

GENERAL NOTES

1. INTENTION. It is Clay County Utility Authority's (CCUA) intention to secure a new utility infrastructure system, complete in accordance with the plans, specifications, and contract documents. All new work shall be in accordance with CCUA Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above, whether or not specifically called out or noted on the plans.

2. GENERAL. All materials shall be of those listed in the CCUA Approved Materials Manual. The installation shall be warranted by the Contractor as to materials, workmanship and accuracy of the asbuilt drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., gravity mains shall be laid true to line and grade, fittings shall be properly installed and restrained, trenches shall be properly excavated and backfilled, manholes shall be installed at locations and to elevations shown on the plans. CCUA Approved Material Manual can be found at the following web link: https://www.clayutility.org/engineering/materials_manual.aspx.

2.1 CONTRACTOR LICENSE AND APPROVAL. Utility reserves the right to approve or deny selected Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State of Florida Underground Utility Contractors license, that named contracting company being the one doing the utility work on the project, and demonstrate acceptable experience in the field of utility construction.

3. CCUA SHOP DRAWING AND SUBMITTAL PROCESS. A signed acknowledgement by the Contractor and the Material Supplier, on the "Shop Drawings and CCUA's Approved Materials List Form," that all materials will be in accordance with CCUA's Specifications, CCUA's Details and CCUA's Approved Materials Manual, is the only submittal CCUA will require for each item of materials with the following exception: any alternate materials requested by the Engineer; any materials not listed in the CCUA Materials Manual; and materials associated with pumping stations and plant installations. Those exceptions shall be an individual shop drawing submitted for CCUA's review and approval prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requiring additional submittals and shop drawings as deemed necessary for the project.

4. JOBSITE SAFETY. While on the job site, the Contractor shall at all times observe all Federal, State and local safety rules, regulations and laws. This includes, but is not limited to, confined spaces and excavation protection systems as per O.S.H.A. standards.

5. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work.

6. AS-BUILT DRAWINGS AND ASSOCIATED COSTS. All records pertaining to the water, reclaimed and sewer facilities being transferred to the Utility shall be provided by applicant at no cost to the Utility. Prior to acceptance of any extension to the Utility's system that is completed by a licensed State of Florida underground utility Contractor, the Utility will require that the applicant's Contractor provide the Utility, to retain for its permanent records, all field as-built data which shall be provided in accordance with the Utility's "As-built Specifications Standards Manual," which can be obtained from the Utility's website (https://www.clayutility.org/engineering/development_permitting.aspx).

7. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD. Developer/Contractor shall secure a written and fully assignable warranty that the system will be free from all defects, latent or otherwise, with respect to workmanship, materials, installation, and accuracy of their as-built drawings in accordance with the Utility's approved plans and specifications for a minimum period of two years from the date of the system's acceptance by the Utility and immediately assign the same and the right to enforce the same to Utility on or before the date of the Utility's acceptance of the system for Ownership and maintenance.

8. RESTORATION. New Water, Sewer and Reclaimed construction in earthen areas shall be restored, in accordance with the permitting agency having jurisdiction. In locations where existing graded (sodded) areas are disturbed, sod shall be replaced to preconstruction condition and to limits of construction or placed where directed by the engineer of record.

9. PERMITS. The Contractor/Developer shall be responsible for obtaining and providing construction records of all permits required for performing work.

10. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, rock, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material. Compaction tests, the first of which shall be the spring line of the pipe by either hand or machine operation carefully to 95% (outside of paving), 80% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

11. EXCAVATION must meet OSHA requirements and Contractor shall conform to the guidelines set forth in the Trench Safety Act throughout the duration of the project. Contractor shall provide written assurance that the trench excavation will comply with the applicable trench safety standards.

12. PIPE BEDDING. In the event unsuitable or unstable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with ASTM D2487 A3 soil material specified by the Design Engineer and approved by the Utility to provide a stable trench bedding surface suitable for proper pipe installation.

13. PIPE BEDDING (ROCK BEDDING MATERIAL). Rock material used for pipe bedding shall be ASTM #57 stone or crushed concrete (crush-crete) in a #57 size. Rock bedding material shall be completely wrapped in a heavy fiber fabric material, overlapped a minimum of one foot. Rock bedding shall be installed to the correct grade and compacted to a density which will prevent any settlement, either by mechanical tamping equipment or other methods approved by the Engineer of Record. The compaction method shall be accepted by the Utility.

14. DEWATERING. The Contractor shall at all times during construction provide ample means and equipment to promptly remove and dispose of all water entering the trench and structure excavations and shall keep sediments acceptably dry until the piping and / or structures to be built therein are completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures, or property. No pipe shall be installed in water and no water shall be allowed to rise above the bottom of any pipe while it is being joined, except as accepted in writing by the Utility. Additionally, pipe trenching must be dewatered in accordance with the Utility's *Typical Pipe Trench Detail*.

15. HYDROSTATIC TESTING. After all pressure pipes (water, force and reclaimed mains, and services) are installed, the joints completed, and the trench backfilled, the newly installed pipe and appurtenances shall be subjected to a hydrostatic pressure test minimum of 150 pounds per square inch (p.s.i.) for a maximum period of two hours. The engineer of record and the Utility must be notified 48 hours before a test is to present as the test is performed. Any pipe leaks detected shall be corrected to the satisfaction of the engineer of record. The two-hour test period shall begin when all joints have been determined to be watertight. Leaks shall be limited to the allowable set forth in Section 4 of AWWA Standard C600-87. Hydrostatic and leakage test and blow-down (venting of gauge) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 p.s.i. regardless of the length of pipe and the hydrostatic pressure test shall not fall below 150 p.s.i.

16. DENSITY TESTING. Backfill in-place density tests are required at intervals not to exceed 150 feet along pipelines for every other lift. A minimum of one test between manholes is required for every other lift regardless of the distance between sanitary sewer manholes.

17. PIPE AND PIPE JOINTING FOR FUSED & HDPE PIPE:

- a. Heat Fusion Joining: Joints between plain end pipes and pipe fittings shall be made by butt fusion when possible. Electro fusion welding may also be used to complete when the location is not accessible to butt fusion welding equipment. The on-site welder making the joints (butt fusion or electro fusion) shall have received specific training from the Manufacturer of the fittings and/or pipe being welded and shall have written proof of proper training/certification from the associated Manufacturers. Only certified welders who have written training certificates from the fitting and/or pipe Manufacturer will be allowed to perform this work. To weld a fitting or electro fusion coupling in place, the on-site welder (employee) must be trained and certified by the fitting Manufacturer. To butt weld pipe, the on-site welder (employee) must be trained and certified by the pipe Manufacturer. The fusion work shall be accomplished (welding and cool-down/closing times) in accordance with the fitting and pipe Manufacturers' recommendations, at a minimum. The Utility reserves the right to require the Contractor to remove or not permit an employee to work on the welding or fusing portion of the work if in the opinion of the Utility that person is not properly trained or cannot perform the welding or fusion process in high quality and professional workmanship manner.
- b. External and internal beads shall only be removed when required by the Utility. The internal bead shall be removed from all fused joints of a pipe that is to be used as a gravity sewer line, or as a sewer force main line or as a sleeve or host pipe which will have another pipe installed inside it. The external bead shall be removed from all fused joints of a pipe which will be installed inside of a sleeve or host pipe and the external bead shall be removed from all fused joints of a pipe to be pulled through a reamed Horizontal Directional Drill hole which may have a possible catch point such as extreme rocky ground conditions or other hazards. The Contractor shall be required to follow the requirements and recommendations of the pipe Manufacturer and the Utility.

18. FUSIBLE POLYVINYL CHLORIDE (PVC) PIPE:

- a. PVC Pipe shall conform to AWWA C900, Ductile Iron Pipe Size (DIPS), DR18, and color coded. The pipe material shall be clean, virgin, National Sanitation Foundation No.14, ASTM class 12454. PVC shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe. Each length shall be clearly marked with the name of the manufacturer, location of the plant, pressure rating, and size.
- b. PVC pipe shall not be bent beyond the manufacturer's recommended minimum allowable bend radius. The published allowable bend radius is applicable to all pipe alignments, including during handling and movement, as well as final positioning and installation.
- c. PVC pipe shall not be subjected to a pull force greater than 80% of the manufacturer's recommended allowable pull force for the pipe wall thickness and size. Allowable pull force is the tensile load that may be safely applied to the pipe and is a function of the tensile stress capacity of PVC and the cross-sectional area of the PVC pipe section. PVC pipe shall meet the cell class tensile stress capacity of 7,000 psi when the compound is tested per ASTM 1784. Safety factor shall be 2.5.

19. PIPE INSTALLATION. The installation of all pipe, regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. No pipe shall be installed with the joints over-homed. The reference mark (home-line) shall not be installed into the bell beyond the manufacturer's recommendation. The Contractor shall be responsible to mark any pipe cut to length with a reference mark (home-line) placed to the correct location on the pipe according to the type and size pipe being installed. CCUA will not permit any pipe joint to be left in place if the joint is over-homed. It shall be the Contractor's responsibility to obtain the information pertaining to installation of pipe to be installed from the manufacturing and to install the pipe accordingly.

20. PIPE ABANDONMENT. Any utility pipe regardless of the type or size which has been abandoned, or taken out of service or out of use for any reason, shall either be removed from the ground for its entire length and disposed of in a legal manner, or shall be grout filled in place for its entire length. A CCUA inspector shall be present and witness the grouting of the pipe from start to finish. If the abandoned pipe is being removed, a CCUA inspector shall be present or be able to view the open ditch where pipe was removed from prior to backfilling that ditch. A grout fill plan must be submitted to CCUA for their acceptance at a minimum of two (2) weeks in advance of the proposed grout fill operation.

21. DISINFECTION/STERILIZATION NOTES:

- a. CCUA staff shall authorize changes or adjustments to existing CCUA values.
- b. The General Superintendent of the Distribution and Collection System must be informed of any changes to existing CCUA values.
- c. Engineer of Record shall provide a Disinfection/Sterilization Plan in accordance to F.A.C. 63-302.530 showing the proposed sample point locations with the initial plan review submittal.
- d. The scheduling of the disinfection process for new water mains must be coordinated with CCUA.
- e. CCUA inspectors must be present to observe and monitor the disinfection process.

22. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

23. CCUA details and specifications (latest available copy) shall be included in all plans submitted for work within the CCUA utility system. No person shall modify, change, omit, or replace any portion of those details and specifications without the express written consent of CCUA. In any instance where the Design Engineer has included his written specifications or details in the plans then the more stringent of the two shall govern.

DESG	DRWN	RHD	CHRD	APRV	DATE

STANDARD WATER AND SEWER SYSTEM SPECIFICATIONS

SPECIFICATIONS FOR CONSTRUCTION OF WATER DISTRIBUTION SYSTEM

01. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all joints, crosses, valves, bends, fittings, and fire hydrants. See CCUA Approved Materials Manual for acceptable restraints and refer to joint restraint table on detail sheet WAT 02.

02. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C160) "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure of 290 p.s.i. for a 8-foot depth of cover. Class 51 minimum and shall be ANSI A21.51 (AWWA C151), laterally cast centrifugal cast iron pipe. Laying depth shall be 20 feet or less in length, and shall be clearly marked with pressure rating, thickness, class, height of pipe without lining, length, and manufacturer. Ductile iron pipe for water service shall be furnished with centering rings per AWWA C110, C115 and C116. The pipe shall have design of 60,000 p.s.i. minimum tensile strength, and 42,000 p.s.i. minimum yield strength. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 80% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

03. EXCAVATION. Excavation must meet OSHA requirements and Contractor shall conform to the guidelines set forth in the Trench Safety Act throughout the duration of the project. Contractor shall provide written assurance that the trench excavation will comply with the applicable trench safety standards.

04. PIPE BEDDING. In the event unsuitable or unstable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with ASTM D2487 A3 soil material specified by the Design Engineer and approved by the Utility to provide a stable trench bedding surface suitable for proper pipe installation.

05. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

06. POLYVINYL CHLORIDE (PVC) 1120, SCHEDULE 80 PIPE. Polyvinyl Chloride Pipe shall conform to the requirements of ASTM D-1785. Fittings shall be suitable for type of installation required. All piping smaller than 4" shall be Schedule 80 PVC.

07. GATE VALVES AND BOXES. Gate valves shall be non-resilient stem type and shall be suitable for a 200 p.s.i. non-shut-off working pressure. Gate valves shall be resilient seated, flanged or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves shall be as described in the CCUA Material Manual.

08. WATER METER BOXES. See CCUA Approved Materials Manual for acceptable water meter boxes. Developer shall be responsible for installation of meter boxes on all water services as part of the water main installation as per standards for water meter service details. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the water meter. The Contractor shall be required to open the meter box for the CCUA Inspector at the final inspection. A treated 6-8" trench post marker shall be placed on the curb stop. The CCUA Inspector shall be responsible for the inspection of the meter box.

09. CURB STOPS. Curb stops shall be cast bronze, inverted key stop, roundway, with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.

10. FIRE HYDRANTS. Fire hydrants shall be type, 150 pounds working pressure. AWWA Standard C502, latest revisions, with two 1 1/2" nozzles, one 4 1/2" nozzle and one 5 1/4" main valve. Fire hydrant shall be compression type with breakable coupling and bolts. Pipe connection shall be mechanical joint. Fire hydrants shall be painted silver, BLP Mobile Paints, Liquid Aluminum, 1151 alky, weight 56.6% x volume 41.2% VOC 3.76 lb. per gallon with 1 1/2" penta nuts, opening one. See CCUA Approved Materials Manual for acceptable fire hydrants.

11. NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full circle stainless steel tapping sleeve and mechanical joint tapping valve. Tapping sleeve shall be rated at 200 p.s.i., non-shock working pressure conforming to AWWA Standard C110, latest revision. Stainless steel tapping sleeves shall be from those listed in CCUA Approved Materials Manual. Tapping valve shall be mechanical joint on one end and standard flanged joint on the other end. Valve shall conform to these specifications.

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24. Under no circumstance shall any trees be planted within a CCUA utility easement without:

25. CLOSE OUT/COMPLETION. Minimum items required for Close Out / Completion for submittal to CCUA will include:

26. ADDED TO ADD PIPE NOTES:

27. UPDATED GENERAL NOTES:

28. UPDATED WATER OUTLINE NOTES:

29. UPDATED FLOW DIRECTION NOTES:

30. UPDATED FLOW RATE NOTES:

31. UPDATED FLOW DURATION NOTES:

32. UPDATED FLOW VARIANCE NOTES:

33. UPDATED FLOW VARIANCE NOTES:

34. UPDATED FLOW VARIANCE NOTES:

35. UPDATED FLOW VARIANCE NOTES:

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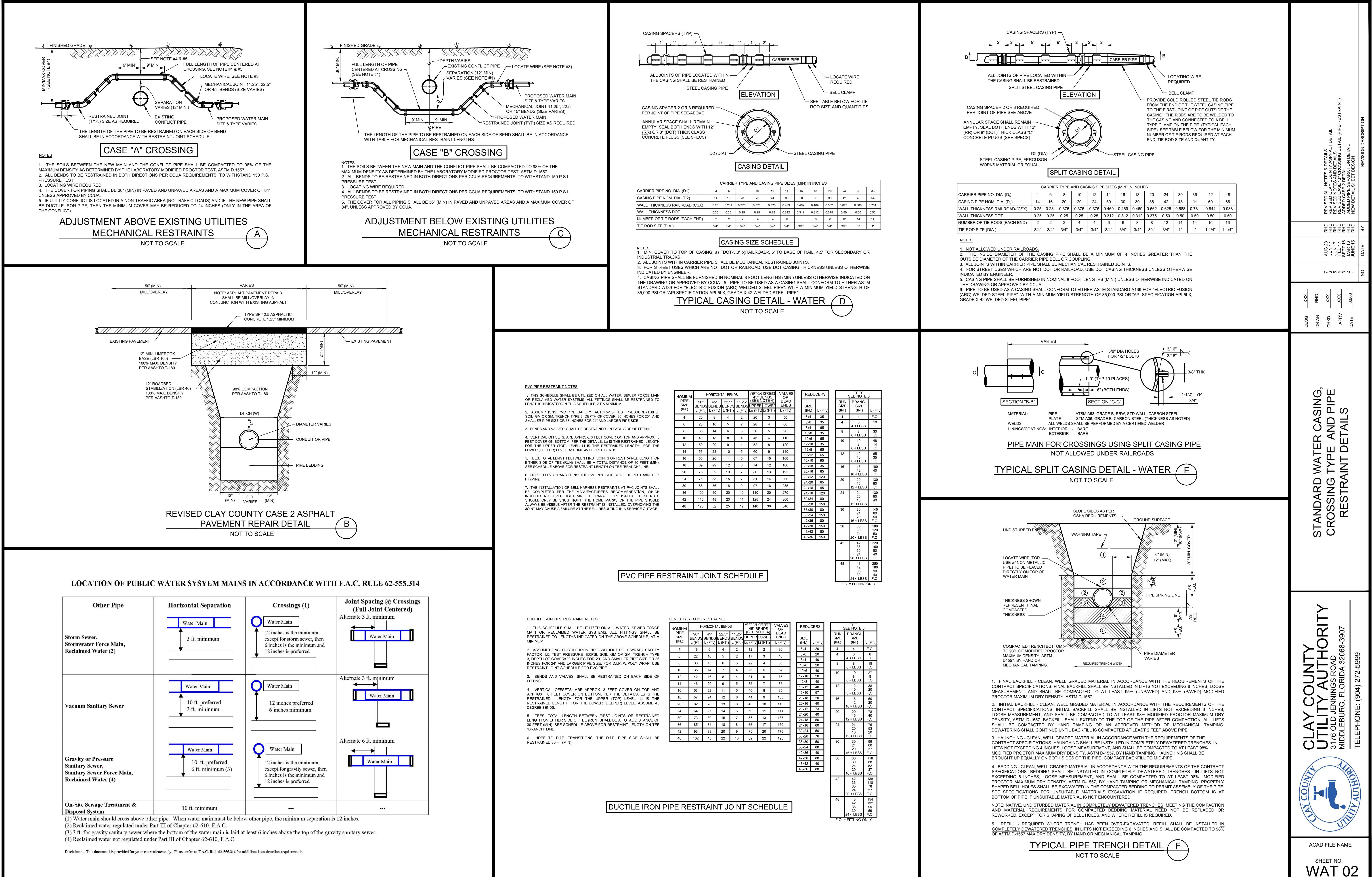
39. UPDATED FLOW VARIANCE NOTES:

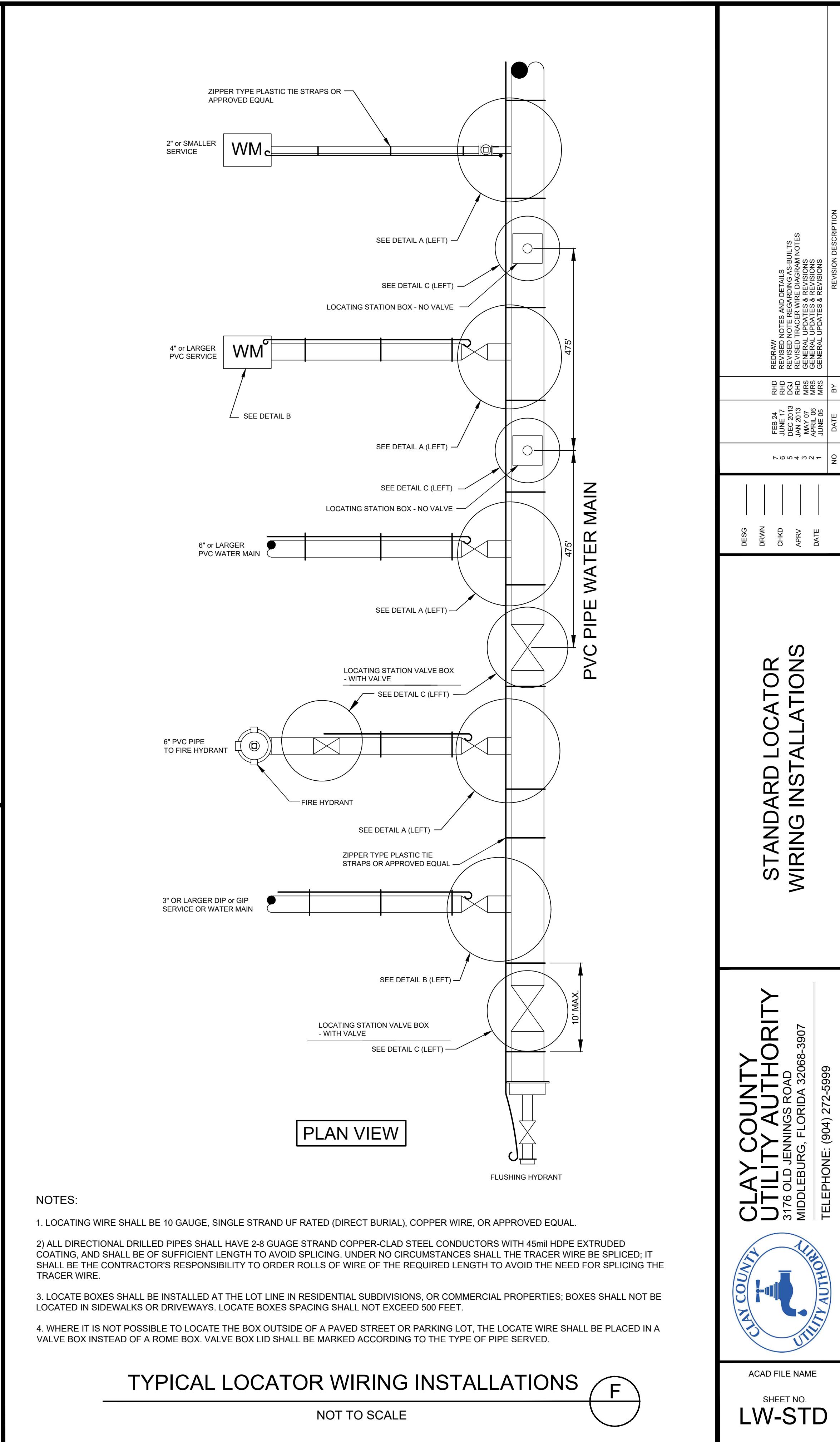
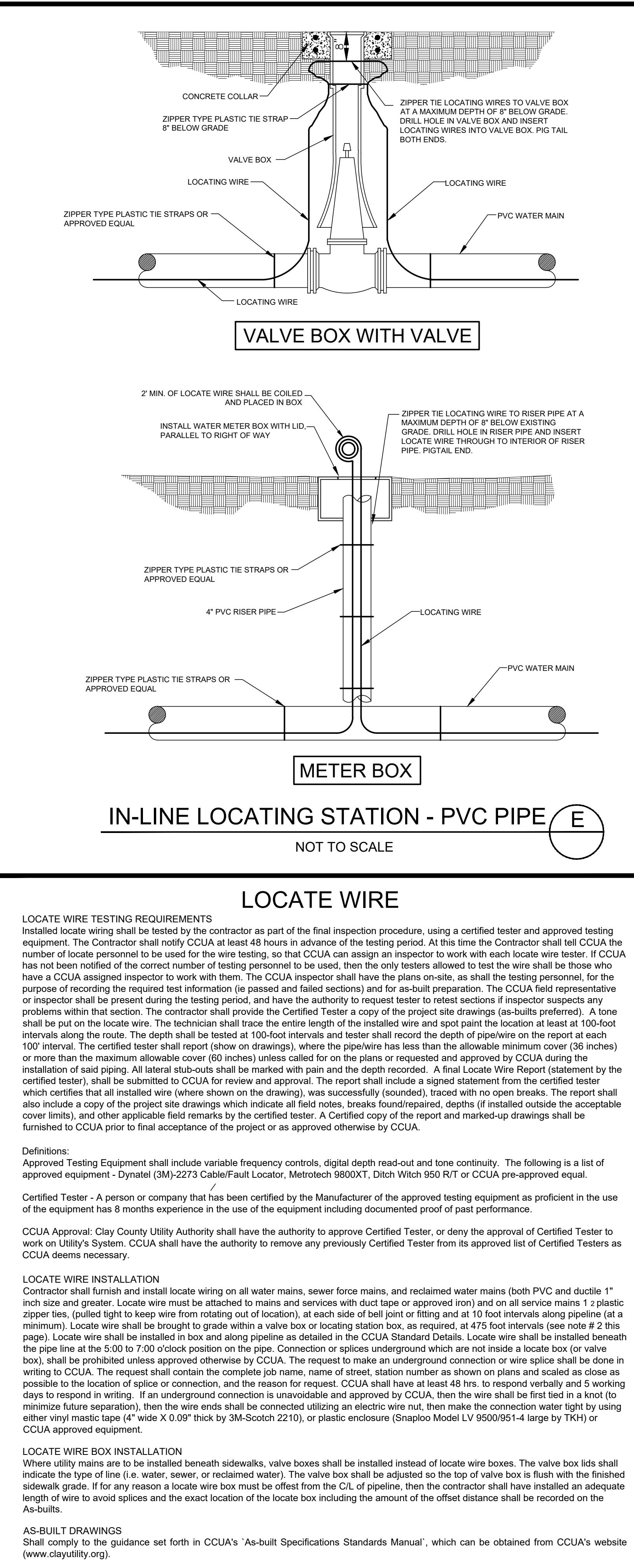
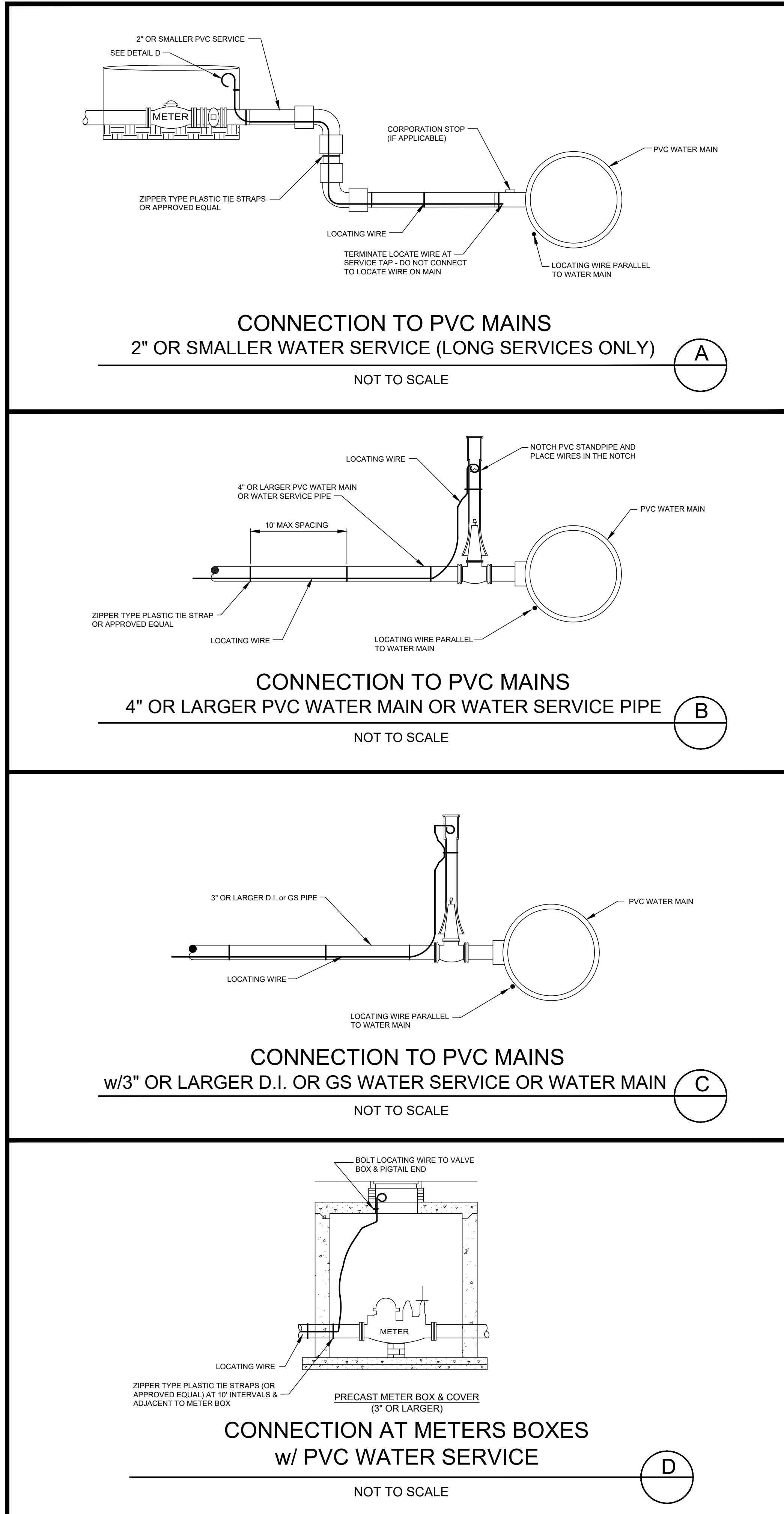
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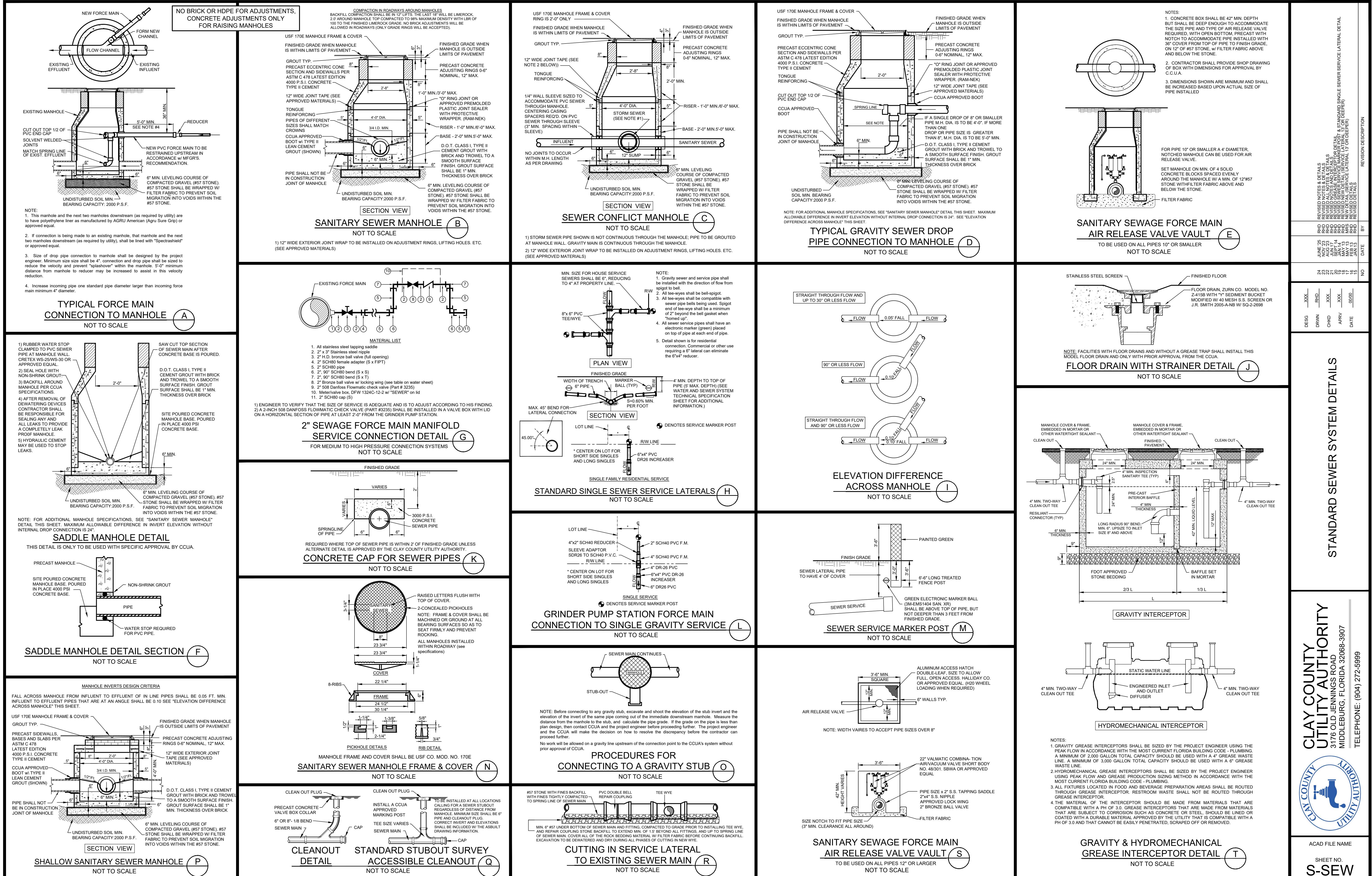
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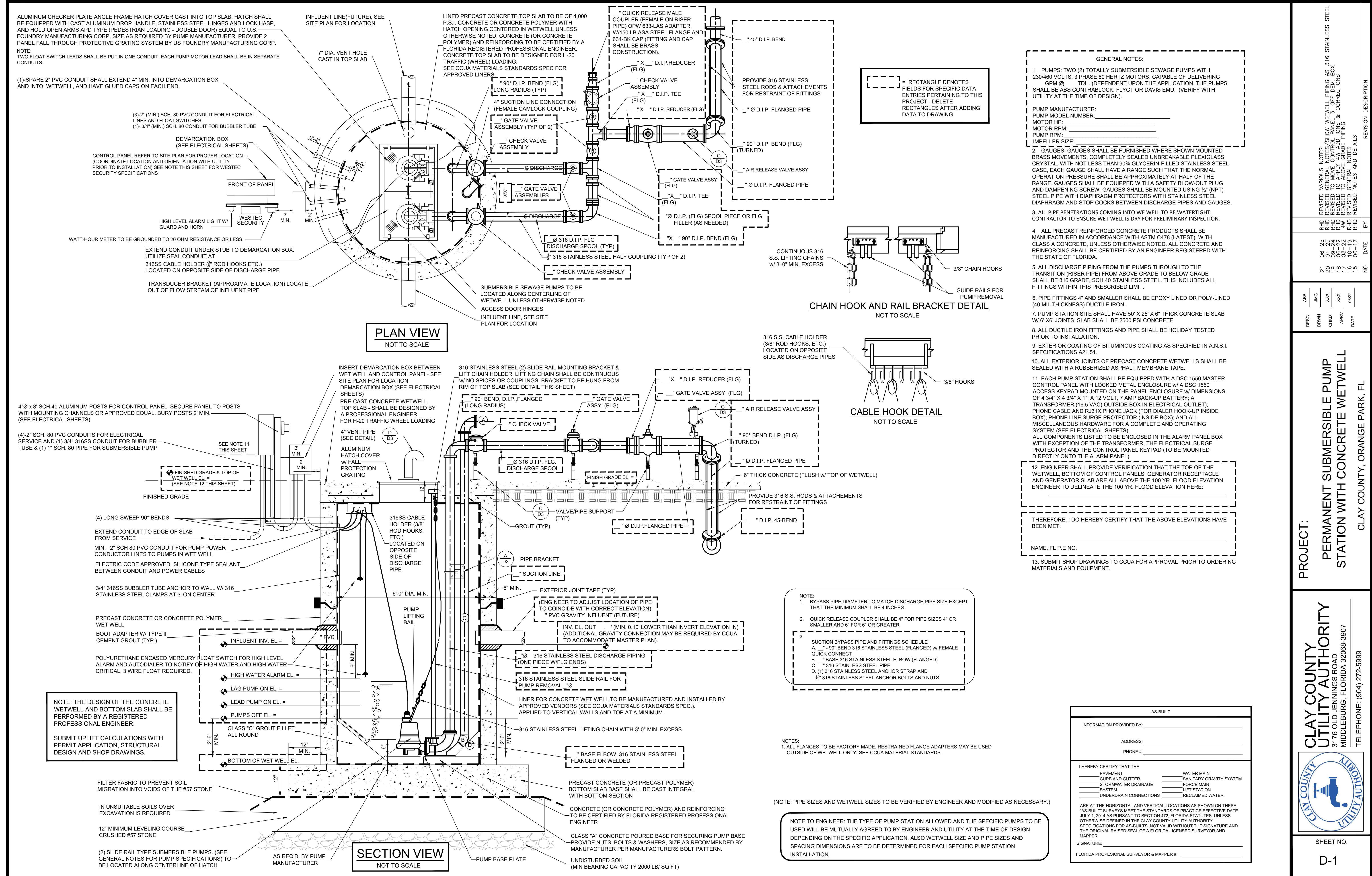
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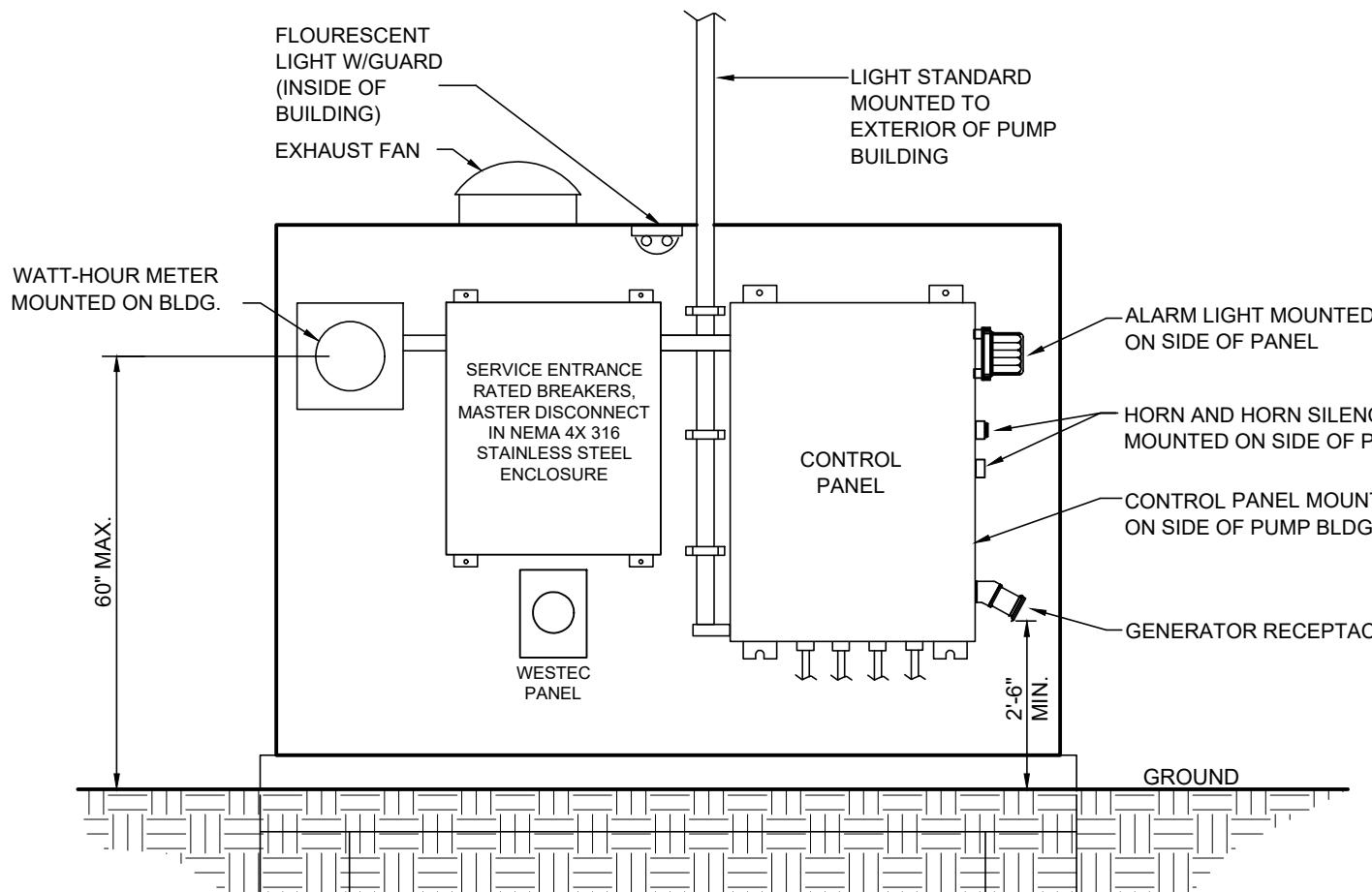
43. UPDATED FLOW VARIANCE NOTES:











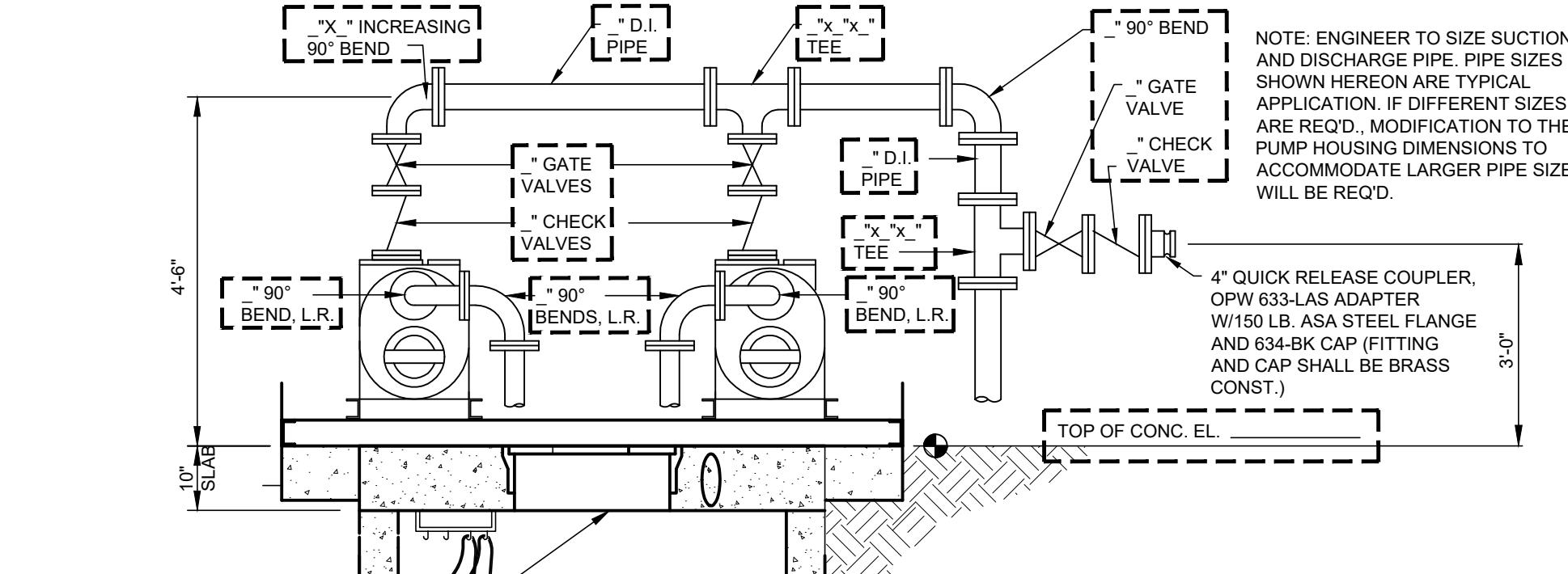
***ATLANTIC COMPANIES AUTO DIALER SPECIFICATIONS:**

EACH PUMP STATION SHALL BE EQUIPPED WITH A DSC PO1616 MASTER CONTROL PANEL WITH LOCKED METAL ENCLOSURE W/ BOX DIMENSIONS OF 12'X 12'X 4 1/2"; A DSC PK-1KON OR A DSC PK-5001 ACCESS KEYPAD MOUNTED ON THE PANEL ENCLOSURE W/ DIMENSIONS NO GREATER THAN 4 3/4"X 4 3/4"X 1"; A 12 VOLT, 7 AMP BACK-UP BATTERY; A TRANSFORMER (16.5 VAC) OUTSIDE BOX IN ELECTRICAL CELL; COMMUNICATOR; ELECTRICAL SURGE PROTECTOR (OUTSIDE BOX IN ELECTRICAL OUTLET); AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE AND OPERATING SYSTEM.

ALL COMPONENTS LISTED TO BE ENCLOSED IN THE ALARM PANEL BOX WITH EXCEPTION OF THE TRANSFORMER, THE ELECTRICAL SURGE PROTECTOR, CELLULAR COMMUNICATOR (INSIDE THE WEATHER PROOF ENCLOSURE) AND THE CONTROL PANEL KEYPAD (TO BE MOUNTED DIRECTLY ONTO THE ALARM PANEL ENCLOSURE).

STATION CONTROLS DETAIL - SIDE VIEW

NOT TO SCALE



MANHOLE RING & COVER U.S. FOUNDRY NO. 1307E
6' MIN.
(ENGINEER TO SIZE WETWELL)
MINIMUM 6'-0" DIAMETER
ASTM C-478 PRECAST SECTIONS
WITH A MIN. STEEL AREA OF 0.18
SQ. IN./LF. E.W.
APPROVED PREMOLDED JOINT SEALER
W/PROTECTIVE WRAPPER AT ALL JOINTS
(RAM-NEK OR APPROVED EQUAL)
BOOT ADAPTER SEAL W/ NON-SHRINK GROUT
3/4" SCH.80 BUBBLER
TUBING TO BE ATTACHED
TO WALL ON 3' CTR. W/
316 STRAPS
(ENGINEER TO ADJUST LOCATION OF PIPE TO
COINCIDE WITH CORRECT ELEVATION)
PVC GRAVITY INFLOW
INV. EL. OUT (MIN. 0.10'
LOWER THAN INV. EL. IN)
POLYURETHANE ENCASED MERCURY FLOAT SWITCH
FOR HIGH LEVEL ALARM AND AUTODIALER TO
NOTIFY OF HIGH WATER AND HIGH WATER CRITICAL
INV. EL.
HWL ALARM EL.
LAG PUMP ON EL.
LEAD PUMP ON EL.

SCH.40 S.S. SUCTION
LINE (2 REQUIRED)

GROUT
D.I. SLUDGE SHOE

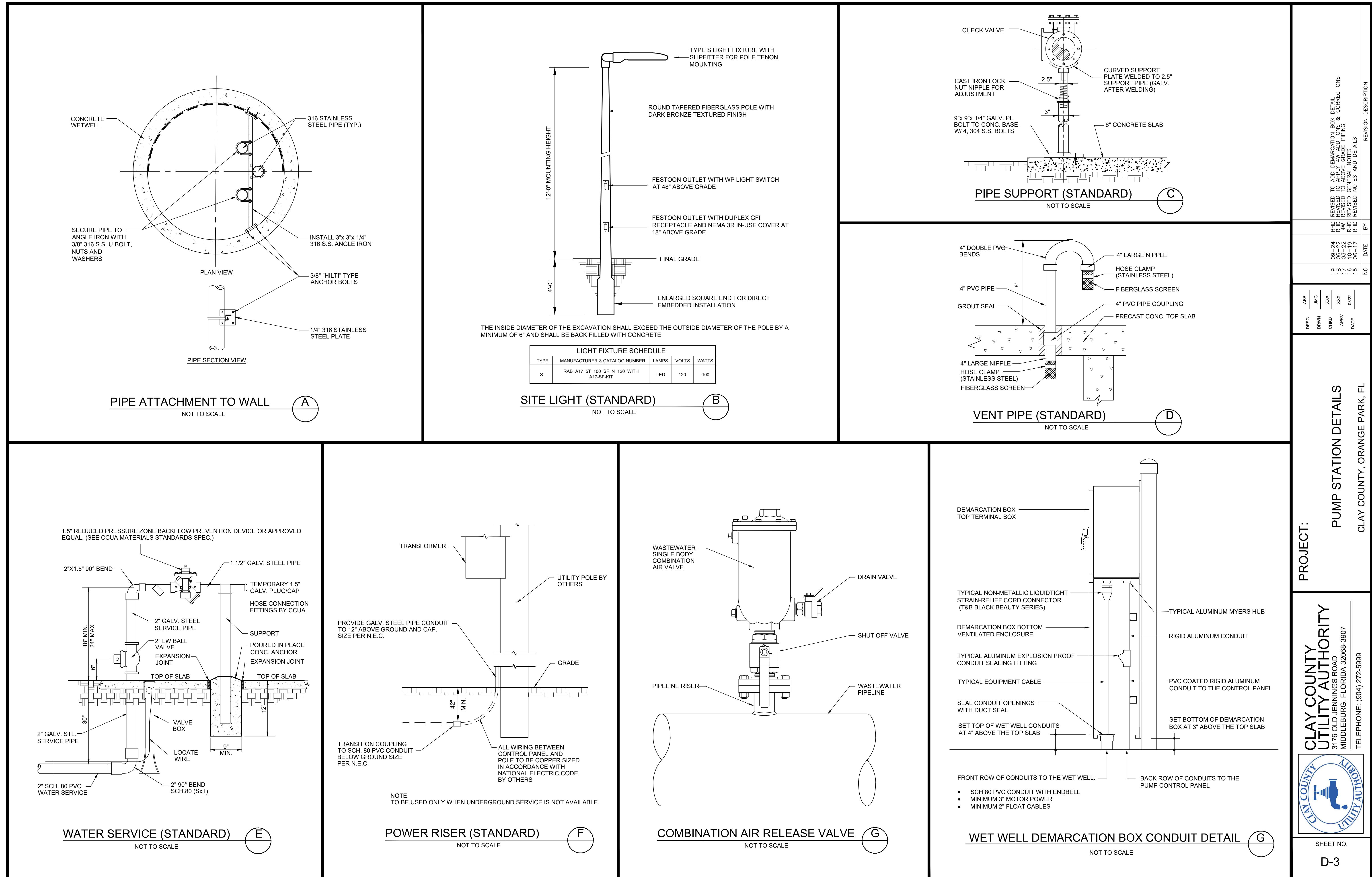
ALL PUMPS OFF EL.

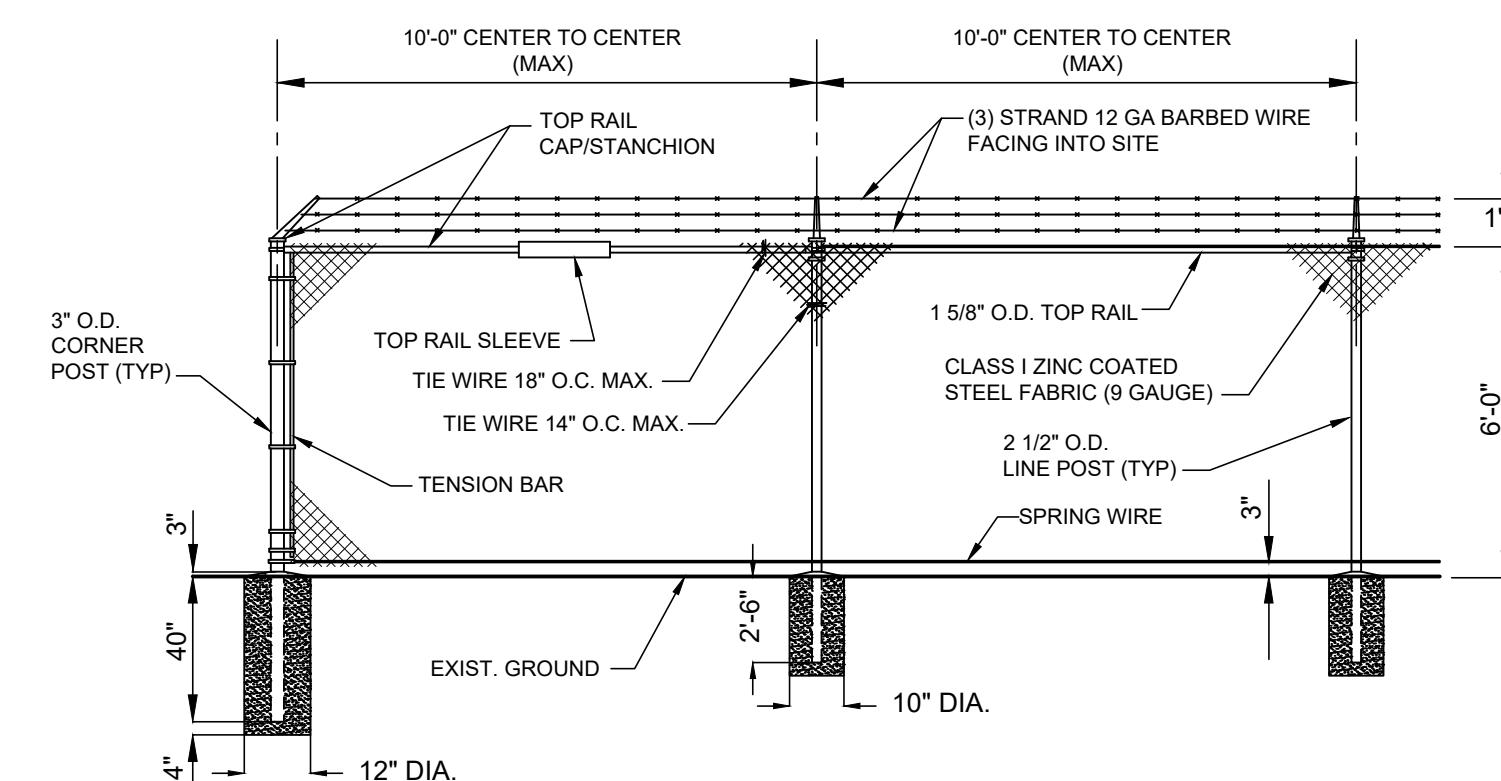
PUMP STA. INV. EL.

6'-0" MIN. LEVELING COURSE OF COMPAKTED
GRAVEL (#57 STONE). IN AREAS WHERE
MANHOLE LOCATIONS MAY IMPACT PAVING, #57
STONE SHALL BE COVERED W/ A FILTER FABRIC
IN A FASHION AS TO PREVENT SOIL MIGRATION
INTO VOIDS WITHIN THE #57 STONE.

6' D.I. PIPE

90° BEND, L.R.

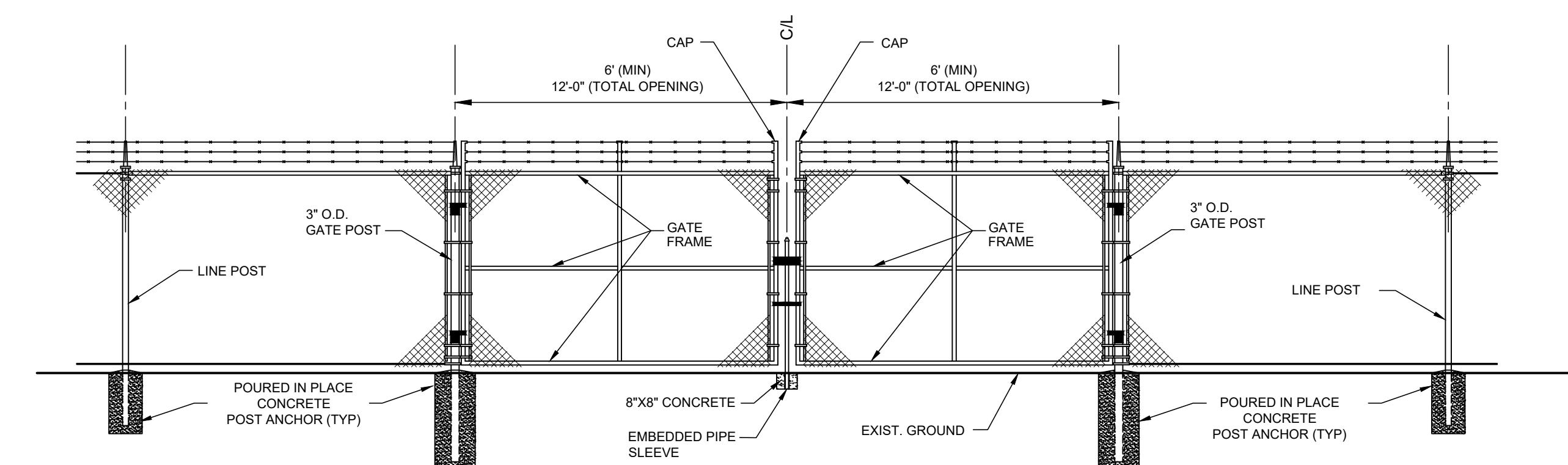




CHAIN LINK FENCE & CORNER POST

NOT TO SCALE

(A)



GATE

NOT TO SCALE

(B)

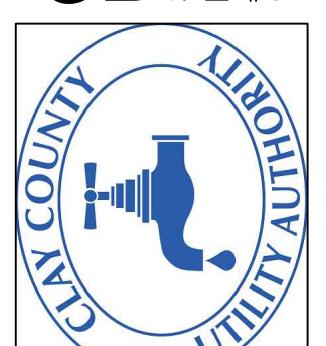
NOTE:

1. PROVIDE GREEN VINYL PRIVACY SLATS
2. TO MAKE A COMPLETE INSTALLATION, FENCING SHALL BE FURNISHED AND INSTALLED. FENCING SHALL COMPLY WITH ASTM A392-68T LATEST SPECIFICATIONS FOR ZINC COATED STEEL CHAIN LINK FENCE FABRIC AND AS DETAILED ON THE DRAWING. FITTINGS SHALL BE MALLEABLE IRON OR PRESSED STEEL FORGINGS. ALL FERROUS MATERIALS SHALL BE THOROUGHLY GALVANIZED BY THE HOT-DIP METHOD.

A. PRIVACY SLATS: SLATS SHALL BE FLAT/TUBULAR IN SHAPE, $\pm 0.003"$ THERMOPLASTIC WITH A WALL THICKNESS OF 0.030". LENGTH AND WIDTH OF SLATS SHALL BE PROVIDED TO ACCOMMODATE CHAIN-LINK FENCE FABRIC AS SPECIFIED HEREIN. SLATS SHALL HAVE A HORIZONTAL LOCKING STRIP TO PROVIDE SECURE ATTACHMENT TO CHAIN-LINK, THE FABRIC, AND PROVIDE A PRIVACY FACTOR OF 85%. MINIMUM WIDTH SLAT SHALL BE 1-1/8".

B. PRIVACY SCREENING: ENVIRONMENTAL PRIVACY SCREENING KNT RASCHEL, 100%, SHALL BE 86 TO 90% POLYETHYLENE UV STABILIZED FIBER, COLOR GREEN. SCREENING SHALL BE ATTACHED TO THE FENCE FABRIC WITH SUFFICIENT TIES TO SECURE THE SCREEN. ACCEPTABLE SCREEN: PRIVACY PLUS OR EQUAL.

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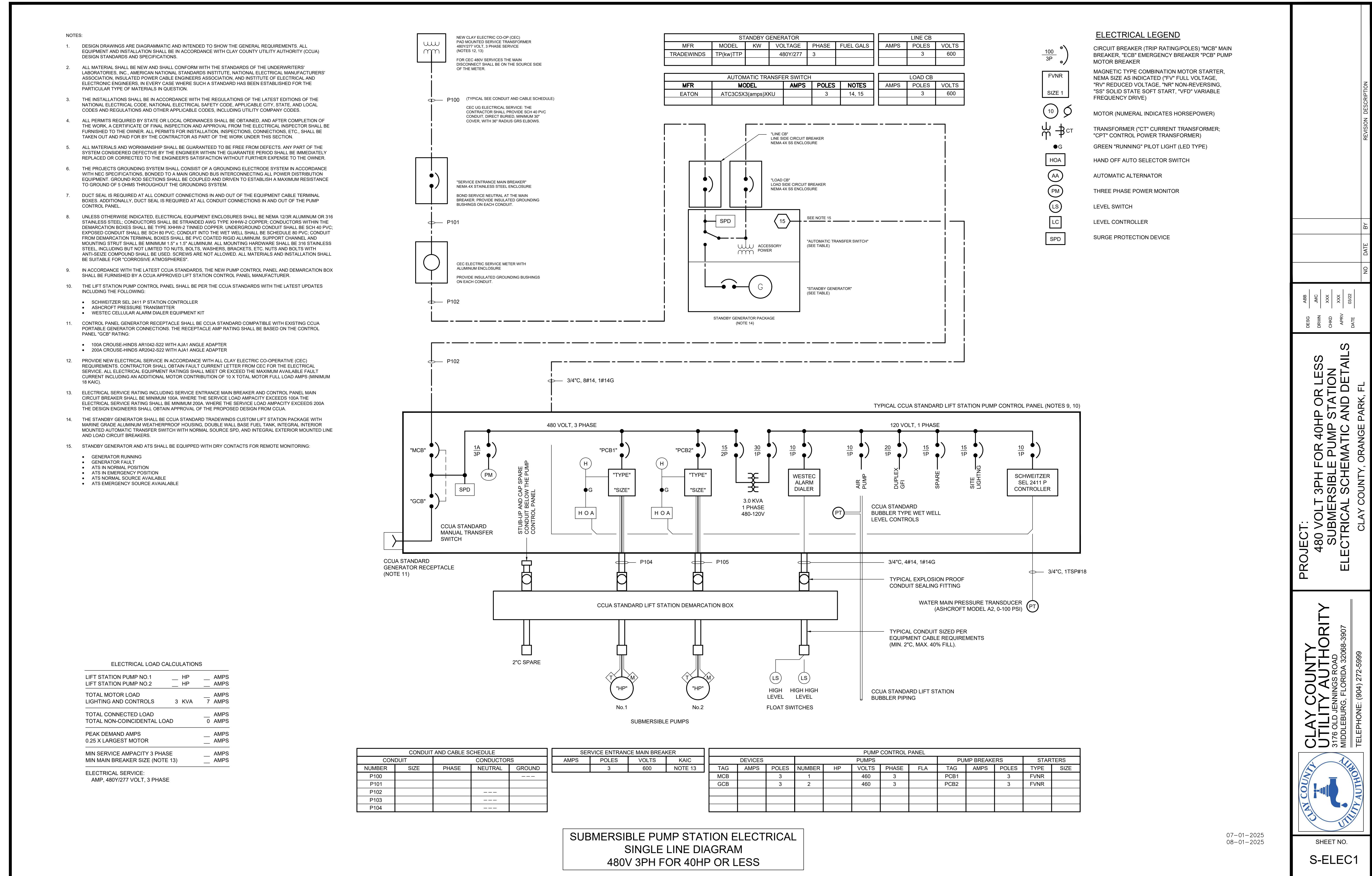
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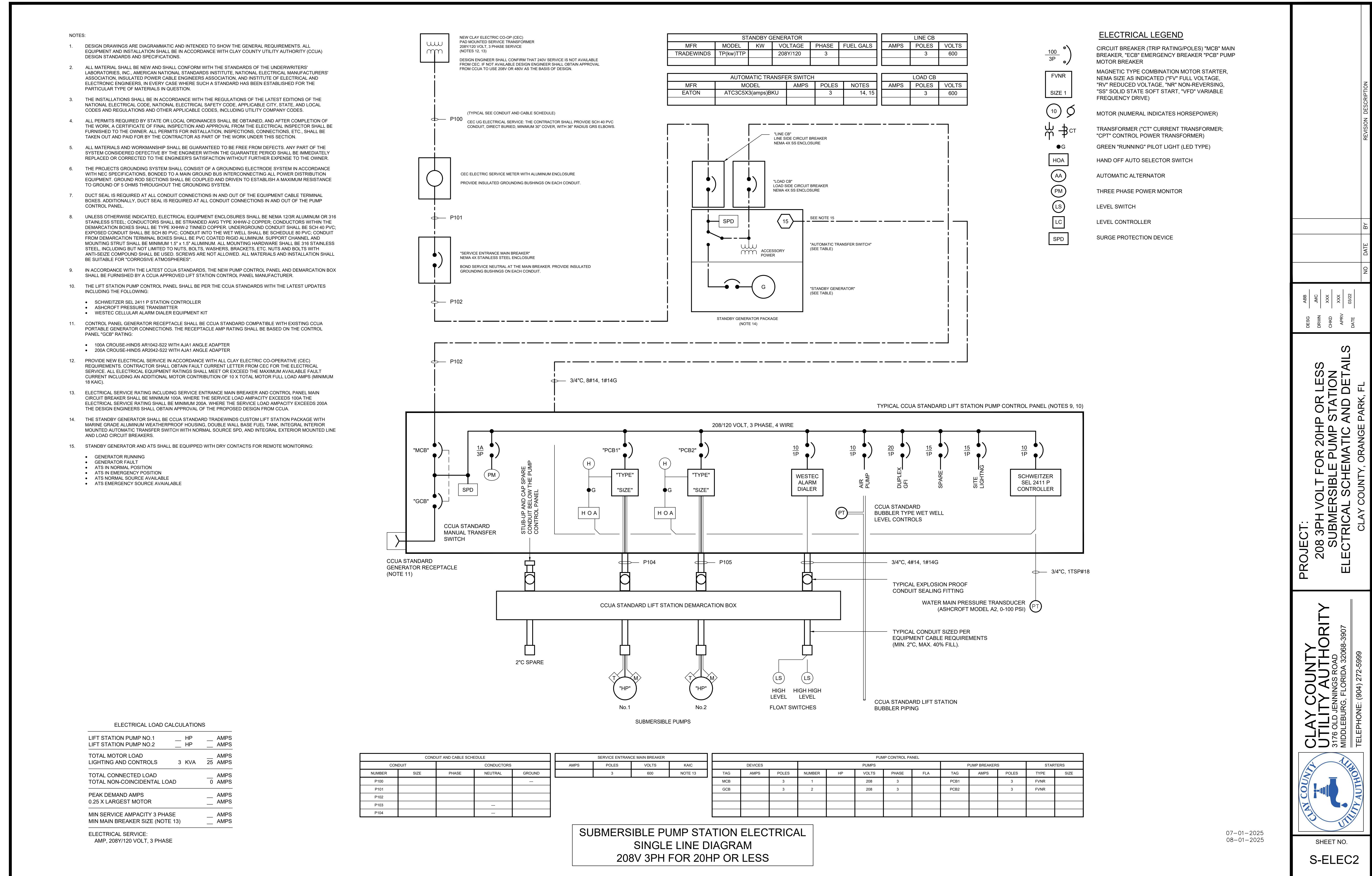
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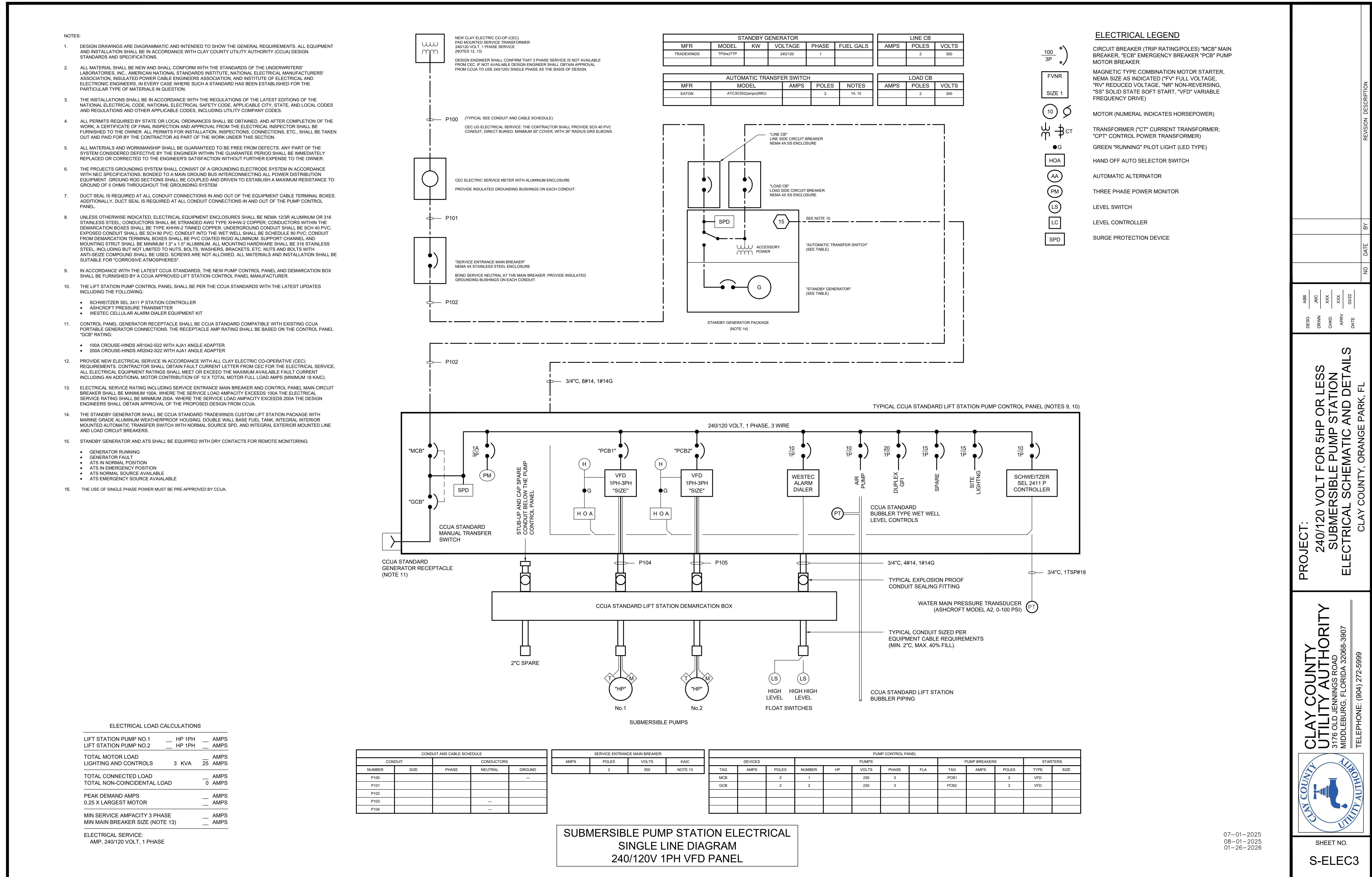
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DRWN	JMC	4W	03-22
CHKD	XXX	REV'D TO A	10-19
APRV	XXX	ABOVE GRADE PIPING	06-17
DATE	03/22	REV'D GENERAL NOTES	16
		RHD	15
		REV'D NOTES AND DETAILS	NO
		RHD	DATE
		REV'D	BY

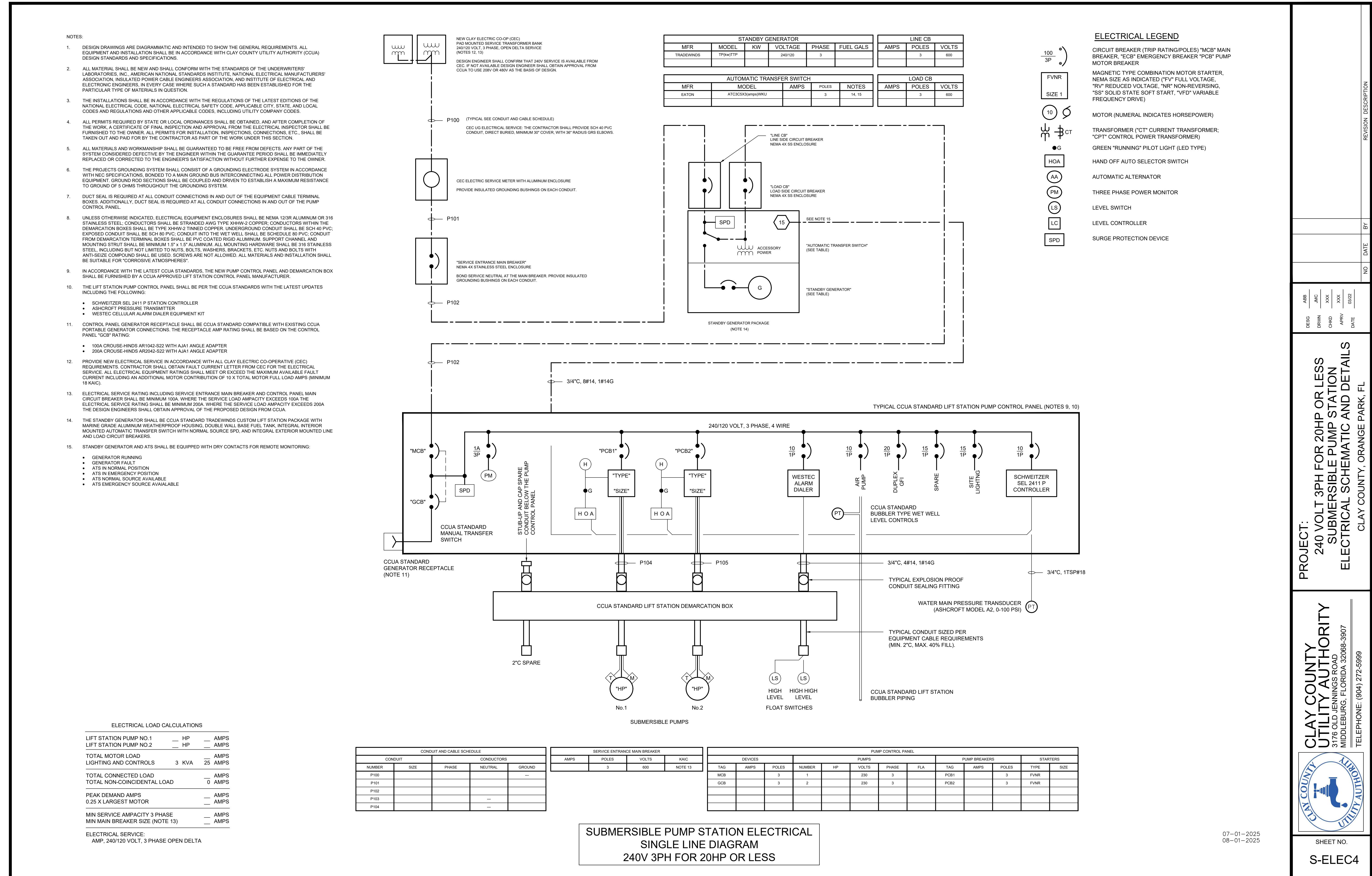
PROJECT: PUMP STATION DETAILS

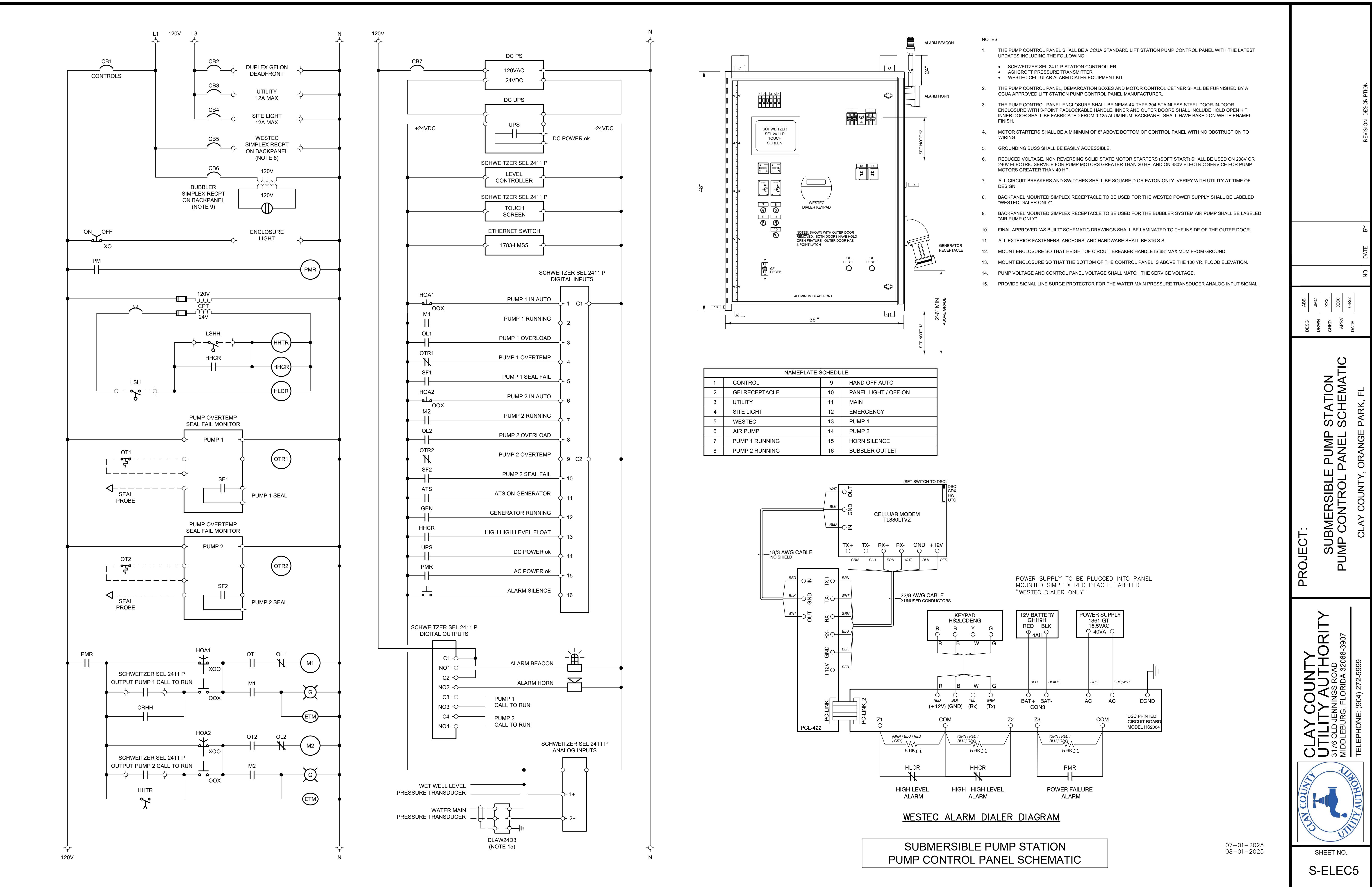
CLAY COUNTY, ORANGE PARK, FL

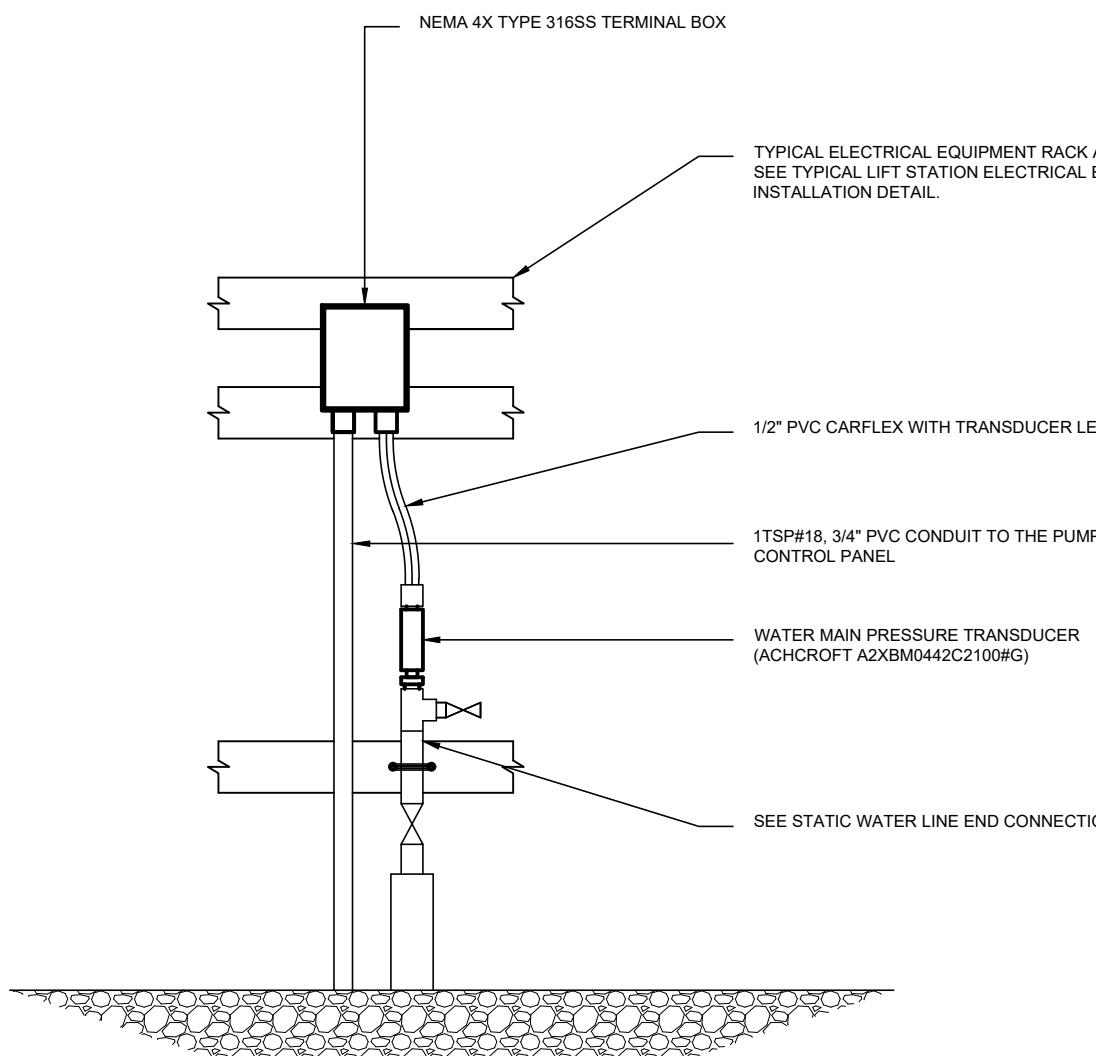




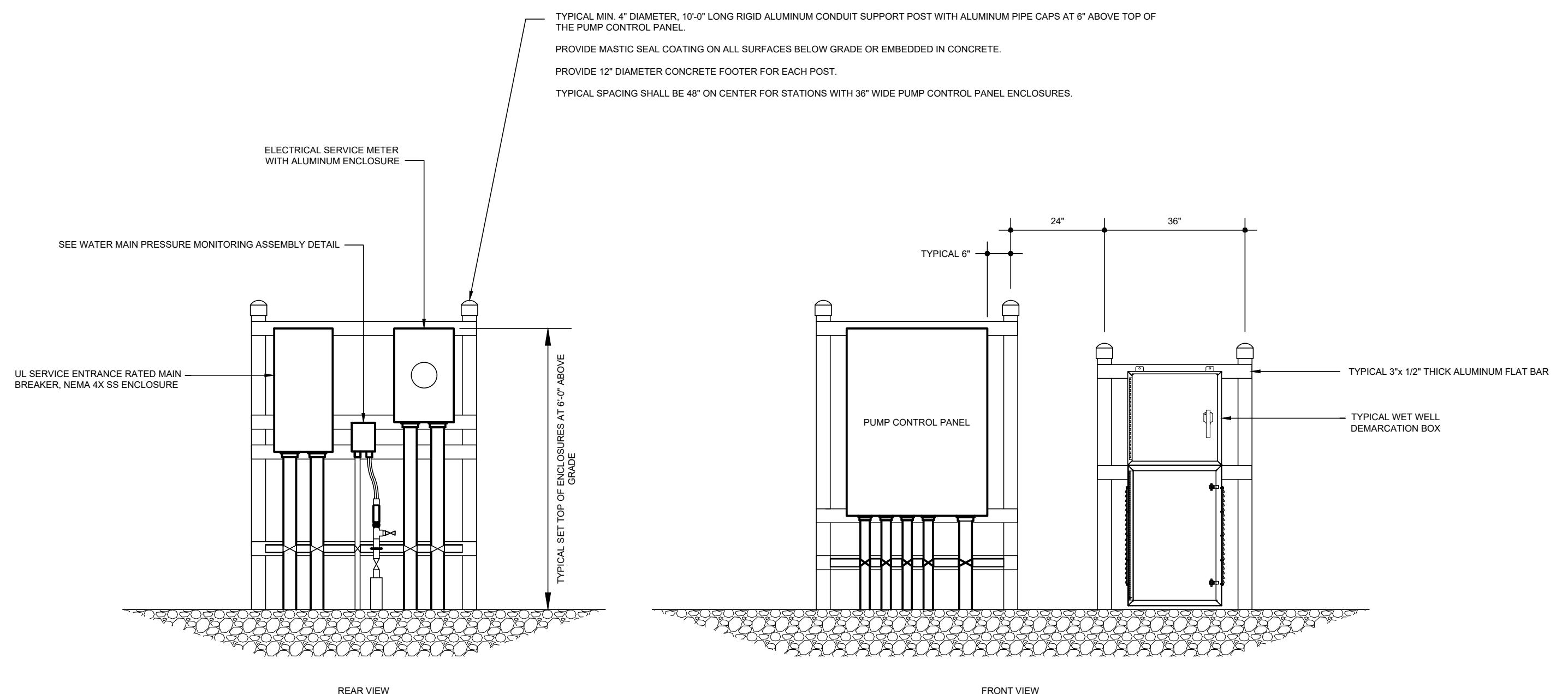






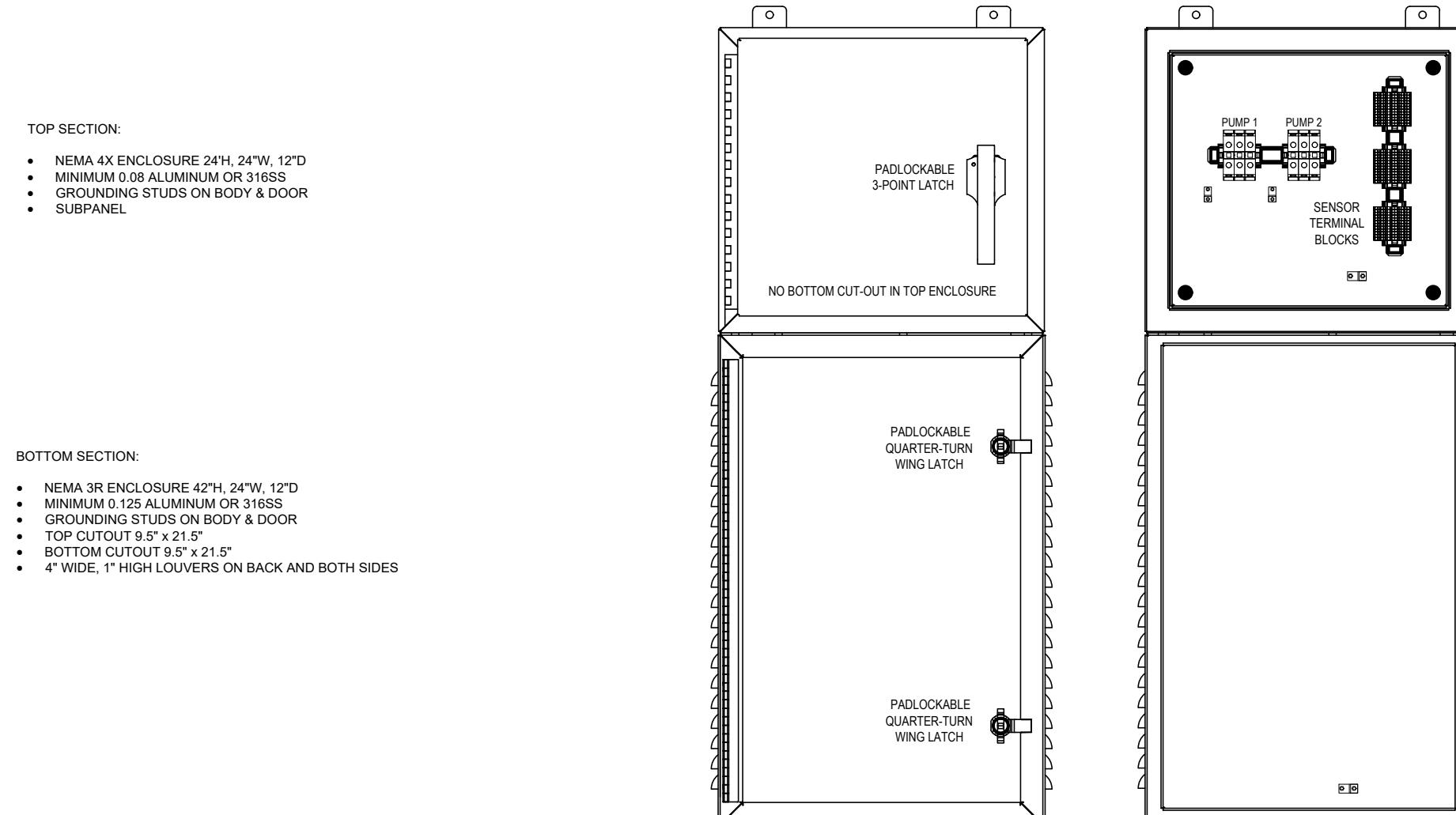


TYPICAL WATER MAIN PRESSURE MONITORING ASSEMBLY DETAIL
NOT TO SCALE



TYPICAL LIFT STATION ELECTRICAL EQUIPMENT INSTALLATION DETAIL
NOT TO SCALE

SUBMERSIBLE PUMP STATION ELECTRICAL DETAILS



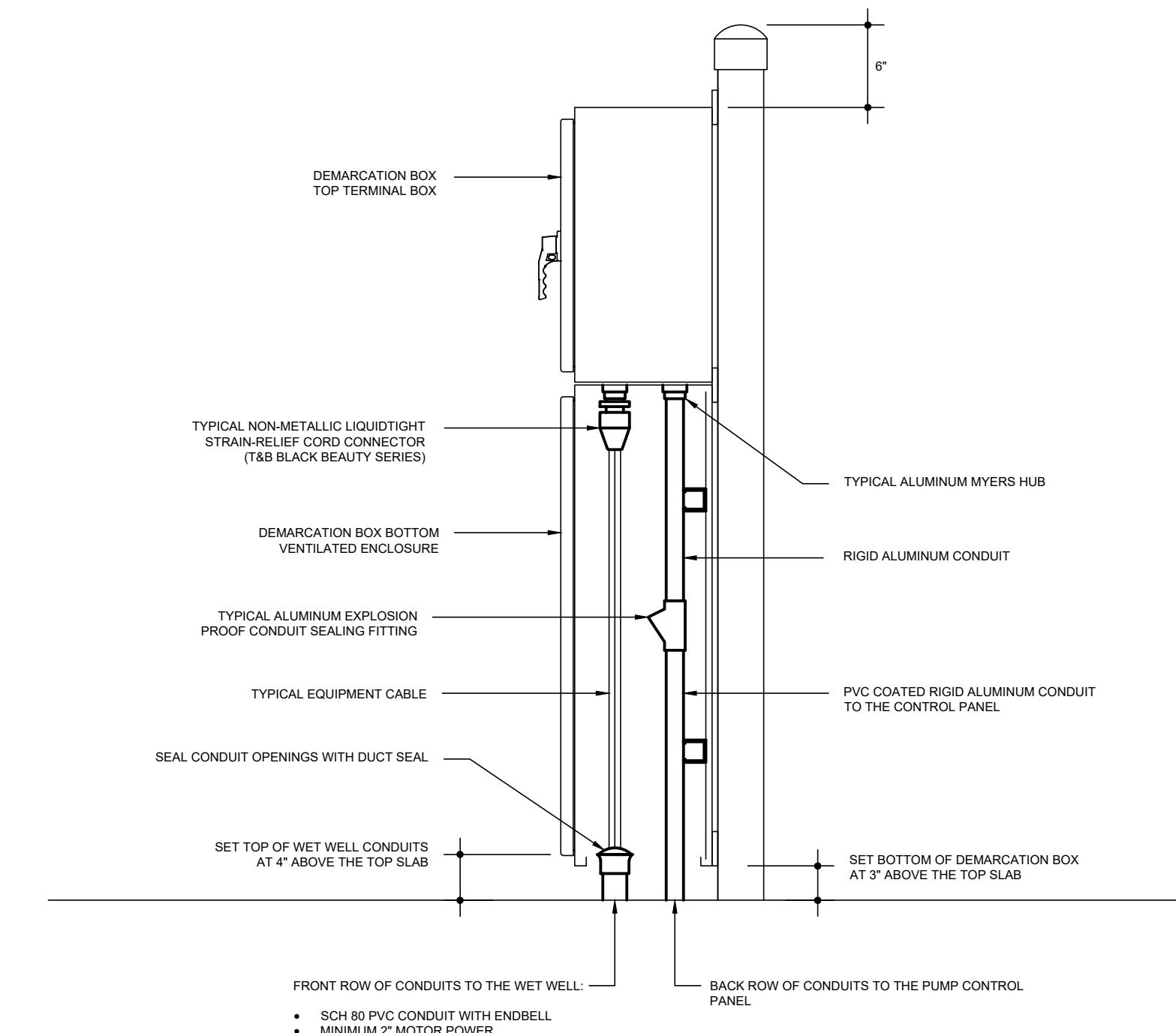
TYPICAL WET WELL DEMARCTION BOX DETAIL
NOT TO SCALE

TERMINAL BLOCKS:

- PUMP POWER TERMINAL BLOCKS: SQUARE-D 9090LBA
- SENSOR TERMINAL BLOCKS: ALLEN-BRADLEY 1492-J4
- GROUND LUGS: PANDUIT LAMA2-14-Q

GENERAL NOTES:

- SEAMS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH
- SEAMLESS RIGID IN-PLACE GASKETS
- ROLLED UP AROUND THREE SIDES OF DOORS
- REMOVE DOORS BY PULLING STAINLESS STEEL CONTINUOUS HINGE PIN
- PROVIDE BONDING PROVISION INSIDE REAR FOR MOUNTING OPTIONAL PANELS
- STAINLESS STEEL HARDWARE
- BONDING PROVISION ON DOORS; GROUNDING STUDS ON BODIES



TYPICAL WET WELL DEMARCTION BOX CONDUIT DETAIL
NOT TO SCALE



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PROJECT:
SUBMERSIBLE PUMP STATION
ELECTRICAL DETAILS

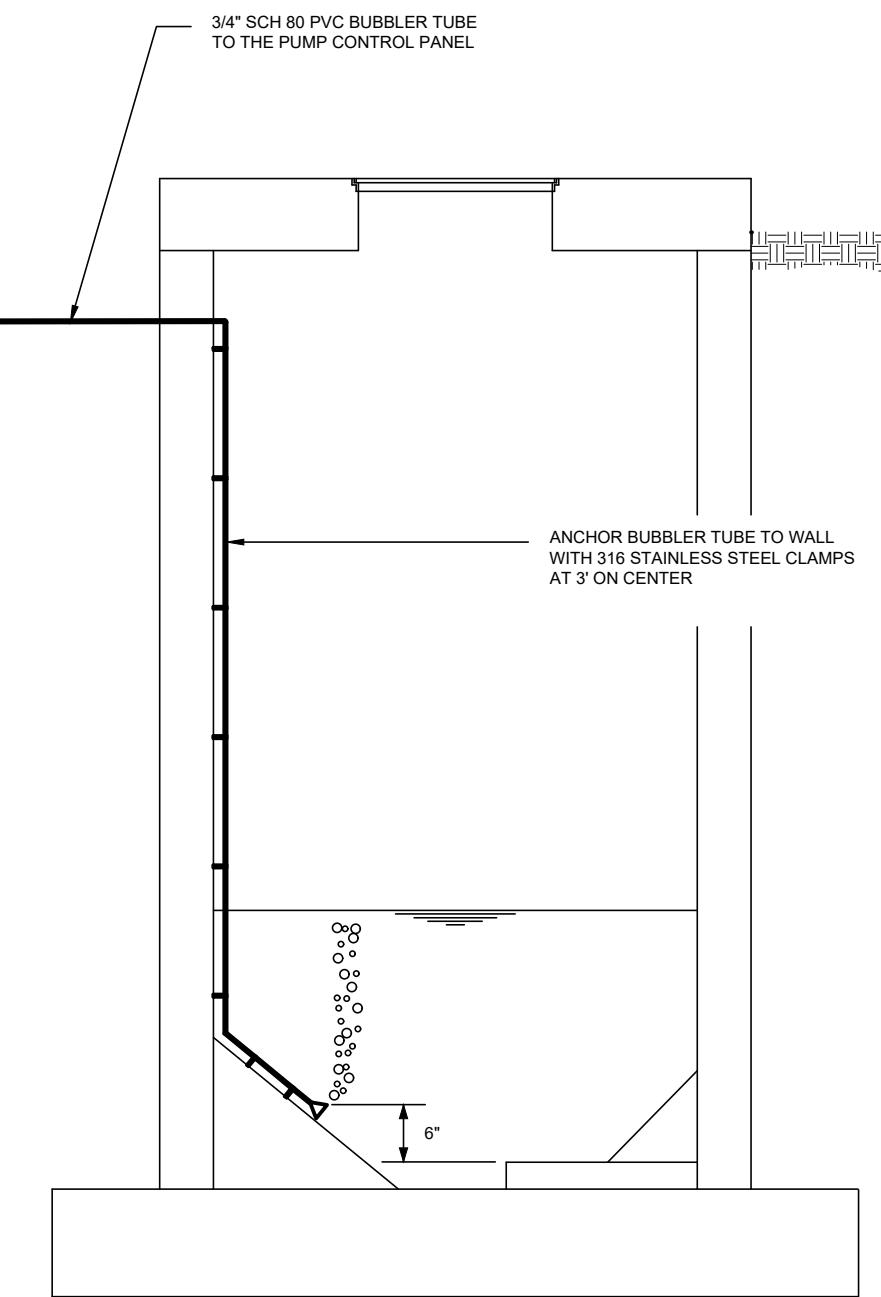
REVISION DESCRIPTION

DESG	ABB
DRWN	JMC
CHKD	XXX
AIRPV	XXX
DATE	03/22

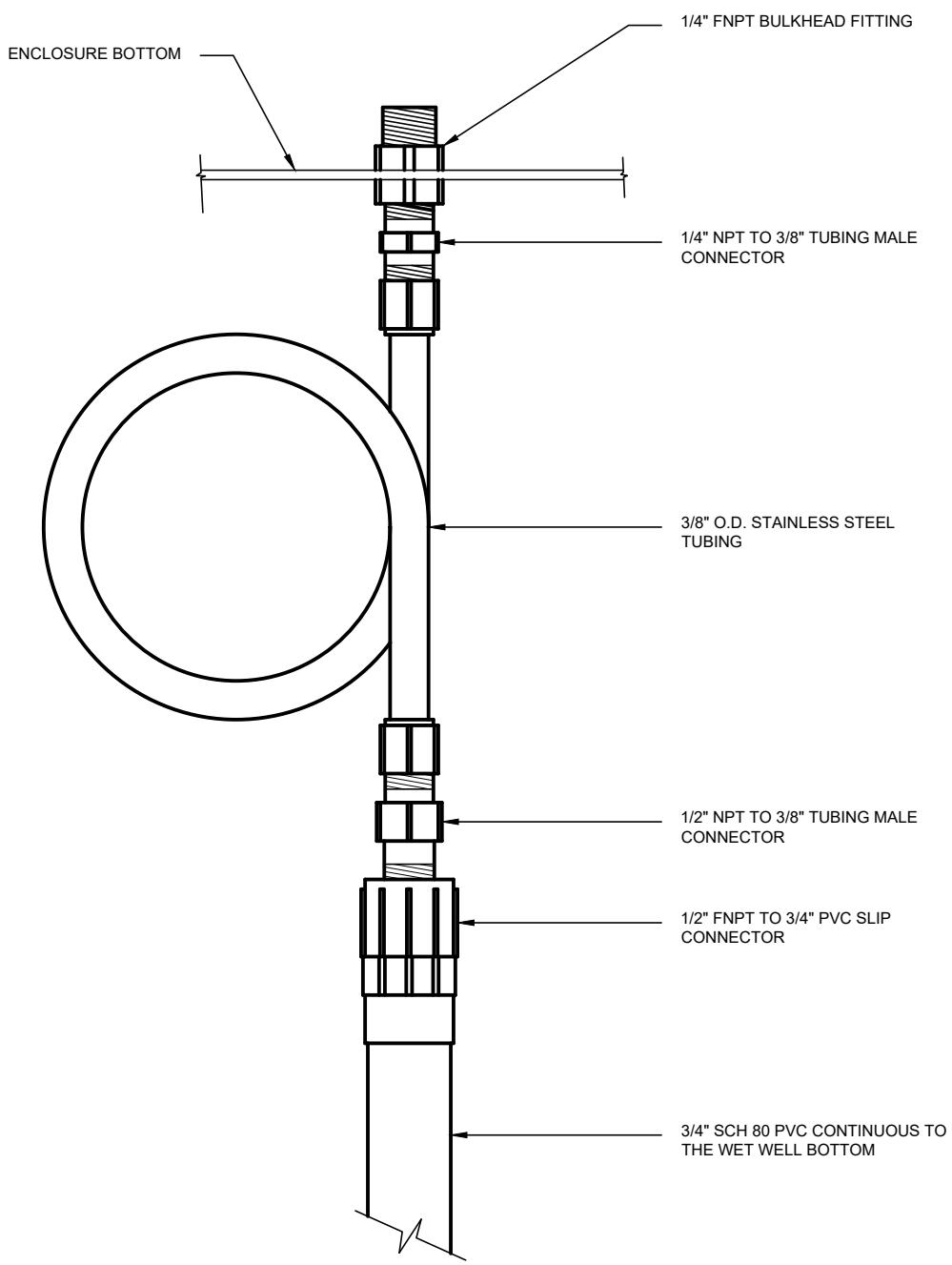
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S-ELEC6

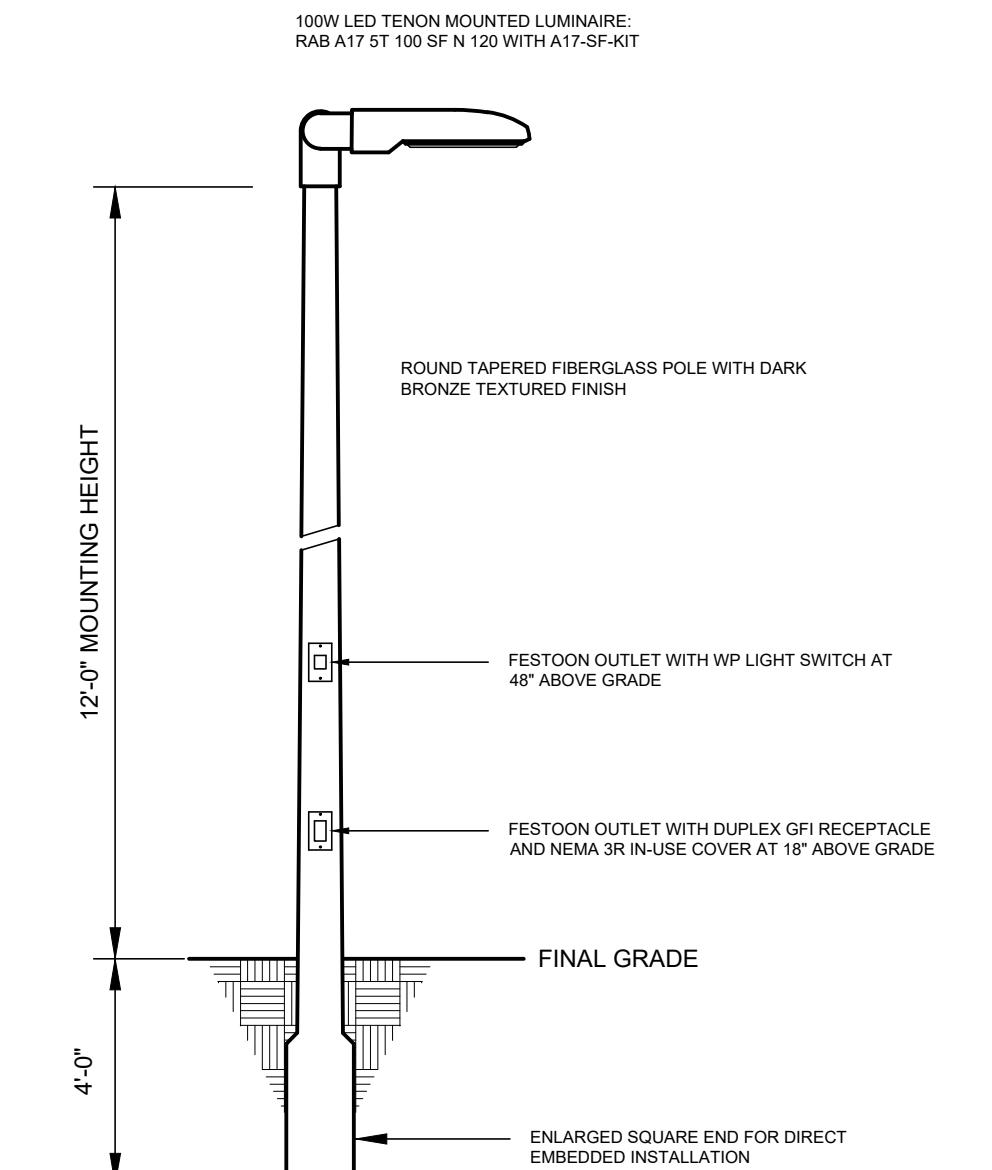
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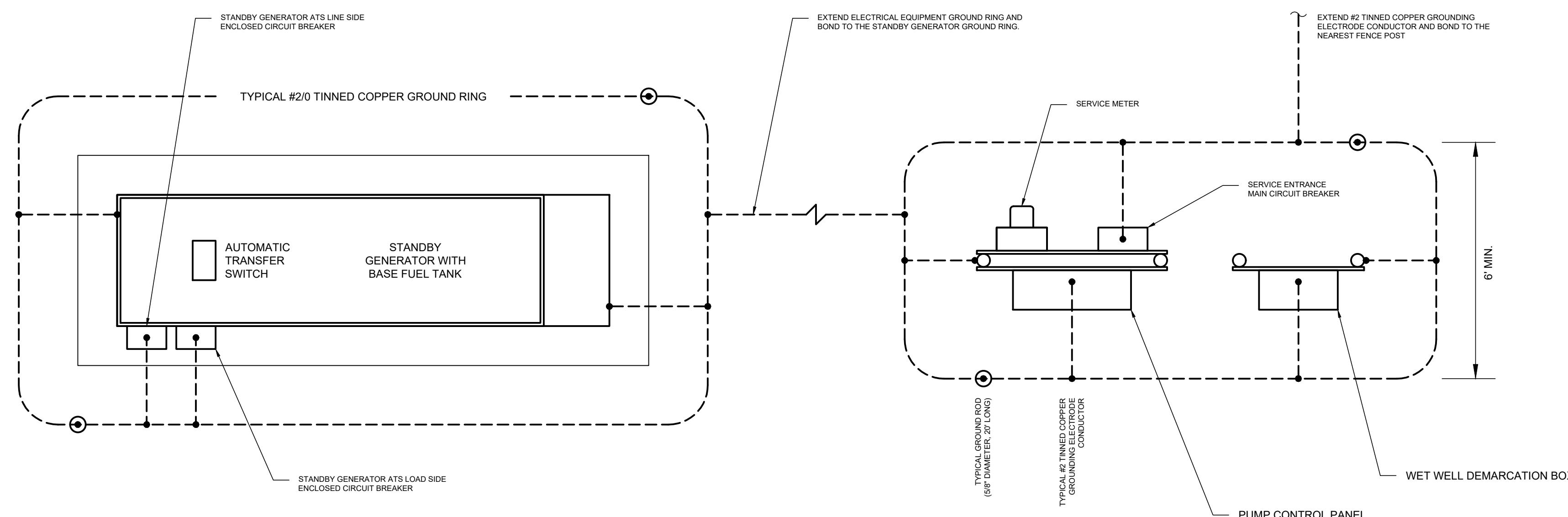
WET WELL BUBBLER TUBE DETAIL
NOT TO SCALE



BUBBLER TUBE CONNECTION DETAIL
NOT TO SCALE



TYPICAL SITE LIGHT POLE DETAIL
NOT TO SCALE



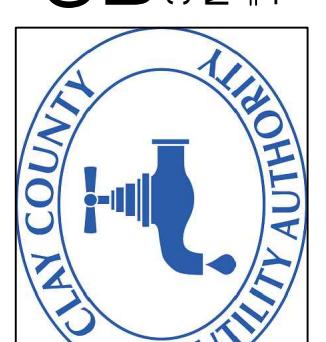
TYPICAL LIFT STATION GROUNDING PLAN
NOT TO SCALE

SUBMERSIBLE PUMP STATION ELECTRICAL DETAILS

GROUNDING NOTES:

1. GROUNDING ELECTRODE SYSTEM: PROVIDE GROUND RINGS PER NEC 250.52, ENCIRCLING THE ELECTRICAL SERVICE EQUIPMENT AND ENCIRCLING THE STANDBY GENERATOR, CONSISTING OF CONTINUOUS #0 TINNED COPPER CONDUCTOR AT 30" BELOW GRADE.
2. PROVIDE GROUND RODS (MINIMUM 3/4" DIAMETER, 20' LONG COPPER CLAD STEEL) BONDED TO EACH END OF EACH GROUND RING, AT LEAST 10' APART. GROUND ROD SECTIONS SHALL BE COUPLED AND DRIVEN TO ESTABLISH A MAXIMUM RESISTANCE TO GROUND OF 5 OHMS THROUGHOUT THE GROUNDING ELECTRODE SYSTEM.
3. GROUNDING ELECTRODE CONDUCTOR: PROVIDE MINIMUM #2 TINNED COPPER GROUNDING ELECTRODE CONDUCTOR FROM THE GROUND RINGS TO THE SERVICE ENTRANCE MAIN BREAKER, PUMP CONTROL PANEL, DEMARCTION BOX, STANDBY GENERATOR CIRCUIT BREAKERS, ELECTRICAL EQUIPMENT RACK END POSTS, AND FENCE. USE GROUND CLAMPS RATED FOR DIRECT BURIAL FOR CONNECTIONS TO END POSTS AND FENCE POSTS.
4. INSTALL EACH GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCH 80 PVC CONDUIT SLEEVE FOR MECHANICAL PROTECTION.

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SHEET NO.

S-ELEC7

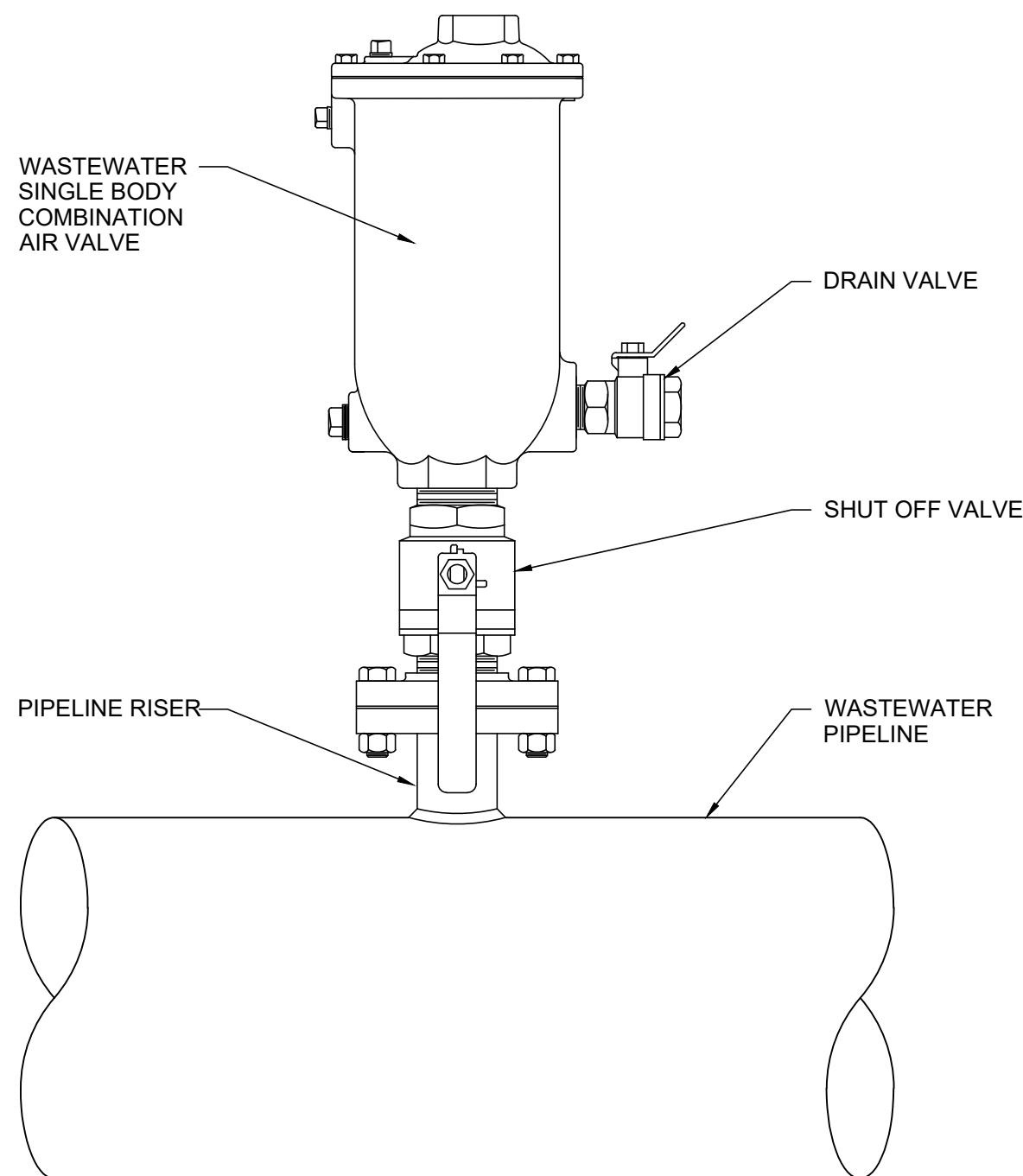
07-01-2025

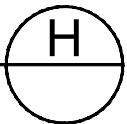
REVISION DESCRIPTION

DESG	ABB
DRWN	JMC
CHKD	XXX
AIRPV	XXX
DATE	03/22
NO	BY

**SUBMERSIBLE PUMP STATION
ELECTRICAL DETAILS**

CLAY COUNTY, ORANGE PARK, FL



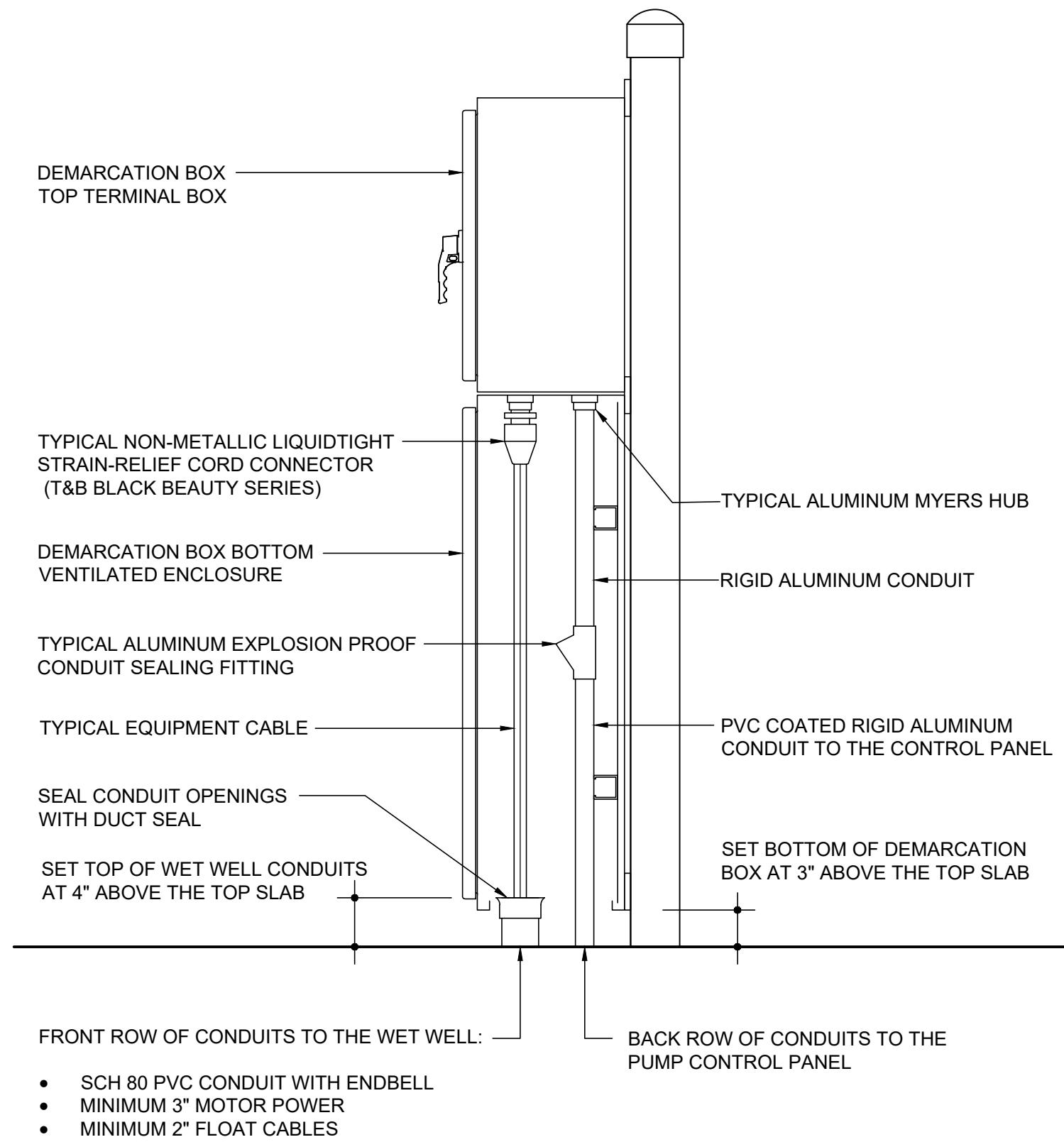
COMBINATION AIR RELEASE VALVE 
NOT TO SCALE

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**PUMP STATION
DETAILS**

DESG	<u>RHD</u>
DRWN	<u>RHD</u>
CHKD	<u>XXX</u>
APRV	<u>XXX</u>
DATE	<u>06/22</u>



WET WELL DEMARCATON BOX CONDUIT DETAIL

NOT TO SCALE

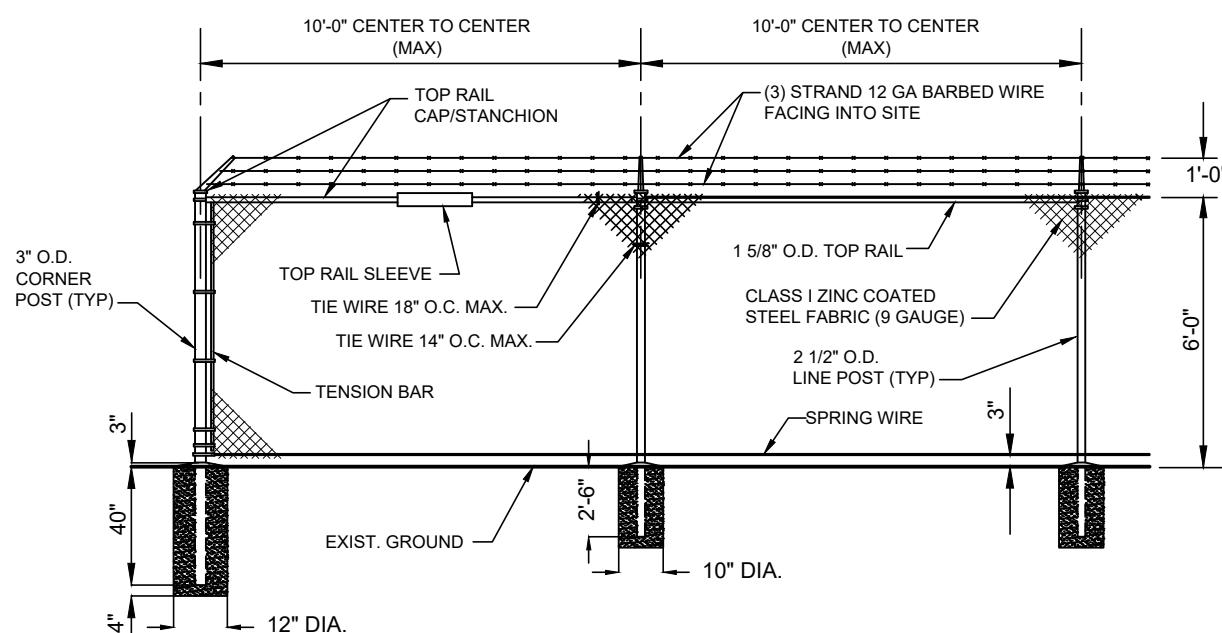
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**PUMP STATION
DETAILS**

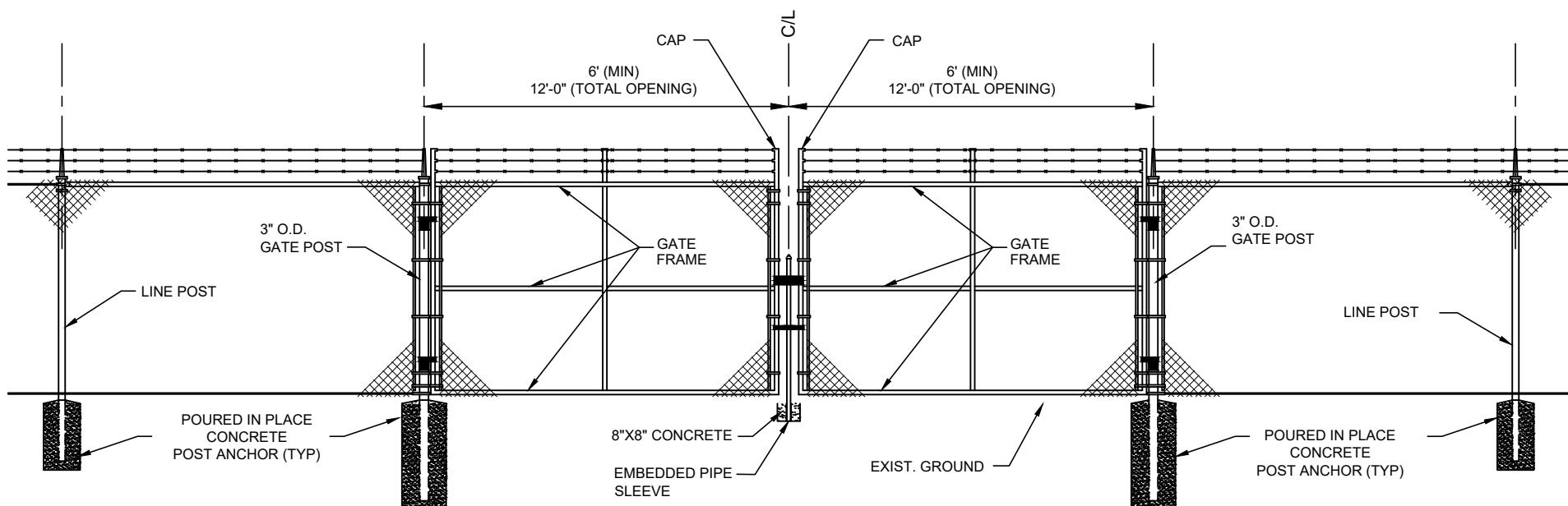
DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	09/24



CHAIN LINK FENCE & CORNER POST

NOT TO SCALE

A



GATE

NOT TO SCALE

B

NOTE:

1. PROVIDE GREEN VINYL PRIVACY SLATS
2. TO MAKE A COMPLETE INSTALLATION, FENCING SHALL BE FURNISHED AND INSTALLED. FENCING SHALL COMPLY WITH ASTM A392-68T LATEST SPECIFICATIONS FOR ZINC COATED STEEL CHAIN LINK FENCE FABRIC AND AS DETAILED ON THE DRAWING. FITTINGS SHALL BE MALLEABLE IRON OR PRESSED STEEL FORGINGS. ALL FERROUS MATERIALS SHALL BE THOROUGHLY GALVANIZED BY THE HOT-DIP METHOD.

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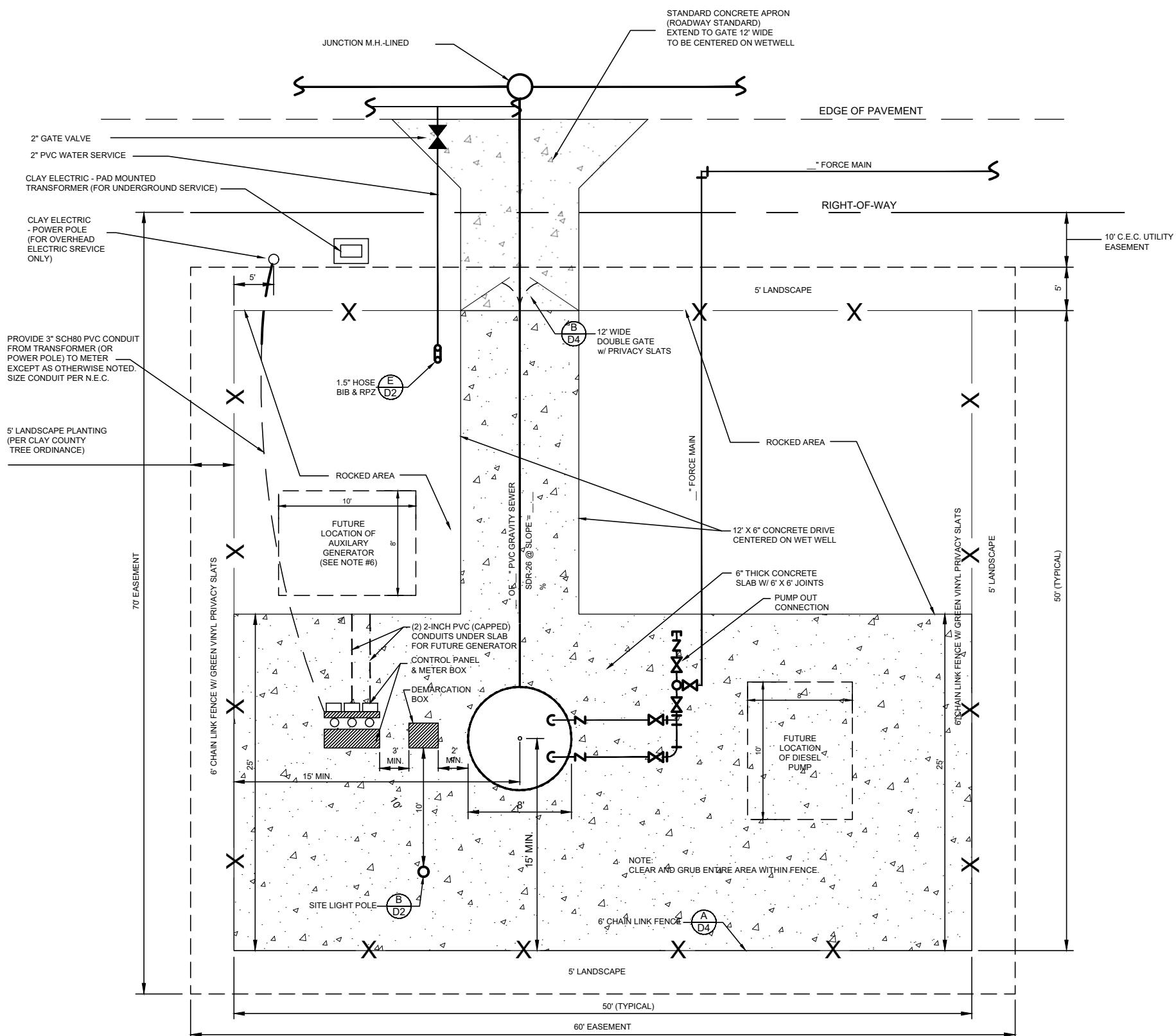
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**PUMP STATION
DETAILS**

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22

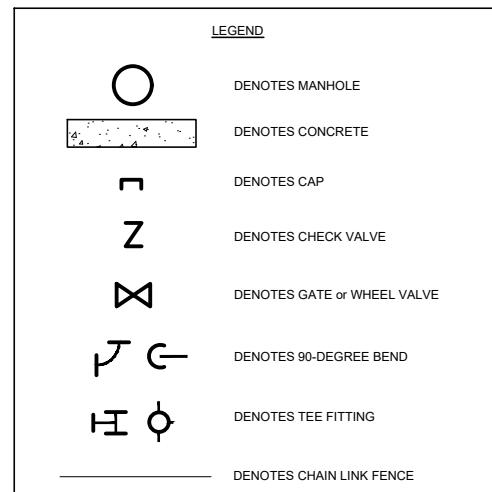


TYPICAL PERMANENT PUMP STATION SITE PLAN

NOT TO SCALE

NOTE:

1. ALL LANDSCAPE OR IRRIGATION INSTALLED AT OR AROUND THE LIFT STATION AS PART OF THE PROJECT TO BE MAINTAINED BY DEVELOPER OF THE CDD AND/OR HOMEOWNER'S ASSOCIATION AFTER THE DEVELOPER IS NO LONGER IN CHARGE OF THE PROJECT.
2. LANDSCAPING PLANS APPROVED BY CCUA TO MINIMIZE IMPACT TO UTILITIES.
3. CLEAR AND GRUB ENTIRE AREA WITHIN FENCE. INSTALL FILTER CLOTH AND 6" OF #57 STONE IN AREAS NOT COVERED BY CONCRETE.
4. TOP OF ROCK AREA TO MATCH TOP OF CONCRETE SLAB.
5. PROVIDE (2) 2" DIA. SCH80 PVC CONDUIT UNDER SLAB FOR FUTURE GENERATOR. CAP CONDUIT AT 6" OUTSIDE OF SLAB AND AT DISCONNECT AND AT THE CONTROL PANEL.



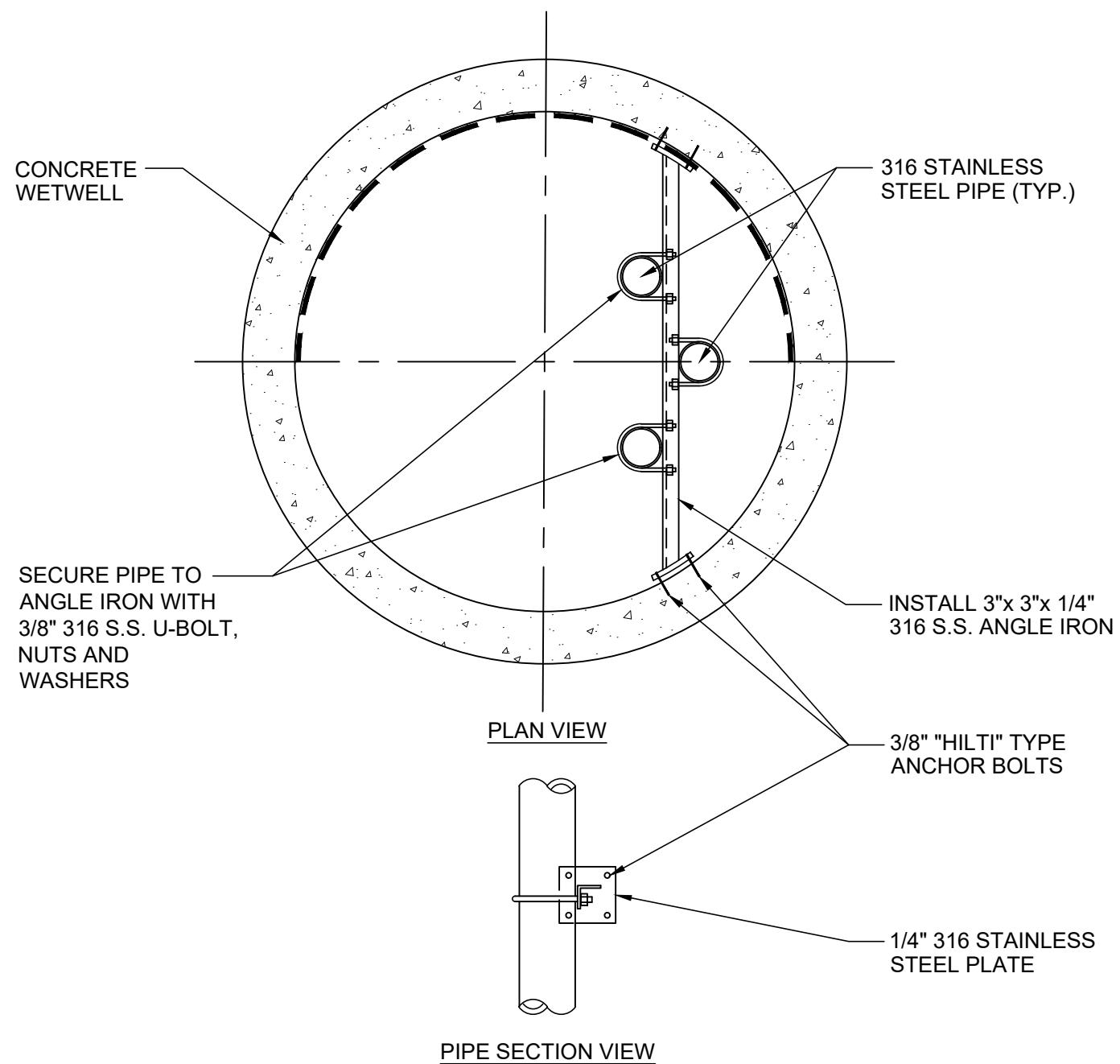
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PUMP STATION DETAILS

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22



PIPE ATTACHMENT TO WALL

NOT TO SCALE

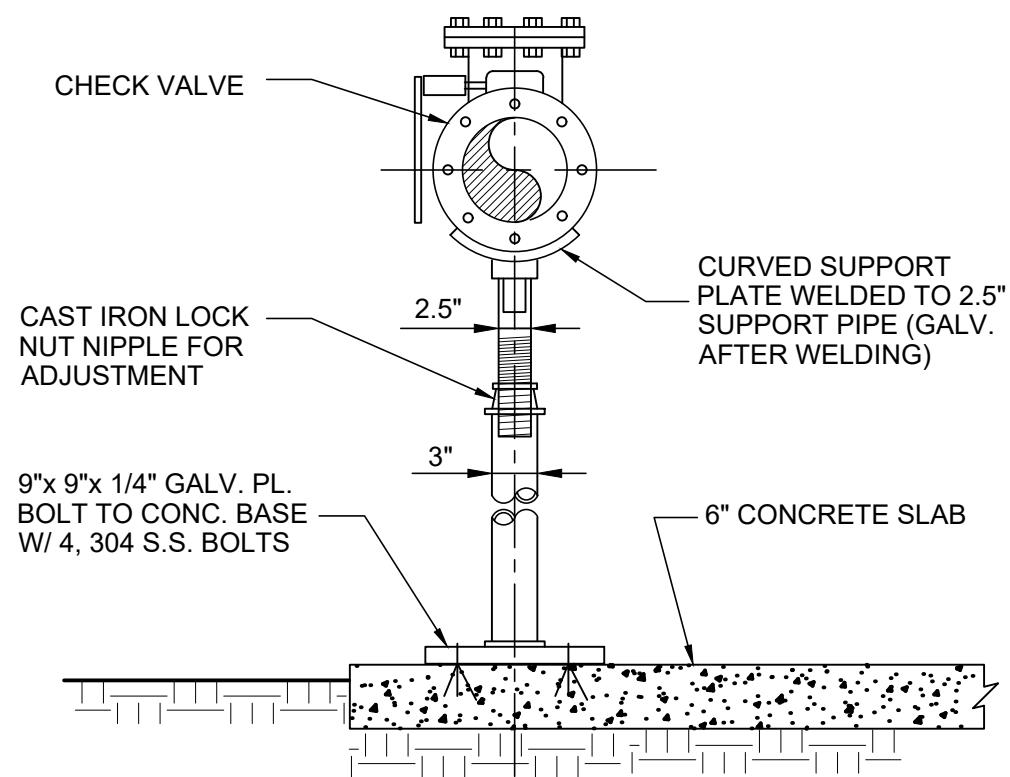
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**PUMP STATION
DETAILS**

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22



PIPE SUPPORT (STANDARD)

NOT TO SCALE

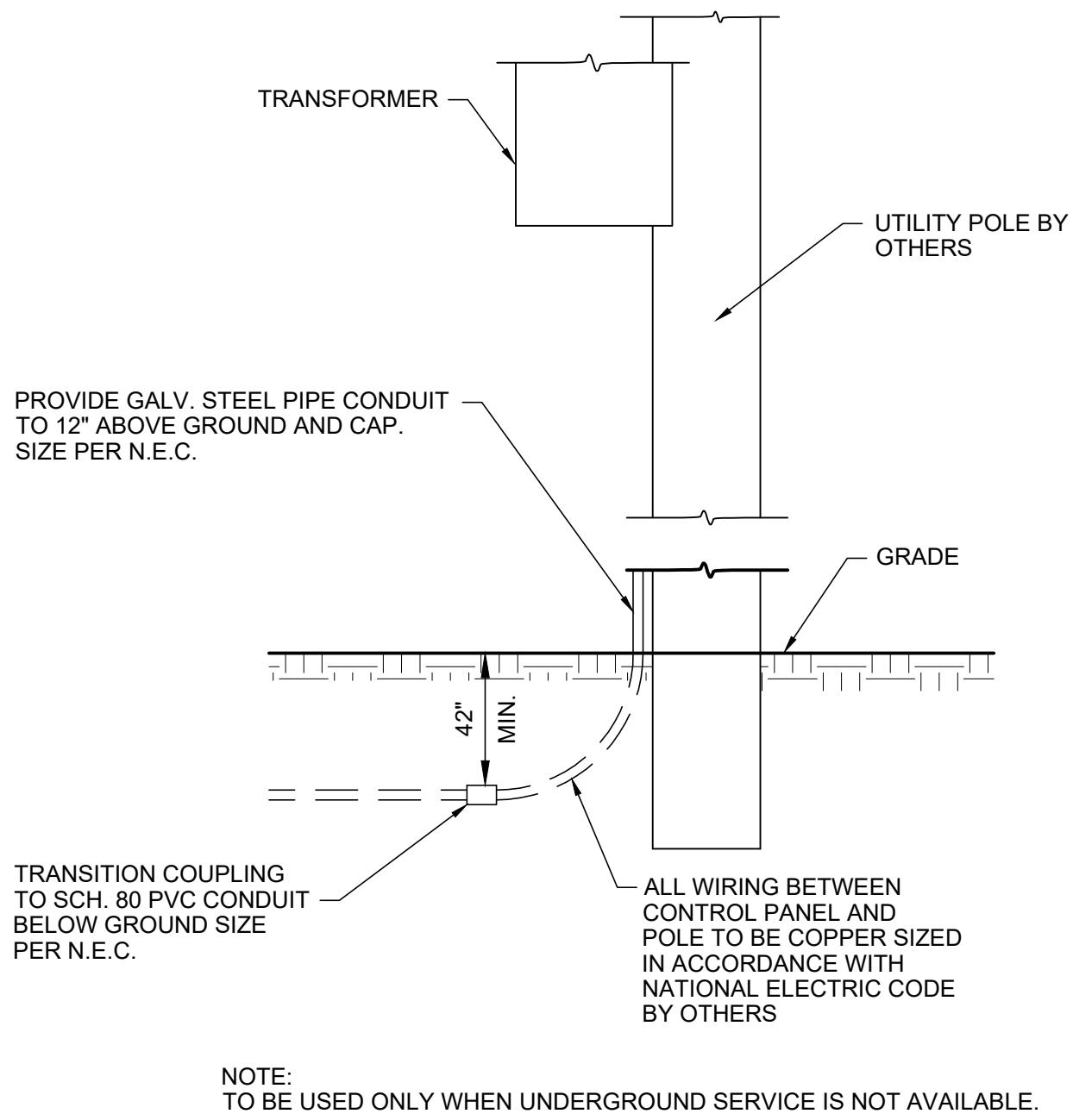
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**PUMP STATION
DETAILS**

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22



POWER RISER (STANDARD)

NOT TO SCALE

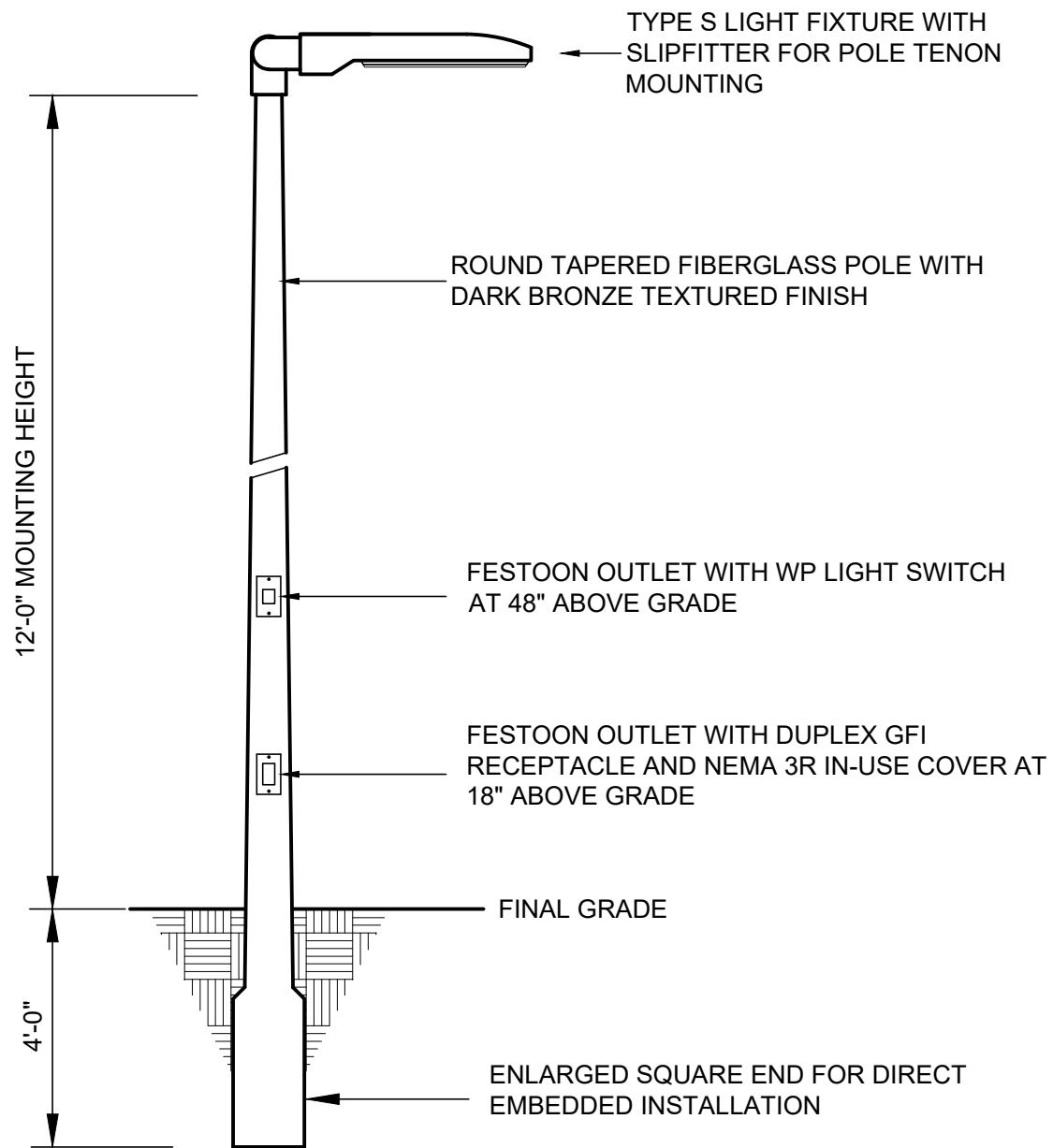
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PUMP STATION DETAILS

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22



THE INSIDE DIAMETER OF THE EXCAVATION SHALL EXCEED THE OUTSIDE DIAMETER OF THE POLE BY A MINIMUM OF 6" AND SHALL BE BACK FILLED WITH CONCRETE.

SITE LIGHT (STANDARD)

NOT TO SCALE

B

NOTES:

1. ALTERNATE LIGHTING FIXTURE SUBMITTALS SHALL INCLUDE PHOTOMETRIC CALCULATIONS FOR EACH AREA FOR WHICH THE ALTERNATE FIXTURE IS PROPOSED.
2. COMPLETE LIGHT POLE ASSEMBLY WITH FIXTURES AND BRACKET ARMS SHALL MEET THE APPLICABLE WIND LOAD RATING.

LIGHT FIXTURE SCHEDULE				
TYPE	MANUFACTURER & CATALOG NUMBER	LAMPS	VOLTS	WATTS
S	RAB A17 5T 100 SF N 120 WITH A17-SF-KIT	LED	120	100

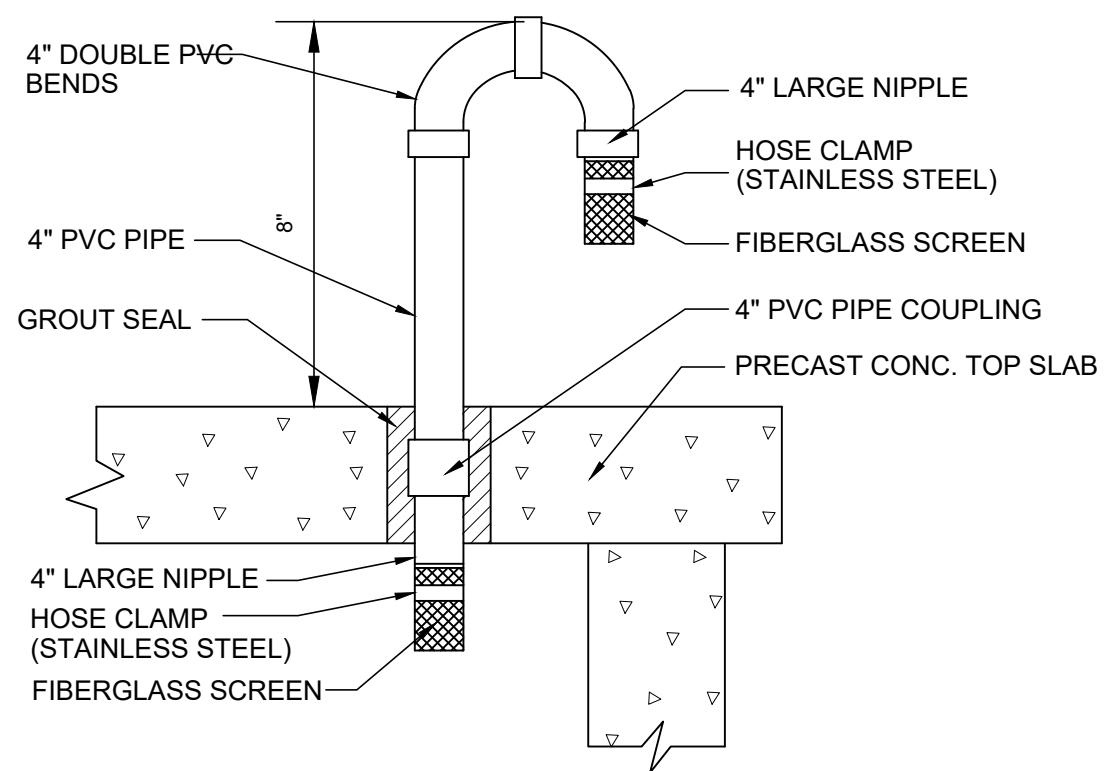
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PUMP STATION DETAILS

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22



VENT PIPE (STANDARD)

NOT TO SCALE

D

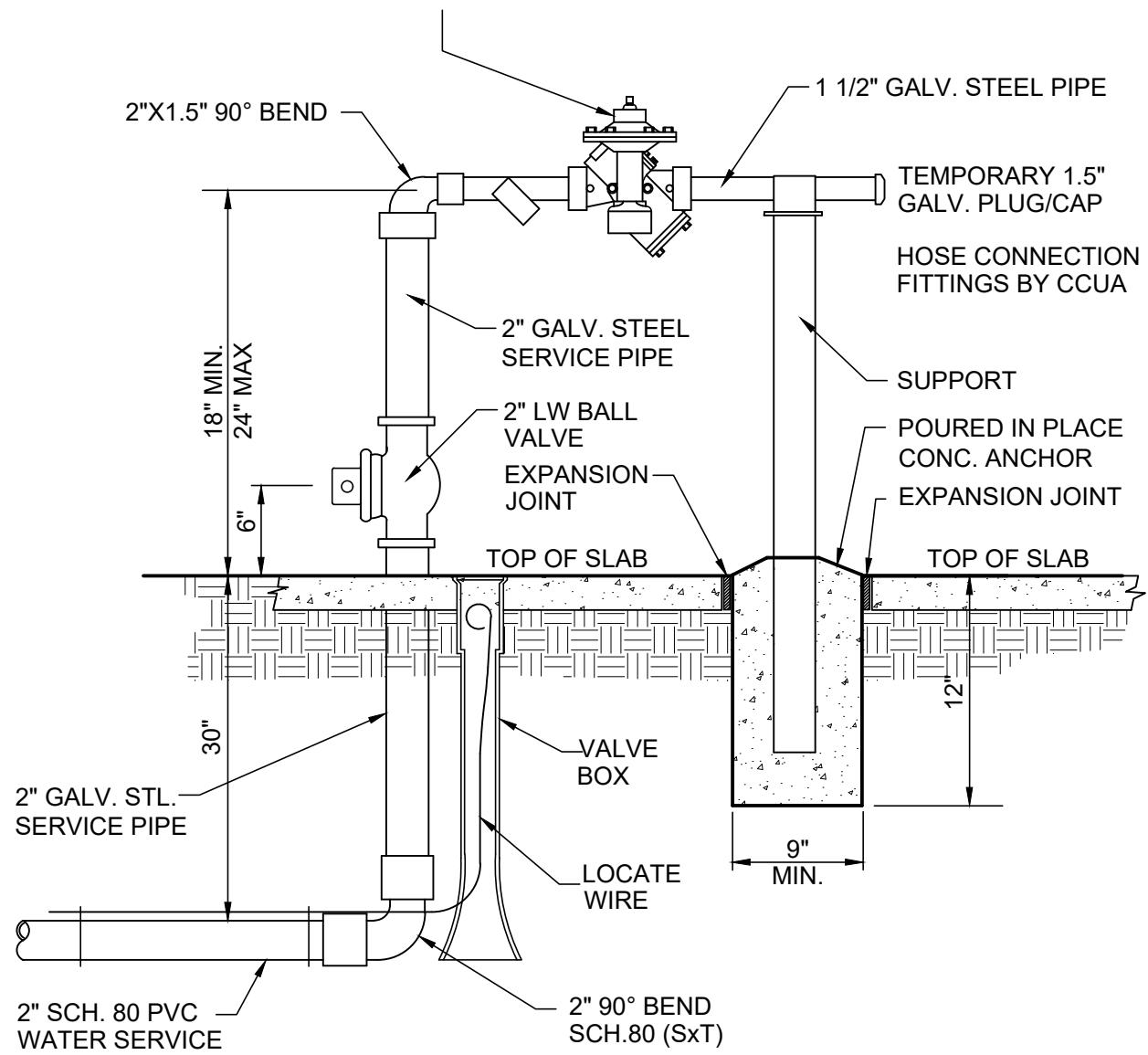
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**PUMP STATION
DETAILS**

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22

1.5" REDUCED PRESSURE ZONE BACKFLOW PREVENTION DEVICE OR APPROVED EQUAL. (SEE CCUA MATERIALS STANDARDS SPEC.)



WATER SERVICE (STANDARD)

NOT TO SCALE

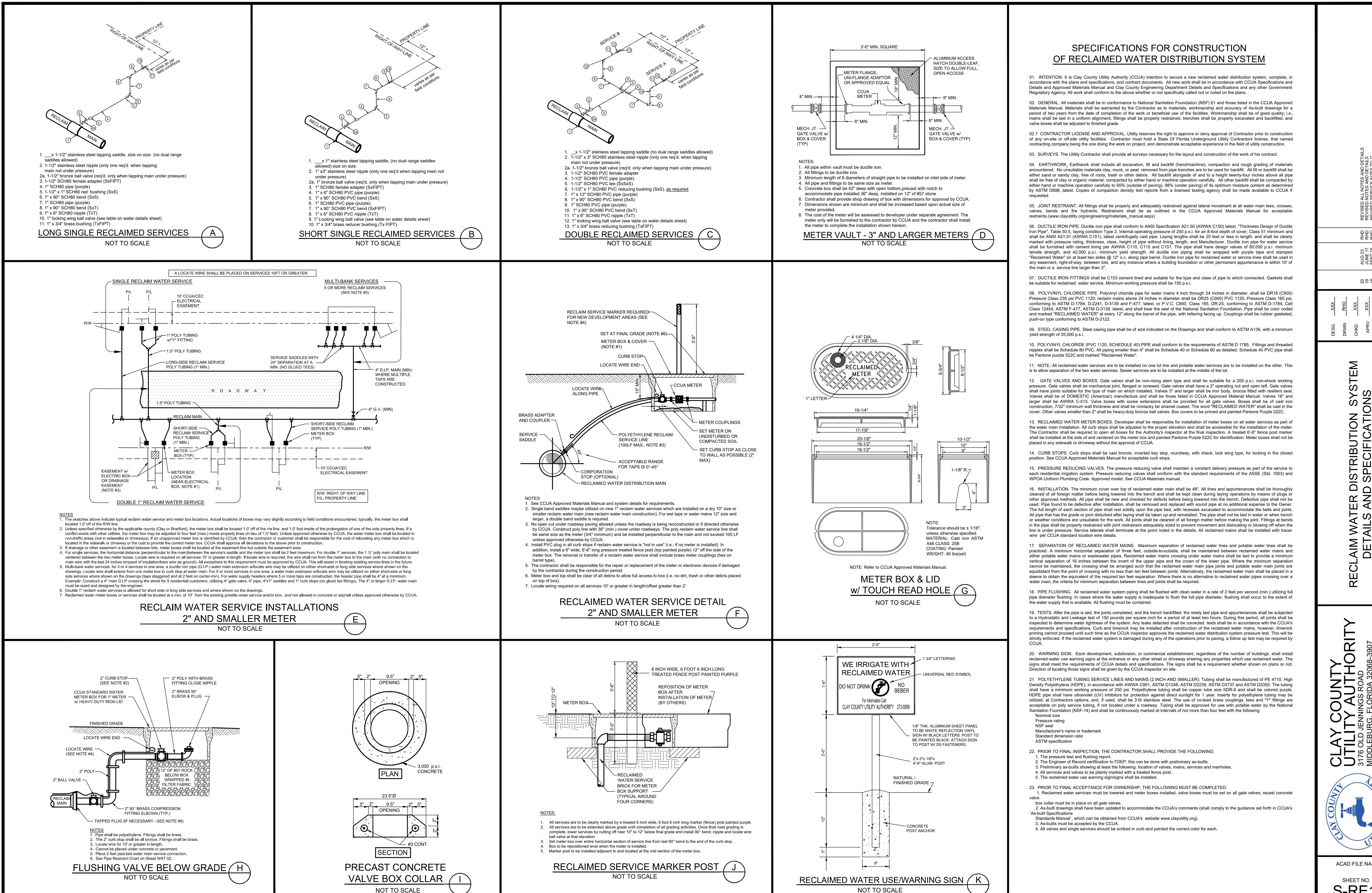
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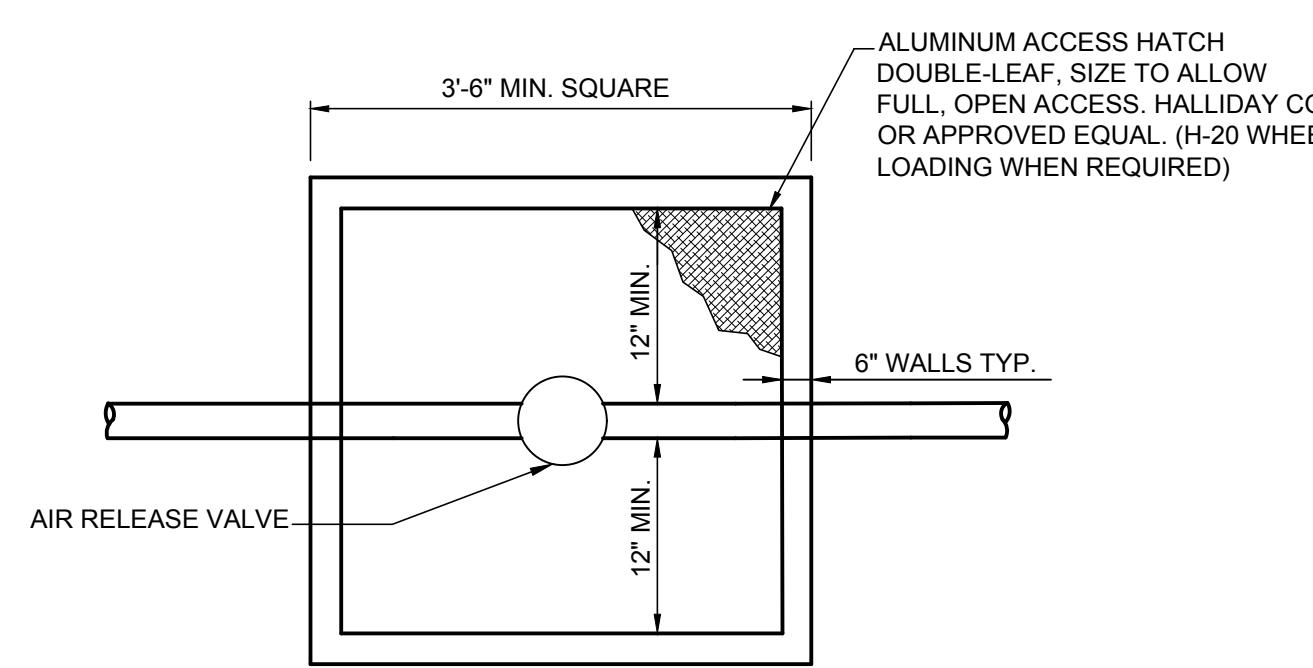
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**PUMP STATION
DETAILS**

DESG	RHD
DRWN	RHD
CHKD	XXX
APRV	XXX
DATE	06/22

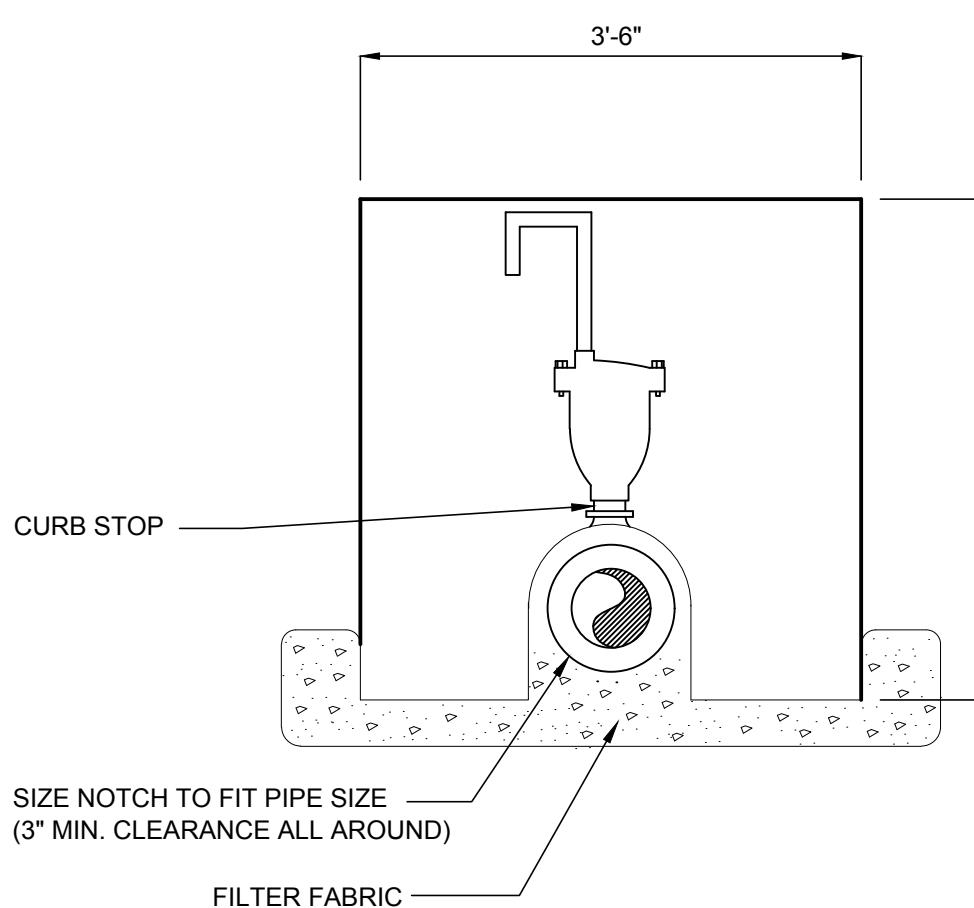




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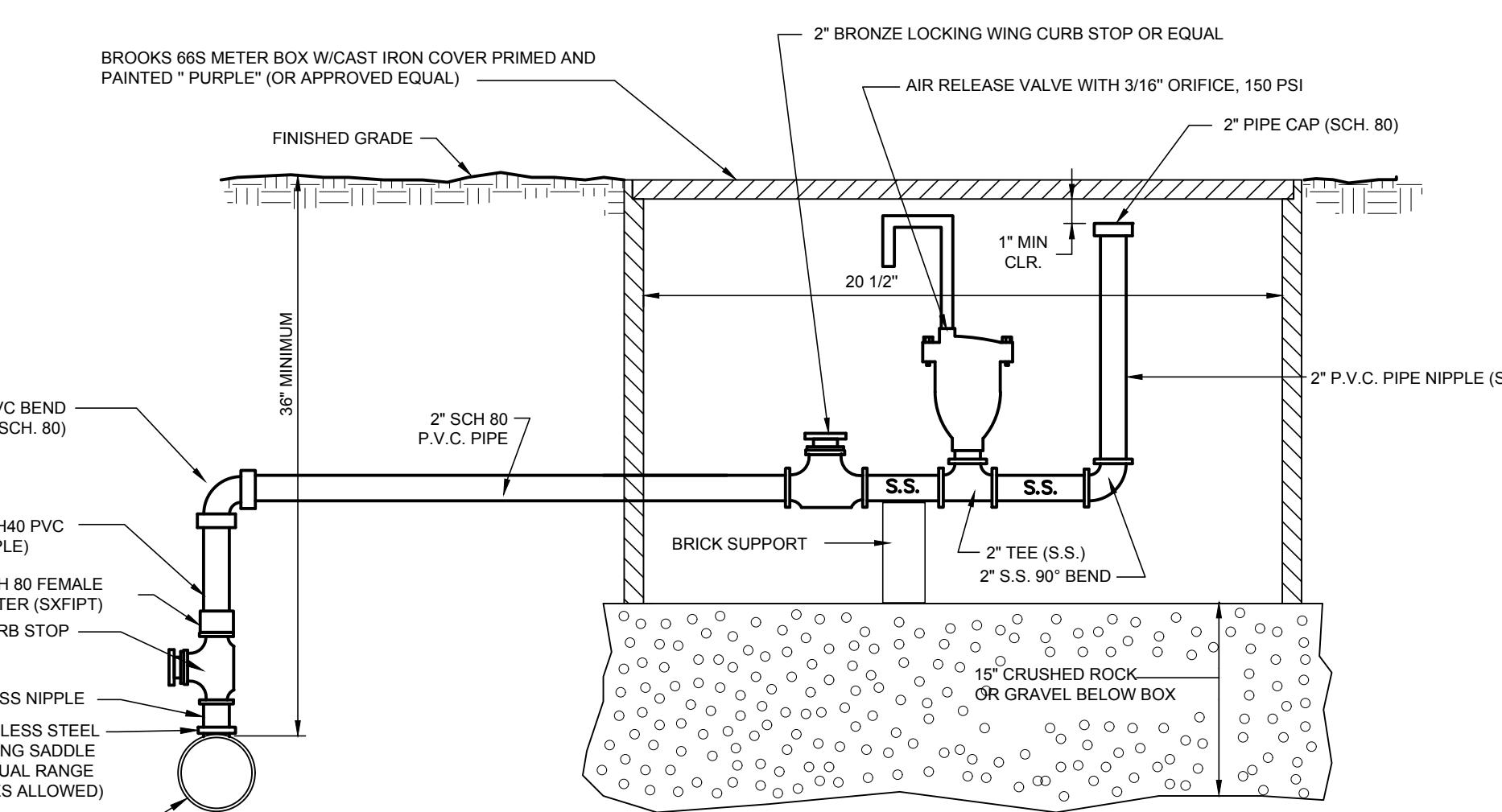
1. CONC. BOX SHALL BE 42" MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36" COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12" OF #57 STONE. WITH FILTER FABRIC ABOVE AND BELOW THE STONE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SITE OF PIPE INSTALLED.

NOTE: WIDTH VARIES TO ACCEPT PIPE SIZES OVER 8"



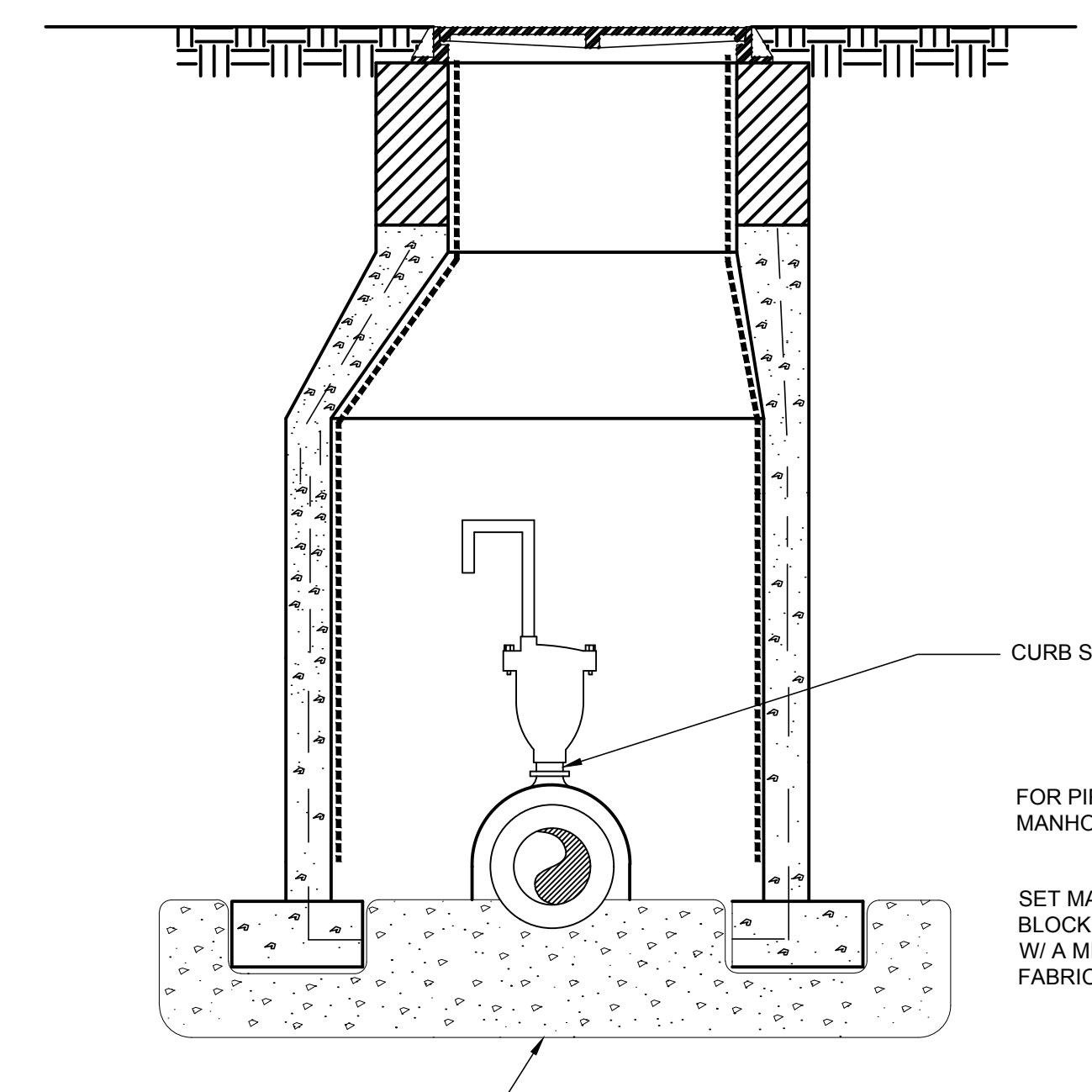
REUSE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 12" OR LARGER



AIR RELEASE VALVE DETAIL

111



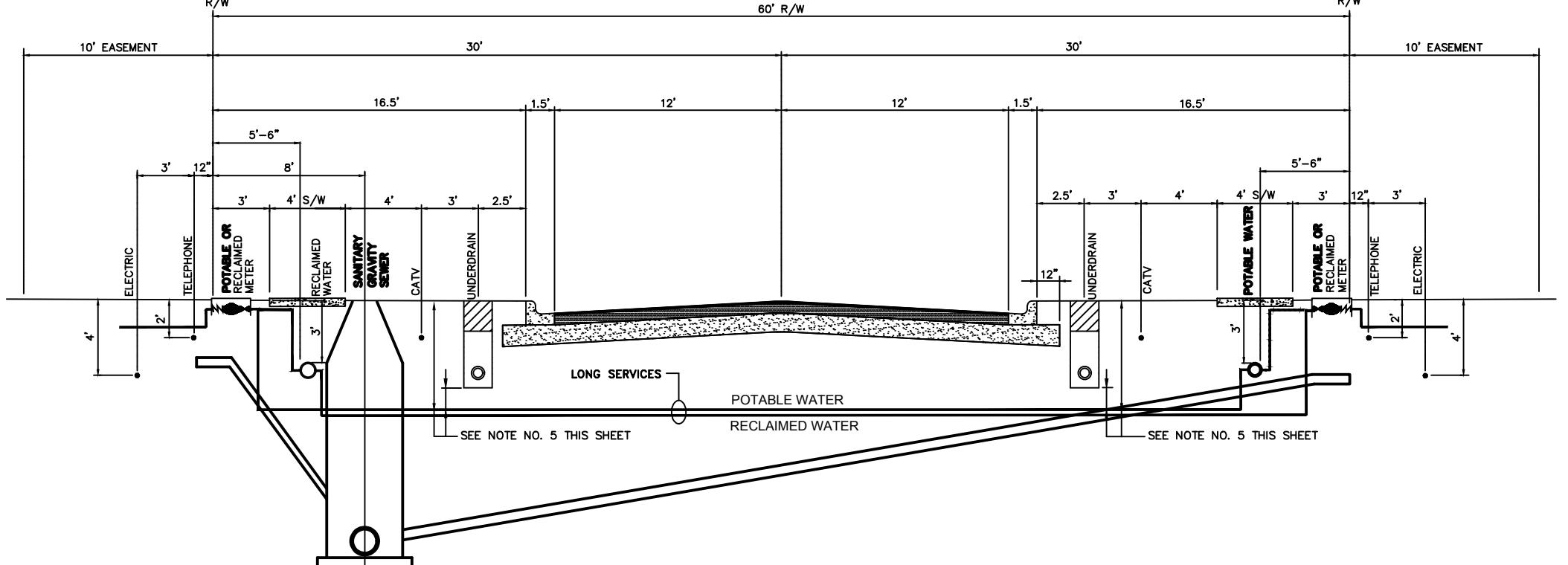
REUSE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 12" OR SMALLER

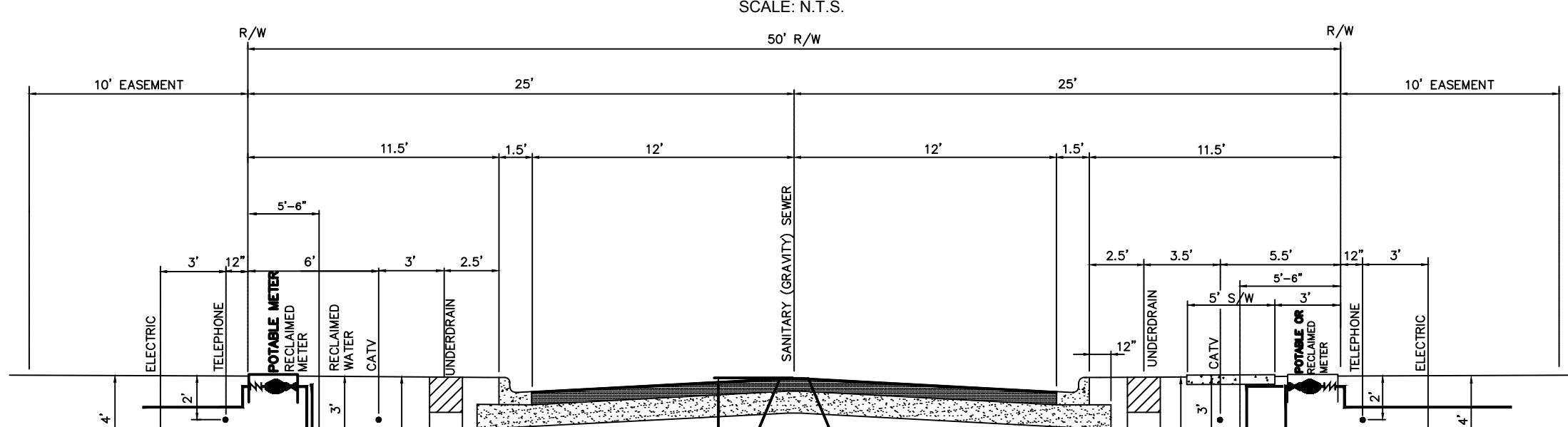
FOR PIPE 10" OR SMALLER A 4' DIAMETER, NOTCHED MANHOLE CAN BE USED FOR AIR RELEASE VALVE.

SET MANHOLE ON MIN. OF 4 SOLID CONCRETE
BLOCKS SPACED EVENLY AROUND THE MANHOLE
W/ A MIN. OF 12" #57 STONE WITH FILTER
FABRIC ABOVE AND BELOW THE STONE.

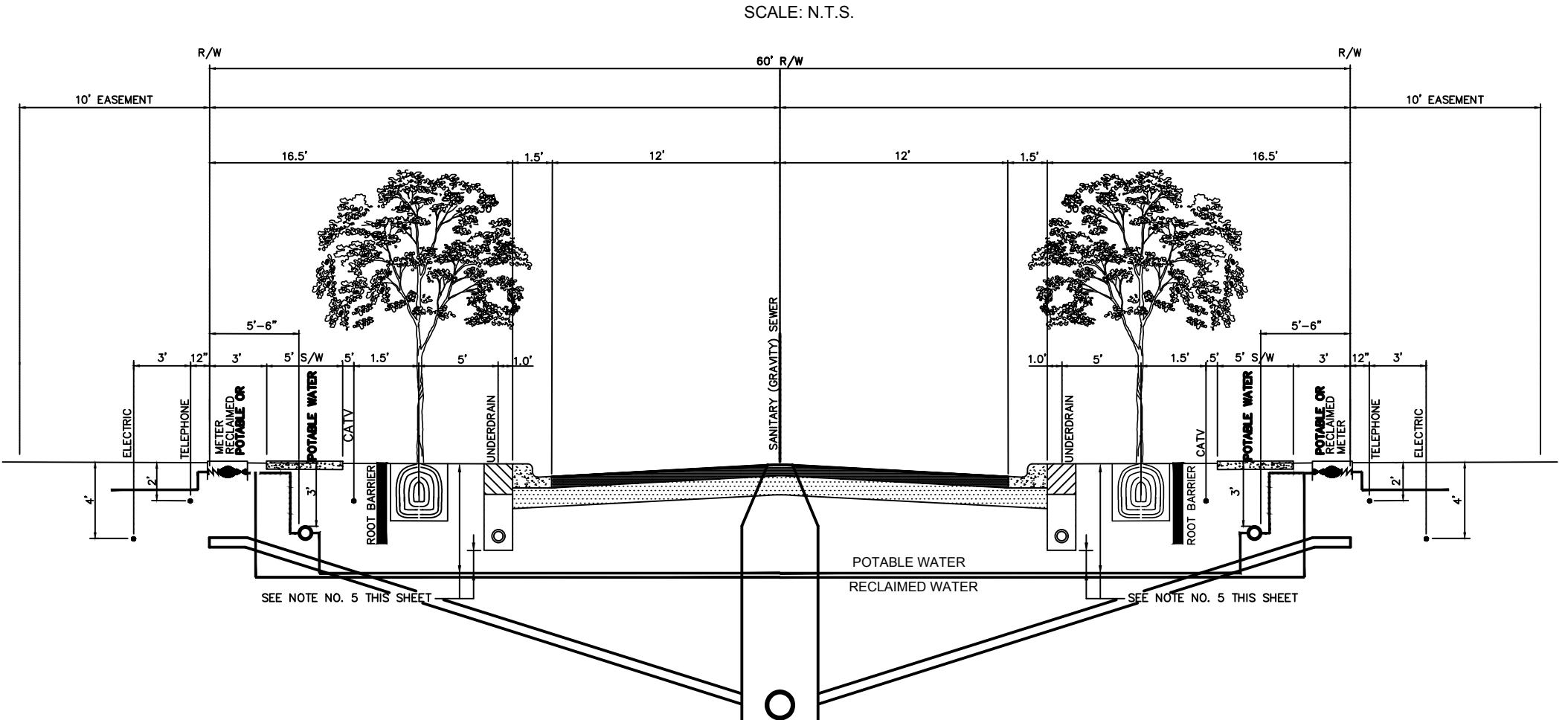
 <p>CLAY COUNTY UTILITY AUTHORITY 3176 OLD JENNINGS ROAD MIDDLEBURG, FLORIDA 32068-3907</p>		<p>PROJECT:</p> <p>RECLAIMED WATER DISTRIBUTION SYSTEM DETAILS AND SPECIFICATIONS 2</p>	
		ACAD FILE NAME	SHEET NO.
		<p>S-R-E2</p>	
DESIGN	DRWN	7 6 5 4 3 2 1	MAY 06 SEP 04 JUNE 03 AUG. 01 SEPT. 00 NOV 99 JULY 98
CHKD	APRV		MRS DGD DLR GAR GAR GAR GAR
DATE	NO	DATE	BY
<p>PRECAST CONCRETE ADJUSTING RINGS REUSE MAIN AIR RELEASE VALVE VAULT GENERAL UPDATES AND REVISIONS GENERAL UPDATES AND REVISIONS</p>			
REVISION DESCRIPTION			



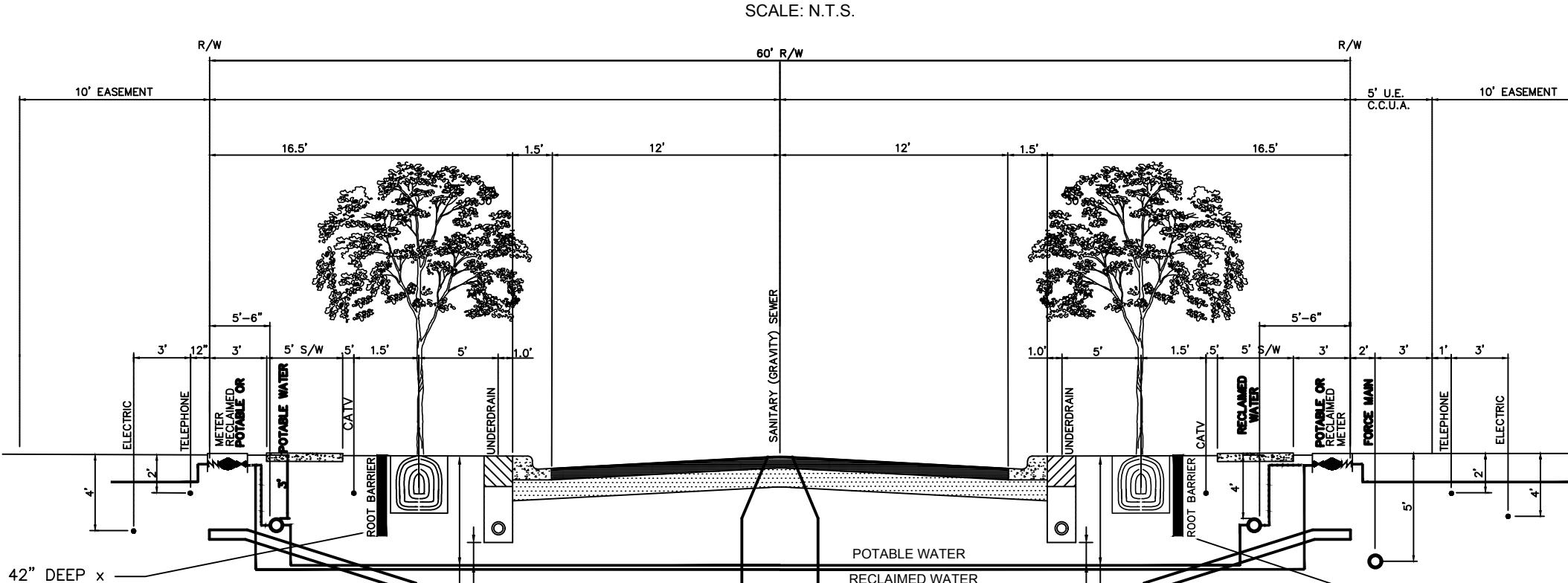
PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH
GRAVITY SEWER BACK OF CURB W/ RECLAIMED WATER



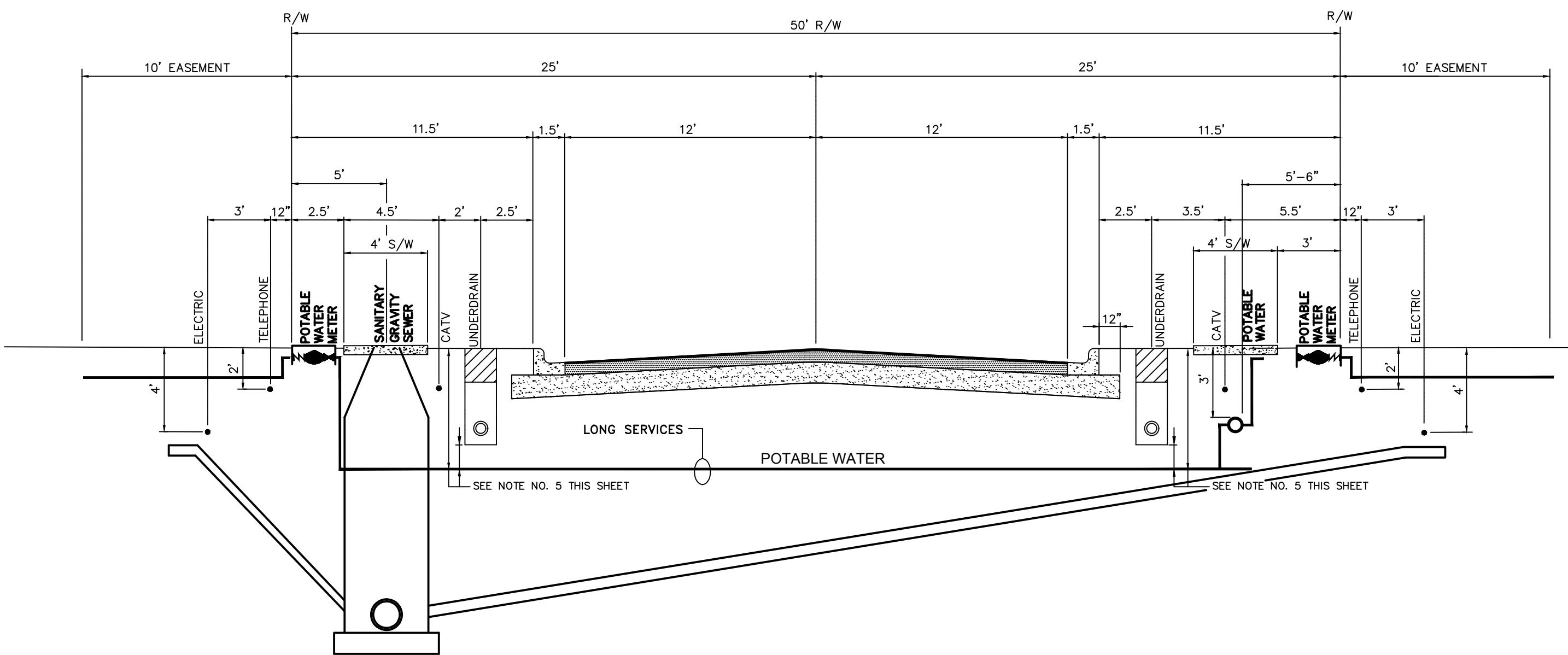
PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH
GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER



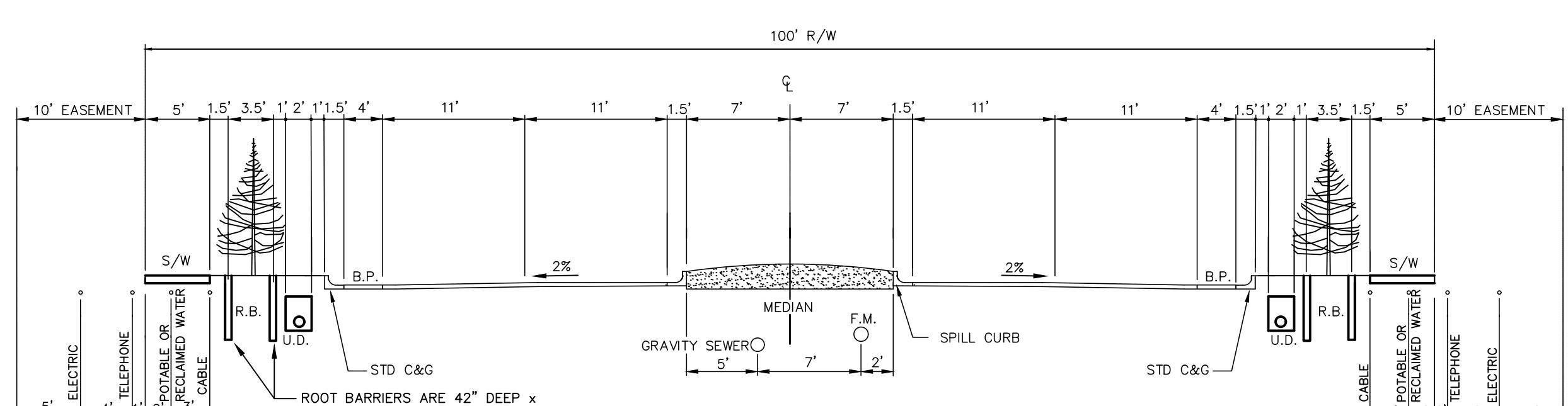
PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH
GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER



PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH GRAVITY SEWER
IN CENTER OF ROAD W/ FORCE MAIN PARALLEL TO RECLAIMED WATER



PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH
GRAVITY SEWER BACK OF CURB W/O RECLAIMED WATER

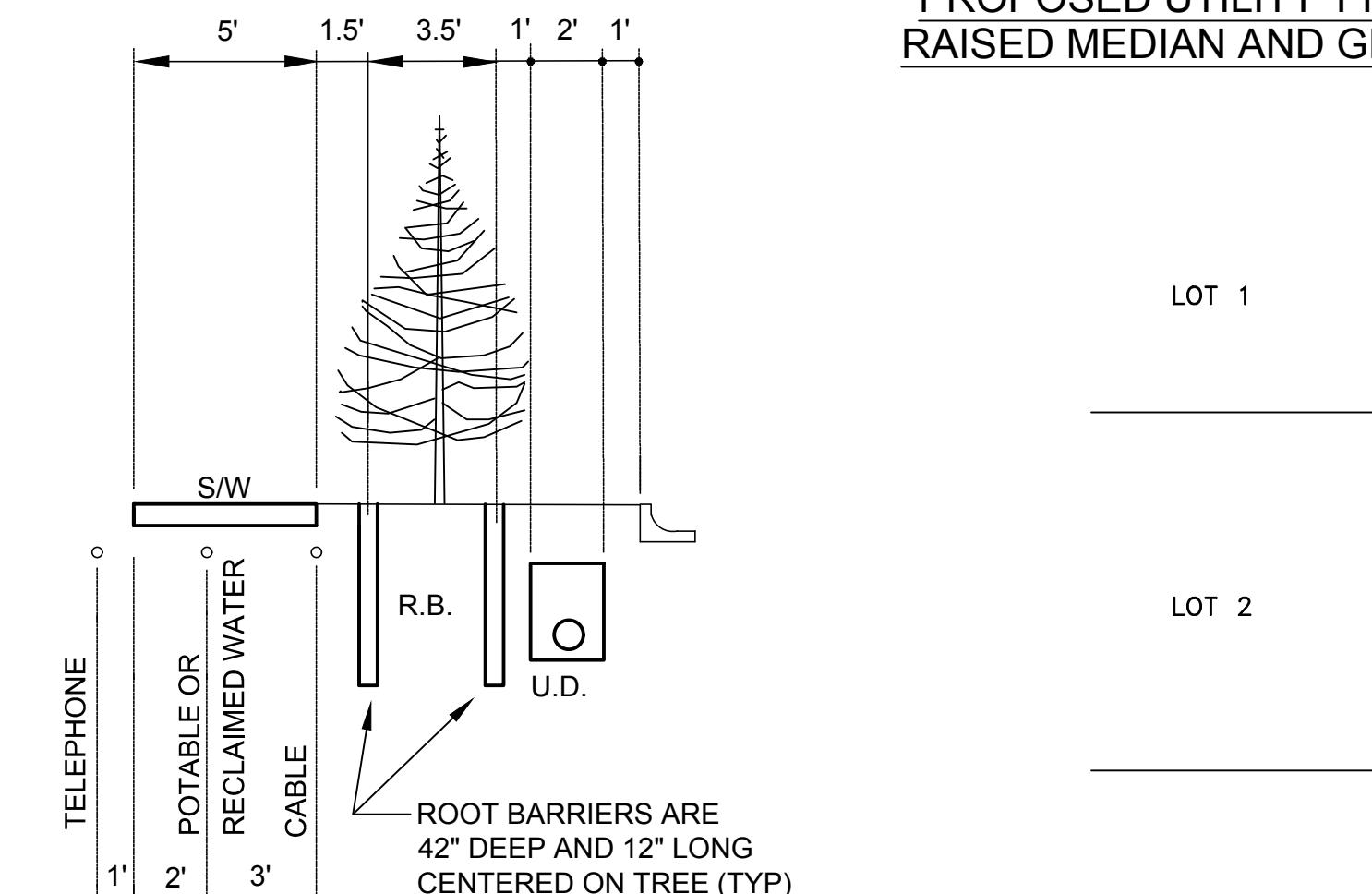


ROOT BARRIER SPECIFICATIONS:
ROOT BARRIERS SHALL BE A LONG TERM ROOT CONTROL SYSTEM
WHICH ALLOWS FOR RELEASE OF AN HERBICIDE TO PREVENT
ROOT INTRUSION. EFFECTIVE LIFE OF THE MATERIAL SHALL BE
AT LEAST 15 YEARS. SIMILAR AND / OR EQUAL TO "BIOBARRIER"
AS MANUFACTURED BY BBA NONWOVEN / REEWAY, INC., 70 OLD
HICKORY BLVD., OLD HICKORY, TN, 37138-3651, (800)284-2780.

SEE CCUA APPROVED MATERIALS MANUAL TO ROOT BARRIER SPECIFICATIONS.

100' CROSS SECTION SHOWN IS FOR INFORMATION PURPOSES
ONLY. THIS CROSS SECTION MAY NEED TO BE MODIFIED TO FIT
THE PROPOSED ROADWAY DESIGN; REQUIRES CCUA APPROVAL.

PROPOSED UTILITY TYPICAL SECTION FOR 100' R/W WITH
RAISED MEDIAN AND GRAVITY SEWER IN CENTER OF ROAD



EXTRUDED SHEETS OR PANELS WITH INTERNAL MALE/FEMALE SLIDING LOCK CONNECTION ENDS.
MATERIAL SHALL BE 1/2" THICK WITH A MINIMUM THICKNESS OF 60 MIL AND SHALL BE LAYERED.
BARRIER SHALL EXTEND TO A MINIMUM DEPTH OF 42" FROM FINISH GRADE. THE ROOT BARRIER
SHALL BE A MINIMUM OF 12" LONG, CENTERED ON THE TREE AND PARALLEL WITH THE UTILITY MAIN
OR SERVICE LINE BEING PROTECTED, UNLESS SHOWN OTHERWISE ON THE PLANS. ROOT BARRIER
SHALL BE INSTALLED AT ANY TREE PLANTED IN A CUA UTILITY EASEMENT, OR ANY TREE PLANTED
WITHIN 10' OF ALL CUA UTILITY MAINS OR SERVICES. NO TREES SHALL BE PLANTED IN A CUA
UTILITY EASEMENT WITHOUT THE APPROVAL OF CCUA. NO TREES SHALL BE CLOSER
THAN 5' TO ANY CUA UTILITY LINE OR SERVICES.

ROOT BARRIER DETAIL

SCALE: N.T.S.

TYPICAL WATER AND SEWER SERVICE LOCATION PLAN

- 1.) ALL WATER AND RECLAIMED DOUBLE SERVICES ON PROPERTY LINE.
- 2.) ANY SINGLE WATER OR RECLAIMED SERVICE LINES ON LOT LINE.
- 3.) ALL SEWER SERVICES ARE TO CENTER OF LOTS.
- 4.) IF FITTINGS ARE REQUIRED TO ACHIEVE 5'-0" SEPARATION
BETWEEN THE RECLAIMED AND POTABLE WATER SERVICE LATERALS
THEN A TEE OR SWEEP SHALL BE REQUIRED. THE TEE OR SWEEP
SERVING THE FITTING SHALL BE LOCATED ON THE RECLAIMED
SERVING FITTING. THE OFFSET REQUIRED TO ACHIEVE THE
SEPARATION SHALL OCCUR OUTSIDE OF THE PAVED ROADWAY.
- 5.) POTABLE AND RECLAIMED WATER SERVICE LINES SHALL ONLY BE
DEEP ENOUGH TO CLEAR THE BOTTOM OF THE UNDERDRAIN TRENCH.
MINIMUM COVER SHALL BE MAINTAINED IN ALL CASES.

CLAY COUNTY
UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME

SHEET NO.

S-UTC2

REVISION DESCRIPTION
REvised to add root barrier detail
REvised to add notes and distances from R/W
GENERAL UPDATES AND REVISIONS FROM R/W
ADDED SECTION DETAIL TO FORCE MAIN PARALLEL TO RECLAIMED MAIN.
REVISED 60' & 50' R/W SECTION DETAILS
NEW STANDARD DETAIL SHEET
REVISION DESCRIPTION