

CALLEGUAS MUNICIPAL WATER DISTRICT
Thousand Oaks, California

PROJECT NO. 450

FOR THE CONSTRUCTION OF THE
LVMWD-CMWD INTERCONNECTION

ADDENDUM NO. 2

May 11, 2021

Specifications and Drawings for Project No. 450 are hereby modified as follows:

Item AD2-1 REPLACE the first two sentences of Special Conditions paragraph 34 with the following:

“The Contractor shall provide a temporary mobile pump and deliver to TWSD’s OCR PRV-1 station vault located within the paved sidewalk approximately 60 feet north of the northwest corner of Kanan Road and Sunnycrest Drive. The pump shall be delivered a minimum of five Working Days prior to the scheduled start of the shutdown of Lindero Feeder No. 2 for Shutdown Nos. 2a and 2b in Table 1-1. The Contractor shall coordinate pump delivery and pickup schedules with the Owner.”

Item AD2-2 REPLACE Section 01650 page 5 with the attached Exhibit A containing replacement page 5.

Item AD2-3 REPLACE Section 11214-1.03.A in its entirety with the following:

“A. The equipment is intended to be standard product of proven reliability as manufactured by a company having at least ten years’ experience in the production of such equipment. All units shall be supplied by a single pump manufacturer. The pump manufacturer shall also supply the required pump can.”

Item AD2-4 Section 11214-1.05.B: INSERT the words “for each pump” after the words “Spare parts”.

Item AD2-5 REPLACE Section 11214 pages 5 and 6 with the attached Exhibit B containing replacement pages 5 and 6.

Item AD2-6 REPLACE Section 11214-2.19.F in its entirety with the following:

“F. Factory performance testing shall be witnessed by the Owner and performed on the fully assembled unit including pump can. The test shall be run for a minimum of 30 minutes covering seven Owner agreed upon points at a minimum of three speeds (including the maximum and minimum speed), for a total of a minimum of 21 points including the rated points. The data collected for the test

points for the full speed test shall include vibration, head, flow rate, speed, and power. The reduced speed test shall include head and flow rate. These points shall be shutoff, minimum continuous stable flow, midway between minimum stable flow and rated flow, rated flow (for that speed, as directed by the Owner), 5% below the rated flow, 5% above the rated flow, and 120% of rated flow for each speed. Testing shall establish that the pump system is free of overheating, cavitation and excessive vibration over the specified conditions. A single line certified performance curve shall be completed after the full speed test and included in the final data package, along with the other speed performance curves. Testing shall include recording measurements of impeller adjustments and total lateral shaft deflection (shaft runout) above the testing lab's temporary stuffing box. The pump test acceptance grade shall be 1B per HI Standard 14.6.”

Item AD2-7 REPLACE Section 11222-1.01.A in its entirety with the following:

“A. Extent of centrifugal pump motor work is indicated by Drawings, schedules, and one-line diagram. Types of centrifugal pump motor work include 3-phase, squirrel cage, inverter duty AC induction motors.”

Item AD2-8 REPLACE Section 11222-1.03.A.18 in its entirety with the following:

“18. Certificate of compatibility that the pump motors are compatible with the variable frequency drives (VFDs) to be furnished in accordance with Section 16480, and certificate of compatibility that the pump motors are compatible with the vertical turbine pumps to be furnished in accordance with Section 11214.”

Item AD2-9 REPLACE Section 11222-1.03.A.19 in its entirety with the following:

“19. Submit certification that the pump and motor connection bolts are designed to withstand the seismic forces in accordance with California Building Code Seismic Zone 4. Identify the center of gravity of the combined pump and motor and locate/describe the mounting and anchorage provisions.”

Item AD2-10 DELETE Section 11222-2.04.F in its entirety.

Item AD2-11 REPLACE Section 15049-1.01.A in its entirety with the following:

“A. This section includes materials and fabrication of steel pipe specials of sizes 4 through 30 inches, in accordance with AWWA C200, C205, and C208 and the following options and restrictions.”

Item AD2-12 REPLACE the first sentence of Section 15049-1.02.A with the following:

“A special is defined as any piece of pipe other than a normal full-length straight section.”

Item AD2-13 REPLACE Section 15049-2.01.B.2.a in its entirety with the following:

“a. Specials and wrought steel butt welded fittings 4 through 24 inches shall comply with one of the following: ANSI B16.9 with material conforming to ASTM A234, Grade WPB; shall be the same as the pipe; or shall comply with ASTM A283 (Grade D), ASTM A36, or ASTM A572 (all grades). Elbows shall be of the long-radius type unless otherwise shown on the Drawings.”

Item AD2-14 REPLACE the first sentence of Section 15049-2.01.B.4 with the following:

“Material for fabricated fittings 30 inches in diameter shall be the same as the pipe or shall comply with ASTM A283 (Grade D), ASTM A36, or ASTM A572 (all grades).”

Item AD2-15 REPLACE the second sentence of Section 15049-2.01.B.5 with the following:

“Minimum wall thickness of all steel fittings and specials shall be standard thickness per ANSI B16.9.”

Item AD2-16 REPLACE Section 15049-2.01.B.6 in its entirety with the following:

“6. Minimum mortar lining thickness shall be as indicated in the table in Section 15050-2.02.B. ”

Item AD2-17 REPLACE Section 15050-2.02.B (not including the table) with the following:

“B. Steel pipe cylinders shall comply with AWWA C200, ASTM A53, or ASTM A135. Steel material shall be ASTM A36. The pipe thickness shall be in accordance with AWWA M11, minimum 0.25 inch for buried piping, 0.375 inch thick for exposed piping in all vault and aboveground locations unless noted otherwise. Thicker wall thicknesses shall be provided if required per AWWA M11, C200 and/or C208. All diameters shown on the Drawings shall be considered the nominal diameters of the pipes shown. Pipe cylinders less than 30 inches in diameter shall be constructed such that the steel cylinder outside diameter conforms to ASME B36.10. The following table summarizes the required steel pipe dimensions including wall, lining, and coating thicknesses. With lining and coatings considered, the dimensional information of major steel pipe components are summarized below, with ‘CML/C’ referring to ‘cement mortar lined and coated’ and CML/P referring to ‘cement mortar lined and painted.’”

Item AD2-18 REPLACE the table in Section 15050-2.02.B with the following:

Nominal Pipe Size (in)	Steel Cylinder OD (in)	Inside Dia. (in)	Lining Thickness (in)	Steel Cylinder Thickness (in)	Coating Thickness (in)	Outside Dia. (in)
30 In. Dia. CML/C	32.25	30	0.75	0.25	1.5	35
30 In. Dia. CML/P	32.25	30	0.75	0.375	0.013	32.276
24 In. Dia. CML/C	24	22	0.75	0.25	1.5	27
24 In. Dia. CML/P	24	21.75	0.75	0.375	0.013	24.026
22 In Dia. CML/C	22	20	0.75	0.25	1.5	25
22 In Dia. CML/P	22	19.75	0.75	0.375	0.013	22.026
20 In. Dia. CML/C	20	18	0.75	0.25	1.5	23
20 In. Dia CML/P	20	17.75	0.75	0.375	0.013	20.026
18 In. Dia CML/P	18	15.75	0.75	0.375	0.013	18.026
16 In. Dia CML/P	16	14	0.75	0.25	0.013	16.026
14 In. Dia CML/P	14	12.625	0.3125	0.375	0.013	14.026
12 In. Dia CML/P	12.75	11.625	0.3125	0.25	0.013	12.776
10 In. Dia. CML/C	10.75	9.625	0.3125	0.25	1.5	13.75
10 In. Dia CML/P	10.75	9.375	0.3125	0.375	0.013	10.776
8 In. Dia CML/C	8.625	7.5	0.3125	0.25	1.5	11.625
8 In. Dia CML/C	8.625	7.5	0.3125	0.25	0.013	8.651
6 In. Dia CML/C	6.625	5.5	0.3125	0.25	1.5	9.625

Nominal Pipe Size (in)	Steel Cylinder OD (in)	Inside Dia. (in)	Lining Thickness (in)	Steel Cylinder Thickness (in)	Coating Thickness (in)	Outside Dia. (in)
4 In. Dia CML/C	4.5	3.375	0.3125	0.25	1.5	7.5

Item AD2-19 REPLACE Section 15050-2.06.A in its entirety with the following:

“A. Use flanges conforming to ANSI B16.5, Class 150, flat face, or AWWA C207 Class E for all piping 24 inches in diameter or less unless otherwise noted in the Drawings. For piping larger than 24 inches in diameter, flanges shall conform to ANSI B16.47, Class 150, Series A or AWWA C207 Class E. Flanges shall be flat faced.”

Item AD2-20 REPLACE the third sentence in Section 15050-2.22.E.3 with the following:

“The wire or reinforcing steel shall extend circumferentially around the pipe and shall meet the requirements on the Drawings.”

Item AD2-21 REPLACE *Cla-Val Plumbing Exhibits* (Valves “LPS1 Reverse Flow Valve (V-892)” and “PRS (V-401 and V-402)”) in Section 15110 Globe Pattern Valves - Attachment A, with the attached Exhibit C.

Item AD2-22 INSERT the following as Section 15144-1.03.C:

“C. Provide seismic anchorage design for pipe supports, including layout and calculations, signed and sealed by a Professional Civil Engineer registered in the State of California. Refer to the seismic design criteria on Drawing S-01.”

Item AD2-23 INSERT the following as Section 15144-2.01.C:

“C. Seismic anchorage design is not required at locations where Calleguas Standard Drawing pipe supports are required on the Drawings.”

Item AD2-24 REPLACE the second sentence of Section 15150-2.02.A with the following:

“The inlet and outlet cones shall be made of NSF 61 compliant materials.”

Item AD2-25 REPLACE Section 15150-2.02.B in its entirety with the following:

“B. The meter center flange shall fit between flanges on the mating pipe sections. The meter shall have an accuracy of +/- 1% of actual flow above a pipe Reynolds number as shown in the metering specifics below. Permanent pressure loss shall not exceed 10% of the differential.”

Item AD2-26 REPLACE Section 15150-2.02.F in its entirety with the following:

“F. The bi-directional venturi meter shall have additional 304 stainless steel high pressure static taps located on the pipe on either side of the venturi meter to improve accuracy.”

Item AD2-27 REPLACE Section 15150-2.04.A in its entirety with the following:

“A. Magnetic flow meter at the TWSD Metering Manhole shall be a hot tappable full profile insertion electromagnetic flow meter for measuring flow in one direction. Meter shall be Model 395S FPI Mag as manufactured by McCrometer or accepted equal.”

Item AD2-28 REPLACE Section 16425-1.03.C in its entirety with the following:

“C. UL Labels: Provide switchboards that have been UL listed and labeled under UL 891 ‘Dead-Front Electrical Switchboards.’ It shall be permissible to furnish switchboard sections SBB-C, SBB-D, & SBB-E in an enclosure listed per UL 845, provided the connection to switchboard distribution section SBB-B is listed under UL 891, all sections are front and rear aligned, and the overall length, depth, and height of the assembly does not exceed the dimensions and footprint shown on the Drawings.”

Item AD2-29 INSERT the following as Section 16425-1.04.B.8:

“8. Submit factory testing plan, including test schedule, plans, procedures, and forms. Submit testing results and reports.”

Item AD2-30 INSERT the following as Section 16425-1.04.F:

“F. Factory testing certifications: Prior to shipment, submit certifications from the manufacturer stating that the equipment has been properly assembled and factory tested including all auxiliary components.”

Item AD2-31 REPLACE the third sentence of Section 16430-2.02.C with the following:

“The minimum AIC rating for the meter pedestal shall be 42,000 AIC.”

Item AD2-32 INSERT the following as Section 16480-1.04.F:

“F. Submit factory testing plan, including test schedule, plans, procedures, and forms. Submit certified testing results and reports.”

Item AD2-33 REPLACE the first sentence of Section 16480-2.01.A with the following:

“Variable frequency drives shall be PowerFlex 755, heavy duty, Frame 8, as manufactured by Rockwell Automation, or equal.”

- Item AD2-34 REPLACE Section 16480-3.02.A in its entirety with the following:
- “The VFD shall be factory prewired, assembled and tested as a complete package. Submit certified test report.”
- Item AD2-35 DELETE *CMWD Std Dwg 210* in Appendix A.
- Item AD2-36 REPLACE *CMWD Std Dwg 403B* in Appendix A with the attached Exhibit D1.
- Item AD2-37 REPLACE *CMWD Std Dwg 501B* in Appendix A with the attached Exhibit D2.
- Item AD2-38 INSERT the attached Exhibit D3 (*CMWD Std Dwg 710*) in Appendix A.
- Item AD2-39 REPLACE *CMWD Std Dwg 805* in Appendix A with the attached Exhibit D4.
- Item AD2-40 REPLACE *CMWD Std Dwg 902* (Sheet 5 of 5) in Appendix A with the attached Exhibit D5.
- Item AD2-41 INSERT the attached Exhibit E into Appendix D – Record Drawings, at end of the Specification No. 173 – Lindero Feeder No. 2 Pipeline Fabrication and Line Layout Shop Drawings.
- Item AD2-42 INSERT the attached Exhibit F (*VCAPCD Authority to Construct 81321-100*) into Appendix G - Permits, behind the Ventura County Watershed Protection District Encroachment Permit and in front of the State Water Resources Control Board Notice of Intent (NOI) and Receipt.
- Item AD2-43 INSERT the attached Exhibit G (Triunfo County Sanitation District Plate No. 23) into Appendix O – TWSD Plates, before Plate No. 25 Chimney.
- Item AD2-44 REPLACE all references to *CMWD Std Dwg 210* in the Drawings with references to “Detail A, Drawing C-42.”
- Item AD2-45 INSERT the following sentence at the end of Construction Note 8 on Drawing C-02:
- “CONNECTION TO EXISTING MAIN SHALL CONFORM TO TRIUNFO COUNTY SANITATION DISTRICT PLATE NO. 23. THE EXISTING SANITARY SEWER LINE IS 24 INCH DIAMETER VCP PER TRUNFIO COUNTY SANITATION DISTRICT’S RECORD DRAWINGS.”
- Item AD2-46 REPLACE Construction Note 23 on Drawing C-11 with the following:
- “22-INCH DIA WELDED STEEL PIPE. FOR PLAN AND PROFILE SEE 1,2/C-32.”
- Item AD2-47 DELETE all note callouts which state “20-INCH DIA WSP” on Drawing C-12, Detail B, and replace with “22-INCH DIA WSP.”

- Item AD2-48 DELETE all note callouts which state “4-INCH DIA” on Drawing C-12, Detail E, and replace with “1.5-INCH DIA.”
- Item AD2-49 REPLACE Drawing C-13 with the attached Exhibit H1, containing replacement Drawing C-13.
- Item AD2-50 REPLACE Drawing C-17 with the attached Exhibit H2, containing replacement Drawing C-17 and new Drawing C-17A.
- Item AD2-51 INSERT the following note at STA 2+69.82 on Drawing C-19:

“NO JOINTS IN THE PIPE SHALL BE PLACED WITHIN 10 FEET OF THE SANITARY SEWER UNDERCROSSING LOCATED AT APPROXIMATELY STA 2+69.82.”
- Item AD2-52 INSERT the following note at STA 47+06 on Drawing C-28:

“NO JOINTS IN THE PIPE SHALL BE PLACED WITHIN 10 FEET OF THE SANITARY SEWER UNDERCROSSING LOCATED AT APPROXIMATELY STA 47+06.”
- Item AD2-53 REPLACE Drawing C-31 with the attached Exhibit H3, containing replacement Drawing C-31.
- Item AD2-54 REPLACE Drawing C-32 with the attached Exhibit H4, containing replacement Drawing C-32.
- Item AD2-55 REPLACE Drawing C-38 with the attached Exhibit H5, containing replacement Drawing C-38.
- Item AD2-56 DELETE all note callouts which state “BUTTSTRAP PER CMWD STD DWG 222” on Drawing C-39, Details 3 and 4 and on Drawing C-40, Details 1 and 2, and replace with “BUTTSTRAP PER CMWD STD DWG 220”.
- Item AD2-57 DELETE all note callouts which state “20-IN” on Drawing C-39, Details 3 and 4, and replace with “22-IN.”
- Item AD2-58 DELETE all note callouts which state “20-IN” on Drawing C-40, Details 1 and 2, and replace with “22-IN.”
- Item AD2-59 INSERT the attached Exhibit H6 containing new Drawing C-42.
- Item AD2-60 REPLACE the “10KAIC” callout on Drawing E-07, Detail 12, with “42KAIC”. REPLACE the “MINIMUM AIC RATING: 10,000A” on Drawing E-07, Detail 8, with “MINIMUM AIC RATING: 42,000A”.
- Item AD2-61 DELETE Drawing Notes 16 and 17 on Drawing E-07 in their entirety.
- Item AD2-62 REPLACE cross section detail callout “F/M-07” on Drawing M-01 with cross section detail callout “F/M-08”.

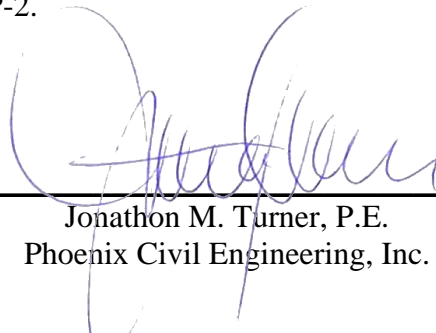
Item AD2-63 DELETE all occurrences of “20-INCH” in the Construction Notes on Drawing M-11 (except Construction Note 87) and replace with “22-INCH.”

Item AD2-64 INSERT the following sentence at the end of Construction Note 87 on Drawing M-11:

“THE PIPE WHICH HOUSES THE VENTURI METER SHALL BE 22 INCH. SEE SECTION 15050-2.02.B FOR PIPE AND LINING DIMENSIONS.”

Item AD2-65 DELETE note callout on Drawing M-12, Detail C, which states “6-INCH DIA SDR 40 PVC VENT PIPE” and replace with “6-INCH DIA SCH 40 PVC”.

Item AD2-66 This addendum shall be attached to and become part of the Contract Documents (Project No. 450). Bidders shall acknowledge receipt of this Addendum No. 2 on Proposal Page P-2.



Jonathon M. Turner, P.E.
Phoenix Civil Engineering, Inc.

END OF ADDENDUM

- J. Site Startup and Test Plan: Site startup and testing shall follow the minimum requirements outlined in the Site Startup and Test Plan included in Attachment A to Section 01650 (Appendix P), and shall be supplemented by additional site testing procedures, forms, and reports where required in the Contract Documents.
1. The Site Startup and Test Plan shall apply to all instruments, equipment, systems, and components to be tested and shall include test descriptions, field calibration and testing procedures, and checklists that the Contractor shall use to facilitate and document site testing.
 2. The following table summarizes testing requirements for the major systems and equipment:

Equipment	Factory Testing		Site Testing
	Witnessed	Unwitnessed	
<i>Vertical turbine pumps</i>	X		X
<i>Centrifugal pump motors</i>	X		X
All control system hardware, components, wiring, cabling, assemblies, interconnections, etc.		X	X
<i>Switchboards (SBA and SBB)</i>		X	X
<i>VFDs and active filter</i>		X	X
Portable engine-generators	X		X
Instrument Loop Checks			X
Cla-Val Control Valves	X		X
Flow Meters		X	X
HVAC Systems (including pumps)	X	X	X
Pushbuttons		X	X

- B. *The pumps furnished under Section 11214 shall be designed to be compatible and operate with the motors furnished under Section 11222.***
- C. The required units shall be ITT GOULDS PUMPS Model VIC-L 16x24 20ELC, FLOWAY 19FKM, or an accepted equal. The pump manufacturer shall furnish a variable frequency drive per Section 16480 capable of operating the pump between 1223 rpm and 1780 rpm, at a minimum. The pump shall be certified NSF 61 for potable water use.
- D. The pump station was designed based on the first-named pump manufacturer and model number (ITT GOULDS PUMPS Model VIC-L 16x24 20ELC). The piping, structure, pump pedestals, anchors, electrical systems, controls, etc. have been designed to accommodate the dimensions and requirements of the first-named pump. If the Contractor elects to submit a model or manufacturer other than the first-named pump manufacturer and model number, the Contractor shall be responsible for all costs, re-design fees, and coordination of all related work and deviations from the Drawings associated with changing the piping, structure, electrical systems, control systems, etc. to accommodate the substitute pump. No additional compensation shall be provided to the Contractor for changes made necessary by a substitution. Any extra work resulting from a substitute pump shall be the responsibility of the Contractor.
- E. *The pump supplier shall provide vertical turbine pumps, and all appurtenant work, complete and operable.***

2.02 PUMP DESIGN

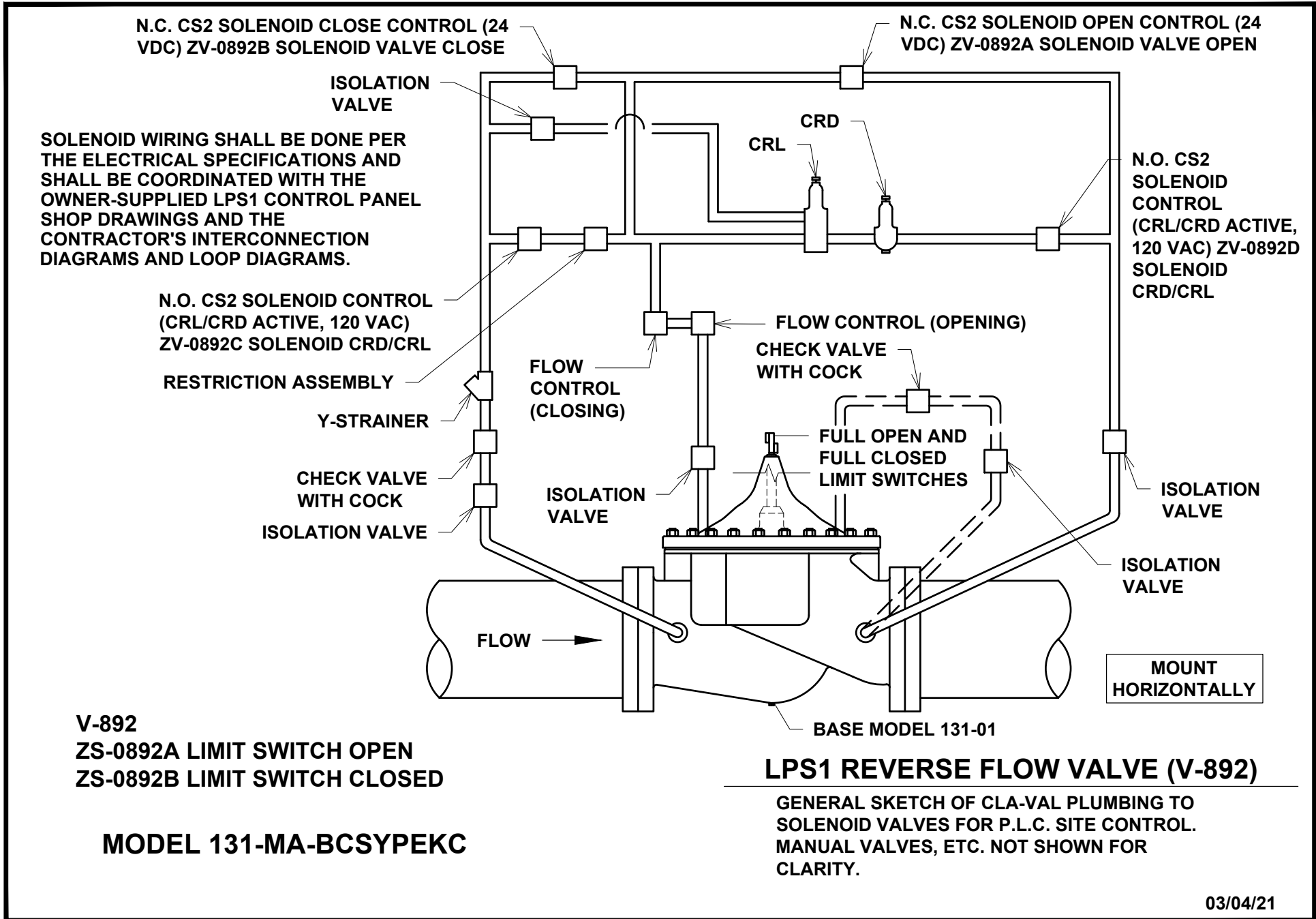
- A. *The equipment for the pumps, including pump cans, and bases, shall be provided as a complete unit by the pump manufacturer.***
- B. The pump curve shall be continuously rising and shall be free of dips and valleys from the design point to the shutoff head. The shutoff heads shall be at least 110% of the head that occurs at the design point.
- C. The NPSH required shall be at least 5 feet less than the minimum NPSH available at all points on the pump curve up to 120% of the flow at the BEP.
- D. Design the pump and its components to operate continuously over a flow range of 70% to 120% of the flow at the BEP.
- E. Anticipated discharge pressures are 150 psi working, 280 psi surge.

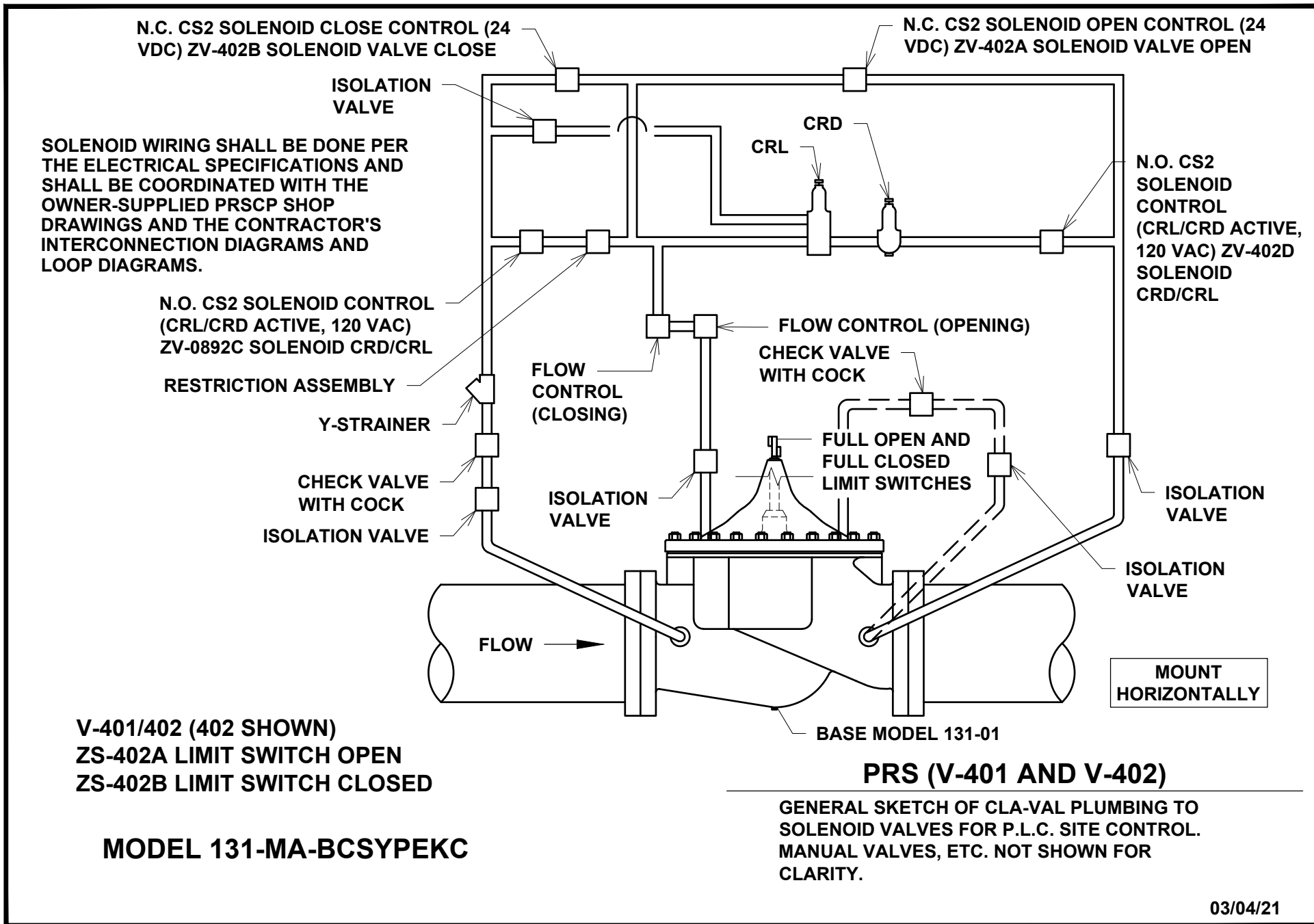
2.03 PUMP DESIGN PARAMETERS

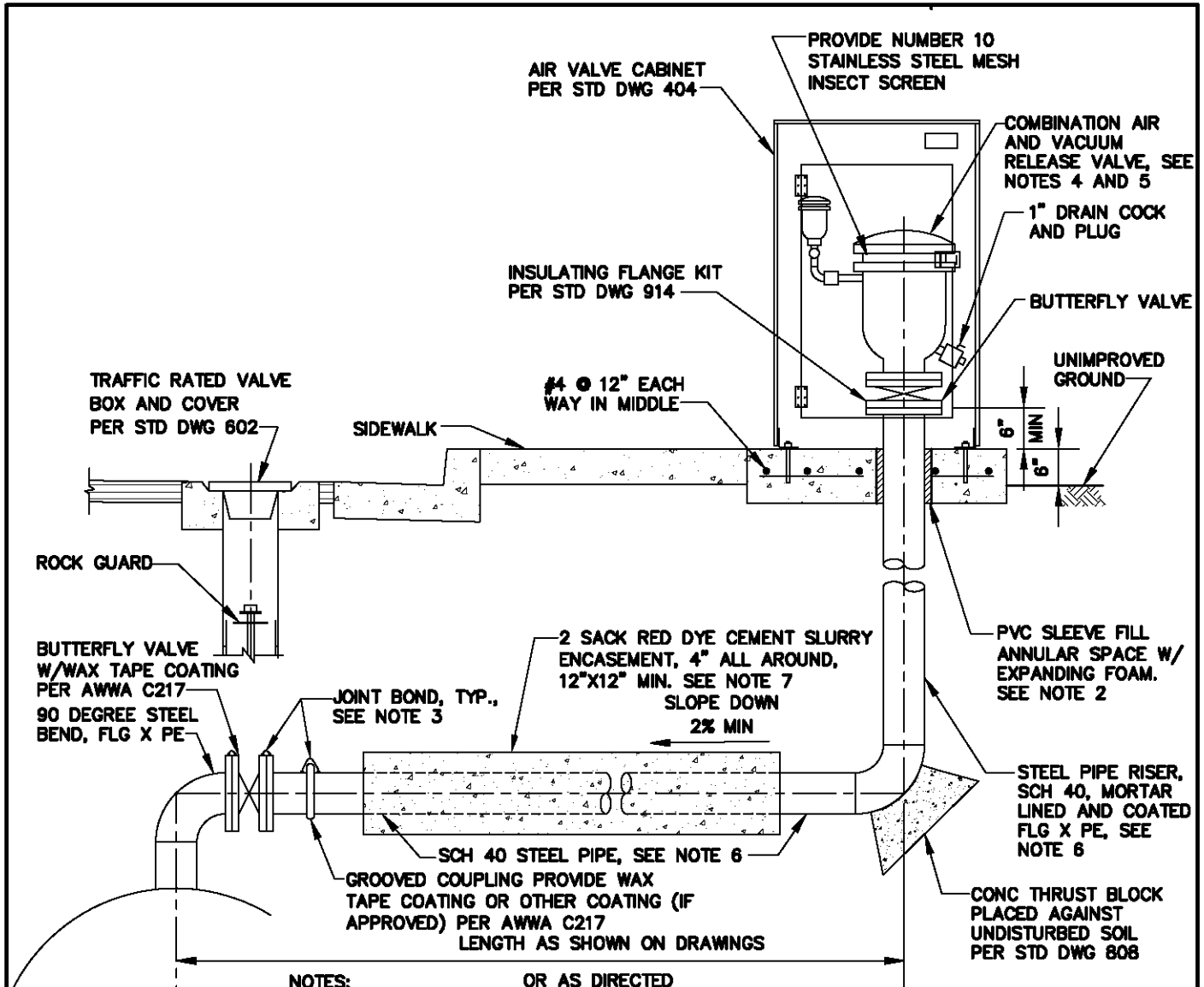
- A. The pump shall be designed for continuous operation. The number of pump starts for a 24 hour period shall not exceed that as required by the motor manufacturer.**

1. *Number of required units: 2*
2. *Rated flowrate/discharge head: 5,834 gpm/203 ft*
3. *Minimum motor horsepower required: 400*
4. *Minimum bowl efficiency, Percent (rated condition): 85.9*
5. *Maximum pump operating speed: 1780 rpm*
6. *Minimum barrel diameter, inches: 36*
7. *Minimum discharge diameter, inches: 16*
8. *Minimum suction diameter, inches: 24*
9. *Minimum lineshaft diameter, inches: 1.9375*
10. *Minimum pumpshaft diameter, inches: 2.25*
11. *In addition to the flow rate stated above, the pump shall also be able to operate at the following points (utilizing VFD and parallel pump operation as needed) without operating outside of the manufacturer's preferred operating range, as well as with the NPSH_A (net positive suction head available, referenced at pump suction centerline) listed below:*

NPSH _A Max = 207.9 ft; NPSH _A Min = 124.9 ft		
<u>Single Pump Running</u>		
<u>Flow (gpm)</u>	<u>Total Dynamic Head (ft)</u>	<u>Power (hp)</u>
3590	129	138
3590	222	250
5834	203	362
<u>Two Pumps Running</u>		
<u>Flow (gpm)</u>	<u>Total Dynamic Head (ft)</u>	<u>Power (hp), Per Pump</u>
5834	150	282
7630	148	168
7630	191	220
9425	189	264
9425	235	328







NOTES:

OR AS DIRECTED

1. SIZES OF PIPE, BENDS, VALVES, FLANGES AND COUPLINGS SHALL BE THE SAME AS NOMINAL SIZE OF AIR/VAC VALVE.
2. DIAMETER OF PVC SLEEVE SHALL BE 2 INCHES LARGER THAN AIR/VAC PIPE.
3. BOND ALL BURIED NON-WELDED JOINTS PER STD DWG 902.
4. CUSTOM DUPLEX COMBINATION AIR VALVES SHALL BE APCO SERIES 1100A OR A COMBINATION OF VAL-MATIC SERIES 100 AIR & VACUUM VALVES WITH A VAL-MATIC MODEL 50 AIR RELEASE VALVE, UNLESS OTHERWISE SPECIFIED. ALL VALVES SHALL HAVE SS COMPONENTS AND EPOXY COATING INSIDE AND OUTSIDE.
5. RESILIENT SEAT MATERIAL HARDNESS SHALL BE AS FOLLOWS.

WORKING PRESSURE (PSI) AT AIR/VAC	0-15	16-55	56-300
DUROMETER HARDNESS	35-45	55-65	75-90

6. PIPE SHALL BE CEMENT MORTAR LINED AND RECEIVE THE SAME COATING SYSTEM AS THE MAINLINE PIPE (ML&C MINIMUM).
7. IF PIPE HAS LESS THAN 3 FEET OF COVER, ENCASE WITH SLURRY.

REVISION	DATE	BY	DESCRIPTION
3	02/04	P&I	ADDITION OF NOTES
4	11/04	P&I	GENERAL
5	03/08	P&I	GENERAL

S. Mulligan 3/14/06
Digitally signed by S. Mulligan 3/14/06
 DN: cn=S. Mulligan 3/14/06, c=US, o=Calleguas MWD, ou=Engineering
 Date: 2006.03.14 08:34:02-0800

APPROVED _____
 MANAGER OF ENGINEERING DATE

CALLEGUAS MUNICIPAL
 WATER DISTRICT

STANDARD DRAWINGS

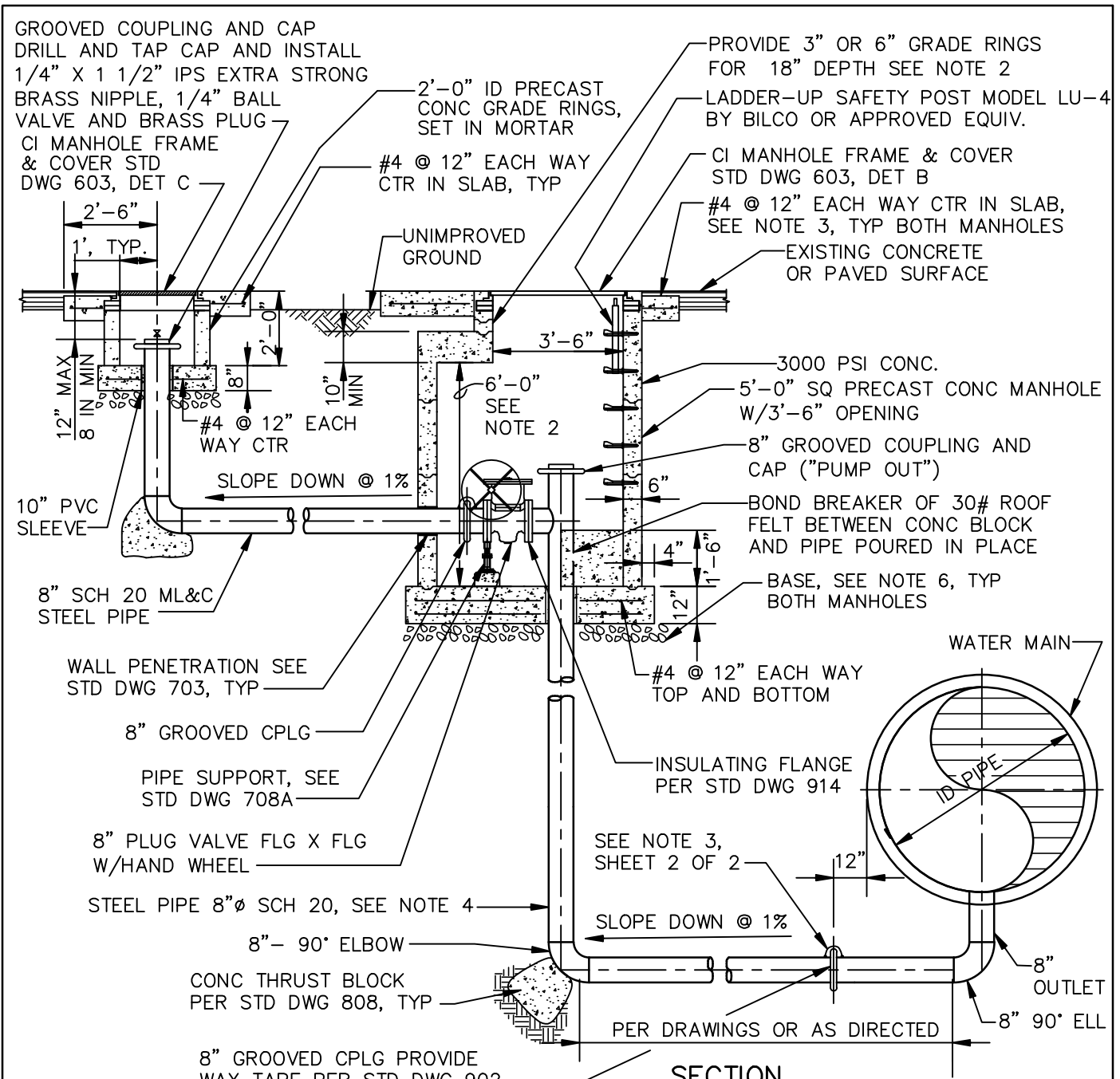
4"-12" AIR/VAC
 VALVE TYPE B
 FOR WSP AND CCP

DWG NO

403B

THOUSAND OAKS

CALIFORNIA



- NOTES:
- SEE ADDITIONAL NOTES ON SHEET NO. 2
 - WHERE SUFFICIENT DEPTH IS NOT AVAILABLE, REDUCE THIS DIMENSION AS DIRECTED BY THE OWNER.
 - DEPTH TO TOP OF CONCRETE COLLAR IN PAVED/IMPROVED AREAS SHALL BE 1 1/2" UNLESS OTHERWISE REQUIRED BY THE AGENCY HAVING JURISDICTION.
 - PIPE SHALL BE CEMENT MORTAR LINED AND COATED AND ADDITIONALLY COATED SIMILAR TO MAINLINE PIPE COATING SYSTEM. COATING(S) SHALL EXTEND TO BACK OF FLANGES AND TO GROOVED COUPLING.
 - BACKFILL ALL BURIED PIPE WITH ONE SACK CEMENT-SAND SLURRY OR 100 PSI SOIL-CEMENT, UNLESS OTHERWISE SPECIFIED.
 - PROVIDE 3/4" CRUSHED ROCK WRAPPED IN GEOTEXTILE MATERIAL (TENCATE MIRAFI 160N OR APPROVED EQUIVALENT) IN AREAS WHERE GROUNDWATER IS WITHIN 2' OF BOTTOM OF EXCAVATION. OTHERWISE PROVIDE CALTRANS 3/4" CLASS II AGGREGATE COMPACTED TO 95%.

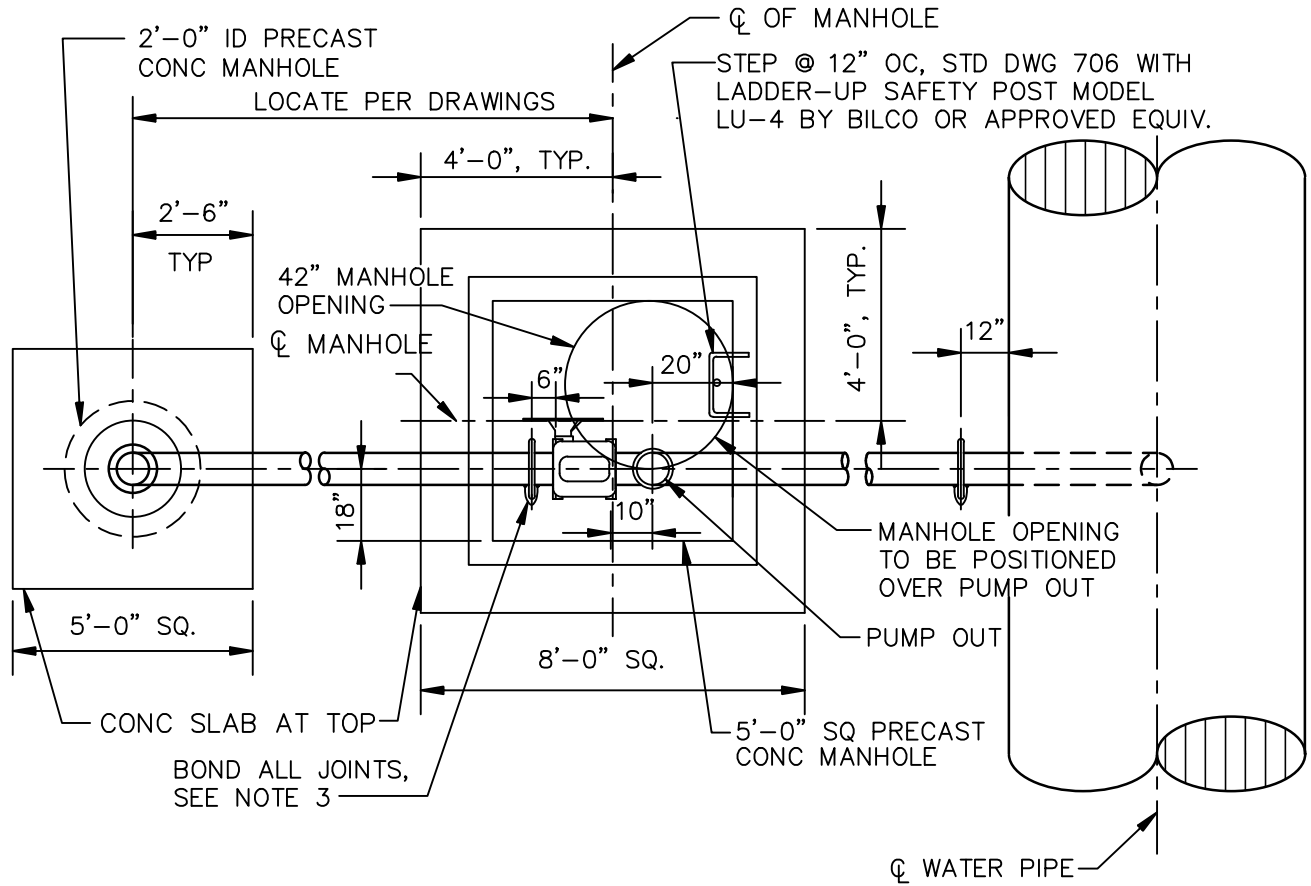
REVISION	DATE	BY	DESCRIPTION
8	10/11	P&I	GENERAL
9	11/10	P&I	GENERAL
10	11/13	P&I	GENERAL
11	05/21	P&I	ADDENDUM #1

APPROVED *[Signature]* 01/24/2014
 MANAGER OF ENGINEERING DATE

CALLEGUAS MUNICIPAL
 WATER DISTRICT

THOUSAND OAKS CALIFORNIA

STANDARD DRAWINGS	DWG NO.
8" BLOWOFF FOR WSP OR CCP - NO DIRECT DISCHARGE TO STORM DRAIN OR ARROYO	501B
	SHEET 1 OF 2



PLAN

NOTES:

1. PAINT ALL EXPOSED STEEL SURFACES EXCEPT FLANGE FACE W/PROTECTIVE COATING PER SPECIFICATIONS.
2. PIPE COATING PER SPECIFICATIONS.
3. BOND ALL NON-WELDED JOINTS PER STD DWG 902, EXCEPT AS SHOWN.
4. SEE 905 FOR CATHODIC REQUIREMENTS.
5. GROOVED COUPLING AND CAP SHALL BE VICTUALIC TYPE 77 AND 60, RESPECTIVELY OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED.
6. THICKNESS OF CONCRETE SLAB AT TOP SHALL BE 8" IN IMPROVED AREA AND 10" IN UNIMPROVED AREA.
7. TOP SLAB AND MANHOLE FRAME & COVER SHALL BE SET FLUSH WITH IMPROVED FINISHED GROUND OR 6" ABOVE UNIMPROVED GROUND.
8. INSTALL ONE LIFTING LUG IN SLAB ABOVE PLUG VALVE.

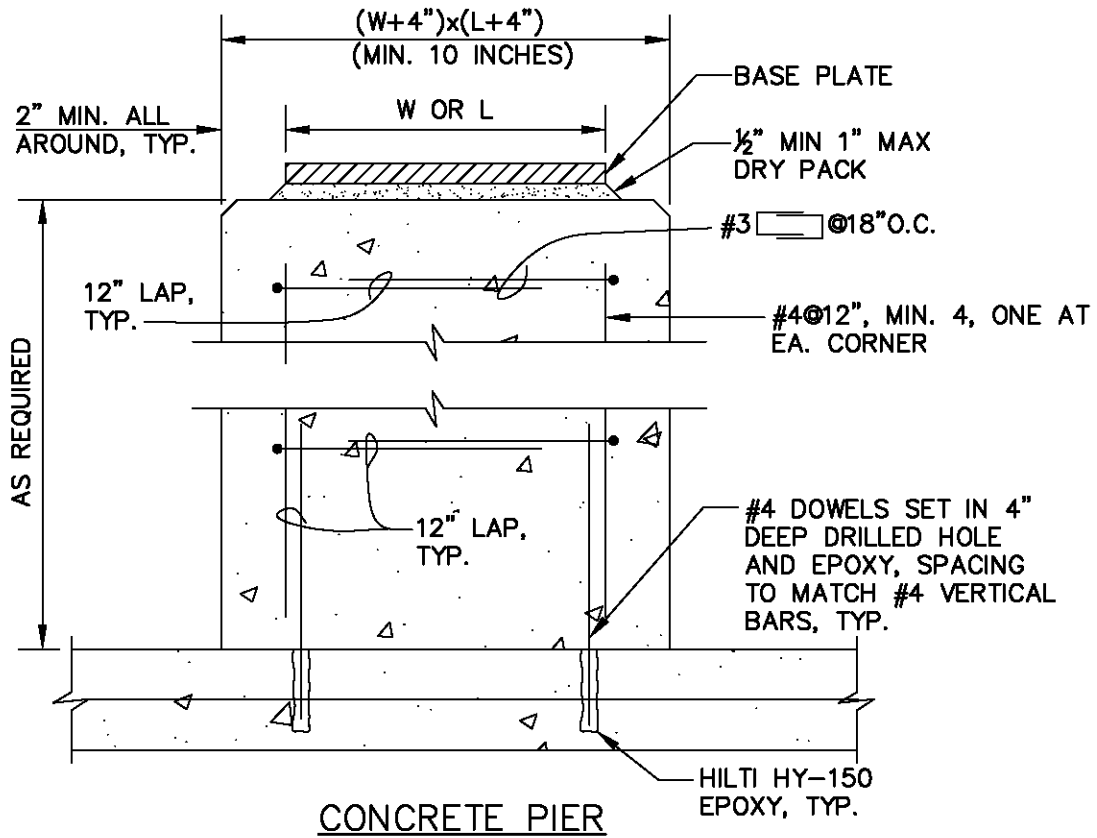
REVISION	DATE	BY	DESCRIPTION
6	03/10	P&J	GENERAL
7	10/11	P&J	GENERAL
8	11/13	P&J	GENERAL

APPROVED *R. Melaffer* 01/24/2014
 MANAGER OF ENGINEERING DATE

CALLEGUAS MUNICIPAL
 WATER DISTRICT

STANDARD DRAWINGS
 8" BLOWOFF FOR WSP
 OR CCP - NO DIRECT
 DISCHARGE TO STORM
 DRAIN OR ARROYO

DWG NO.
 501B
 SHEET
 2 OF 2



REVISION	DATE	BY	DESCRIPTION
1	08/04	P&E	GENERAL
2	03/06	P&E	GENERAL
3	12/06	P&E	GENERAL

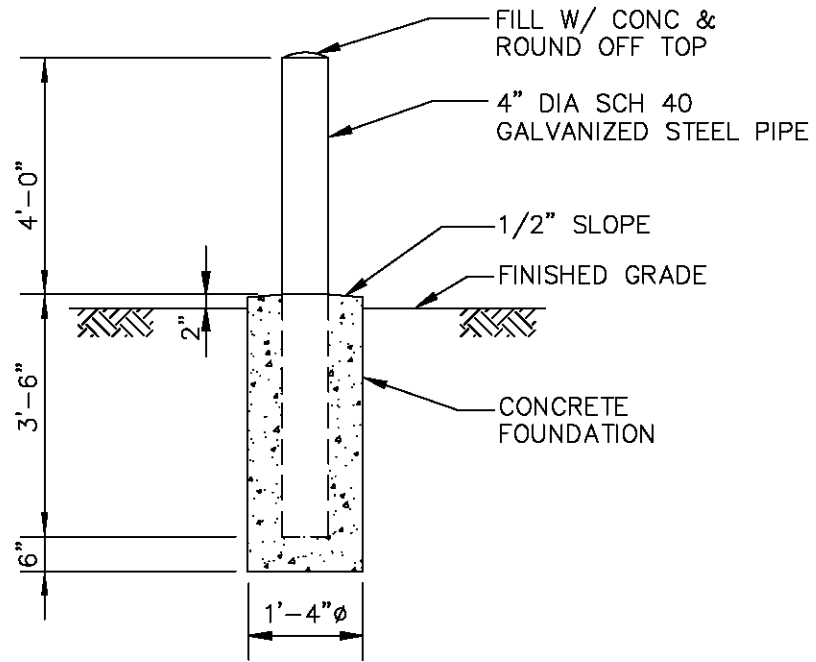
APPROVED **Susan Mulligan**
Digitally signed by Susan Mulligan
 DN: cn=Susan Mulligan, c=US
 Date: 2006.12.11 10:06:48-08'00'
 MANAGER OF ENGINEERING DATE

**CALLEGUAS MUNICIPAL
 WATER DISTRICT**

THOUSAND OAKS CALIFORNIA

STANDARD DRAWINGS
**CONCRETE PIER
 FOR PIPE AND
 FLANGE SUPPORT**

DWG NO
710

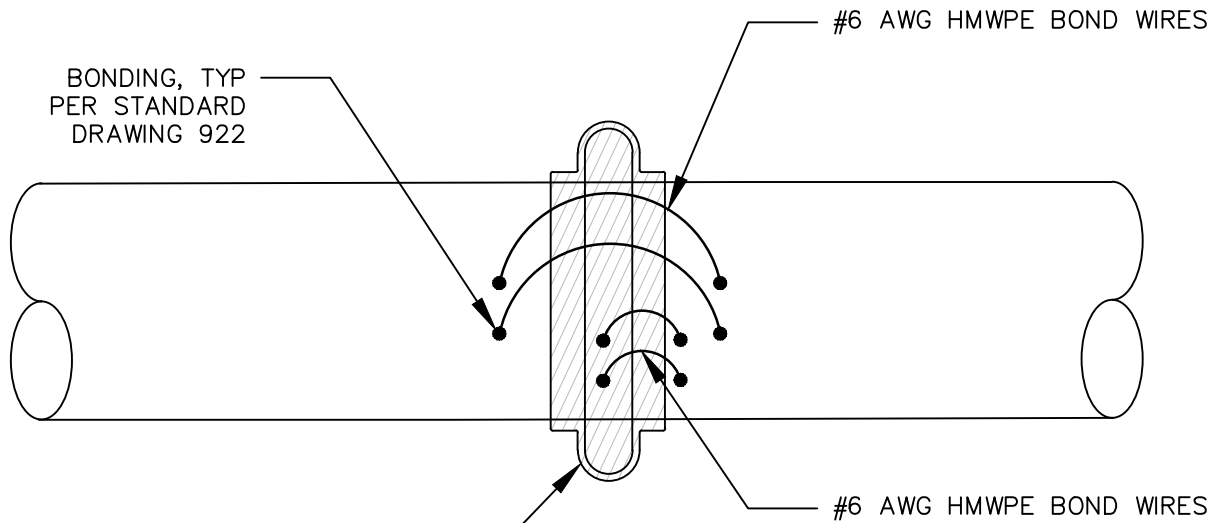


GUARD POST

REVISION	DATE	BY	DESCRIPTION	CALLEGUAS MUNICIPAL WATER DISTRICT	STANDARD DRAWINGS	DWG NO
1	08/06	P&I	GENERAL			GUARD POST
APPROVED Susan Mulligan <small>Digitally signed by Susan Mulligan DN: cn=Susan Mulligan, c=US Date: 2006.11.07 08:48:12 -08'00'</small>			MANAGER OF ENGINEERING	DATE	THOUSAND OAKS	CALIFORNIA

NUMBER OF BONDING WIRES REQUIRED		
* T (IN)	20 FEET LENGTH	30 FEET AND 40 FEET LENGTHS
0.225	3	2
0.250	3	2
0.312	4	3
0.372	4	3
0.415	4	3
0.500	5	4

* STEEL CYLINDER THICKNESS



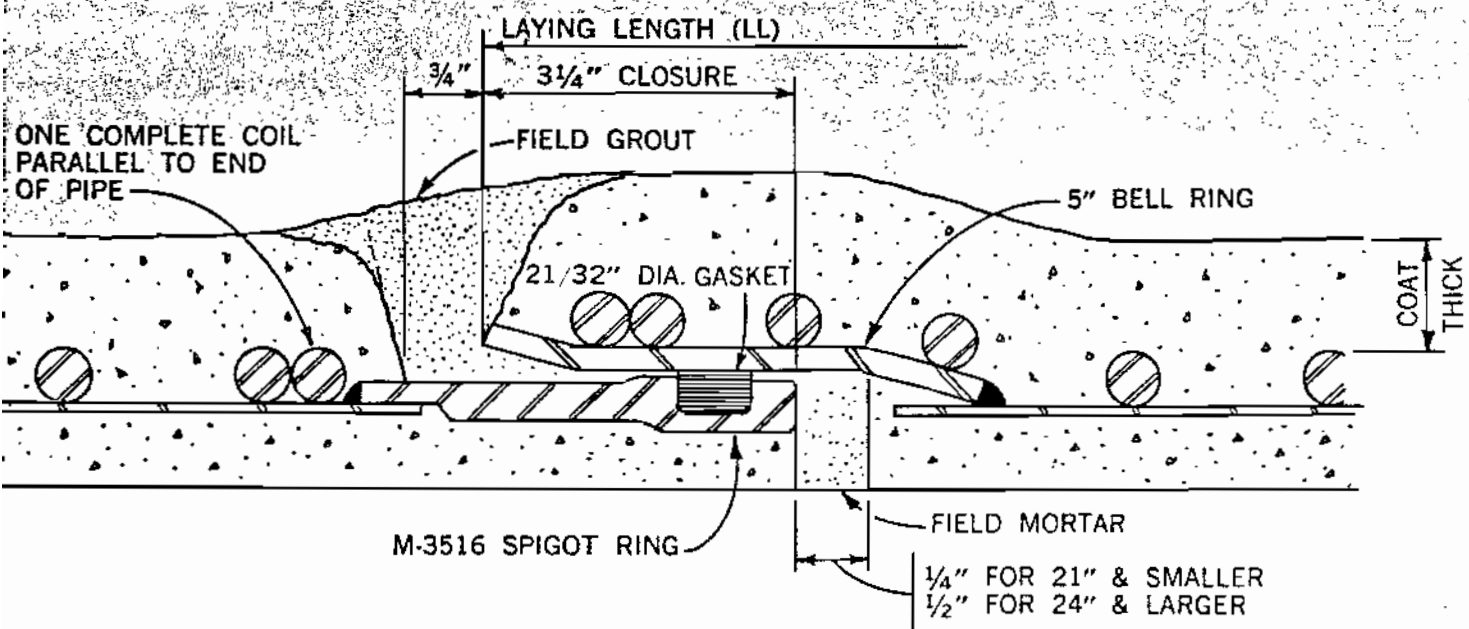
IF BURIED, APPLY PETROLATUM TAPE TO ALL NON-MORTAR COATED PARTS PER AWWA C217. APPLY TAPE AFTER BONDING WIRES ARE INSTALLED.

GROOVED COUPLING

1. MINIMUM DISTANCE BETWEEN BONDING LOCATIONS IS 6".
2. MINIMUM DISTANCE BETWEEN BONDING LOCATIONS AND JOINT IS 6" UON.

REVISION	DATE	BY	DESCRIPTION	<p align="center">CALLEGUAS MUNICIPAL WATER DISTRICT</p> <hr/> <p align="center">STANDARD DRAWINGS</p> <p align="center">TYPICAL BONDING AT NON-WELDED JOINTS</p>	DWG NO.
2	03/02	P&I	GENERAL		902
3	05/09	P&I	ADD VALVE JUMPER & GENERAL		SHEET
4	10/20	PCE	GENERAL		5 OF 5
5	05/21	PCE	APPENDIX #1		
APPROVED <i>[Signature]</i>			03/04/2021	THOUSAND OAKS	CALIFORNIA
MANAGER OF ENGINEERING			DATE		

Office Copy Exhibit E



- SPECIFICATIONS:**
- CYLINDER — ASTM A-415, 27,000 P.S.I. MIN. YIELD; .25% MAX. CARBON
 - ROD — ASTM A-15 INTER. GR. 42,000 P.S.I. MIN. YIELD
 - JOINT RINGS — AISI C-1012 27,000 P.S.I. MIN. YIELD
 - GASKETS — JOB SPECIFICATION N°173 SECTION 4-07
 - CEMENT — FEDERAL SPECIFICATION 55-C-192A TYPE II
 - AGGREGATE — ASTM C-33

$$p = \frac{22,000 \times 2 \times .0747}{31.875} = 104 \text{ OK}$$

$$p = \frac{40,000 \times 1.1046}{31.875} = 145 \text{ (OK)}$$

(OK)

ITEM NO.	QUAN. LF	PIPE ID	CLASS (PSI)	LL	CYLINDER						ROD					TOT. AREA	NOM. LINING THICK.	MIN. COATING THICK.	MIN. BELL THICK.	CYL. TEST P.S.I.	ROD TENSION	
					OD	LENGTH	GA	AREA	# LF	TONS	DIA.	SPACING	AREA	# LF	TONS						MIN.	MAX.
9	1650	30"	125	40'	31 7/8"	475 1/4"	14	.90	27.46	22.65	3/8"	1.82"	.73	22.01	18.16	1.63	3/4"	1 1/4"	3/16"	104	1580"	1796"
10	230	30"	130	40'	31 7/8"	475 1/4"	14	.90	27.46	3.16	3/8"	1.68"	.79	23.82	2.74	1.69	3/4"	1 1/4"	3/16"	104	1580"	1796"
11	1600	30"	135	40'	31 7/8"	475 1/4"	14	.90	27.46	21.97	3/8"	1.58"	.84	25.33	20.26	1.74	3/4"	1 1/4"	3/16"	104	1580"	1796"
12	1470	30"	140	40'	31 7/8"	475 1/4"	14	.90	27.46	20.18	3/8"	1.49"	.89	26.84	19.73	1.79	3/4"	1 1/4"	3/16"	104	1580"	1796"
13	360	30"	145	40'	31 7/8"	475 1/4"	14	.90	27.46	4.94	7/16"	1.90"	.95	28.70	5.17	1.85	3/4"	1 1/4"	3/16"	104	2149"	2442"
14	200	30"	150	40'	31 7/8"	475 1/4"	12	1.26	38.40	3.64	3/2"	1.74"	.76	22.93	2.29	2.02	3/4"	1 1/4"	3/16"	145	1580"	1796"
15	1060	30"	155	40'	31 7/8"	475 1/4"	12	1.26	38.40	20.35	3/8"	1.64"	.81	24.43	12.95	2.01	3/4"	1 1/4"	3/16"	145	1580"	1796"
16	920	30"	160	40'	31 7/8"	475 1/4"	12	1.26	38.40	17.66	3/2"	1.54"	.86	25.93	11.93	2.12	3/4"	1 1/4"	3/16"	145	1580"	1796"
17	750	30"	165	40'	31 7/8"	475 1/4"	12	1.26	38.40	14.40	7/16"	1.96"	.92	27.80	10.43	2.15	3/4"	1 1/4"	3/16"	145	2149"	2442"
18	730	30"	170	40'	31 7/8"	475 1/4"	12	1.26	38.40	14.02	7/16"	1.86"	.97	27.31	10.70	2.23	3/4"	1 1/4"	3/16"	145	2149"	2442"

APPROVED AS NOTED
 PERLITER & INGALSBE, ENGINEERS
 Date JAN 31 1968 By [Signature]

12 Ga = .1046
 x 12 = 1.255
 5 x 150 x 6 x 31.666 = 40,000 ft² = 27,000 x 1.255
 200
 900
 30,300
 40,000 = .76
 66,300
 22,900 91
 72,700 .97

JOB TITLE: <u>CALLEGIAS MUNICIPAL WATER DISTRICT SPEC. #173</u>	UNITED CONCRETE PIPE CORPORATION
DRAWN BY: <u>[Signature]</u> JOB NO: <u>E2-BP-05302</u>	SHOT-COTE PRETENSIONED CONCRETE CYLINDER PIPE
DATE: <u>1-25-68</u> DWG. NO: <u>347E-51</u>	



Ventura County
Air Pollution
Control District

4567 Telephone Rd
Ventura, California 93003

tel 805/303-4005
fax 805/456-7797
www.vcapcd.org

Dr. Laki Tisopoulos, P.E.
Air Pollution Control Officer

Authority to Construct 81231 - 100

Page 1 of 3

Valid: 04/15/2021 to 04/14/2023

THIS PERMIT HAS BEEN ISSUED TO THE FOLLOWING:

COMPANY NAME AND ADDRESS:

Calleguas Municipal Water District
2100 OLSEN RD
THOUSAND OAKS, CA 91360

FACILITY NAME AND ADDRESS:

Las Virgenes- Calleguas Interconnection PS/PRS
10 Lindero Canyon Road
Oak Park, CA 91377

EQUIPMENT DESCRIPTION:

Permission is hereby granted to operate the equipment listed at the end of this permit in Table A.

1. THIS PERMIT HAS BEEN ISSUED SUBJECT TO THE FOLLOWING PERMITTED EMISSIONS (PURSUANT TO RULE 29.B):

Permitted Emission	Tons/Year	Pounds/Hour
Reactive Organics	0.02	0.20
Nitrogen Oxides	0.38	3.80
Particulate Matter	0.02	0.12
Sulfur Oxides	0.02	0.20
Carbon Monoxide	0.22	2.16

Note: Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.

THIS PERMIT HAS BEEN ISSUED SUBJECT TO THE FOLLOWING CONDITIONS:

- Annual hours of operation for maintenance and testing of each emergency engine shall not exceed 50 hours per year. This limit does not include emergency operation when electrical line service has failed. When not being operated for maintenance or testing, the emergency engine shall only be used during a failure or loss of all or part of normal electrical power service to the facility. This condition is applied pursuant to the California ARB Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines.

In order to comply with this condition, the engine shall be equipped with a non-resettable hour meter and the permittee shall maintain a log that differentiates operation during maintenance and testing from emergency operation. These records shall be compiled into a monthly total. The monthly operating

Authority to Construct 81231 - 100

Page 2 of 3

hour records shall be summed for the previous 12 months. Total operating hours for any of these 12 month periods, excluding emergency operation, in excess of the specified annual limit shall be considered a violation of this condition.

3. The emergency diesel engine(s) shall be operated in compliance with all applicable requirements of the California ARB Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines, Section 93115 through 93115.15, Title 17, California Code of Regulations. This includes, but is not limited to, the following permit conditions.
4. Pursuant to Section 93115.5(a) of the ATCM for Stationary Compression Ignition Engines, effective January 1, 2006, no owner or operator of a new emergency standby stationary diesel-fueled engine shall fuel the engine with any fuel unless the fuel is CARB diesel fuel or another fuel that meets the requirements of Section 93115.5(a) of the ATCM.
5. Pursuant to Rule 74.9.D.3, an emergency engine is exempt from Rule 74.9, "Stationary Internal Combustion Engines", provided that it is operated during either an emergency or maintenance operation. Maintenance operation is limited to 50 hours per calendar year and is defined as "the use of an emergency standby engine and fuel system during testing, repair, and routine maintenance to verify its readiness for emergency standby use".
6. A log of engine operation for the emergency engine shall be maintained based on readings from a non-resettable hour meter. The log shall differentiate operation during maintenance and testing from operation during an emergency. The hours of operation shall be totaled on a monthly basis and shall be summed for the previous 12 months.

This data shall be maintained for a minimum of three (3) years from the date of each entry and shall be made available to the APCD upon request.

Prior to operation of equipment listed on this Authority to Construct, the permittee shall submit a Permit to Operate application (Rule 10).

This Authority to Construct shall expire and shall be cancelled two years from the date of issuance unless an extension has been approved in writing by the District (Rule 10).

Within 30 days after receipt of this permit, the permittee may petition the Hearing Board to review any new or modified condition (Rule 22). This permit, or a copy, shall be posted reasonably close to the subject equipment and shall be accessible to inspection personnel (Rule 19). This permit is not transferrable from one location to another unless the equipment is specifically listed as being portable (Rule 20).

The granting of this Authority to Construct shall not be construed as an endorsement by the District and shall not guarantee compliance with the rules of the District. This Authority to Construct shall not be

Authority to Construct 81231 - 100

Page 3 of 3

construed to allow any emission unit to operate in violation of any state or federal emission standard or any rule of the District.

This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.



Ali Ghasemi, Manager
Engineering Division

For:

Dr. Laki Tisopulos
Air Pollution Control Officer

Attachments:

- Table A - Permit Equipment List(s)
Q:\PRISM\PRISMFileRoom\PermitFiles\81231\Engineering\Permits\ATC 81231 100 - Final Permit - 4-15-2021.docx

Equipment List for Authority to Construct 81231 - 100

Page 1 of 1

PERMIT EQUIPMENT LIST - TABLE A

ATC 81231 100 / FID: 81231 Las Virgenes- Calleguas Interconnection PS/PRS / SSID: 81231

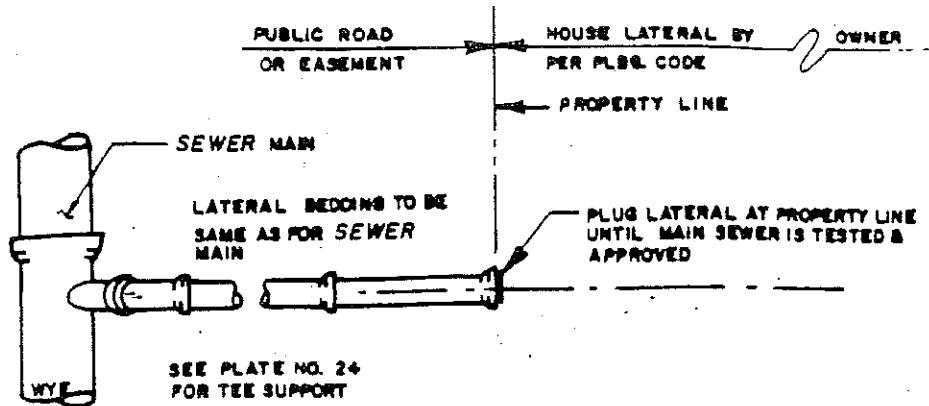
A PERMITTED EQUIPMENT

1 Diesel Fired Emergency Standby Engine

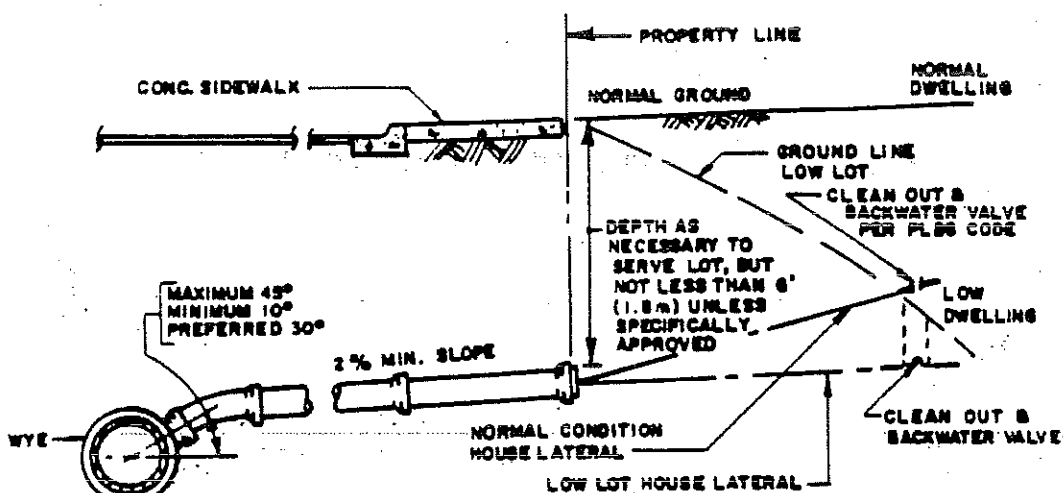
<i>Quantity</i>	<i>Description</i>
1	779 BHP Caterpillar Diesel-Fired Emergency Standby Engine , Model XQ570, Serial No. TBD, EPA Family Name: MCPXL18.1HTH, Tier 4F, Model Year 2021

2 Diesel Fired Emergency Standby Engine

<i>Quantity</i>	<i>Description</i>
1	779 BHP Caterpillar Diesel-Fired Emergency Standby Engine , Model XQ570, Serial No. TBD, EPA Family Name: MCPXL18.1HTH, Tier 4F, Model Year 2021



PLAN



ELEVATION

- NOTES:**
1. To connect 6" (150 mm) and smaller house laterals, install tee saddle in wastewater main with inspector's approval.
 2. locate lateral in accordance with water-wastewater separation ordinance- see Plate No. 29.
 3. Service laterals larger than 6" (150 mm) shall be connected with a manhole.
 4. Location if laterals shall be on as built drawings.

Triunfo County Sanitation District

Approved by:

DR Burbank

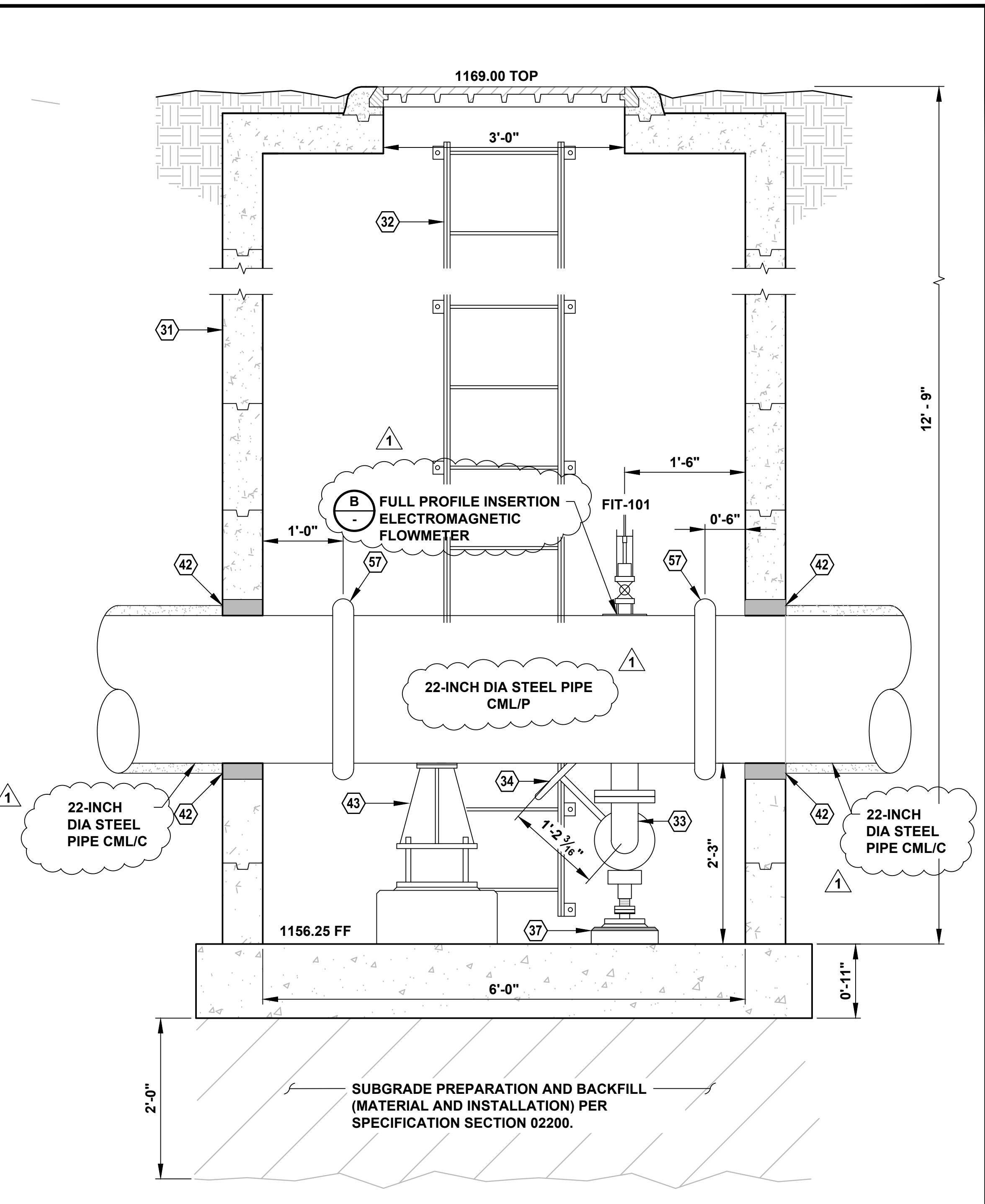
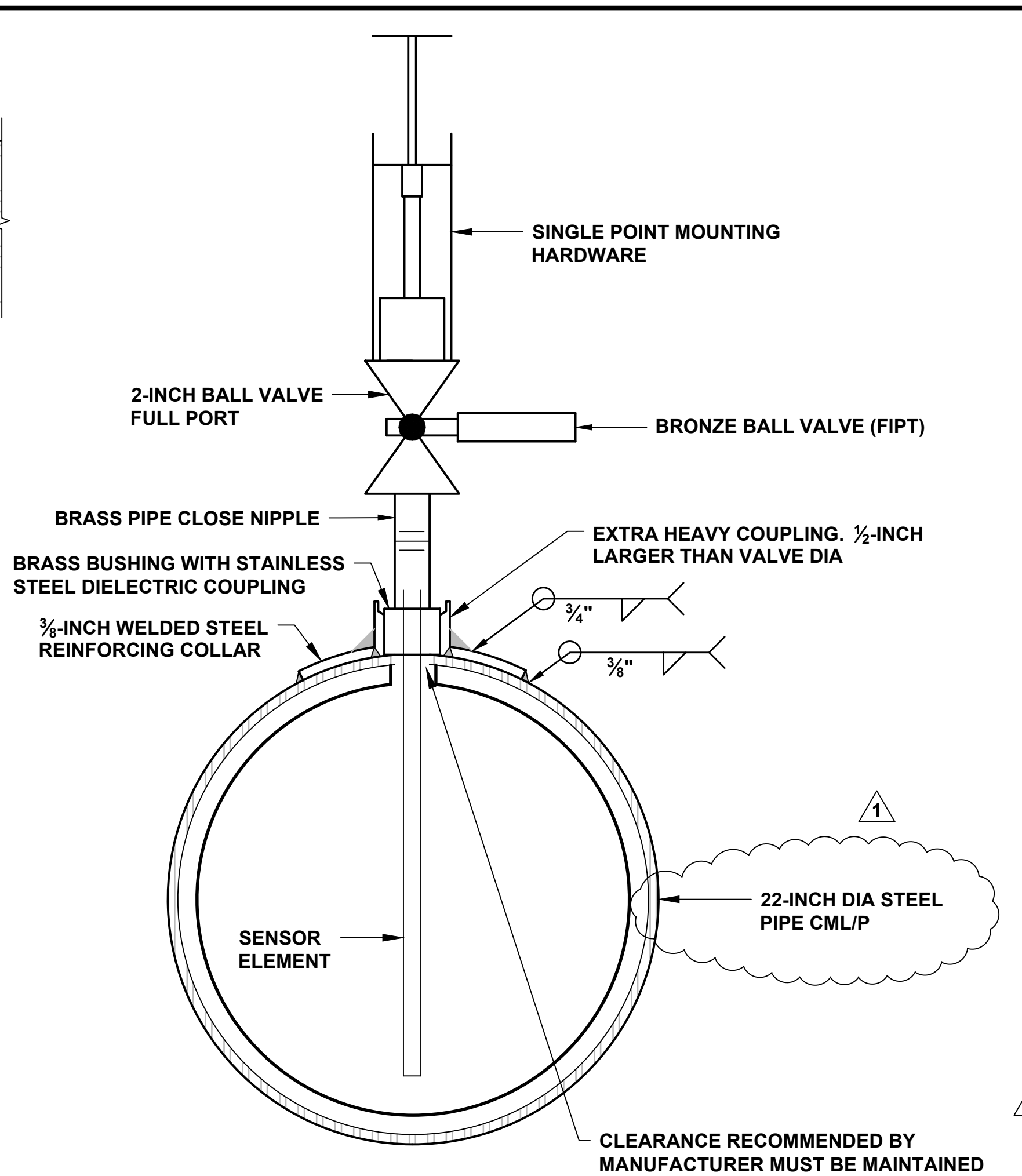
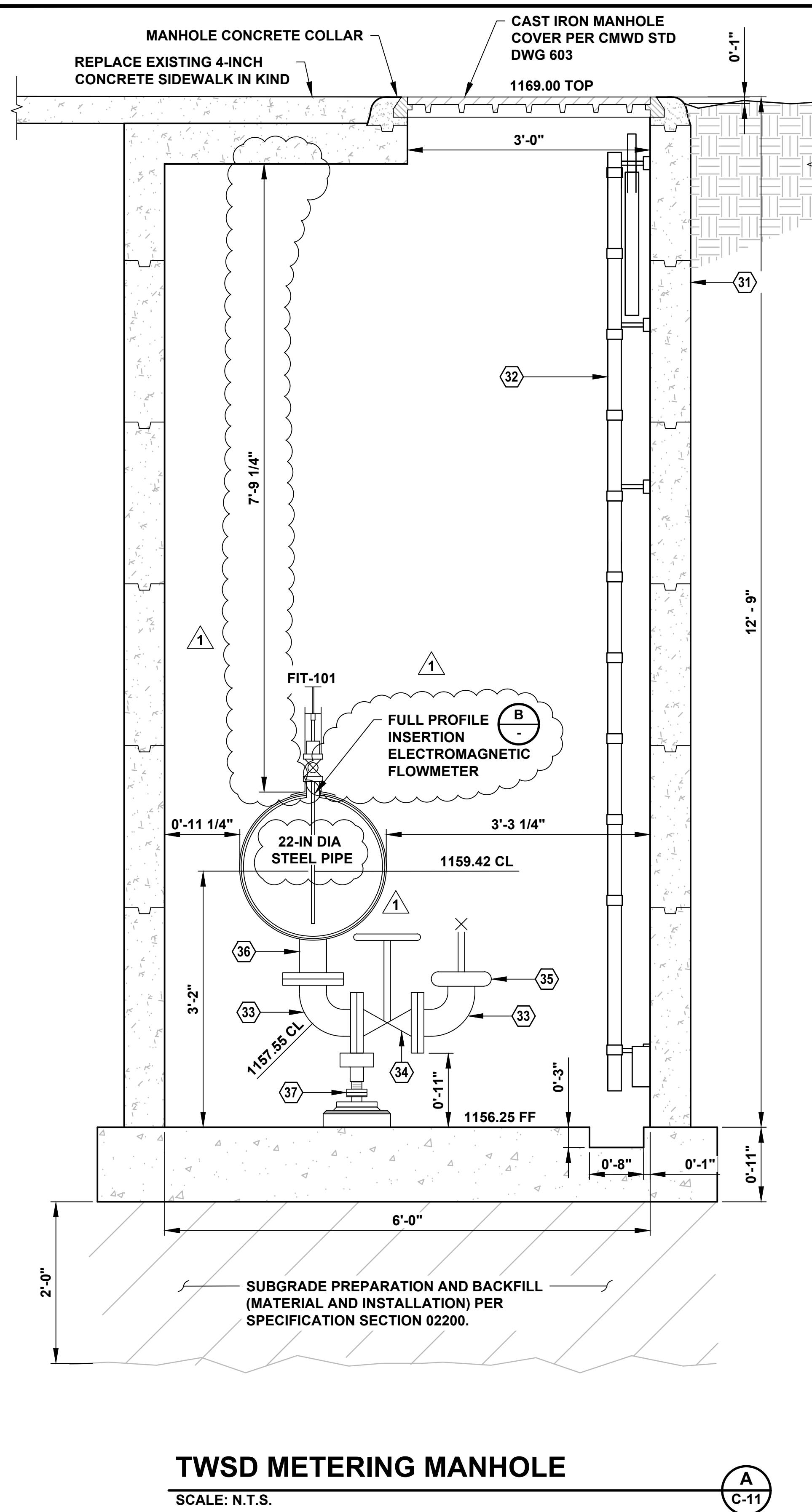
Submitted:

MHP/ASL

Plate No. 23

Service Lateral

Adopted by the Board of Directors of
Triunfo County Sanitation District



SINGLE POINT INSERTION ELECTROMAGNETIC FLOWMETER INSTALLATION DETAIL

SCALE: N.T.S.

CONSTRUCTION NOTES:

- 31 PRECAST MANHOLE PER SPECIFICATION SECTION 03420.
- 32 LADDER AND LADDER-UP SAFETY POST PER CMWD STD DWG 705.
- 33 4-INCH DIA SCH 40 STEEL 90° FITTING.
- 34 4-INCH DIA GATE VALVE WITH HANDWHEEL. ROTATED 45° TO AVOID THE 20-INCH DIA STEEL PIPE THIS LOCATION ONLY.
- 35 4-INCH GROOVED COUPLING AND VICTAULIC BLIND FLANGE WITH TAPPED OUTLET (FLG X GRV). DRILL AND TAP VICTAULIC BLIND FLANGE INSTALL 3/4-INCH X 1 1/2-INCH BRASS NIPPLE AND 3/4-INCH BALL VALVE, BRASS PLUG.
- 36 4-INCH FLANGED OUTLET PER CMWD STD DWG 216.
- 37 PIPE SUPPORT PER CMWD STD DWG 708A.
- 42 PIPE PENETRATIONS PER CMWD STD DWG 703A.
- 43 PIPE SUPPORT PER CMWD STD DWG 708C.
- 57 22-INCH DIA VICTAULIC COUPLING.

DWG: C:\Users\asmith\Box\Las Virgenes-Calleguas Interconnection\CAD Project 450\CMD-LO\IMPROVEMENTS\OX-CIVIL SITE Address.dwg USER: ASmith
 DATE: May 06, 2021 12:55pm XREFS: CMD-TOPO CMD-VAULT CMD-LO 180291T PCE 180291T PCE 180291T PCE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

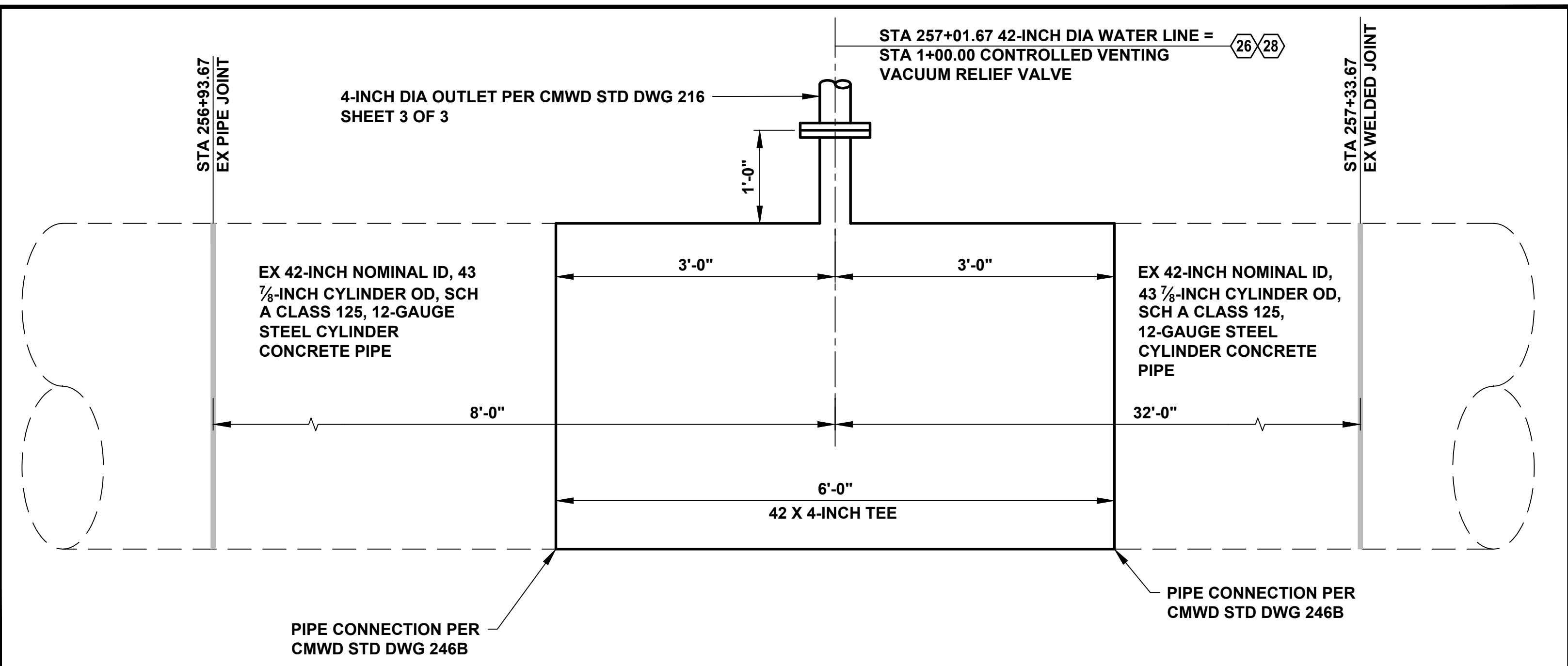
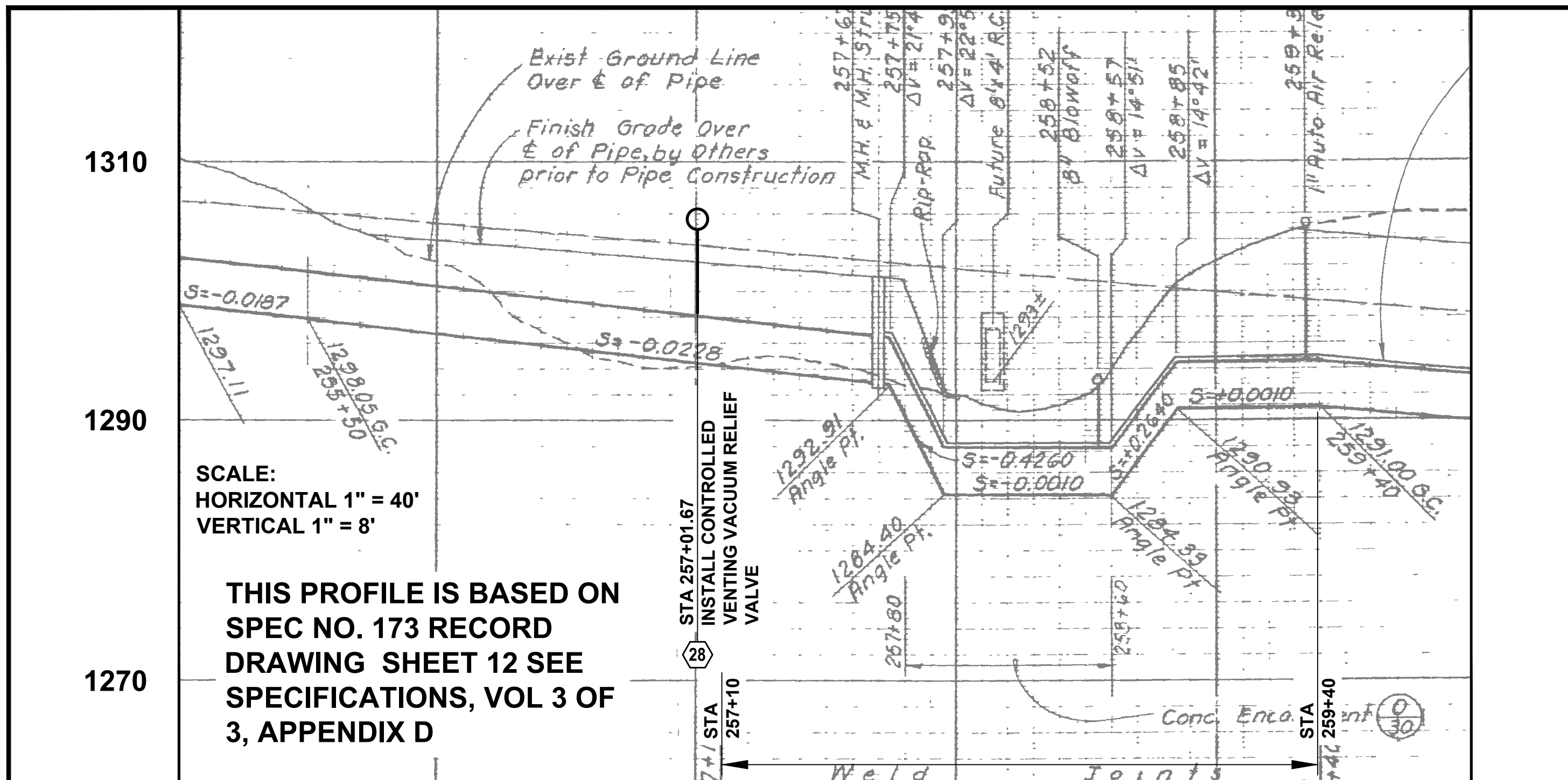
REVISIONS			
REV.	DESCRIPTION	BY	DATE
1	ADDENDUM NO. 1		04/23/21

DESIGNED BY: JMT		PHOENIX CIVIL ENGINEERING, INC. 535 E. MAIN STREET SANTA PAULA, CA 93060 (805) 658-6800
DRAWN BY: ADS		
CHECKED BY: JMT		
REGISTERED PE 60214		

CALLEGUAS MUNICIPAL WATER DISTRICT REVIEWED BY: MANAGER OF ENGINEERING CALLEGUAS MUNICIPAL WATER DISTRICT	03/10/21 DATE
--	------------------

LVMWD - CMWD INTERCONNECTION PROJECT NO. 450 TWSD METER MANHOLE DETAILS
--

DRAWING NO. C-13
JOB NO.
SHEET 19 OF 127



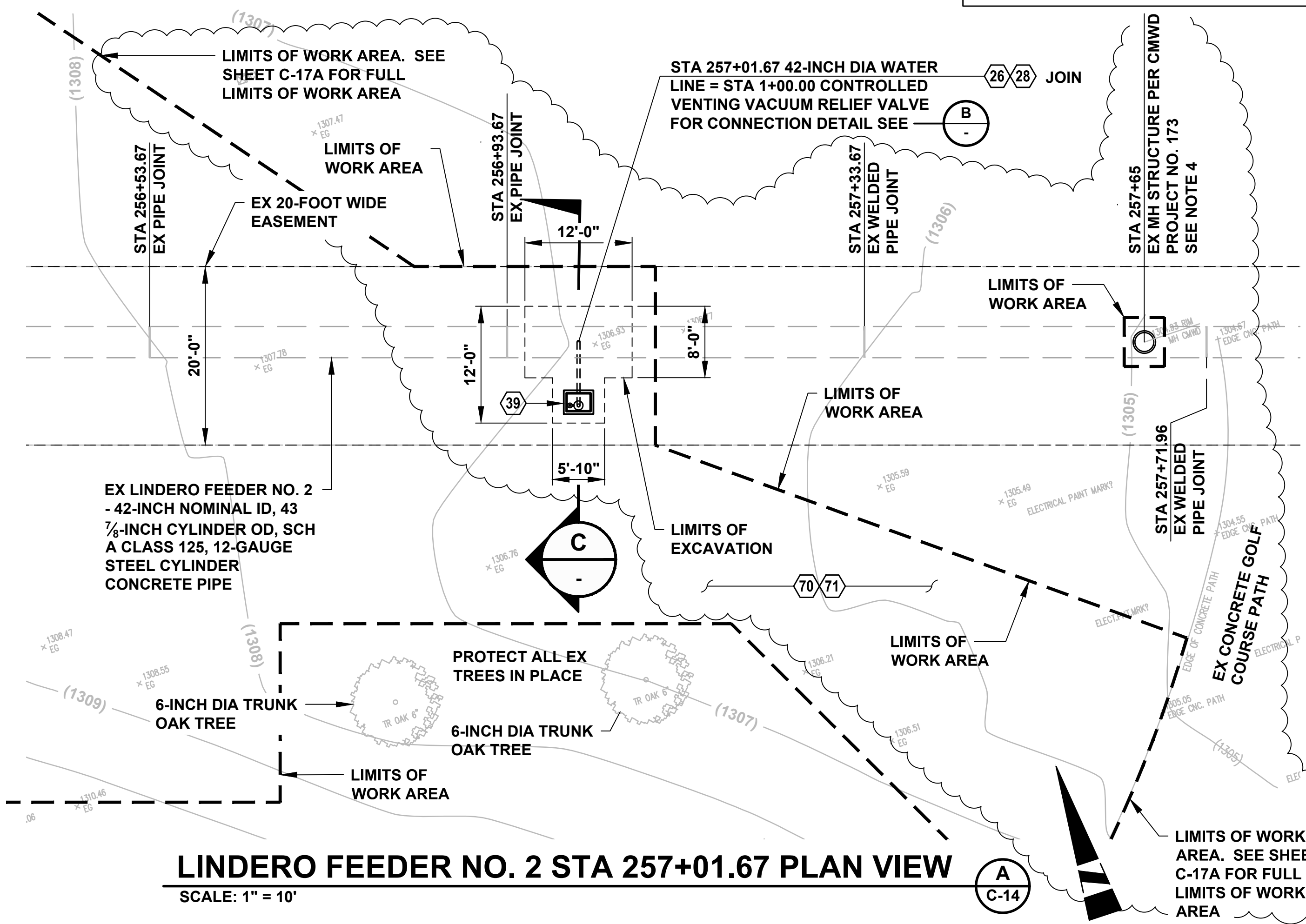
LINDERO FEEDER NO. 2 CONNECTION DETAIL

N.T.S.

255+00 256+00 257+00 258+00 259+00

STATIONING ALONG CENTERLINE OF 42-INCH PIPE

WARNING: SCALE OF PLAN VIEW IS DIFFERENT FROM THE SCALE OF THE PROFILE



LINDERO FEEDER NO. 2 STA 257+01.67 PLAN VIEW

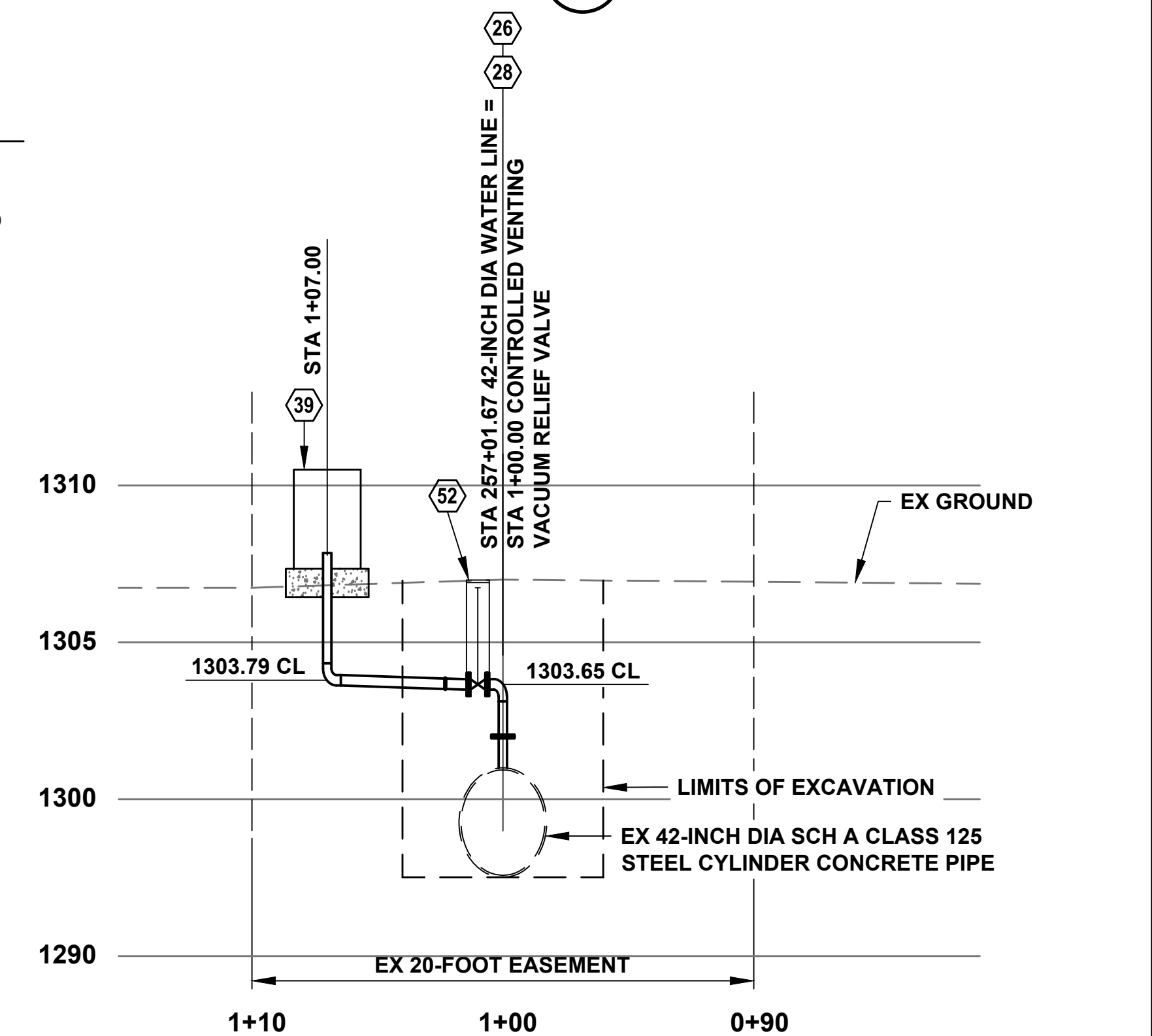
SCALE: 1" = 10'

CONSTRUCTION NOTES:

- (26) 42 X 4-INCH WELDED STEEL CML/C TEE (PE X PE X FLG).
- (28) 4-INCH DIA CONTROLLED VENTING VACUUM RELIEF VALVE. INSTALL PER CMWD STD DWG 403B.
- (39) CABINET FOR A 4-INCH DIA CONTROLLED VENTING VACUUM RELIEF VALVE PER CMWD STD DWG 404.
- (52) TRAFFIC RATED VALVE BOX AND COVER PER CMWD STD DWG 602.
- (70) SEE SPECIFICATION SECTION 02840 REGARDING PROTECTION OF EX IRRIGATION SYSTEM.
- (71) SEE SPECIFICATION SECTION 02930 REGARDING PLANTING OF REPLACEMENT TURF.

NOTES:

1. FIELD VERIFY FINAL LOCATION FOR THE 4-INCH DIA CONTROLLED VENTING VACUUM RELIEF VALVE PLACEMENT WITH THE CONSTRUCTION INSPECTOR SO THE EQUIPMENT WILL NOT BE LOCATED ON THE GOLF COURSE 17TH GREEN.
2. IN ADDITION TO POTHOLING REQUIRED BY GC 5.24.7. POTHOLE TO LOCATE NEAREST EX JOINTS ALONG EX LINDERO FEEDER NO. 2 PIPELINE ON BOTH SIDES OF AND ALONG THE NEW PIPE CONNECTION SHOWN IN DETAIL B. INCLUDE SURVEYED POTHOLE DATA IN POTHOLING REPORT PER GC 5.24.10.
3. NEAREST EX PIPELINE ACCESS POINT WEST OF NEW 42 X 4-INCH CUT-IN TEE IS LOCATED AT STA 242+03 AT AN EX 6-INCH AIR AND VACUUM VALVE ASSEMBLY. THIS LOCATION IS WITHIN AN EX EASEMENT AND CAN BE USED FOR CONTRACTOR'S VENTILATION PURPOSES DURING INSTALLATION OF NEW CUT-IN TEE INCLUDING WELDING. THIS LOCATION SHALL ALSO BE MODIFIED PER DETAIL B ON DWG NO. C-15. COORDINATE WITH OWNER FOR ACCESS. SEE SPEC. NO. 173 RECORD DRAWINGS.
4. THE EX MH STRUCTURE AT STA 257+65 CAN ALSO BE USED FOR CONTRACTOR'S VENTILATION PURPOSES DURING INSTALLATION OF NEW CUT-IN TEE INCLUDING WELDING.



NOTE: DESIGN FOR THIS PROFILE WAS COMPILED USING THE RECORD DRAWINGS AND A SURVEY COMPLETED DECEMBER 2019. ALL ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. THE DATUM USED FOR THE RECORD DRAWINGS AND THE 2019 SURVEY ARE NOT THE SAME. ELEVATION SHOWN FOR THE TOP OF PIPE HAS BEEN ESTIMATED.

LINDERO FEEDER NO. 2 STA 257+01.67 PROFILE

SCALE: HORIZONTAL 1" = 5', VERTICAL 1" = 4'

DWG: C:\Users\asmith\Box\Las Vegas\Colleges\Interconnection\CAD Project 450\CMWD-Lo\Virgenes\ACAD\IMPROVEMENTS\OX-CIVIL SITE ADDRESS.dwg USER: ASmith
 DATE: May 05, 2021 1:34pm
 XREFS: CMWD-BR 22334
 CMWD-TOPO CMWD-VAULT CMWD-LO 1802911 PCE 18029 NORTH RANCH TI PCE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REVISIONS			
REV.	DESCRIPTION	BY	DATE
1	ADDENDUM NO. 1		04/23/21

DESIGNED BY: JMT
 DRAWN BY: ADS
 CHECKED BY: JMT

PHOENIX CIVIL ENGINEERING, INC.
 535 E. MAIN STREET
 SANTA PAULA, CA 93060
 (805) 658-6800

REGISTERED PE 60214
 6/30/22 EXP. 03/10/21 DATE

CALLEGUAS MUNICIPAL WATER DISTRICT

REVIEWED BY: *R. Meloff*
 MANAGER OF ENGINEERING
 CALLEGUAS MUNICIPAL WATER DISTRICT
 03/10/21 DATE

LVMWD - CMWD INTERCONNECTION PROJECT NO. 450

CONTROLLED VENTING VACUUM RELIEF VALVE UPGRADES AT LINDERO FEEDER NO. 2 STA 257+01.67 PLAN AND PROFILE

DRAWING NO. C-17
 JOB NO.
 SHEET 23 OF 127



STA 257+01.67 LIMITS OF WORK AREA AND SITE ACCESS
SCALE: 1" = 50'

DWG: C:\Users\asmith\Box\Las Virgenes-Calleguas Interconnection\CAD Project 450\CMD-Loas Virgenes-Calleguas Interconnection\CMD-LO 18029 NORTH RANCH TI_PCE
 DATE: May 05, 2021 1:35pm
 USER: ASmith
 PROJECT: 18029 NORTH RANCH TI_PCE
 DRAWING: CMD-LO 18029 NORTH RANCH TI_PCE
 REF: CMD-BIR 22334
 FILE: CMD-VAULT

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET,
ADJUST SCALES ACCORDINGLY

REVISIONS			
REV.	DESCRIPTION	BY	DATE
1	ADDENDUM NO. 1		04/23/21

DESIGNED BY: JMT
 DRAWN BY: ADS
 CHECKED BY: JMT

PHOENIX CIVIL ENGINEERING, INC.
 535 E. MAIN STREET
 SANTA PAULA, CA 93060
 (805) 658-6800

REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PE 60214

6/30/22 EXP. 03/10/21 DATE

CALLEGUAS MUNICIPAL WATER DISTRICT

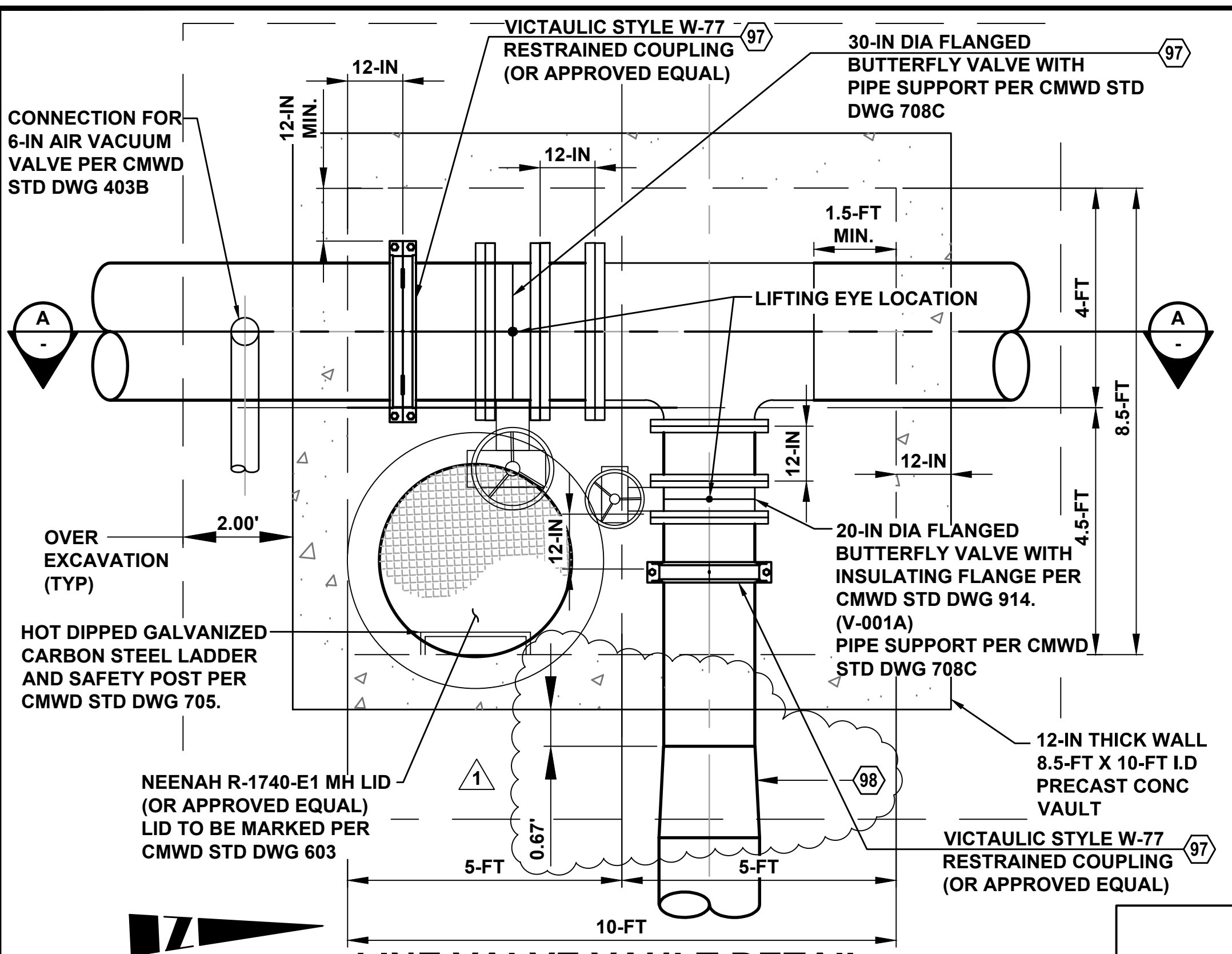
REVIEWED BY: *R. McElroy*
 MANAGER OF ENGINEERING
 CALLEGUAS MUNICIPAL WATER DISTRICT

03/10/21 DATE

LVMWD - CMWD INTERCONNECTION
 PROJECT NO. 450

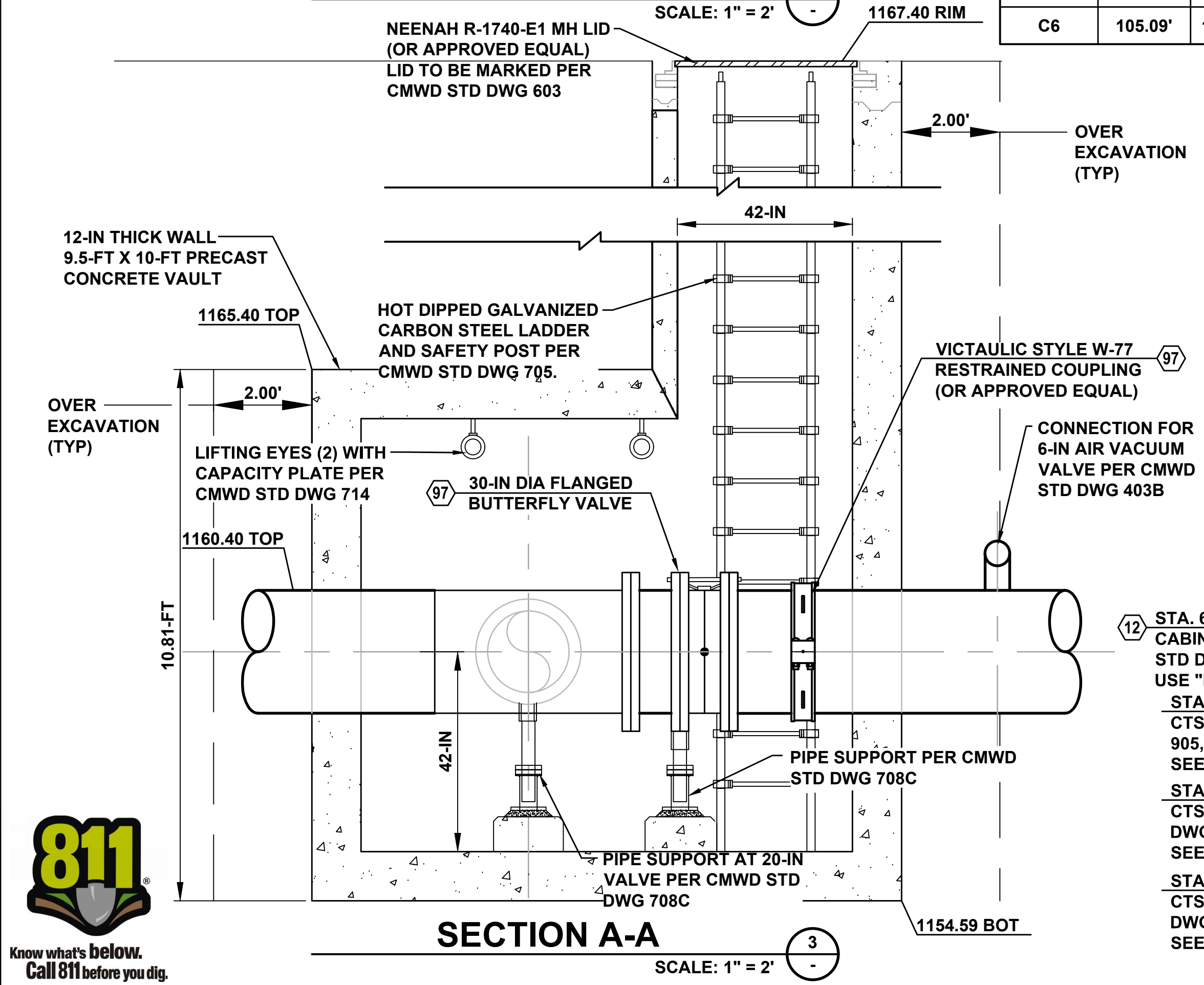
**CONTROLLED VENTING VACUUM RELIEF VALVE
 UPGRADES AT LINDERO FEEDER NO. 2
 STA 257+01.67
 LIMITS OF WORK AREA AND SITE ACCESS**

DRAWING NO. C-17A
 JOB NO.
 SHEET 23A OF 127

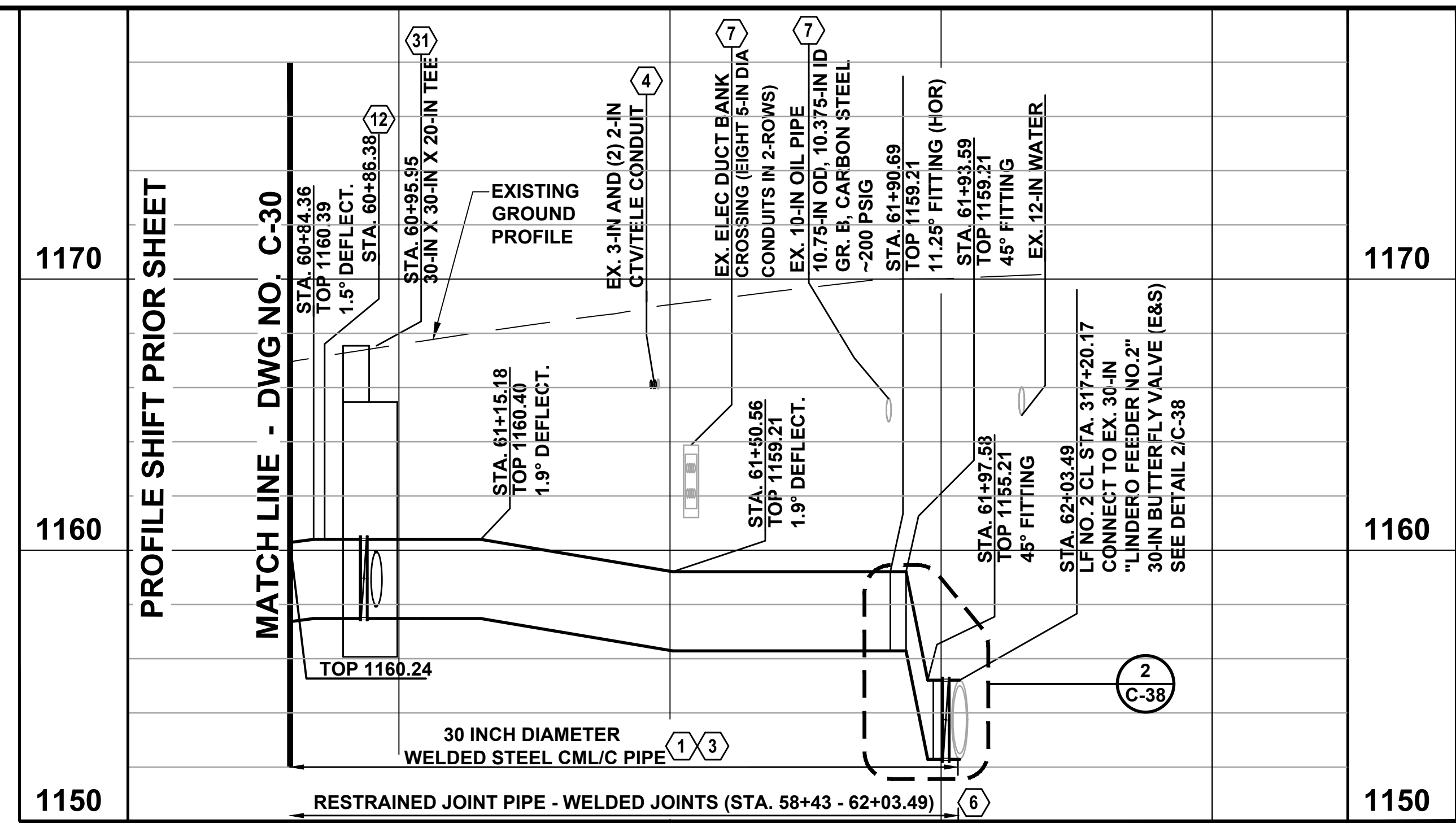


LINE VALVE VAULT DETAIL (2)
SCALE: 1" = 2'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C6	105.09'	1975.31'	3°02'53"

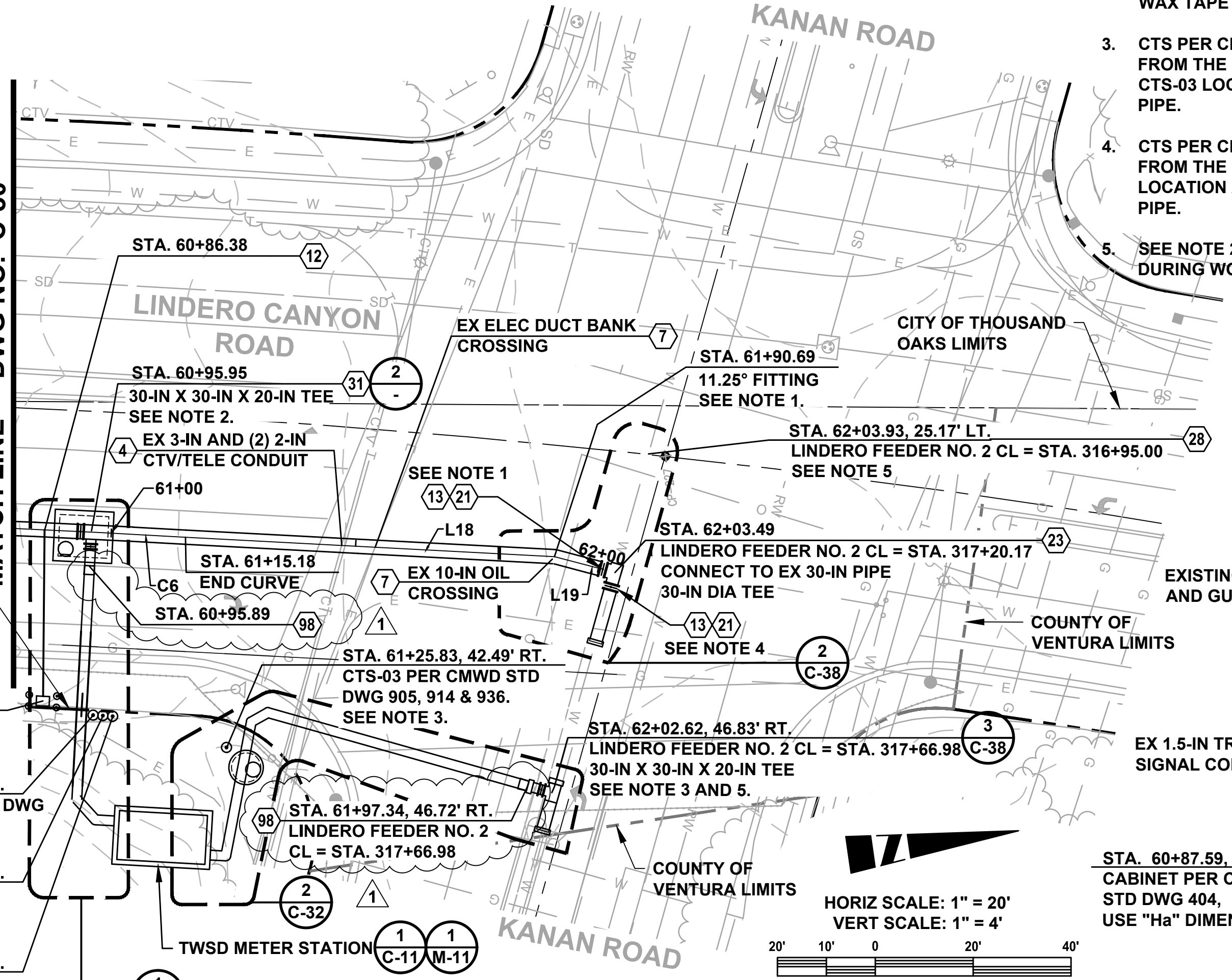


SECTION A-A (3)
SCALE: 1" = 2'

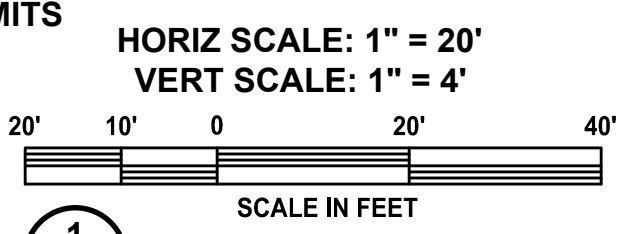


PROFILE SHIFT PRIOR SHEET

MATCH LINE - DWG NO. C-30

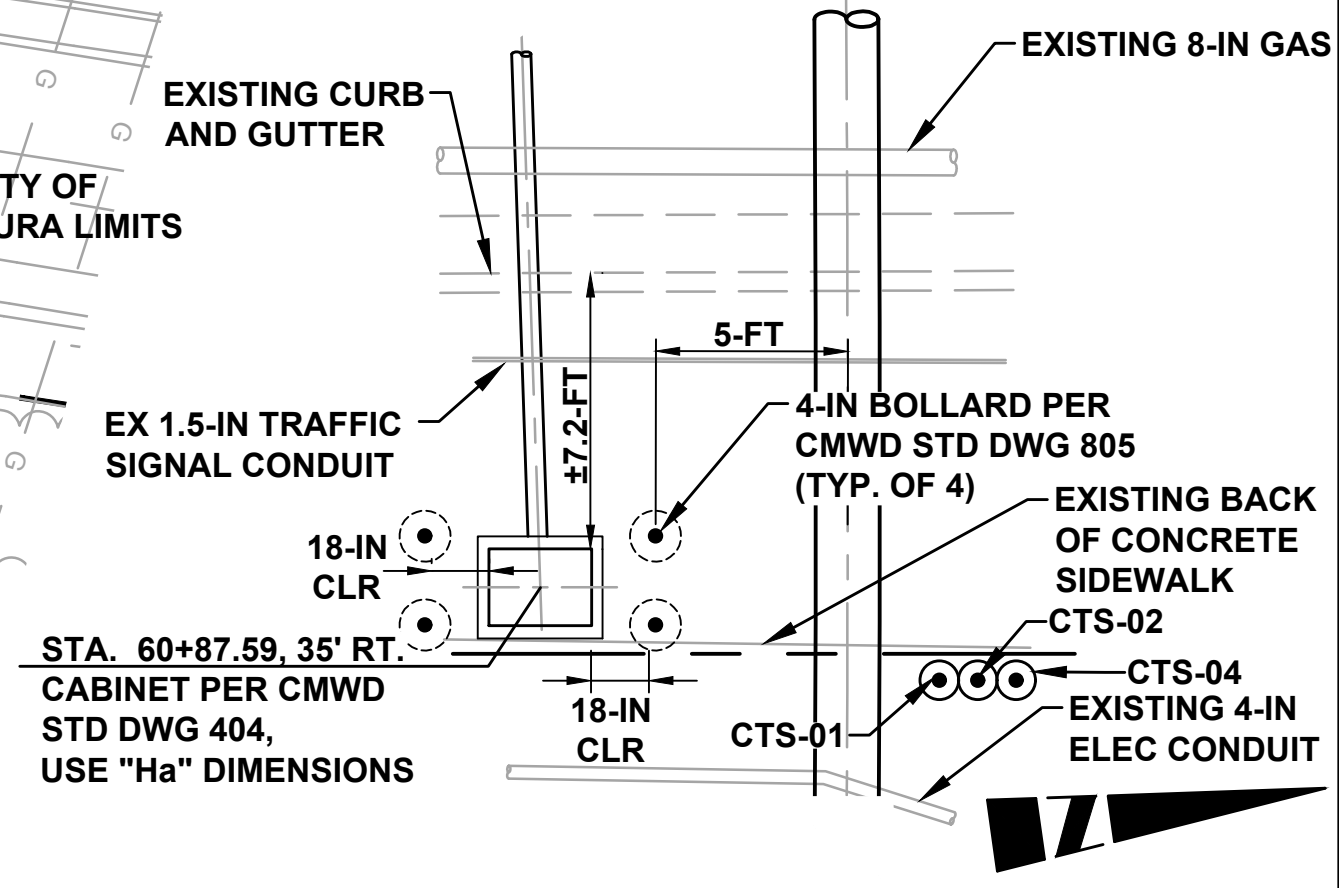


LINDERO CANYON ROAD
STA. 60+80 TO STA. 62+03.49



- CONSTRUCTION NOTES**
- CATHODIC PROTECTION (CP) BONDING JUMPER PER CMWD STD DWG 901 AT ALL NON-WELDED JOINTS.
 - PIPE TRENCH PER (A) C-41
 - UTILITY CROSSING PER CMWD STD DWG 1103
 - FIELD WELDED RESTRAINED JOINT PIPE PER CMWD STD DWG 212
 - UTILITY CROSSING PER CMWD STD DWG 1102
 - 6-IN DIAMETER AIR VACUUM VALVE AND CABINET PER CMWD STD DWG 403B. (4)
 - INSULATING FLANGE PER CMWD STD DWG 914
 - 30-IN DIA FLANGED BUTTERFLY VALVE
 - 30-IN DIA TEE (FLGXPEXFLG)
 - MODIFY EXISTING UNRESTRAINED JOINT TO INCLUDE NEW INTERIOR AND EXTERIOR WELDS. SEE (5) C-38
 - 30-IN BUTTERFLY VALVE (SOUTH)
 - 20-IN BUTTERFLY VALVE (EAST)
 - VAULT PER DETAIL (2)
 - CATHODIC PROTECTION (CP) BONDING JUMPER AT COUPLING OR VALVE PER CMWD STD DWG 902.
 - 20 X 22-INCH DIA WELDED STEEL REDUCER. (1)
- NOTES**
- CTS PER CMWD STD DWG 905, 914 AND 936. ROUTE THE 6 WIRES FROM THE 30-IN INSULATING FLANGE NEAR STA. 62+03.49 TO CTS-01 LOCATION AT 60+98.21, 37.37' RT. IN SAME TRENCH AS 30-IN PIPE.
 - CTS PER CMWD STD DWG 905, 914 AND 936. ROUTE THE 6 WIRES FROM THE 20-IN INSULATING FLANGE NEAR STA. 60+95.95 TO CTS-02 LOCATION AT 61+00.25, 37.37' RT. IN SAME TRENCH AS 20-IN PIPE. NO WAX TAPE REQUIRED.
 - CTS PER CMWD STD DWG 905, 914, AND 936. ROUTE THE 6 WIRES FROM THE 20-IN INSULATING FLANGE AT STA. 62+02.62, 46.83' RT TO CTS-03 LOCATION AT 61+25.83, 42.49' RT. IN SAME TRENCH AS 20-IN PIPE.
 - CTS PER CMWD STD DWG 905, 914, AND 936. ROUTE THE 6 WIRES FROM THE 30-IN INSULATING FLANGE NEAR STA 62+03.49, TO CTS-04 LOCATION AT 61+02.29, 37.37' RT. IN SAME TRENCH AS 30-IN AND 20-IN PIPE.
 - SEE NOTE 25 ON SHEET G-02 REGARDING PIPELINE VENTILATION DURING WORK AT EX 30-INCH LINDERO FEEDER NO. 2 PIPE.

LINE TABLE		
LINE #	BEARING	LENGTH
L18	N11° 28' 05"E	75.51'
L19	N23° 12' 41"E	12.80'



CABINET LOCATION DETAIL (4)
SCALE: 1" = 5'

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET,
ADJUST SCALES ACCORDINGLY

REVISIONS			
REV.	DESCRIPTION	BY	DATE
1	ADDENDUM NO. 1		04/23/21

DESIGNED BY: JMT
DRAWN BY: ADS
CHECKED BY: JMT

PHOENIX CIVIL ENGINEERING, INC.
535 E. MAIN STREET
SANTA PAULA, CA 93060
(805) 658-6800

REGISTERED PE 60214
6/30/22 EXP. 03/10/21

CALLEGUAS MUNICIPAL WATER DISTRICT

REVIEWED BY: *R. Meloff*
MANAGER OF ENGINEERING
CALLEGUAS MUNICIPAL WATER DISTRICT
03/10/21 DATE

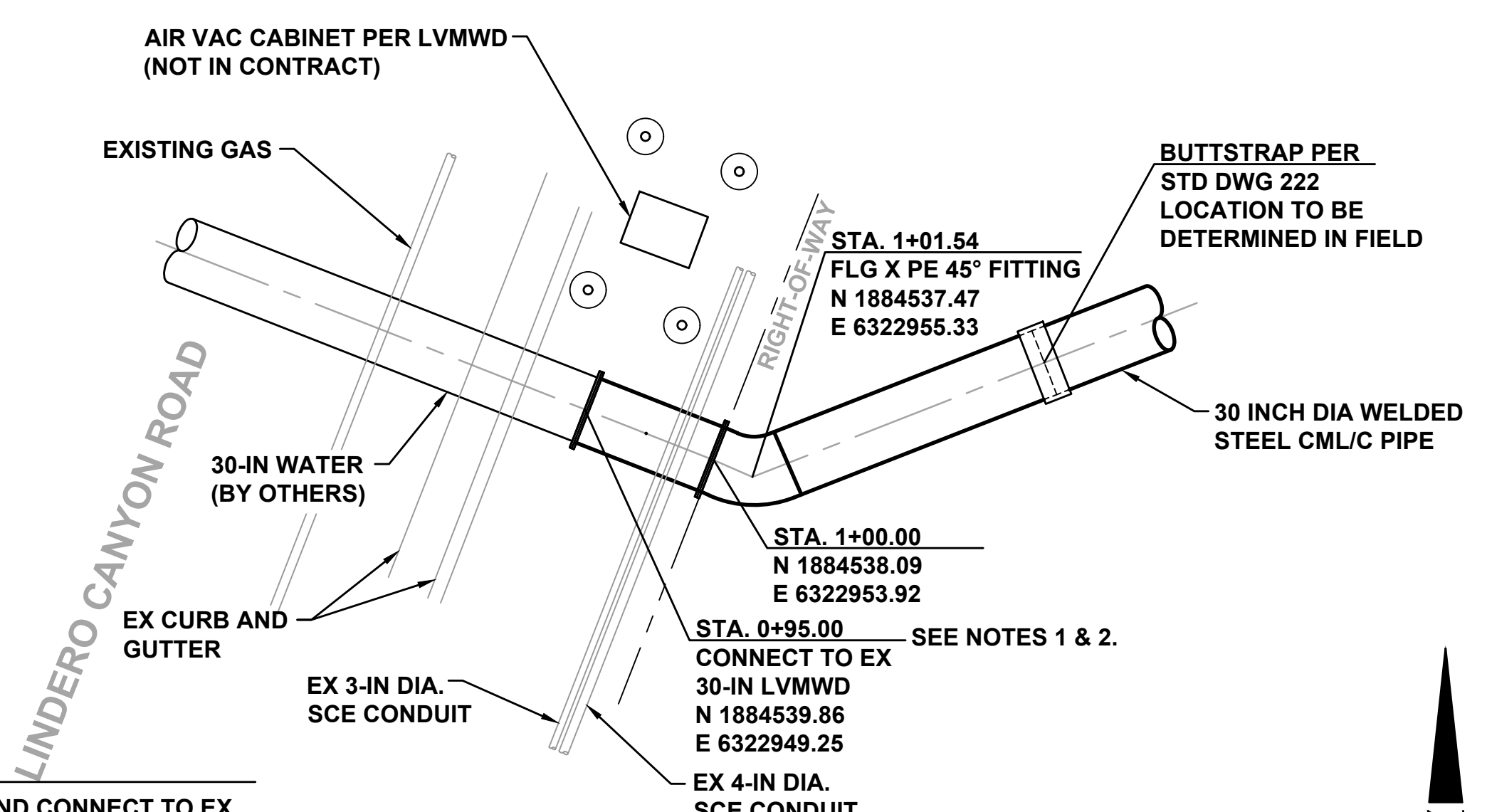
LVMWD - CMWD INTERCONNECTION PROJECT NO. 450

WATER LINE PLAN AND PROFILE
STA. 60+80 TO STA. 62+03.49

DRAWING NO. C-31
JOB NO.
SHEET 37 OF 127

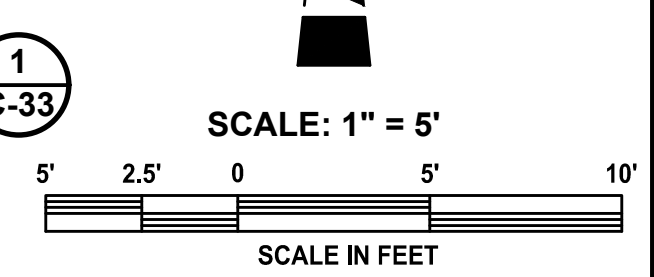
DWG: C:\Users\smith\Box\Las Vegas\College Interconnection\CAD Project 450\CMWD-Las Vegas\PROFILES\04-0-FL APPROFILE Address.dwg
 USER: A.Smith
 CMWD-TOPO
 DATE: May 05, 2021 1:38pm
 XREFS: CMWD-BR 22334 CMWD-UTL CMWD-LO oddi data inverts
 EX: Utilities LV CMWD Interconnect PHOE



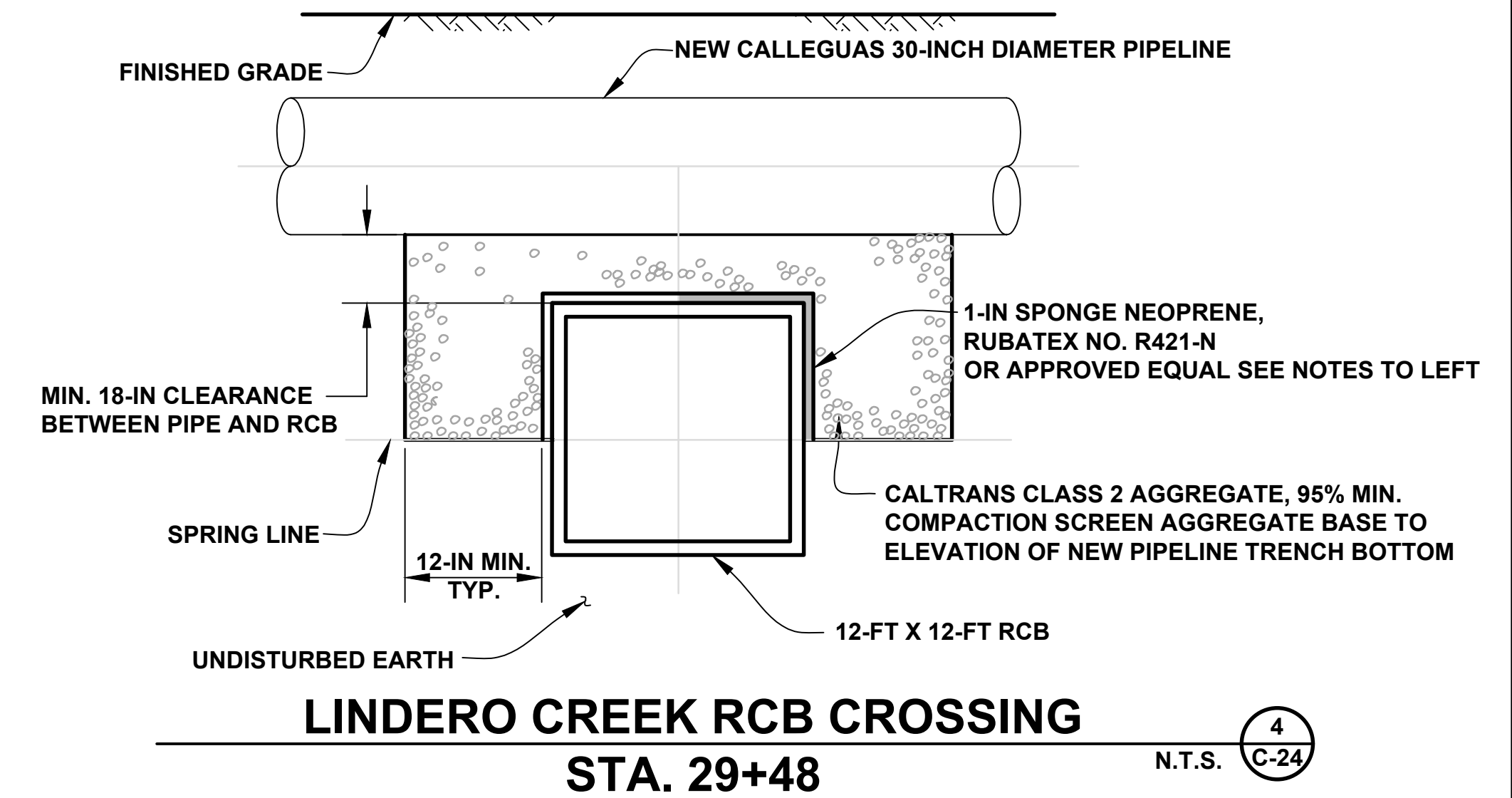


- NOTES**
- REMOVE EX BLIND FLANGE AND CONNECT TO EX WITH INSULATING FLANGE PER CMWD STD DWG 914. INSTALL CTS PER CMWD STD DWG 931.
 - PRIOR TO REMOVING EXISTING BLIND FLANGE, VERIFY WITH OWNER THAT THE 30-IN WATER (BY OTHERS) IS DEPRESSURIZED AND DEWATERED.

PS/PRS INLET CONNECTION DETAIL
STA. 1+00

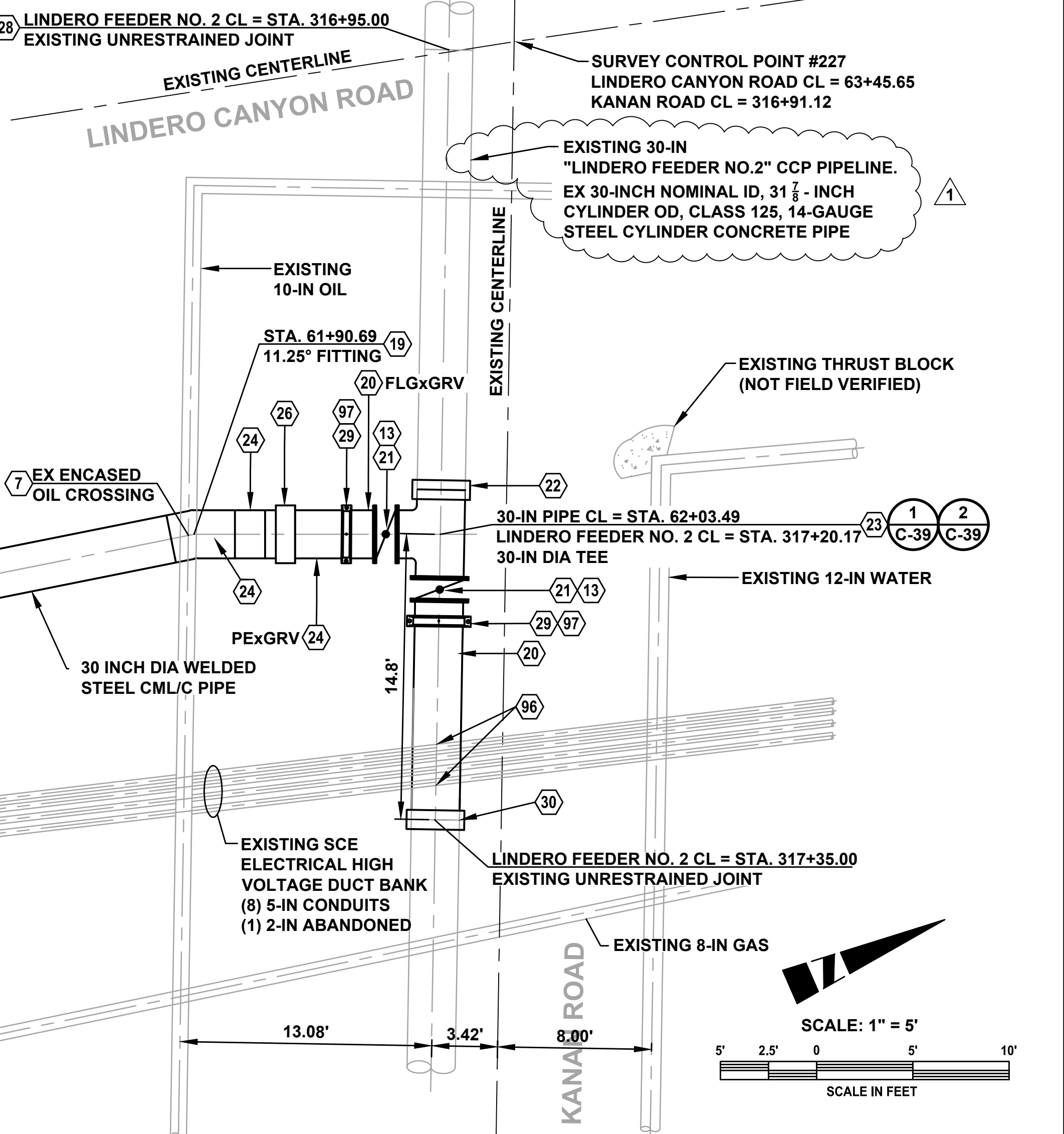


- NOTES:**
- THE DETAIL IS FOR STRUCTURAL PROTECTION OF EXISTING RCB ONLY. REFER TO STATE AND LOCAL REGULATIONS FOR ADDITIONAL SANITARY SEPARATION AND PROTECTION REQUIREMENTS.
 - EQUIVALENT SPONGE PRODUCT FROM FOLLOWING MANUFACTURERS ARE ACCEPTABLE: S & S PLASTICS, INC. AMERICAN NATIONAL RUBBER (MODEL 4311N).



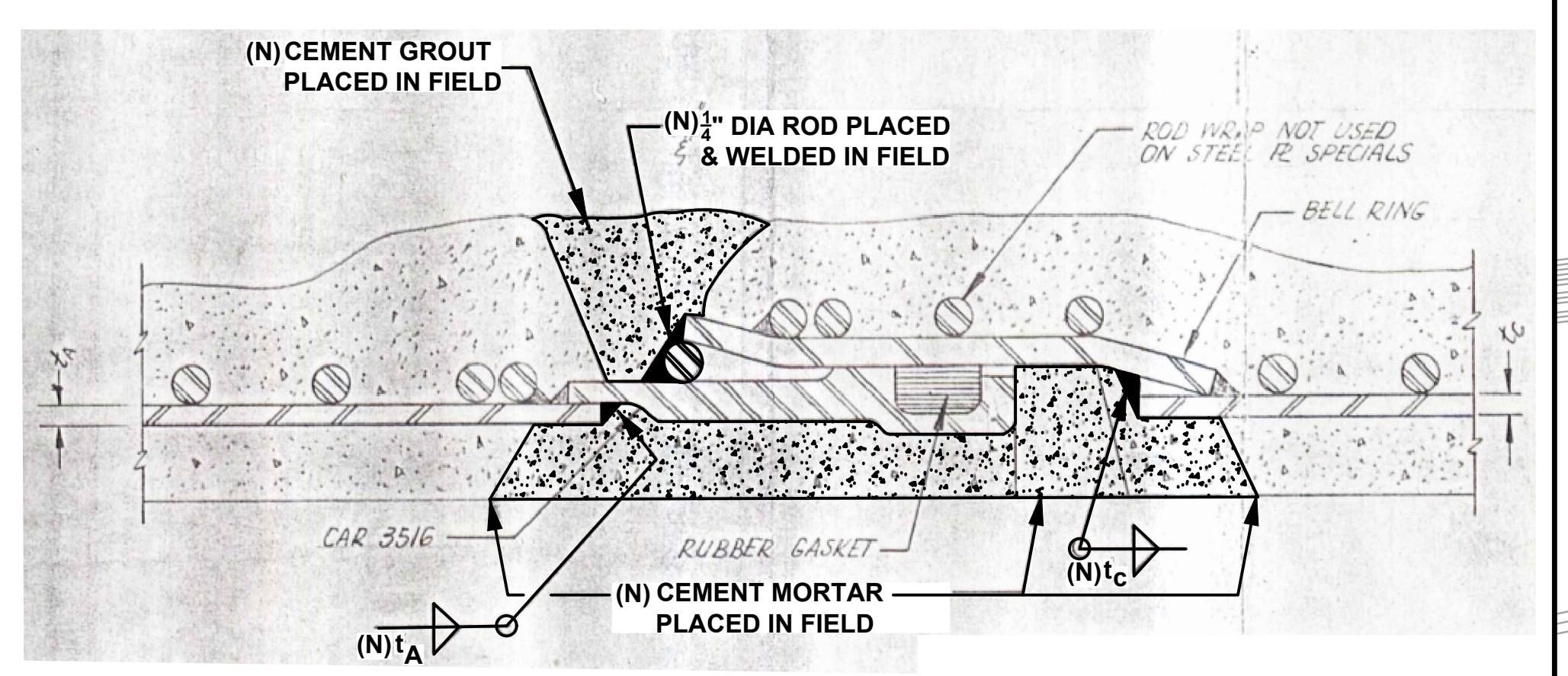
LINDERO CREEK RCB CROSSING
STA. 29+48

NOTE:
IN ADDITION TO POTHOLING REQUIRED BY GC 5.24.7. POTHOLE TO LOCATE NEAREST EXISTING JOINTS ALONG EXISTING LINDERO FEEDER NO. 2 PIPELINE ON BOTH SIDES OF AND ALONG THE NEW PIPE CONNECTION SHOWN IN DETAIL 2. INCLUDE SURVEYED POTHOLE DATA IN POTHOLING REPORT PER GC 5.24.10.



LINDERO FEEDER NO. 2 PIPE CONNECTION
STA. 62+03.49

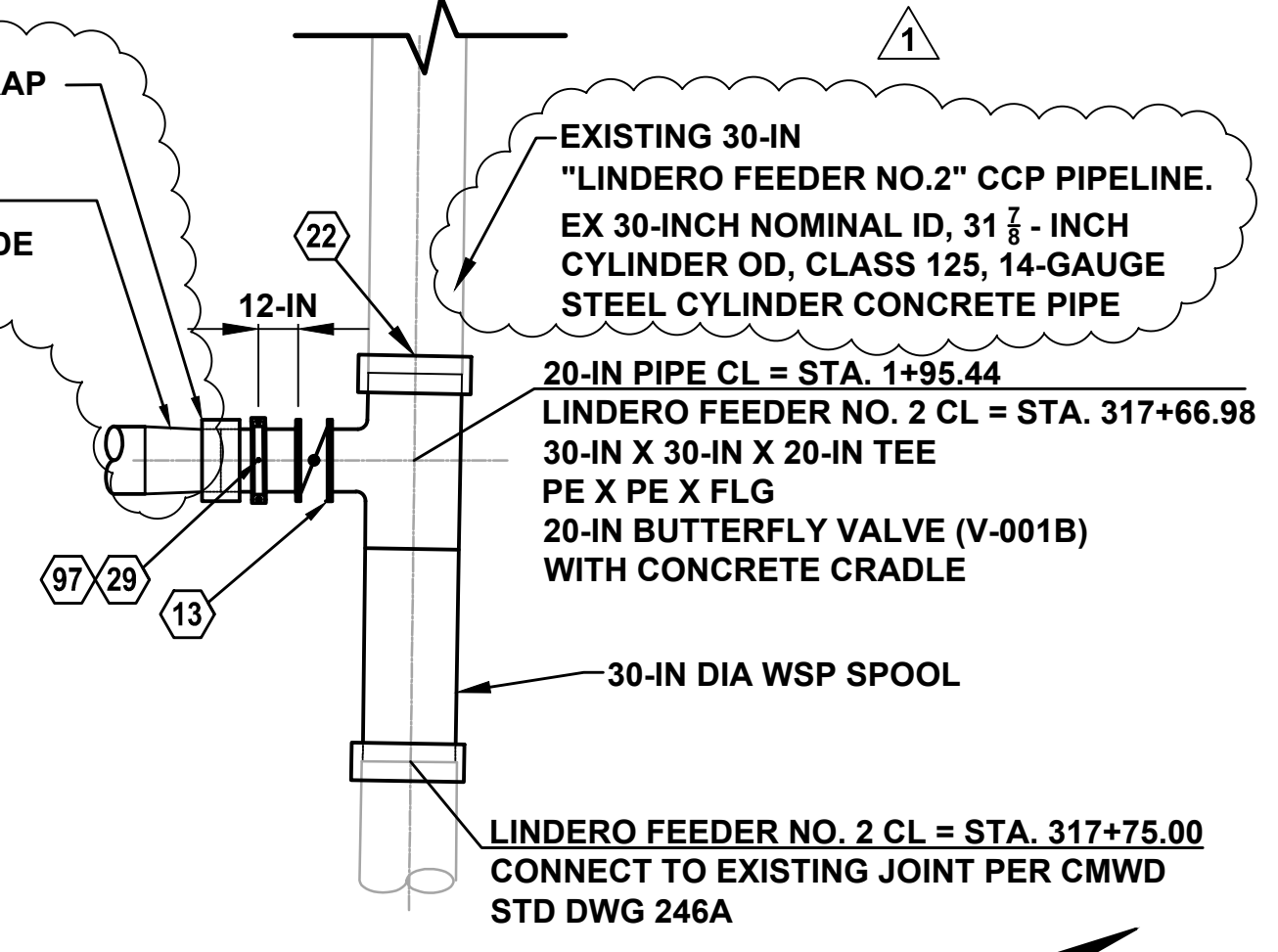
- CONSTRUCTION NOTES**
- PIPELINE CROSSING PER CMWD STD DWG 1102
 - INSULATING FLANGE (V-001B) PER CMWD STD DWG 914. SEE DWGS NO. C-31 AND C-32 FOR CTS INSTALLATION.
 - 30-IN DIA 11.25° FITTING (PEXPE)
 - 30-IN DIA PIPE CML/C SPOOL (PEXFLG) U.N.O.
 - 30-IN DIA FLANGED BUTTERFLY VALVE WITH CONCRETE CRADLE PER CMWD STD DWG 601
 - PIPE CONNECTION PER CMWD STD DWG 246B
 - 30-IN DIA TEE (FLGxPEXFLG)
 - 30-IN DIA CML/C PIPE SPOOL (PEXPE) U.N.O.
 - BUTTSTRAP PER CMWD STD DWG 222
 - MODIFY EXISTING UNRESTRAINED JOINT TO INCLUDE NEW INTERIOR AND EXTERIOR WELDS SEE
 - VICTAULIC STYLE W77 AGS FLEXIBLE COUPLING
 - PIPE CONNECTION PER CMWD STD DWG 246A
 - EXISTING SCE TRANSMISSION (69KV) CONDUIT CROSSING. SUPPORT CONDUITS/DUCT BANK AT THIS CROSSING PER REQUIREMENTS IN DWG C-18. CONTRACTOR'S STRUCTURAL DESIGN AND CALCULATIONS REQUIRED PER DETAIL NOTE 1 ON DWG C-18 SHALL CONSIDER UNIT WEIGHTS FOR CONDUITS AND/OR ENCASEMENTS BASED ON FIELD VERIFIED CONDITIONS DURING CONTRACTOR'S POTHOLING OF THIS CROSSING. BACKFILL PER DETAIL A/C-41
 - CATHODIC PROTECTION (CP) BONDING JUMPER AT COUPLING OR VALVE PER CMWD STD DWG 902.



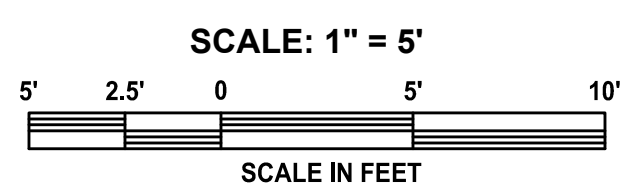
MODIFICATION OF UNRESTRAINED JOINT DETAIL
SCALE: N.T.S.

INFORMATION TAKEN FROM PIPELINE SHOP DRAWING FOR SPECIFICATION 173 DRAWING M-3478-100

NOTE:
IN ADDITION TO POTHOLING REQUIRED BY GC 5.24.7. POTHOLE TO LOCATE NEAREST EXISTING JOINTS ALONG EXISTING LINDERO FEEDER NO. 2 PIPELINE ON BOTH SIDES OF AND ALONG THE NEW PIPE CONNECTION SHOWN IN DETAIL 3. INCLUDE SURVEYED POTHOLE DATA IN POTHOLING REPORT PER GC 5.24.10.



20-IN CONNECTION TO LINDERO FEEDER NO. 2 (STA. 1+95.44)



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REVISIONS			
REV.	DESCRIPTION	BY	DATE
1	ADDENDUM NO. 1		04/23/21

DESIGNED BY: JMT
 DRAWN BY: ADS
 CHECKED BY: JMT

PHOENIX CIVIL ENGINEERING, INC.
 535 E. MAIN STREET
 SANTA PAULA, CA 93060
 (805) 658-6800

REGISTERED PE 60214
 6/30/22 EXP. 03/10/21 DATE

REVIEWED BY: *R. McElroy*
 MANAGER OF ENGINEERING
 CALLEGUAS MUNICIPAL WATER DISTRICT
 03/10/21 DATE

CALLEGUAS MUNICIPAL WATER DISTRICT

LVMWD - CMWD INTERCONNECTION PROJECT NO. 450

PIPELINE DETAIL SHEET

DRAWING NO. C-38
 JOB NO.
 SHEET 44 OF 127

DWG: C:\Users\smith\Box\Las Vegas\CMWD-Interconnection\CAD Project 450\CMWD-Interconnection\04-PLAN\PROFILE - 23-DETAIL-CONNECTIONS\Address\cmwd-vault
 USER: ASmith
 DATE: May 05, 2021 2:26pm
 XREFS: CMWD-UTIL, CMWD-LO, CMWD-TOPD, CMWD-SITE, CMWD-BDR 22-24, Pipe Cabinet for Plan & Profile, EXISTING CMWD-LF2_RECORD

