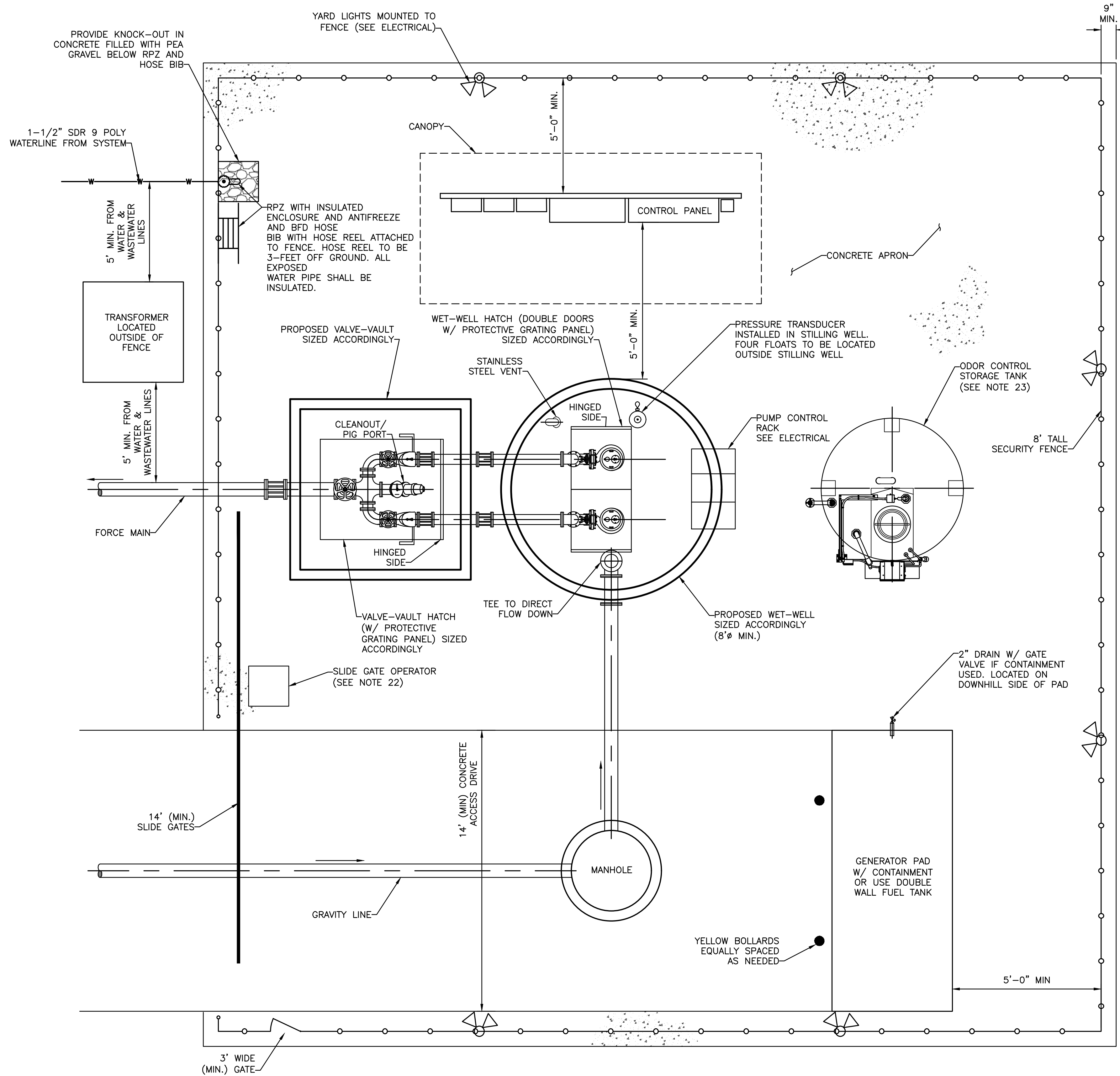


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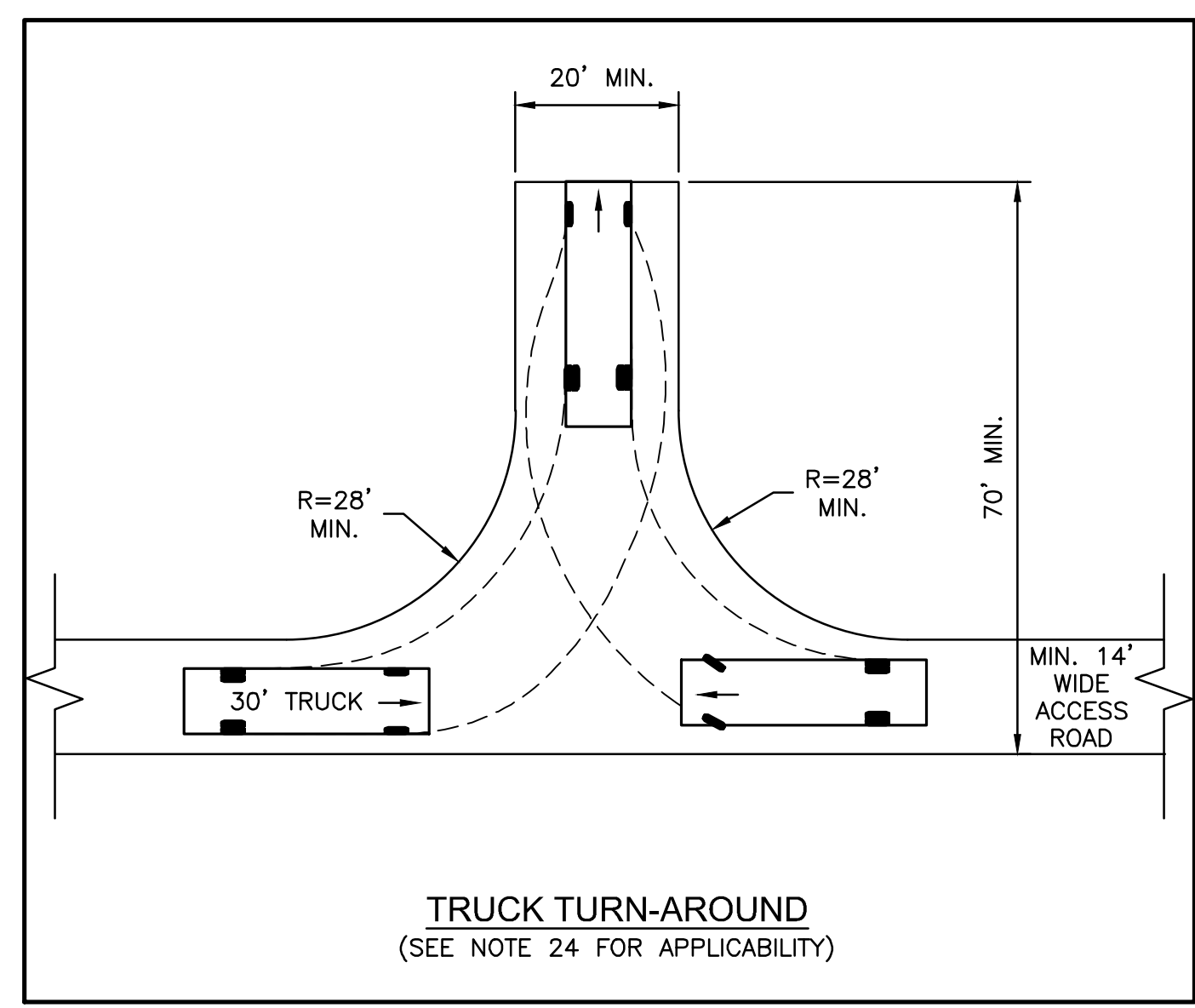


NOTES:

1. MINIMUM 5' CLEARANCE REQUIRED AROUND ALL EQUIPMENT.
2. FENCE TO BE LOCATED 9" FROM EDGE OF CONCRETE.
3. FENCE TO BE MINIMUM 8' TALL AND SHALL BE PER WCID 17 STANDARD DETAIL, PRECAST CONCRETE, OR OTHER APPROVED LOW MAINTENANCE FENCE.
4. WHERE PIPE SLOPE EXCEEDS 10%, CONCRETE RETARDS TO BE INSTALLED PER WCID 17 STANDARD DETAIL.
5. PIPE BEDDING TO BE 3/8" F GRAVEL UNLESS SPECIFIED OTHERWISE.
6. FORCE MAIN AND WATER LINES TO BE INSTALLED WITH 48" COVER UNLESS NOTED OTHERWISE.
7. ALL VALVES, MANHOLES, LIDS, ETC. IN PAVEMENT AREA SHALL BE ADJUSTED TO FINISHED GRADE
8. WET-WELL AND MANHOLES SHALL BE IN ACCORDANCE WITH NOTES ON "TYPICAL WET-WELL AND VALVE-Vault PLAN AND SECTION" SHEET.
9. ALL ISOLATION VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
10. ALL CHECK VALVES TO BE LEVER AND WEIGHT SWING CHECK VALVES WITH EXTERNAL ARM.
11. PUMP CONTROL RACK TO BE MOUNTED ON TOP OF THE WET-WELL OPPOSITE THE VALVE VULT.
12. A HINGED PROTECTIVE GRATING PANEL SHALL BE INSTALLED BENEATH THE WET-WELL AND VALVE-Vault DOOR OPENING.
13. AN ANTIFREEZE AND BFD HOSE BIB SHALL BE INSTALLED INSIDE THE FENCED AREA.
14. THE WATERLINE SERVING THE LIFT STATION SHALL HAVE AN RPZ ABOVE GROUND IN AN INSULATED ENCLOSURE (HOT BOX OR EQUAL).
15. NO 90° BENDS SHALL BE INSTALLED ON THE FORCE MAIN.
16. THERE SHALL NOT BE ANY TRANSFORMER, GENERATOR PAD, CONTROL PAD, OR ANY OTHER STRUCTURE INSTALLED WITHIN 5-FEET OF WATER OR WASTEWATER LINES.
17. SUBSURFACE DRAINAGE ENTERING THE WET-WELL THROUGH PIPE TRENCHES SHALL BE ADDRESSED. CONCRETE RETARDS PLACED ON THE PIPE OR A FRENCH DRAIN SYSTEM MAY BE USED.
18. ELECTRICAL TRANSFORMER PADS W/METER PAD, SHALL BE PLACED OUTSIDE OF THE FENCED AREA.
19. ELECTRICAL GENERATOR SHALL BE INSTALLED WITHIN 15-FEET OF THE ACCESS DRIVE.
20. POSITIVE DRAINAGE AROUND THE WET-WELL SHALL BE MAINTAINED. THE SLAB ELEVATIONS OF THE WET-WELL AND VALVE-Vault SHALL BE 6-INCHES ABOVE THE SURROUNDING GRADE. THE TOP ELEVATION OF THE WET-WELL AND VALVE-Vault SHALL BE THE SAME WHENEVER POSSIBLE. A 2-PERCENT CROSS SLOPE SHALL BE USED ON THE CONCRETE SLAB.
21. PRIOR TO POURING CONCRETE AROUND THE WET-WELL AND VALVE-Vault, THE CONTRACTOR SHALL TAKE STANDARD PROCTOR DENSITIES AND SUBMIT THE RESULTS TO THE INSPECTOR FOR APPROVAL.
22. A SLIDE GATE WITH MOTORIZED OPERATOR SHALL BE INSTALLED, UNLESS APPROVED OTHERWISE BY WCID NO. 17. SLIDE GATE OPERATOR SHALL BE A COMMERCIAL SLIDE GATE OPERATOR BY LINEAR OR APPROVED EQUAL, COMPATIBLE WITH LINEAR MODEL 308911 TRANSMITTERS, WITH EMERGENCY MANUAL DISCONNECT, VEHICLE SENSOR, AND MINIMUM GATE SPEED OF 11 INCHES PER SECOND. INSTALL KNOX BOX PER TRAVIS COUNTY ESD #6 REQUIREMENTS.
23. ODOR CONTROL SYSTEMS SHALL UTILIZE BIOXIDE WITH A COMPLETE STORAGE AND DOSING SYSTEM BY EVOQUA, UNLESS APPROVED OTHERWISE.
24. A TRUCK TURN-AROUND IS REQUIRED ON STREETS WITH A TRAFFIC COUNT/RATING OF A RESIDENTIAL COLLECTOR OR GREATER, OR WHERE DEEMED NECESSARY BY WCID NO. 17

PIPE MATERIAL:

1. GRAVITY WASTEWATER LINE TO BE SDR 26 PVC COLORED GREEN.
2. FORCE MAIN LINES 2" IN DIAMETER OR LESS TO BE SCHEDULE 80 PVC COLORED WHITE.
3. FORCE MAIN LINES 3" IN DIAMETER TO BE SDR 21 PVC, OR SCHEDULE 80 PVC COLORED WHITE.
4. FORCE MAIN LINES 4" IN DIAMETER OR GREATER TO BE C900 PVC DR 14 COLORED WHITE.
5. ALL BURIED PIPING TO HAVE PROPERLY LABELED DETECTABLE TAPE.
6. ALL EXPOSED PIPING TO HAVE FLANGED FITTINGS, UNLESS NOTED OTHERWISE. SCHEDULE 80 PVC TO HAVE FLANGED BY GLUE FITTINGS. ALL BURIED PIPING TO HAVE MECHANICAL JOINT FITTINGS WITH RESTRAINTS, UNLESS NOTED OTHERWISE.
7. ALL HORIZONTAL AND VERTICAL FORCEMAIN BENDS SHALL BE MECHANICALLY RESTRAINED TO THE PIPE USING MEGA-LUG OR APPROVED COA EQUAL, AND HAVE CONCRETE THRUST BLOCKING

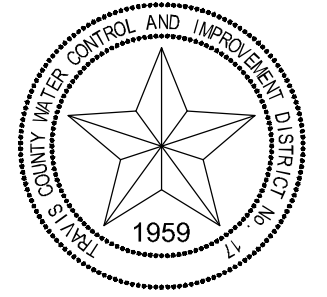


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PREPARED BY:

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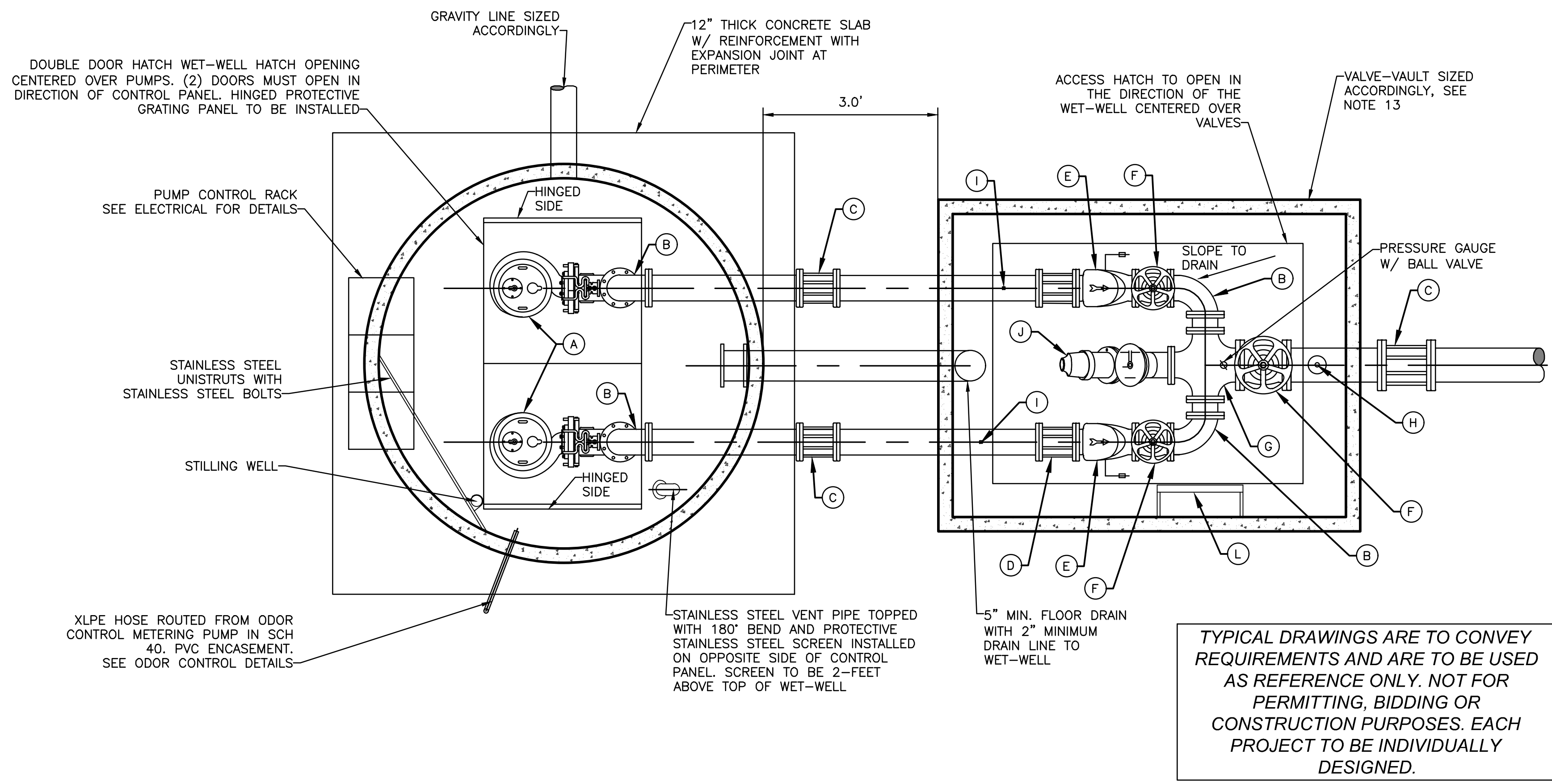
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TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION DRAWINGS

TYPICAL LIFT STATION LAYOUT

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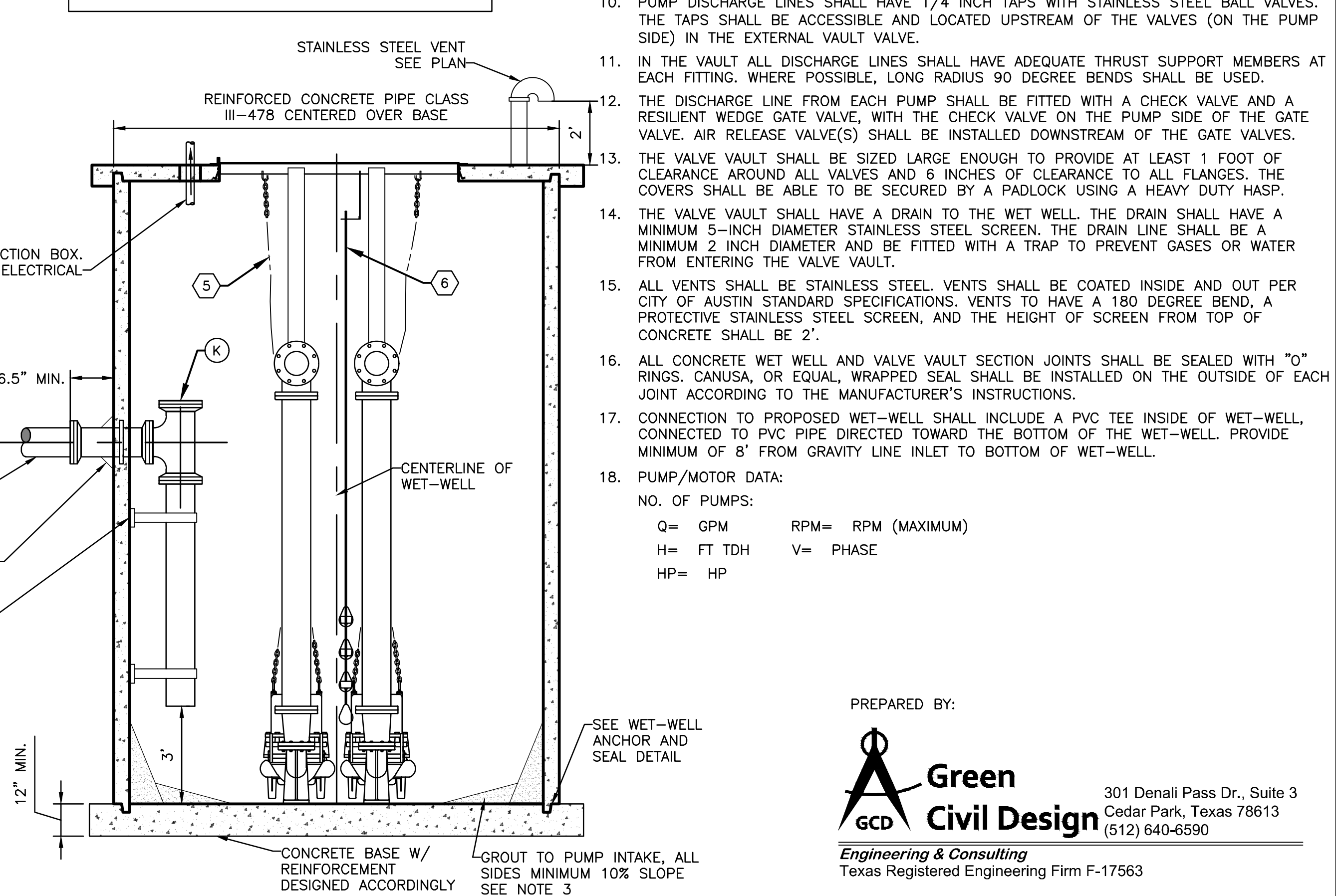
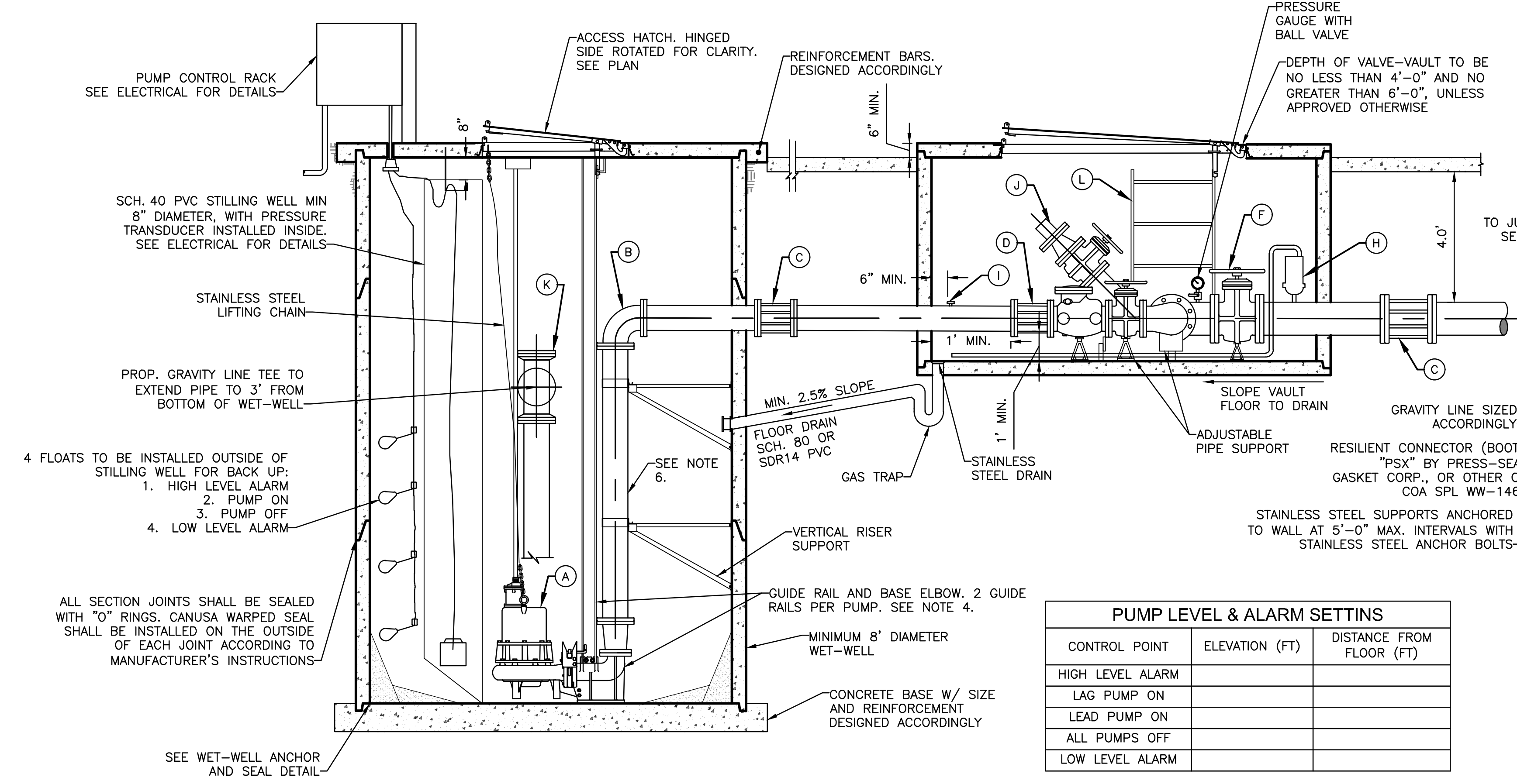
EQUIPMENT SCHEDULE:

ITEM	DESCRIPTION
(A)	SUBMERSIBLE PUMPS SIZED ACCORDINGLY
(B)	90° BEND
(C)	FLEX COUPLING
(D)	RESTRAINED DISMANTLING JOINT
(E)	SWING CHECK VALVE WITH EXTERNAL ARM (ARM TO BE ON SIDE OF VALVE CLOSEST TO VAULT WALL)
(F)	RESILIENT WEDGE GATE VALVE
(G)	CROSS
(H)	2" AUTOMATIC AIR RELEASE ARI FLOW CONTROL MODEL D-#25 WITH 2" STAINLESS STEEL BALL VALVE
(I)	1/4" TAP & STAINLESS STEEL BALL VALVE, SEE NOTE 10
(J)	2" PIG PORT AND GATE VALVE WITH FLANGE MOUNTED PIPE SUPPORT ON FLANGE OF GATE VALVE
(K)	TEE
(L)	FIBERGLASS OR ALUMINUM LADDER WITH MIN. 300 LB CAPACITY, ANCHORED AT TOP AND BOTTOM

- NOTES:**
- WET-WELLS AND MANHOLES:
 - WET-WELLS SHALL BE STANDARD CONCRETE, POLYMER CONCRETE (BY U.S. COMPOSITE PIPE OR APPROVED EQUAL), OR FIBERGLASS.
 - MANHOLES SHALL BE STANDARD CONCRETE OR POLYMER CONCRETE (BY U.S. COMPOSITE PIPE OR APPROVED EQUAL).
 - POLYMER CONCRETE AND FIBERGLASS: NO LINING REQUIRED.
 - STANDARD CONCRETE: SHALL BE LINED INSIDE WITH ALUMINUM SILICATE COMPOUND (LAFARGE SEWPER COAT, OR APPROVED EQUAL) TO THE FOLLOWING THICKNESS:
 WET-WELLS: ONE-INCH (1") MINIMUM
 MANHOLES: HALF-INCH (1/2") MINIMUM
 - VERIFY SIZE OF WET WELL ACCESS HATCH WITH PUMP MANUFACTURER, WITH MINIMUM SIZE BEING TWO (2) 36-INCH BY 36-INCH DOORS. THE ACCESS FRAMES AND COVERS SHALL BE CONSTRUCTED OF ALUMINUM THREAD PLATE AND SHALL BE WATERTIGHT (GASKET), AND SHALL BE RATED FOR 300 PSF. THE DOORS SHALL OPEN TO 90° AND AUTOMATICALLY LOCK. THE LIFTING HANDLES, HINGES AND ALL FASTENING HARDWARE SHALL BE ALUMINUM OR STAINLESS STEEL, TYPE 316. ACCESS COVER ON VALVE VAULT SHALL BE CENTERED ON THE VALVES AND CLEANOUT FOR ACCESS. ACCESS COVERS SHALL INCLUDE HINGED ALUMINUM GRATES FOR SAFETY. ACCESS COVERS SHALL BE ABLE TO BE SECURED WITH A PADLOCK.
 - THE WET WELL FLOOR SHALL BE GROUTED TO FORM A HOPPER STYLE SUMP AT THE PUMPS. THE SLOPE FOR THE GROUT SURFACE SHOULD BE A MINIMUM OF 10% AND SHOULD EXTEND FROM THE PUMP INTAKE TO THE WET-WELL WALL ON ALL SIDES OF THE WELL. GROUT SHALL BE SHAPED TO ENSURE THAT SOLIDS WILL NOT ACCUMULATE. GROUT SHALL NOT INTERFERE WITH EQUIPMENT REMOVAL.
 - GUIDE RAILS, BASE ELBOW, FLANGE GRONNET, AND DISCHARGE FLANGE MUST BE SUPPLIED BY PUMP MANUFACTURER. THE PUMP SHALL BE EASILY REMOVED FOR INSPECTION OR SERVICE. PERSONNEL SHALL HAVE NO REASON TO ENTER THE WET WELL. GUIDE RAILS SHALL BE SUPPORTED AT A MAXIMUM INTERVAL OF EVERY 10 FEET WITH STAINLESS STEEL SUPPORTS. SUPPLIER SHALL PROVIDE DIMENSIONS OF THE STAINLESS STEEL GUIDE RAILS TO ENSURE COMPATIBILITY.
 - ALL HARDWARE AND FASTENERS USED SHALL BE CONSTRUCTED OF 316 STAINLESS STEEL. GUIDE BRACKETS FOR EACH PUMP MUST BE SUPPLIED BY THE PUMP MANUFACTURER TO ENSURE COMPATIBILITY WITH SUPPLIED EQUIPMENT.
 - ALL STATIONARY PIPING AND VALVES USED IN THE LIFT STATION WET WELL AND VALVE VAULT SHALL BE DUCTILE IRON OR 316 STAINLESS STEEL WITH A MINIMUM WORKING PRESSURE OF 350 PSI. DUCTILE IRON PIPE AND FITTINGS SHALL BE EPOXY COATED AND LINED WITH A 100% SOLIDS EPOXY SUITABLE FOR THE WET WELL ENVIRONMENT, PROTECTO 401 (P401) OR APPROVED EQUAL. ALL HARDWARE MUST BE 300 SERIES STAINLESS STEEL. FLANGES SHALL HAVE FULL FACE GASKETS WITH 350 PSI RATING.
 - ALL DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE SHOP PRIMED AND FIELD COATED WITH TWO (2) COATS OF TMEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL, PROVIDING A TOTAL OF 12 MILS DFT.
 - EACH PUMPING UNIT SHALL BE PROVIDED WITH A STAINLESS STEEL LIFTING CHAIN. LIFTING CHAIN SHALL EXTEND AT LEAST 6 FEET ABOVE WET WELL.
 - A 316 STAINLESS STEEL FLOAT MOUNTING ASSEMBLY SHALL BE PROVIDED. THE FLOATS SHALL BE MOUNTED AWAY FROM THE WET WELL INLET, ANY CONTROL WIRING, AND THE PUMPS TO MINIMIZE DISTURBANCE. FLOATS SHALL BE LOCATED OUTSIDE OF STILLING WELL.
 - PUMP DISCHARGE LINES SHALL HAVE 1/4 INCH TAPS WITH STAINLESS STEEL BALL VALVES. THE TAPS SHALL BE ACCESSIBLE AND LOCATED UPSTREAM OF THE VALVES (ON THE PUMP SIDE) IN THE EXTERNAL VAULT VALVE.
 - IN THE VAULT ALL DISCHARGE LINES SHALL HAVE ADEQUATE THRUST SUPPORT MEMBERS AT EACH FITTING. WHERE POSSIBLE, LONG RADIUS 90 DEGREE BENDS SHALL BE USED.
 - THE DISCHARGE LINE FROM EACH PUMP SHALL BE FITTED WITH A CHECK VALVE AND A RESILIENT WEDGE GATE VALVE, WITH THE CHECK VALVE ON THE PUMP SIDE OF THE GATE VALVE. AIR RELEASE VALVE(S) SHALL BE INSTALLED DOWNSTREAM OF THE GATE VALVES.
 - THE VALVE VAULT SHALL BE SIZED LARGE ENOUGH TO PROVIDE AT LEAST 1 FOOT OF CLEARANCE AROUND ALL VALVES AND 6 INCHES OF CLEARANCE TO ALL FLANGES. THE COVERS SHALL BE ABLE TO BE SECURED BY A PADLOCK USING A HEAVY DUTY HASP.
 - THE VALVE VAULT SHALL HAVE A DRAIN TO THE WET WELL. THE DRAIN SHALL HAVE A MINIMUM 5-INCH DIAMETER STAINLESS STEEL SCREEN. THE DRAIN LINE SHALL BE A MINIMUM 2 INCH DIAMETER AND BE FITTED WITH A TRAP TO PREVENT GASES OR WATER FROM ENTERING THE VALVE VAULT.
 - ALL VENTS SHALL BE STAINLESS STEEL. VENTS SHALL BE COATED INSIDE AND OUT PER CITY OF AUSTIN STANDARD SPECIFICATIONS. VENTS TO HAVE A 180 DEGREE BEND, A PROTECTIVE STAINLESS STEEL SCREEN, AND THE HEIGHT OF SCREEN FROM TOP OF CONCRETE SHALL BE 2'.
 - ALL CONCRETE WET WELL AND VALVE VAULT SECTION JOINTS SHALL BE SEALED WITH "O" RINGS. CANUSA, OR EQUAL, WRAPPED SEAL SHALL BE INSTALLED ON THE OUTSIDE OF EACH JOINT ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
 - CONNECTION TO PROPOSED WET-WELL SHALL INCLUDE A PVC TEE INSIDE OF WET-WELL, CONNECTED TO PVC PIPE DIRECTED TOWARD THE BOTTOM OF THE WET-WELL. PROVIDE MINIMUM OF 8' FROM GRAVITY LINE INLET TO BOTTOM OF WET-WELL.
 - PUMP/MOTOR DATA:
 NO. OF PUMPS:
 Q= GPM RPM= RPM (MAXIMUM)
 H= FT TDH V= PHASE
 HP= HP

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INCLUDE MANUFACTURER'S PUMP CURVE & INFORMATION (INCLUDING DESIGN BASIS PUMP WITH DESIGN POINT) REVISE WITH INSTALLED PUMP, IF NECESSARY, WITH AS-BUILT.

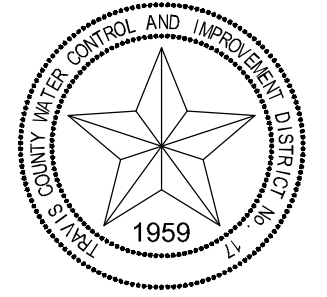


PUMP LEVEL & ALARM SETTINGS

CONTROL POINT	ELEVATION (FT)	DISTANCE FROM FLOOR (FT)
HIGH LEVEL ALARM		
LAG PUMP ON		
LEAD PUMP ON		
ALL PUMPS OFF		
LOW LEVEL ALARM		

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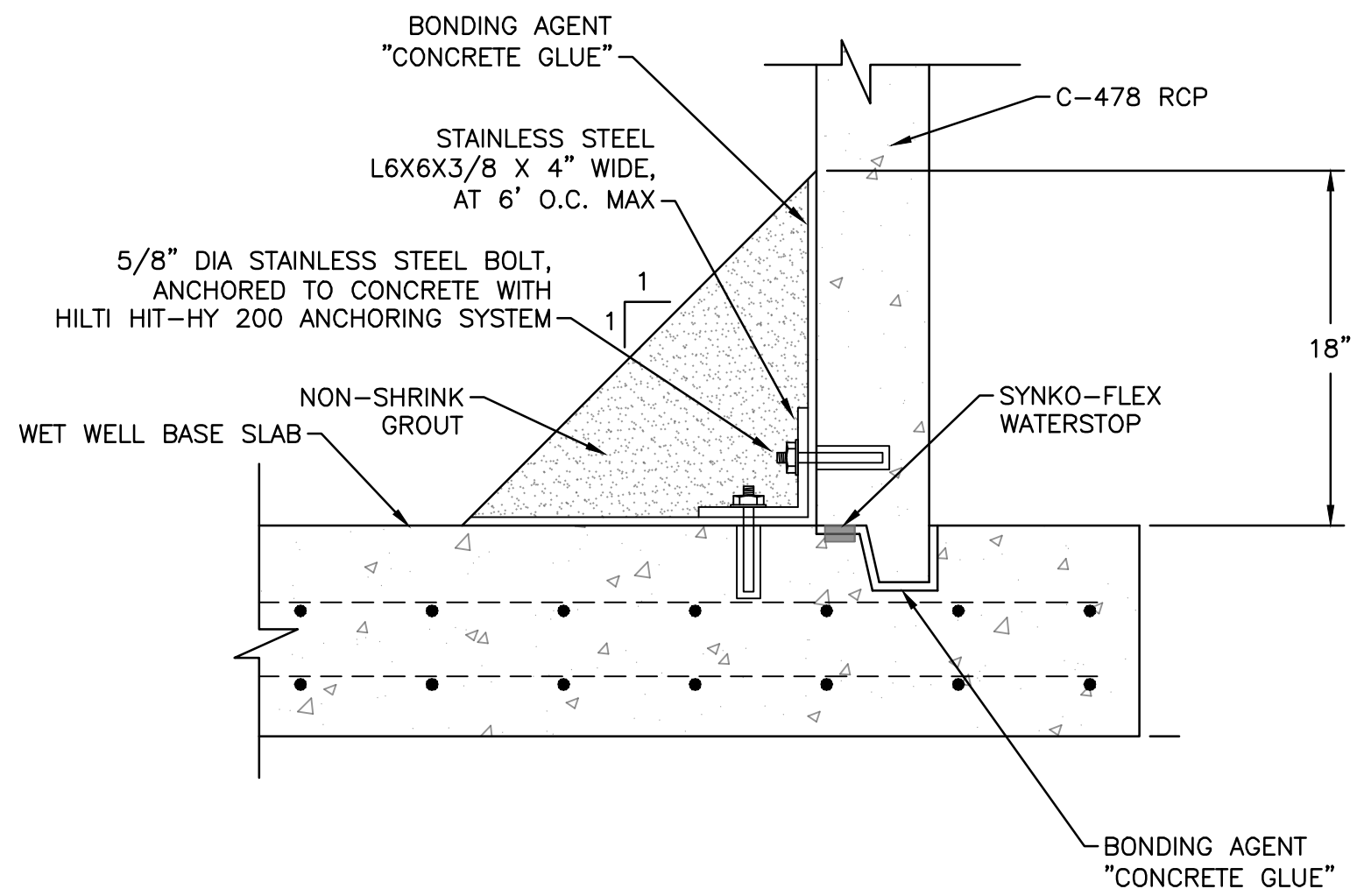
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TRAVIS COUNTY WCD NO. 17
 TYPICAL LIFT STATION DRAWINGS

TYPICAL WET-WELL AND VALVE VAULT
 PLAN AND SECTIONS

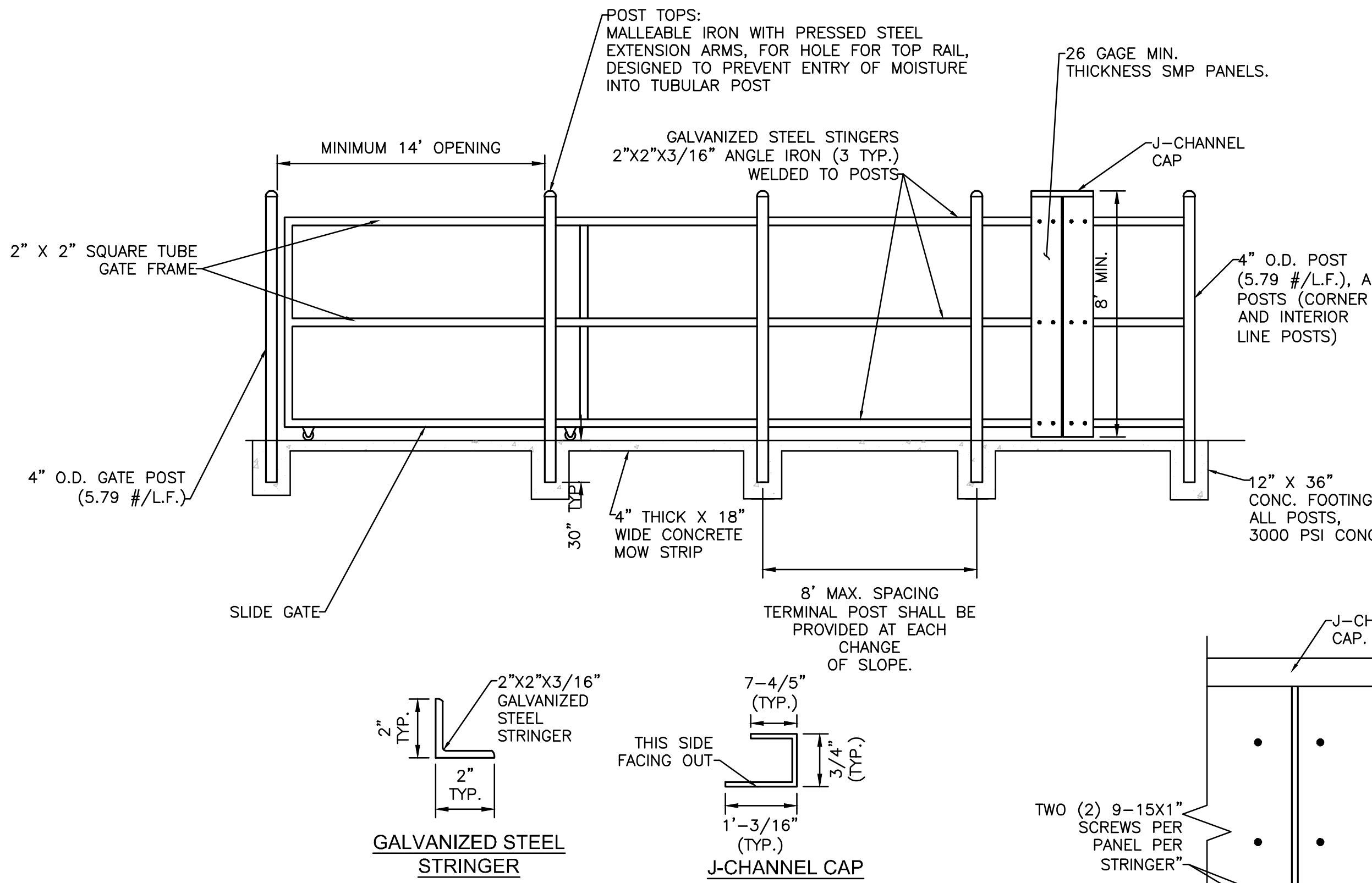
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- NOTES:**
1. CONCRETE TO HAVE A MINIMUM STRENGTH OF 3,500 PSI AT 28 DAYS.
 2. ANCHOR BOLTS IN EXISTING CONCRETE: DRILLED HOLES SHALL BE COMPLETELY CLEANED USING A BRUSH AND COMPRESSED AIR PRIOR TO INSTALLING BOLT AND ADHESIVE. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED FOR INSTALLATION.

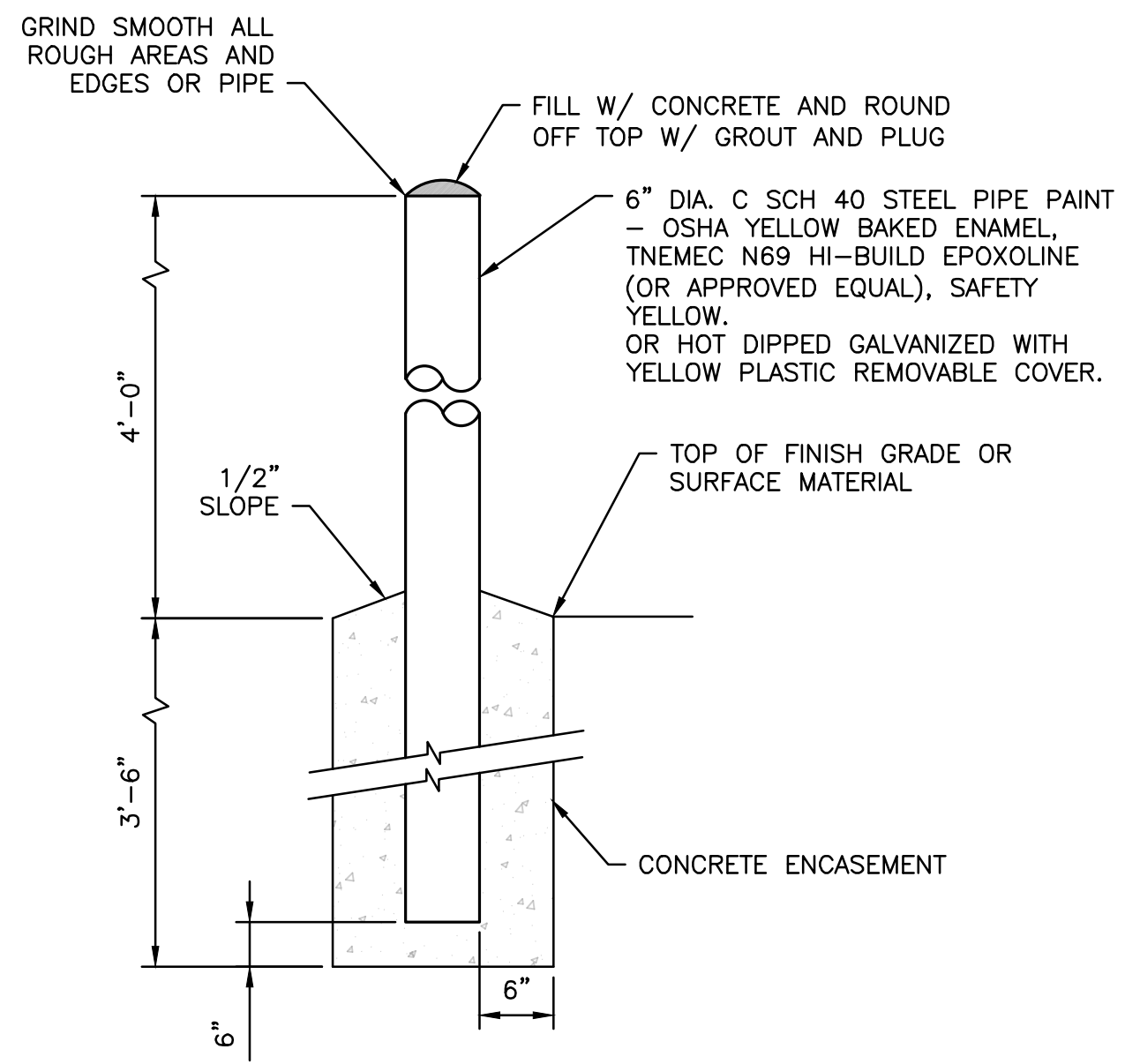
1 WET-WELL SEAL AND ANCHOR DETAIL (CONCRETE WET-WELL)
 NOT TO SCALE

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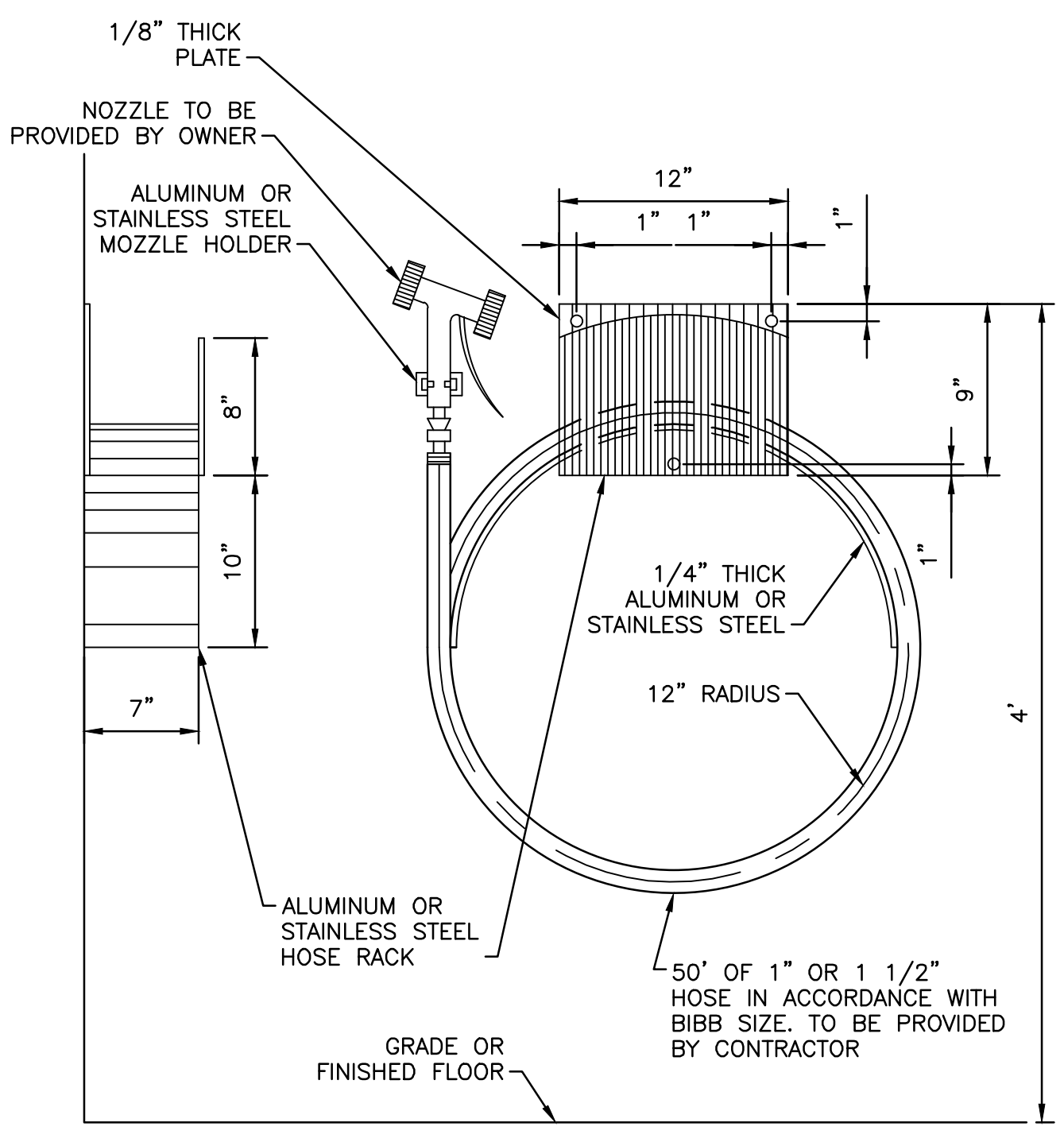


- NOTES:**
1. THE GATE SHALL COME COMPLETE WITH TAMPER PROOF FRAMES, HINGES, BRACED AND PAD LOCKABLE. THE HINGES SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATE SHALL BE INSTALLED SO THAT IT MAY NOT BE REMOVED WITHOUT DISASSEMBLING THE HARDWARE. THE HARDWARE ATTACHMENT BOLTS SHALL BE PEENED SO THAT REMOVAL WILL BE DIFFICULT.
 2. ALL POST SHALL BE SET PLUMB AND SPACED AT MAXIMUM OF EIGHT (8) FEET APART. THE FENCE SHALL BE INSTALLED TO MAINTAIN NOT MORE THAN TWO (2) INCHES OF CLEARANCE FROM FINISHED GRADE.
 3. FENCE HARDWARE TO BE RUST PROOF AND TAMPER PROOF.
 4. FENCE TO BE INSTALLED BY EMPIRE FENCE, LOTT FENCE, VIKING FENCE, OR APPROVED EQUAL.
 5. GATES TO BE OF THE WIDTH AND TYPE INDICATED ON THE PLAN. GATES TO BE DESIGNED BY FENCE MANUFACTURER TO WITHSTAND OPENING WIDTH AND ALLOW FOR SMOOTH OPERATION. GATE FRAME AND MEMBER DIMENSIONS ARE MINIMUMS. GATE SHALL INCLUDE HARDWARE TO ACCEPT A HIGH SECURITY PADLOCK. DOUBLE PANEL GATES, (MEETING IN THE MIDDLE) SHALL INCLUDE A PLUNGER ROD ON EACH PANEL. GATES SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH DIVISION 09000.
 6. GATE LOCK DIMENSIONS ARE TYPICAL. FINAL LOCK DIMENSIONS TO BE APPROVED IN THE FENCE SUBMITTAL.

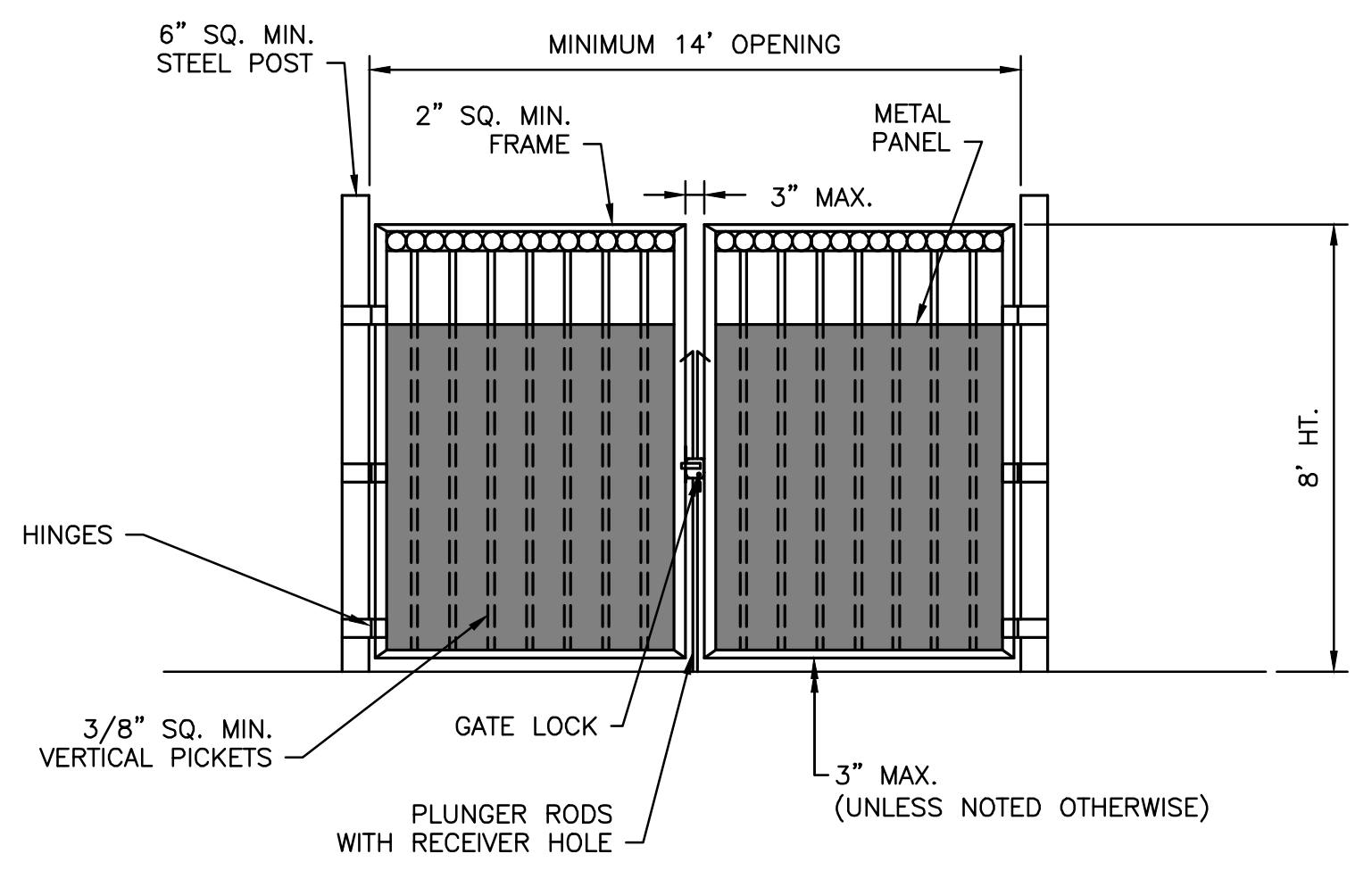
4 SECURITY FENCE DETAIL
 NOT TO SCALE



2 BOLLARD DETAIL
 NOT TO SCALE

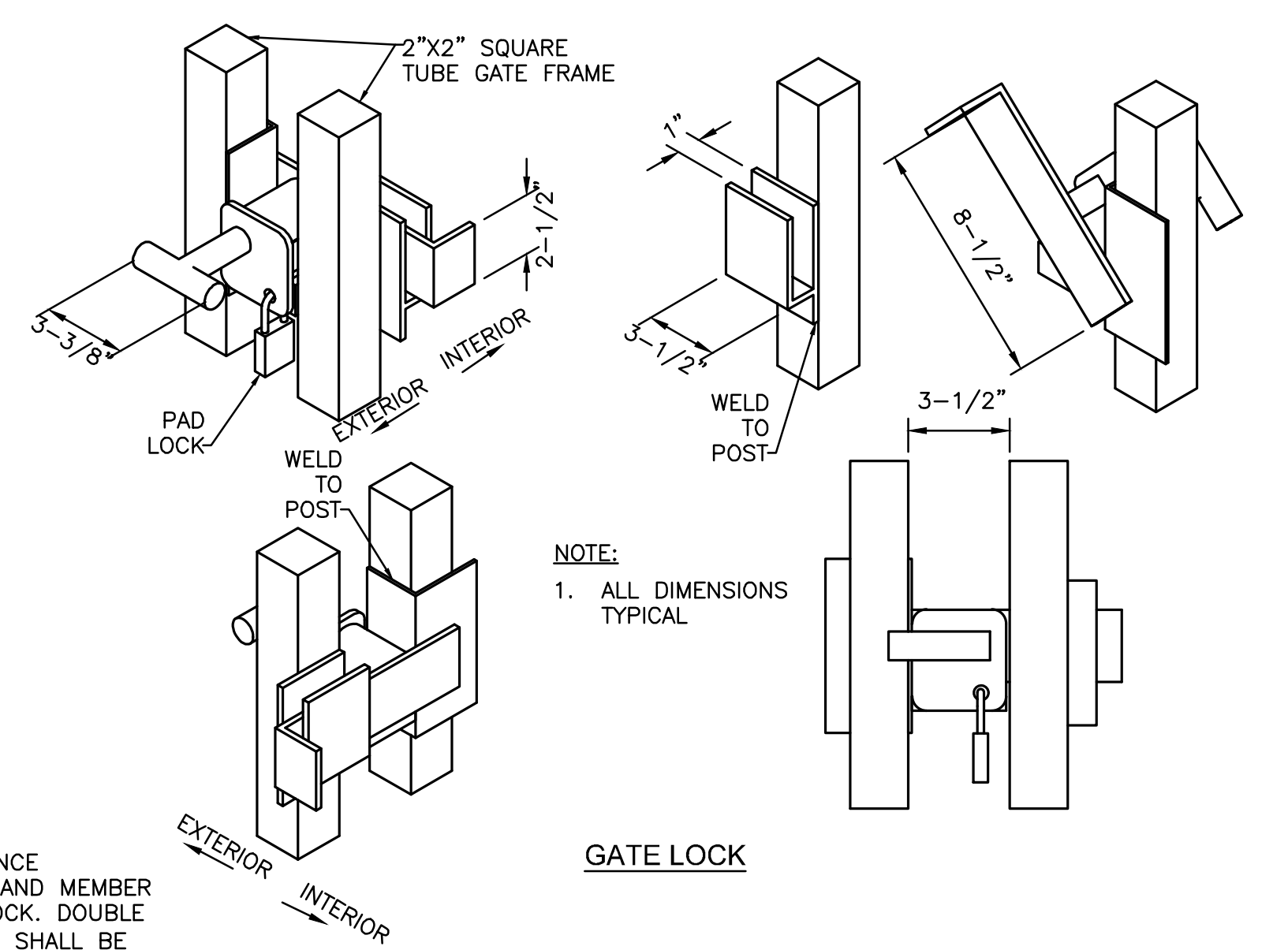


3 WASH HOSE STATION DETAIL
 NOT TO SCALE



- NOTES:**
1. GATES TO BE OF THE WIDTH AND TYPE INDICATED ON THE PLANS. GATES TO BE DESIGNED BY FENCE MANUFACTURER TO WITHSTAND OPENING WIDTH AND ALLOW FOR SMOOTH OPERATION. GATE FRAME AND MEMBER DIMENSIONS ARE MINIMUMS. GATES SHALL INCLUDE HARDWARE TO ACCEPT A HIGH SECURITY PADLOCK. DOUBLE PANEL GATES, (MEETING IN THE MIDDLE) SHALL INCLUDE A PLUNGER ROD ON EACH PANEL. GATES SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH DIVISION 09000.
 2. GATE SKETCH IS THE BASIS FOR DESIGN AND TO DEMONSTRATE INTENT. IF A SPECIFIC STYLE IS SHOWN, IN ADDITION, PROVIDE THE STYLE INDICATED MEETING THIS INTENT.

5 SWING GATE DETAIL (ONLY WHEN NECESSARY AND WITH PRIOR APPROVAL)
 NOT TO SCALE



- NOTE:**
1. ALL DIMENSIONS TYPICAL

GATE LOCK

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