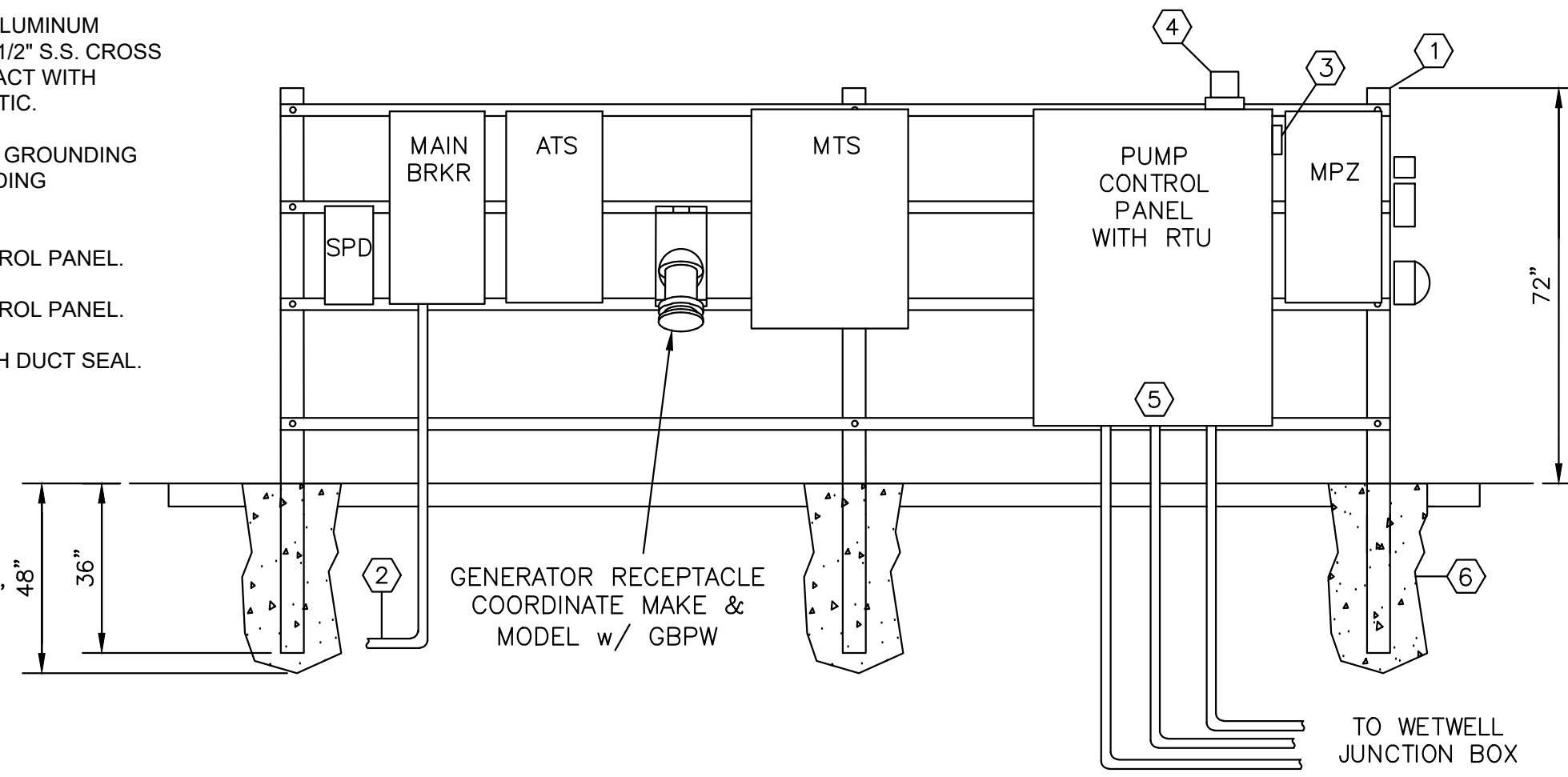


**EQUIPMENT RACK DETAIL NOTES:**

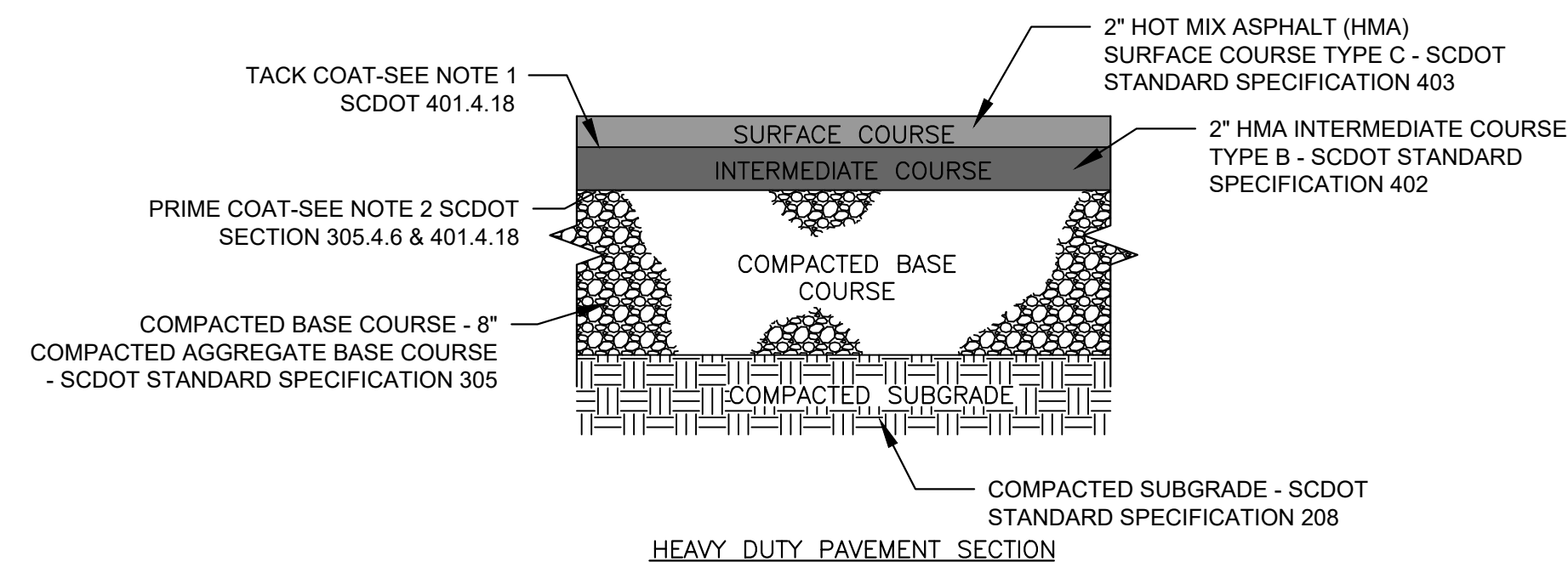
- 4"x4"x1/4" 316 STAINLESS STEEL OR ALUMINUM TUBING WITH END CAP AND 1 1/2" X 1 1/2" S.S. CROSS MEMBERS. COAT PORTIONS IN CONTACT WITH CONCRETE WITH 2 COATS OF BITUMSTIC.
- 1" SCH. 80 PVC WITH 2" BARE COPPER GROUNDING ELECTRODE CONDUCTOR TO GROUNDING ELECTRODES.
- ALARM HORN FURNISHED WITH CONTROL PANEL.
- ALARM LIGHT FURNISHED WITH CONTROL PANEL.
- SEAL CONDUITS FROM WETWELL WITH DUCT SEAL.
- ENCASE IN CONCRETE.

**ABBREVIATIONS:**

- SPD - SURGE PROTECTION DEVICE  
 ATS - AUTOMATIC TRANSFER SWITCH  
 MTS - MANUAL TRANSFER SWITCH  
 RTU - REMOTE TELEMETRY UNIT  
 MPZ - MINI POWER ZONE



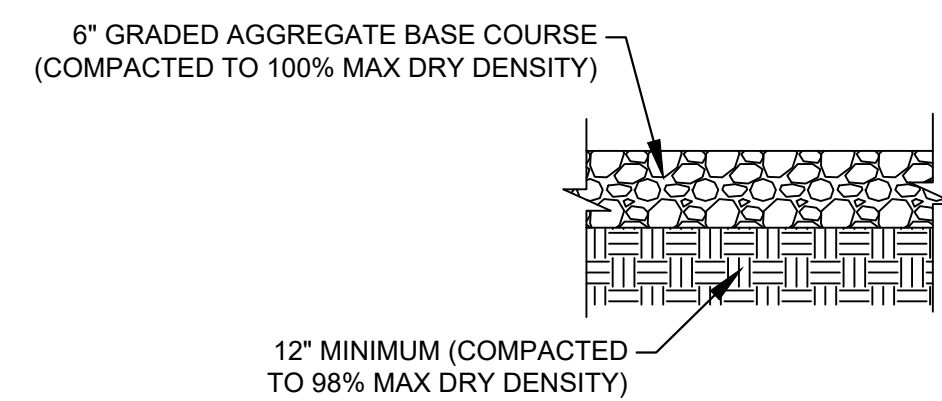
**TYPICAL EQUIPMENT RACK DETAIL**  
 SCALE: N.T.S.



**NOTES:**

- APPLICATION RATE FOR LAYING AND HMA ON EXISTING PAVEMENTS SHALL BE 0.05 - 0.15 GAL PER SQUARE YARD.
- APPLICATION RATE FOR MACADAM AND RECYCLED PORTLAND CEMENT BASE COURSE SHALL BE 0.25 - 0.30 GAL PER SQUARE YARD.

**PUMP STATION ASPHALT PAVING DETAIL**  
 SCALE: NTS

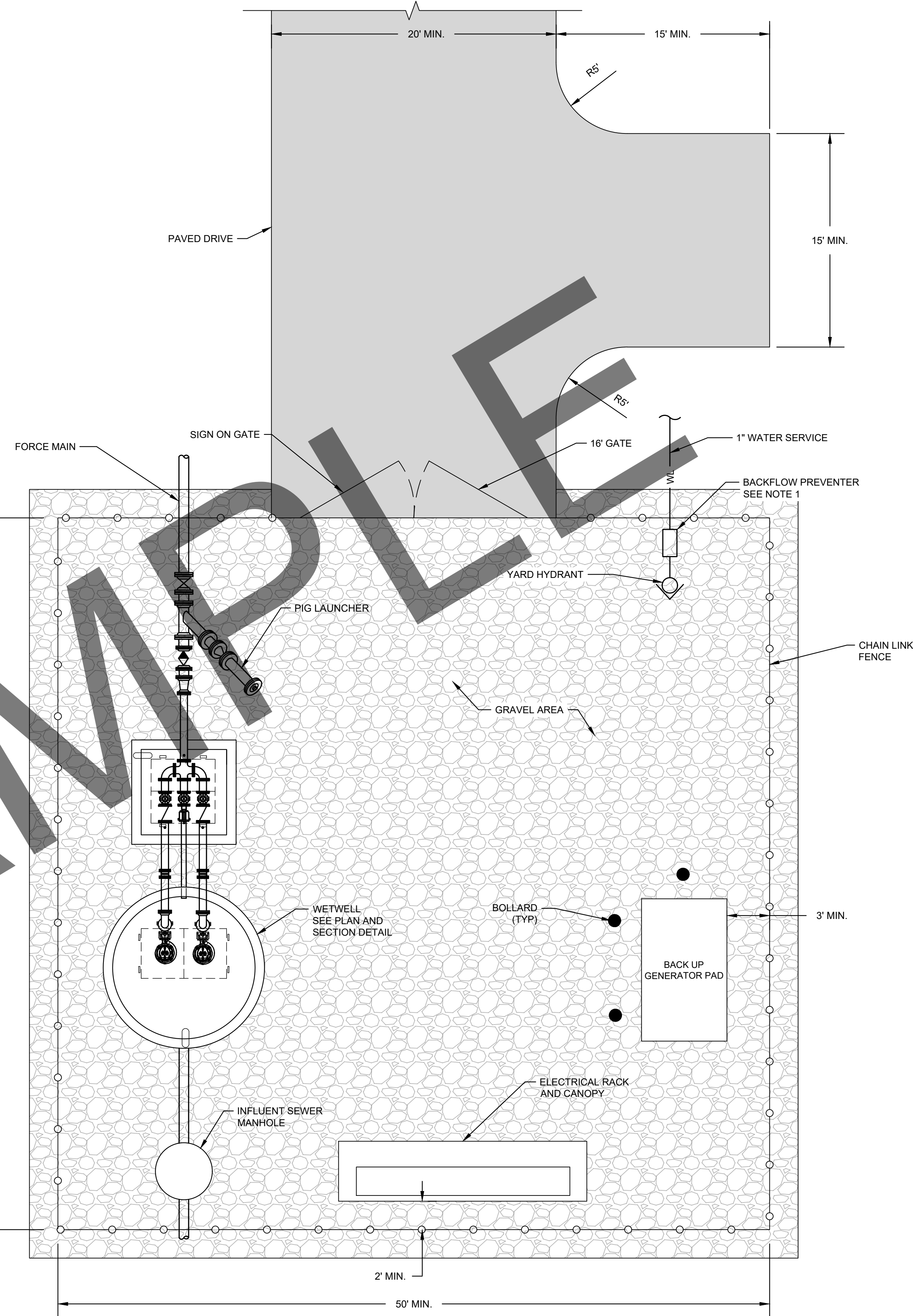


**GRAVEL DRIVE DETAIL**  
 SCALE: NTS

THIS COMPILED DRAWING REPRESENTS A GENERAL PUMP STATION LAYOUT PER GBPW STANDARDS. THE FINAL LAYOUT AND DESIGN OF ALL PUMP STATIONS IS SUBJECT TO CHANGE BASED ON GBPW REVIEW AND PROJECT SPECIFIC CONDITIONS.

**NOTE:**

- BACKFLOW PREVENTER TO BE A DUAL CHECK VALVE IN BURIED BOX.



**TYPICAL PUMP STATION PLAN**  
 SCALE: 1" = 5'

PUMP STATION SITE PLAN

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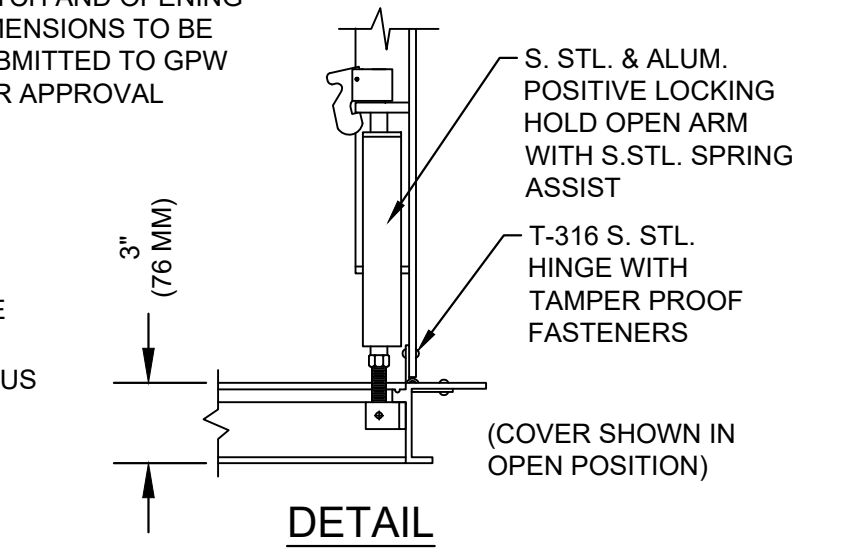
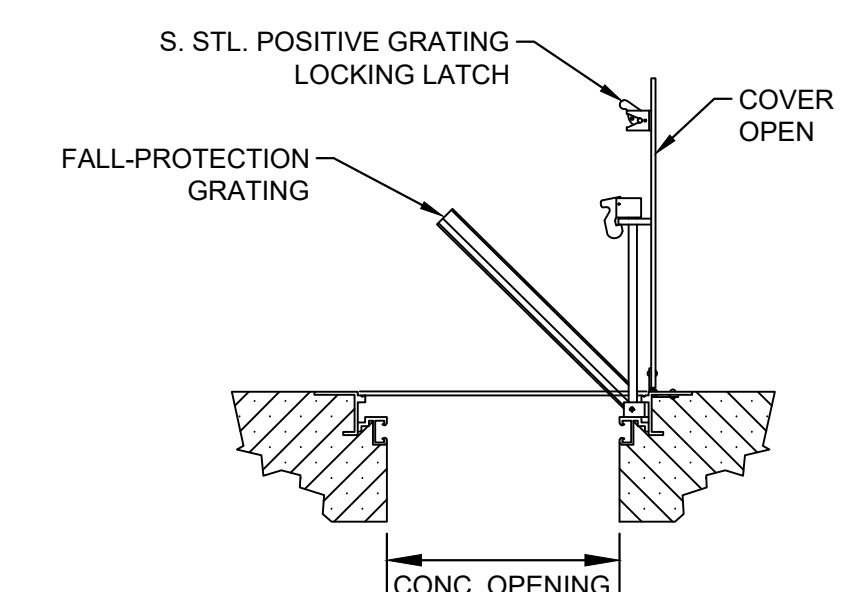
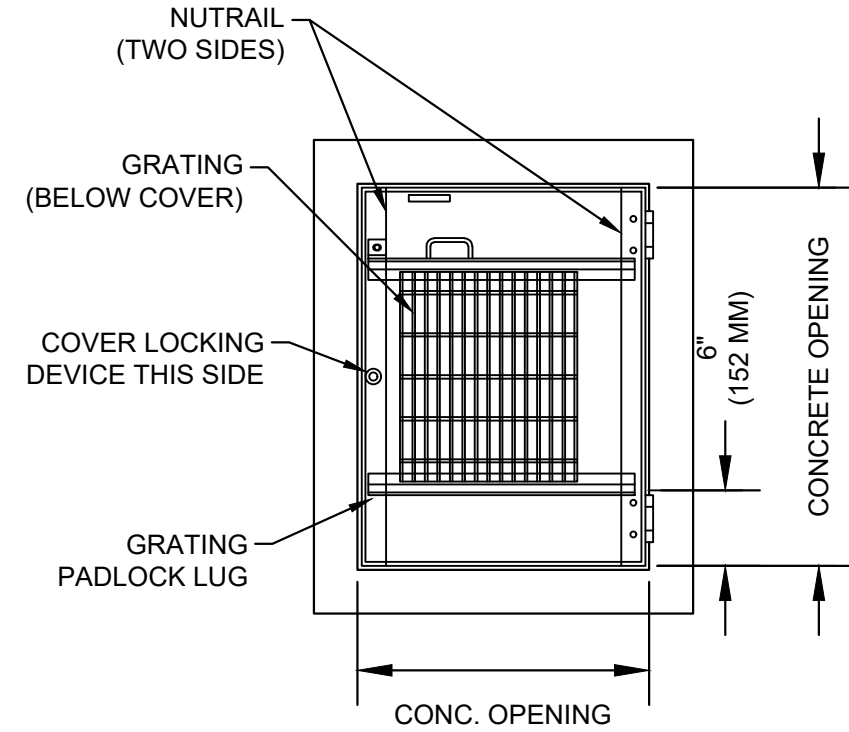
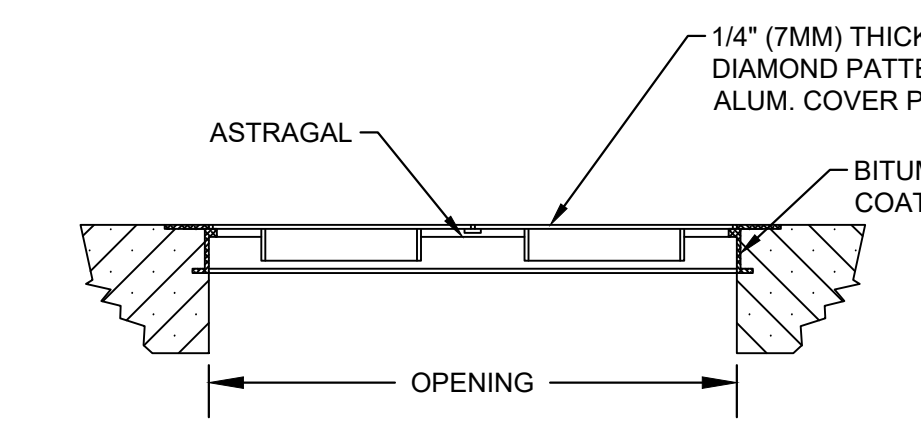
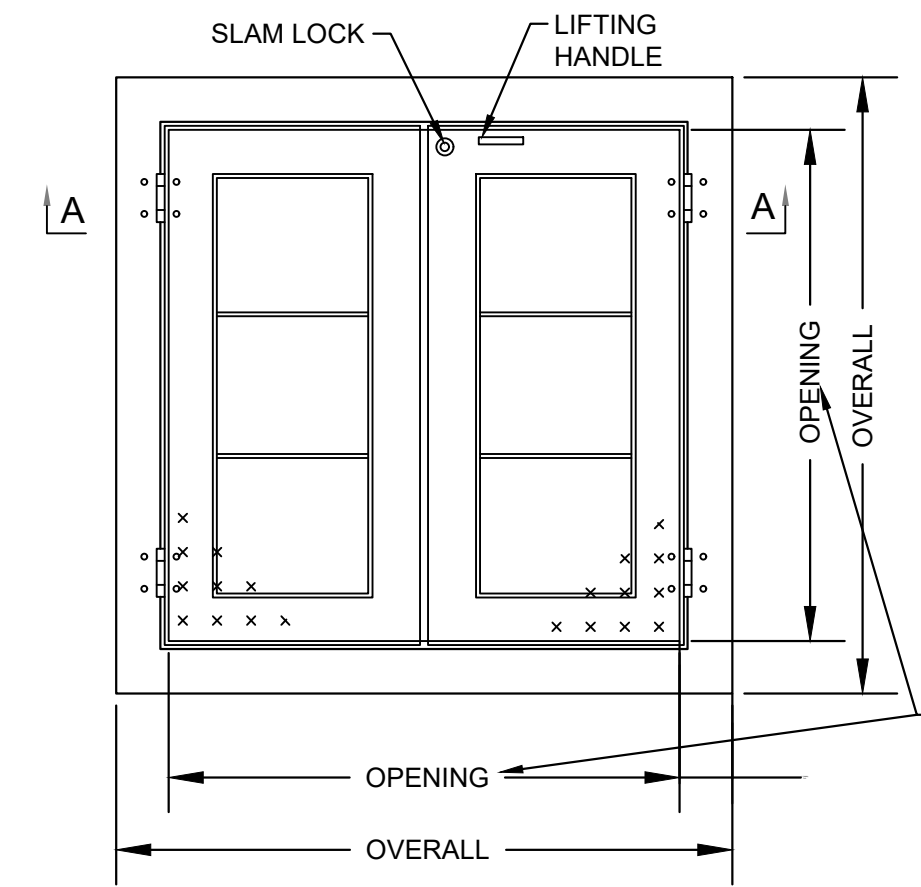


DATE: 06/04/24

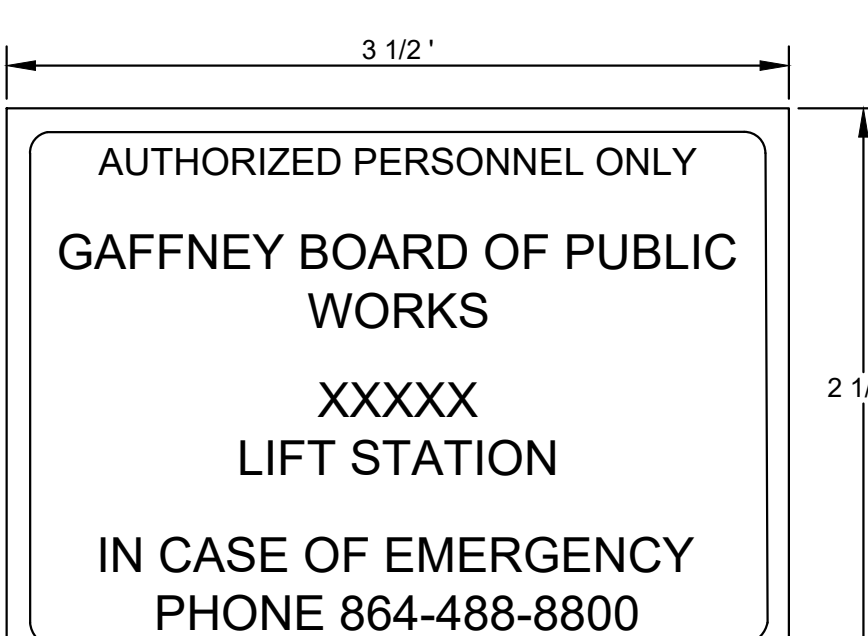
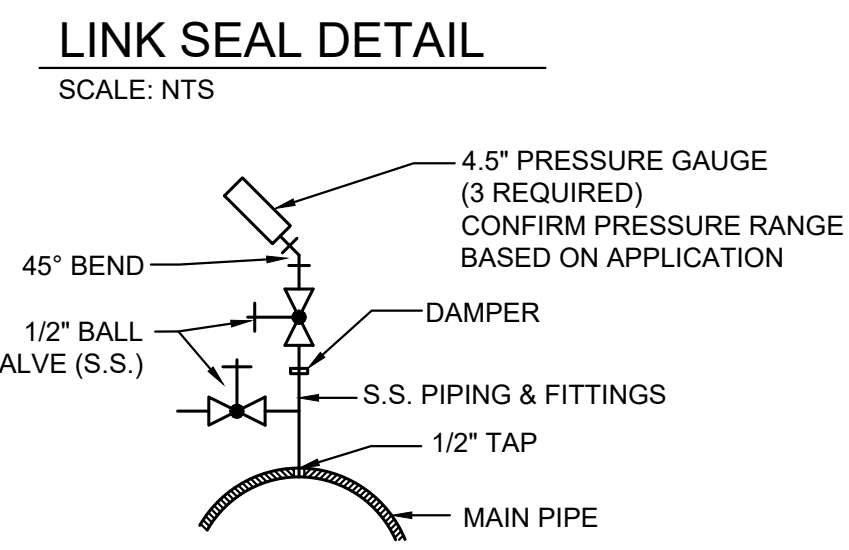
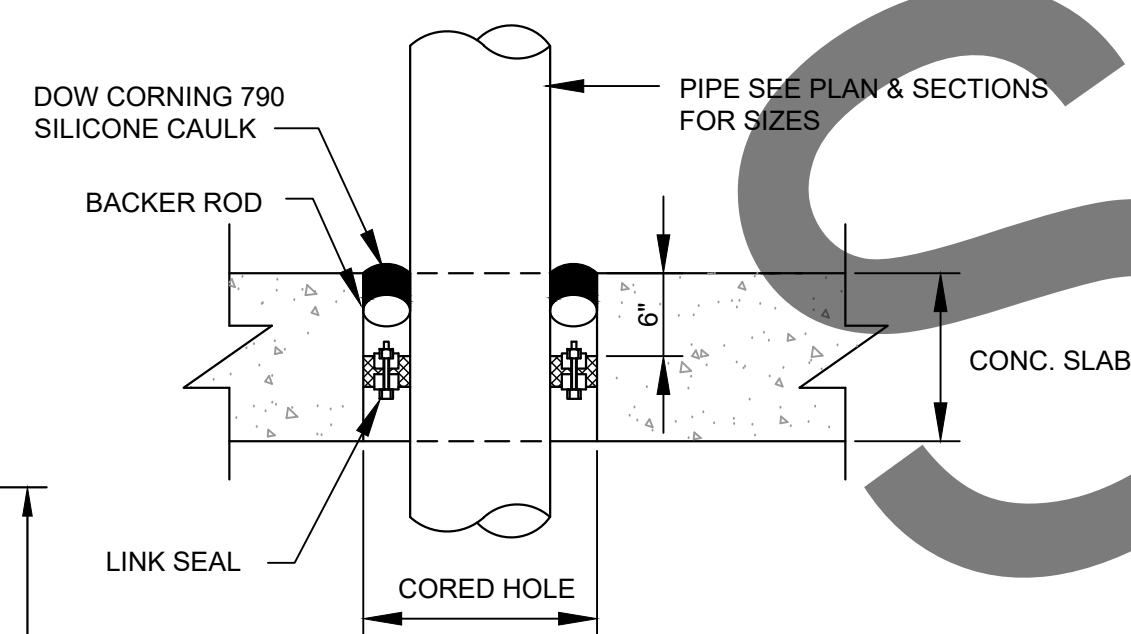


**STANDARD FEATURES:**

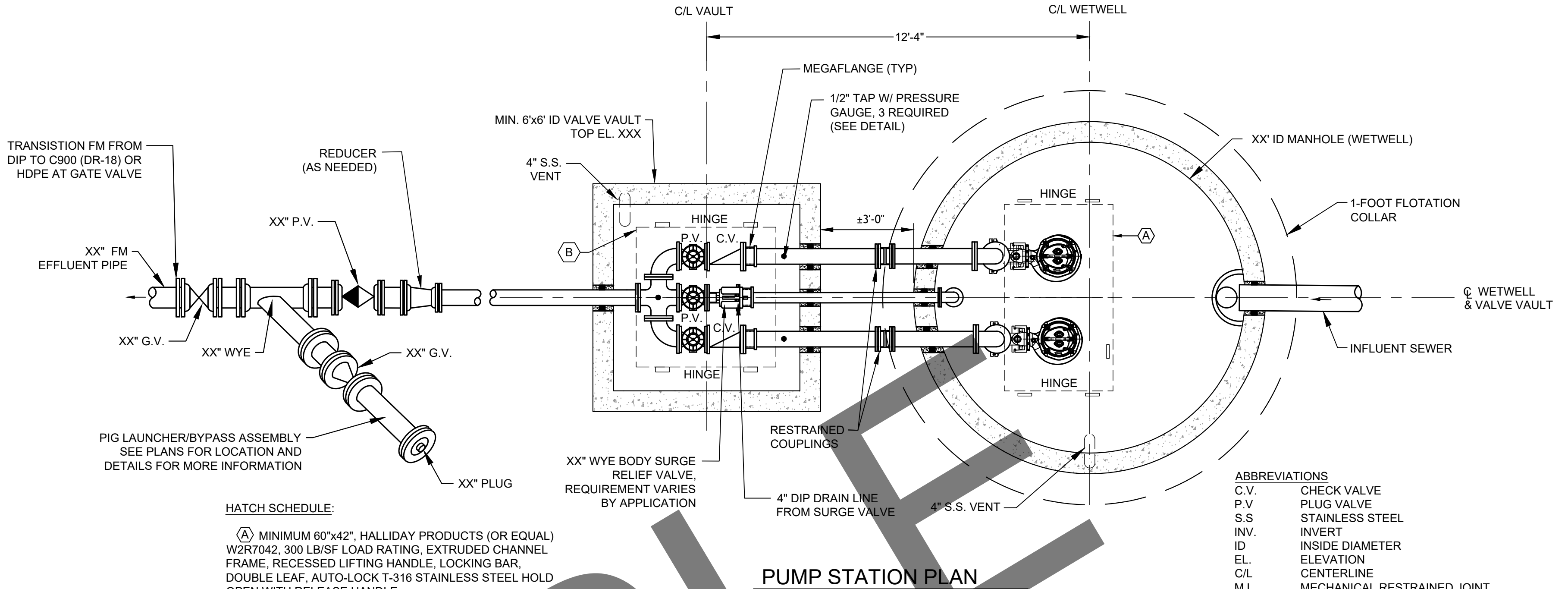
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN NEOPRENE CUSHION/GASKET
- NON-OZONE DEPLETING BITUMINOUS COATING
- DOUBLE LEAF CONSTRUCTION
- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM FRAME
- RECESSED LIFTING HANDLE
- ALUMINUM FALL-PROTECTION GRATING
- LIFETIME GUARANTEE
- AS MANUFACTURED BY HALLIDAY, BILCO, US-FOUNDRY, OR APPROVED EQUAL.



**HATCH WITH FALL PROTECTION GRATING**



- NOTES:**
1. CONSTRUCTION FROM 16 GA. ALUMINUM.
  2. PROVIDE WHITE BACKGROUND WITH THREE COATS OF PAINT.
  3. PROVIDE 1-1/2" LETTERS (MIN).
  4. ALL LETTERING SHALL CONSIST OF TWO COATS OF THE APPROPRIATE ENAMEL.
  5. DIMENSIONS SHOWN ARE APPROXIMATE.
  6. ALL SIGNS MUST BE APPROVED PRIOR TO INSTALLATION.



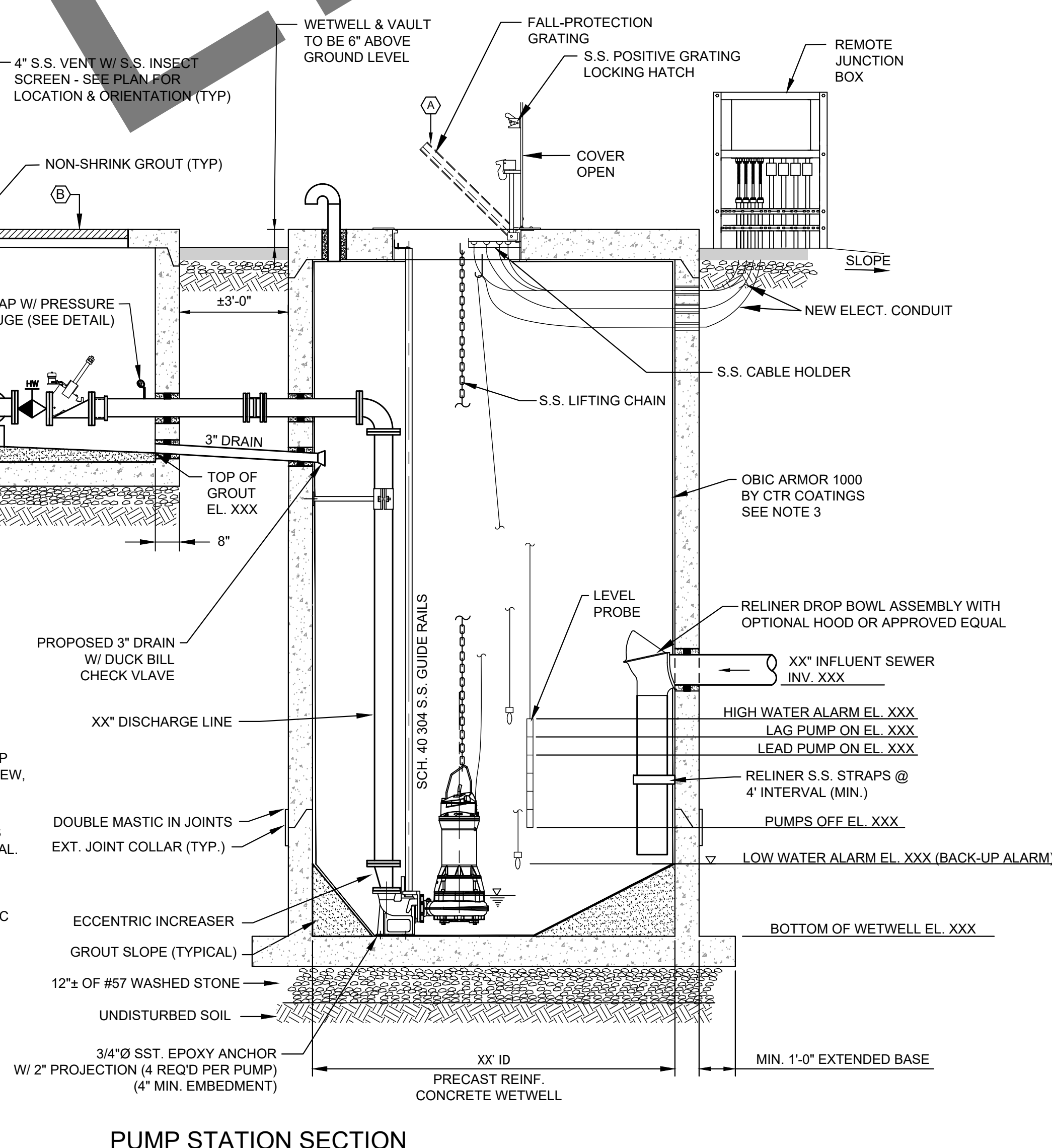
- HATCH SCHEDULE:**
- (A) MINIMUM 60"x42", HALLIDAY PRODUCTS (OR EQUAL) W2R7042, 300 LB/SF LOAD RATING, EXTRUDED CHANNEL FRAME, RECESSED LIFTING HANDLE, LOCKING BAR, DOUBLE LEAF, AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN WITH RELEASE HANDLE.
  - (B) MINIMUM 48"x48", HALLIDAY PRODUCTS (OR EQUAL) W2R5454, 300 LB/SF LOAD RATING, EXTRUDED CHANNEL FRAME, RECESSED LIFTING HANDLE, LOCKING BAR, DOUBLE LEAF, AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN WITH RELEASE HANDLE.

**ABBREVIATIONS**

C.V.	CHECK VALVE
P.V.	PLUG VALVE
S.S.	STAINLESS STEEL
INV.	INVERT
ID	INSIDE DIAMETER
EL.	ELEVATION
C/L	CENTERLINE
MJ	MECHANICAL RESTRAINED JOINT

- NOTES:**
1. THE STANDARD PUMP STATION DETAILS SHOWN ARE MEANT TO PROVIDE A DESIGN BASIS FOR ALL NEW PUMP STATION INSTALLATIONS. A PROJECT SPECIFIC PLAN VIEW, SECTION VIEW, SITE PLAN, AND DETAILS ARE TO BE PROVIDED TO GPW FOR REVIEW AND APPROVAL.
  2. SEAL/GROUT ALL PIPE AND ELECTRICAL PENETRATIONS WATER TIGHT. PROVIDE LINK-SEAL OR APPROVED EQUAL.
  3. PROTECT STRUCTURE FROM FLOATATION PRIOR TO BACKFILLING.
  4. COAT WETWELL AND 2 UPSTREAM MANHOLES WITH OBIC ARMOR 1000 BY CTR COATINGS.
  5. ALL DIP USED ON PUMP STATION & FORCEMAIN TO BE PROTECTO 401 COATED

THIS COMPILED DRAWING REPRESENTS A GENERAL PUMP STATION LAYOUT PER GPW STANDARDS. THE FINAL LAYOUT AND DESIGN OF ALL PUMP STATIONS IS SUBJECT TO CHANGE BASED ON GPW REVIEW AND PROJECT SPECIFIC CONDITIONS.



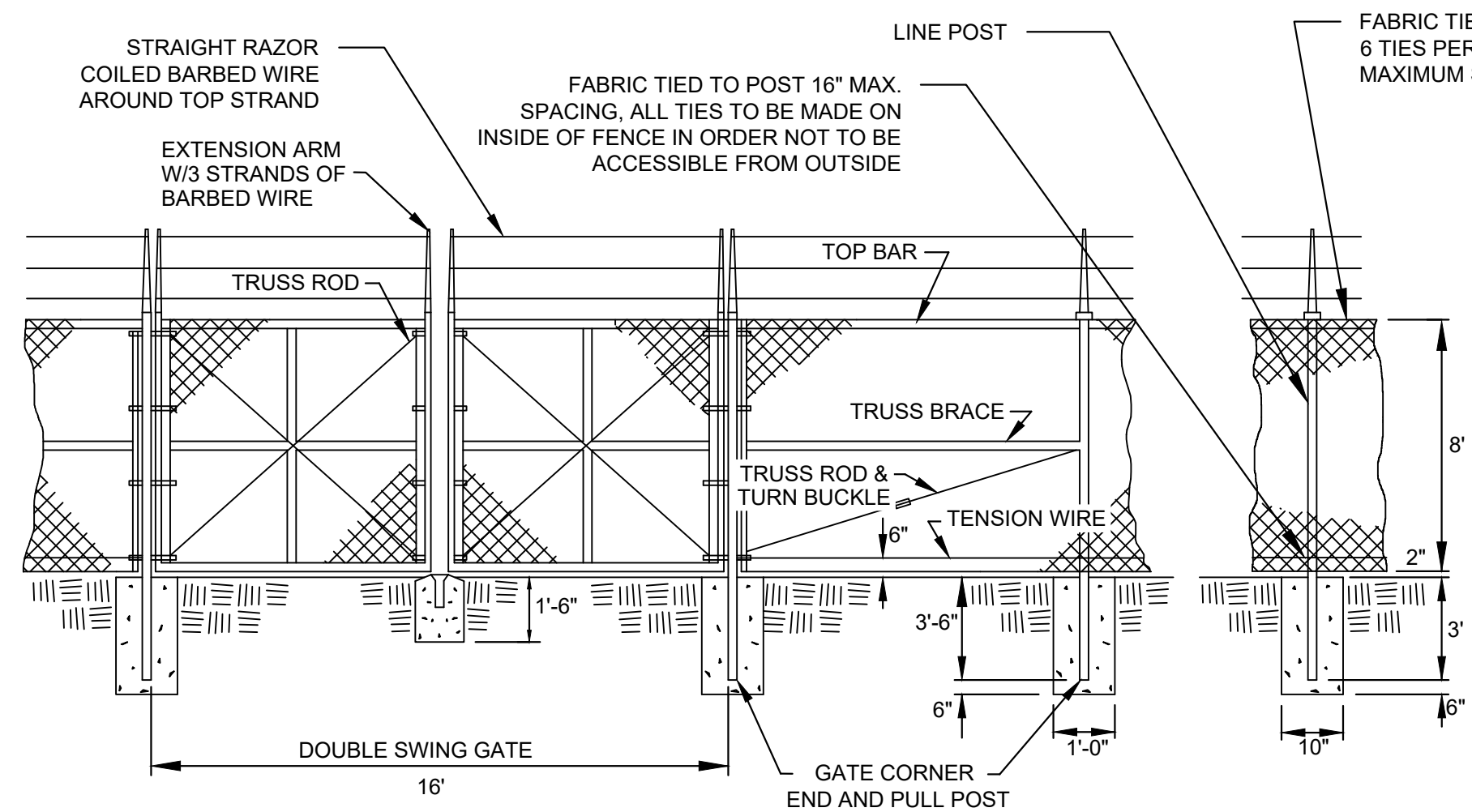
PUMP STATION STANDARD DETAIL

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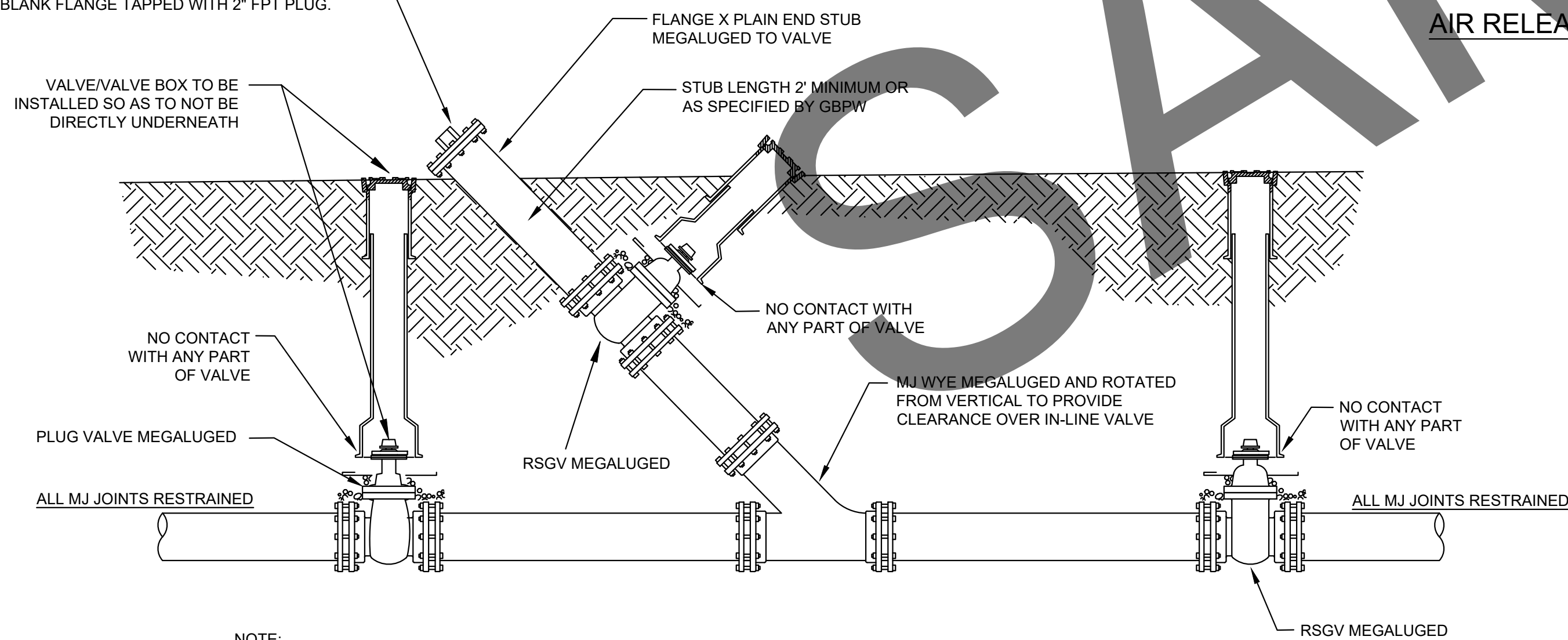
**NOTES:**

1. PROVIDE FINISH GALVANIZED TO ASTM A123/A123M FOR COMPONENTS; ASTM A153/A153M FOR HARDWARE; ASTM A392 FOR FABRIC; 1.8 OZ/SQ FT COATING.
2. FABRICATE GATES TO PERMIT A 180° SWING. FINISH IS TO BE GALVANIZED TO MATCH FENCE.
3. MATERIALS:
  - FRAMING (STEEL): ASTM F1083 SCHEDULE 40 GALVANIZED STEEL PIPE, WELDED CONSTRUCTION, MINIMUM YIELD STRENGTH OF 50 KSI; COATING CONFORMING TO ASTM F1043 TYPE A ON PIPE EXTERIOR AND INTERIOR.
  - FABRIC WIRE (STEEL): ASTM A392 CLASS 1 ZINC COATED STEEL WIRE.
  - BARBED WIRE: ASTM A121 COATING TYPE Z, GALVANIZED STEEL; 12 GAGE THICK WIRE, 2 STRANDS, 4 POINTS AT 3 INCH ON CENTER.
  - CONCRETE: CLASS 2500 CONCRETE IN ACCORDANCE WITH SCDOT STANDARD SPECIFICATIONS WITH 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
4. COMPONENTS:
  - LINE POSTS: 2.5 INCH DIAMETER
  - CORNER AND TERMINAL POSTS: 2.875 INCH
  - GATE POSTS: 4.0 INCH DIAMETER
  - TOP AND BRACE RAIL: 1.625 INCH DIAMETER, PLAIN END, SLEEVE COUPLED
  - GATE FRAME: 1.925 INCH DIAMETER FOR WELDED FABRICATION
  - TENSION WIRE: 6 GAGE THICK STEEL, SINGLE STRAND
  - TENSION BRAND: 3/16 INCH THICK BY 3/4 INCH WIDE STEEL
  - TIE WIRE: ALUMINUM ALLOY STEEL WIRE, 9-GAGE OR 11-GAGE AS INDICATED

**TYPICAL CHAIN LINK FENCE W/ DOUBLE SWING GATE DETAIL**

SCALE: NTS

DURING BYPASS OPERATION, CHECK VALVE AND FLANGE WITH CAM-LOCK TO BE INSTALLED HERE. AFTER BYPASS IS TERMINATED, REMOVE CHECK VALVE AND CAM-LOCK AND INSTALL BLANK FLANGE TAPPED WITH 2" FPT PLUG.

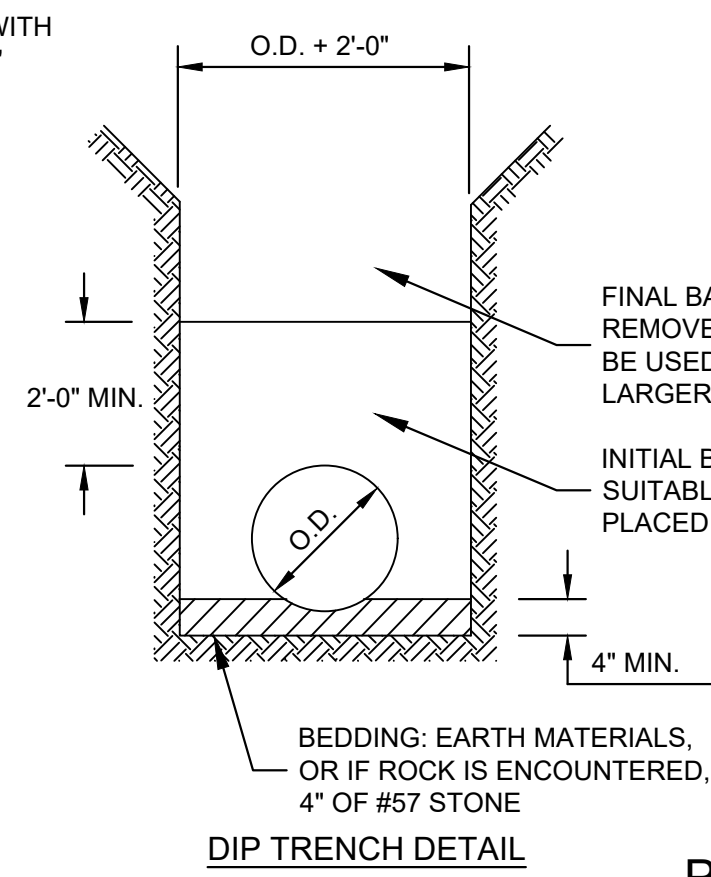


**NOTE:**

1. THIS ASSEMBLY WILL SERVE AS BOTH A PIG LAUNCHING STATION AND A BYPASS CONNECTION WHEN NEEDED. IF PROPERLY SIZED AND SERVICEABLE ITEMS ARE AVAILABLE, THE CONTRACTOR SHALL RESUSE ONE EXISTING, FLGXFLG, EXTERNAL WEIGHTED ARM CHECK VALVE AND THE FEMALE CAM-LOCK FITTING MATTED TO THE FLANGE AS SHOWN WHICH WILL BE INSTALLED ABOVE GROUND WHEN USED AS A BYPASS CONNECTION. IF CHECK VALVE OR CAM-LOCK ARE NOT AVAILABLE OR SERVICEABLE, THESE ITEMS ARE TO BE PROVIDED BY THE CONTRACTOR AS PART OF THE PROJECT.
2. WHEN THE BYPASS OPERATION IS TERMINATED, THE CONTRACTOR SHALL REMOVE THE CHECK VALVE AND CAM-LOCK FITTING WITH FLANGE AND FASTENERS, PROVIDE THESE PARTS TO GAFFNEY BOARD OF PUBLIC WORKS AND INSTALL TREADED FLANGE AND PLUG AS SHOWN.

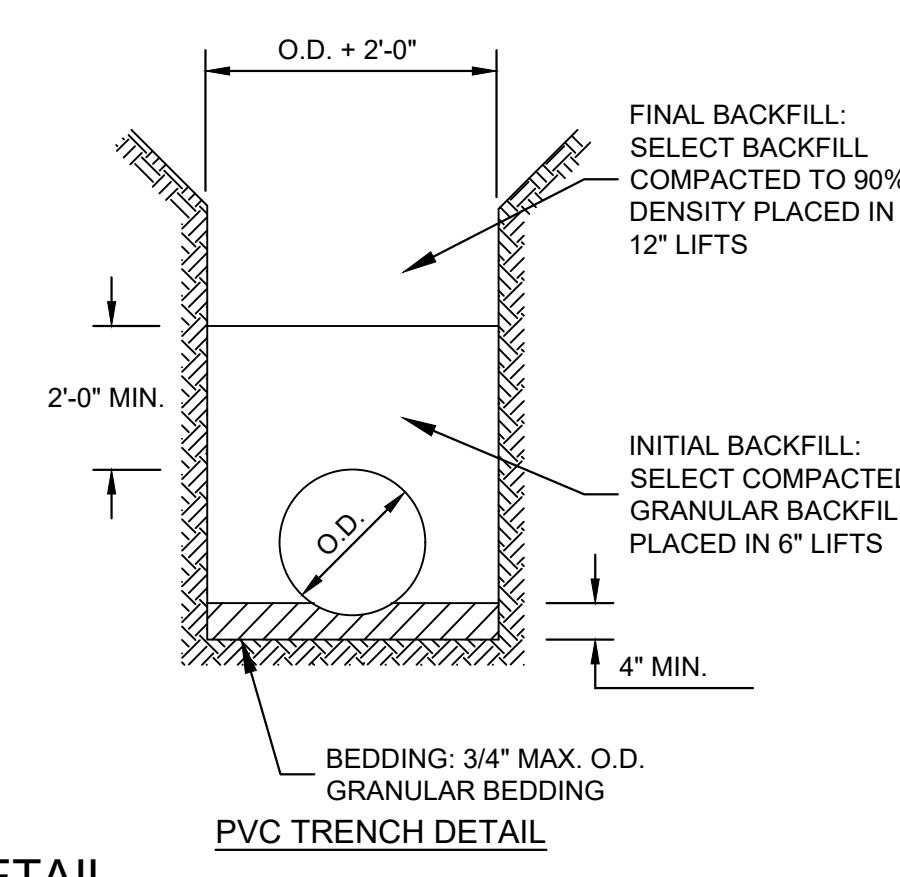
**TYPICAL PIG LAUNCHER/BYPASS CONNECTION DETAIL**

SCALE: NTS

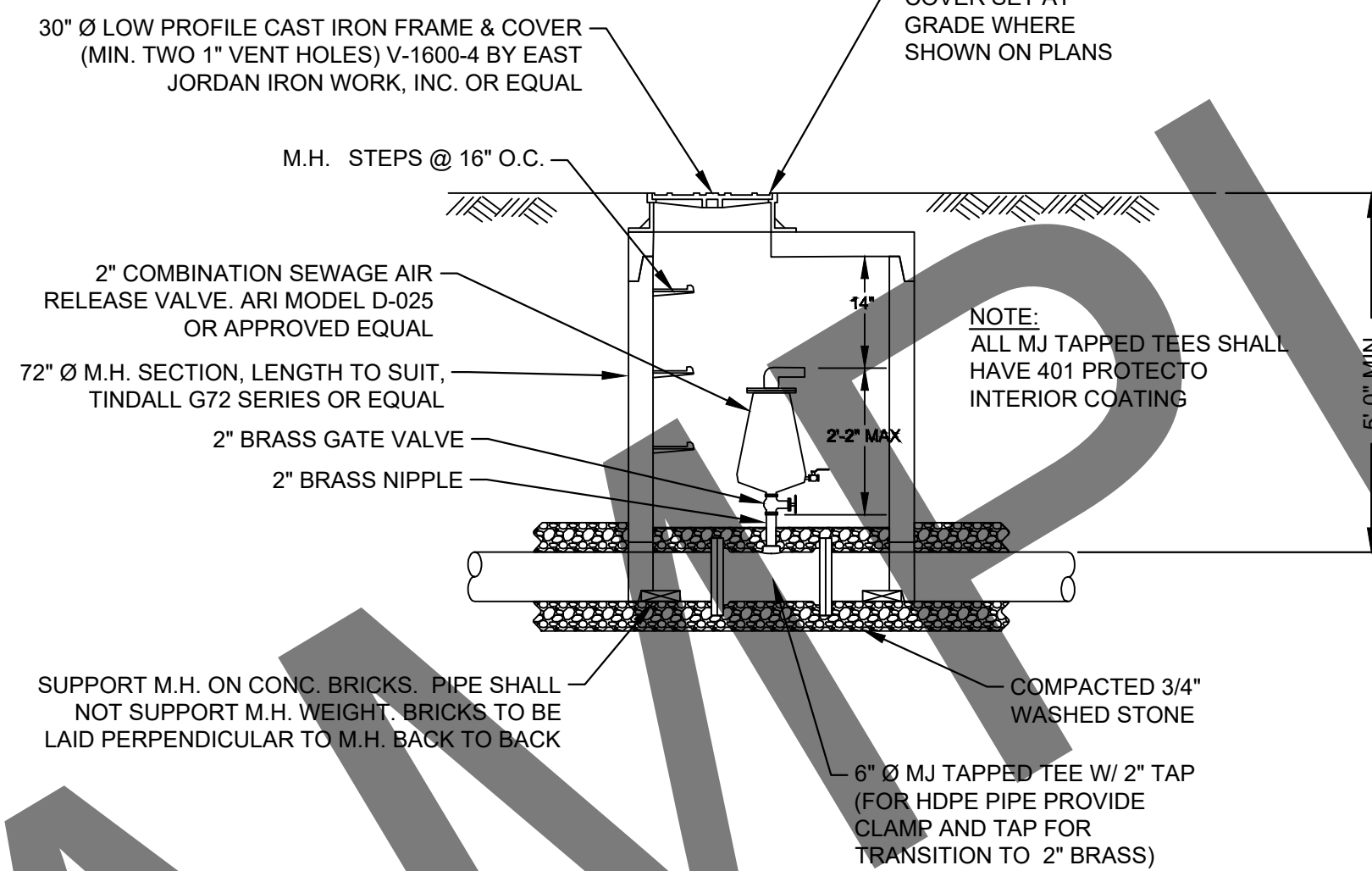


**PIPE TRENCH DETAIL**

SCALE: NTS

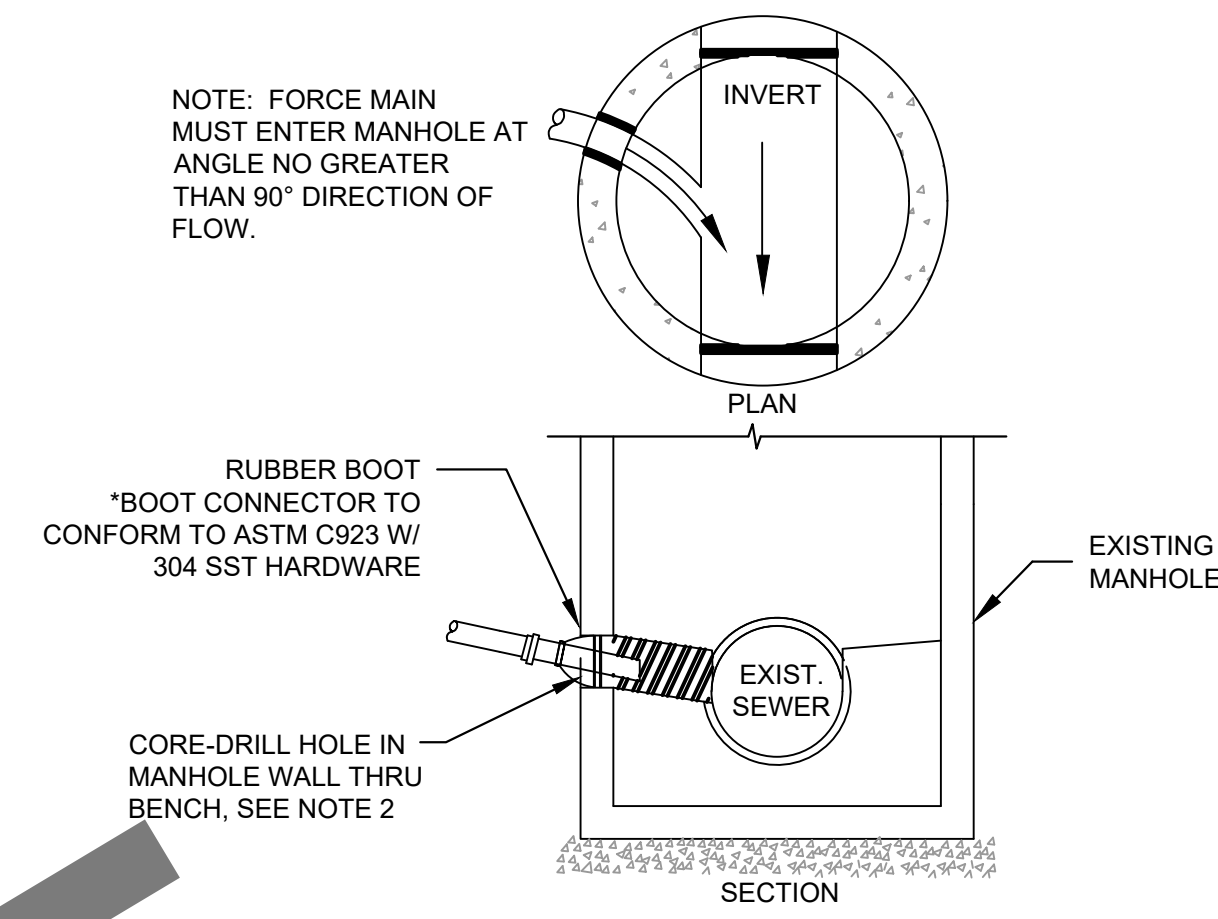


**PVC TRENCH DETAIL**



**AIR RELEASE VALVE DETAIL**

SCALE: NTS

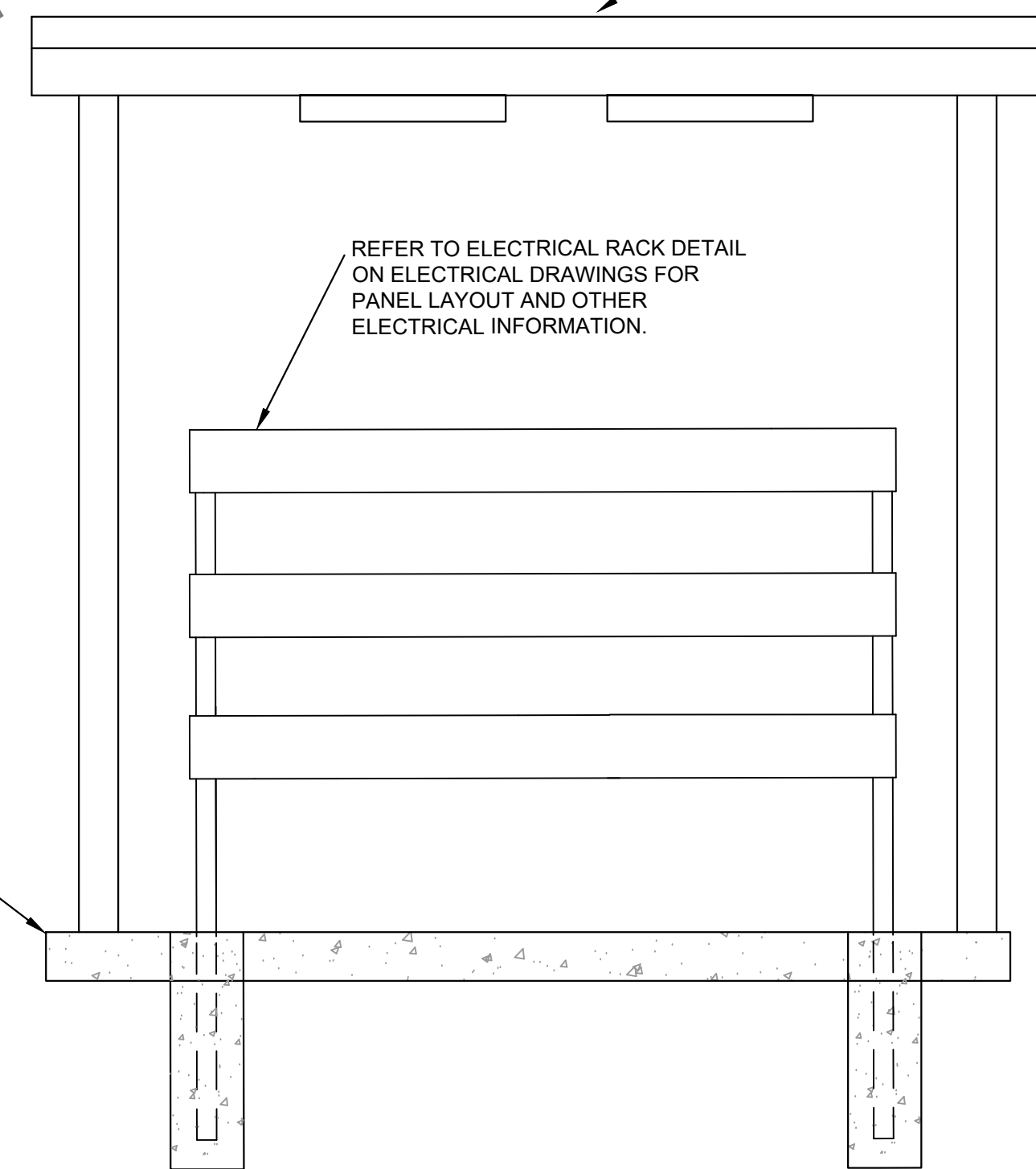


**CORROSION CONTROL NOTES:**

1. FORCEMAIN DISCHARGE MANHOLE AND NEXT DOWNSTREAM MANHOLE TO BE COATED WITH OBIC ARMOR 1000 BY CTR COATINGS.
2. CORE DRILL HOLE THROUGH WALL OF MANHOLE AND EXISTING BENCH AS DEPICTED IN THE DETAIL. PROVIDE A WATERTIGHT SEAL AT THE PIPE CONNECTION USING A FLEXIBLE RUBBER BOOT.

**TYPICAL FORCE MAIN DISCHARGE TO EXISTING RECEIVING MANHOLE**

SCALE: NTS



CONTROL CANOPY COVER SHALL BE BY GREENVILLE AWNING COMPANY, 864-288-0063, OR APPROVED EQUAL. THE CANOPY SHALL HAVE A PITCHED ROOF WITH 6' x 14' OUTSIDE DIMENSIONS, OR AS NEEDED TO MATCH SIZE OF ELECTRICAL PANEL RACK, AND 8' CLEAR HEIGHT. CANOPY TO BE CONSTRUCTED OF THE FOLLOWING MATERIALS:

- 1) 4" x 4" SUPPORT POSTS (11 GAUGE STEEL TUBING WITH WELDED STEEL PLATES ANCHORED TO CONCRETE PADS WITH 3/4" x 5" STUD ANCHORS).
- 2) 2"x2" SUPPORT BEAMS (14 GAUGE STEEL TUBING WITH WELDED UPRIGHTS).
- 3) 1-1/8" WIDE x 3-1/2" HIGH BOS RAFTERS (0.040 GAUGE ALUMINUM SHEET SPACED A MAXIMUM OF 2' ON CENTER).
- 4) 20 GAUGE STEP DOWN ALUMINUM SHEET ROOFING WITH 2" CORRUGATIONS & FASTENED TO RAFTERS WITH STAINLESS STEEL SCREWS. ALL STEEL MATERIALS SHALL BE PRIMED AND PAINTED WITH INDUSTRIAL GRADE ENAMEL PAINT.
- 5) ALL ALUMINUM MATERIALS SHALL HAVE INDUSTRIAL GRADE BAKED ENAMEL PAINT. CONTRACTOR SHALL SUBMIT COLOR CHARTS FOR OWNER SELECTION. CANOPY STRUCTURE SHALL BE DESIGNED FOR A MINIMUM 70 MPH WIND LOAD AND 25 LBS/SF.

**ELECTRICAL CANOPY DETAIL**

SCALE = N.T.S.

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FORCEMAIN DETAILS

STANDARD DETAILS  
Gaffney Board of Public Works  
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