TEMESCAL VALLEY WATER DISTRICT

Established in 1965

STANDARD DRAWINGS

September

2015

22646 Temescal Canyon Road
Temescal Valley, California 92883
Phone (951) 277-1414 Facsimile (951) 277-1419

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Temescal Valley Water District

Standard Drawings

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TEMESCAL VALLEY WATER DISTRICT

PART I. Water Construction Notes

WATER NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL FACILITIES IN ACCORDANCE WITH TEMESCAL VALLEY WATER DISTRICT (TVWD) WATER SYSTEM FACILITY REQUIREMENTS, STANDARD SPECIFICATIONS, AND STANDARD DRAWINGS. TVWD STANDARD SPECIFICATIONS AND STANDARD DRAWINGS ARE AVAILABLE AT THE DISTRICT OFFICE. CONTRACTOR SHALL BE IN POSSESSION OF DISTRICT'S SPECIFICATIONS AND STANDARD DRAWINGS ON THE JOB SITE AT ALL TIMES.

2. ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED BY THE APPLICANT OR THEIR CONTRACTOR AND ARE MADE PART OF THE SPECIFICATIONS.

3. THE DRAWINGS AND DATA HEREON ARE HEREBY MADE PART OF THE SPECIFICATIONS.

4. REVISIONS WILL NOT BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF TVWD.

5. APPROVAL OF THESE PLANS BY TVWD DOES NOT CONSTITUTE A REPRESENTATION OF THE ACCURACY OF THE LOCATION OR EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY, PIPE, OR STRUCTURE WITHIN THE LIMITS OF WORK.

6. THE CONTRACTOR SHALL NOTIFY THE TVWD DISTRICT ENGINEER A MINIMUM OF ONE (1) WEEK PRIOR TO BEGINNING WORK SO THAT INSPECTIONS CAN BE ARRANGED AND PROVIDED.

7. THE TVWD INSPECTOR SHALL BE FURNISHED TWO SETS OF PROJECT DRAWINGS.

8. THE CONTRACTOR SHALL CONFORM TO CURRENT CAL-OSHA SAFETY REQUIREMENTS.

9. THE CONTRACTOR SHALL SUBMIT TO THE TVWD A SOILS REPORT BY A QUALIFIED GEOTECHNICAL ENGINEER WHICH CERTIFIES THAT ALL TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TVWD SPECIFICATIONS.

10. JOB-MIXING OF CONCRETE IS NOT PERMITTED.

11. ALL CONCRETE TESTING REQUIRED BY TVWD WILL BE AT THE EXPENSE OF THE CONTRACTOR.

12. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION REQUESTING A SYSTEM SHUTDOWN FOR CONNECTIONS TO EXISTING SYSTEM. SAID NOTIFICATION SHALL BE MADE A MINIMUM OF THREE WEEKS PRIOR TO SAID SHUTDOWN TO THE TVWD DISTRICT ENGINEER.

13. ALL CONNECTIONS OR TIE-INS TO THE EXISTING FACILITIES REQUIRING SYSTEM SHUTDOWN AND DRAINING OF THE EXISTING FACILITIES SHALL BE DONE AT NIGHT OR AS APPROVED BY TVWD.

14. EACH LOT SHALL BE SERVICED WITH A MINIMUM ONE (1) INCH COPPER LATERAL WITH METER AND BACK FLOW PROTECTION DEVICE. A 3/4-INCH HIGH LETTER "W" SHALL BE CHISELED IN THE TOP OF EXISTING CURB OR IMPRINTED IN NEW CURB AT ALL WATER SERVICE CONNECTIONS.

15. AIR VACUUM AND AIR RELEASE ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH TVWD STANDARD DRAWINGS W-5 OR W-6. AIR RELEASE VALVES SHALL BE INSTALLED AT ALL HIGH POINTS AND BLOW-OFFS AT ALL LOW POINTS IN THE WATER LINE PROFILE. FIRE HYDRANTS CAN BE USED IN LIEU OF A MANUAL AIR RELEASE OR BLOW-OFF WHEN LOCATED NEAR THE HIGH POINT OR LOW POINTS IN THE PROFILE. BLOW-OFFS SHALL BE INSTALLED IN CONFORMANCE TO W-2.

16. ALL EXISTING FACILITIES TO BE TIED INTO SHALL BE FIELD VERIFIED AND NOTES SHALL BE SUBMITTED TO TVWD PRIOR TO CONNECTION.

17. WATER SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

18. ALL VALVES, PIPING, AND APPURTENANCES SHALL BE DESIGNED TO MEET OR EXCEED THE SPECIFIED PIPE PRESSURE CLASS SHOWN ON THE PLAN PROFILE SHEETS IN ADDITION, ALL VALVES, PIPELINES AND APPURTENANCES SHALL BE TESTED AT 1.25 TIMES THE MAXIMUM STATIC PRESSURE OF THE PIPELINE, WITH THE TOTAL ROUNDED UP TO THE NEAREST 25 PSI. VALVES SHALL BE CAPABLE OF WITHSTANDING DESIGN PRESSURES IN A CLOSED POSITION. TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE DISTRICT INSPECTOR.

19. CONTRACTOR SHALL DISINFECT ALL PIPELINES AND APPURTENANCES EITHER PRIOR TO OR AFTER THEY HAVE BEEN SUBJECTED TO HYDROSTATIC AND LEAKAGE TESTING. THE METHOD OF DISINFECTING SHALL CONFORM TO PROVISIONS OF AWWA C-601 (LATEST). THE CONCENTRATION OF THE DOSAGE APPLIED SHALL BE PRESCRIBED BY THE DISTRICT AND SHALL BE AT LEAST 50 PPM AND IT SHALL NOT EXCEED 200 PPM. CHLORINATED WATER SHALL REMAIN IN THE PIPE LONG ENOUGH TO DESTROY ALL NON-SPORE-FORMING BACTERIA (MIN. 24 HOURS).

20. CONTRACTOR SHALL FURNISH PHYSICAL AND CHEMICAL TEST RESULTS FOR ALL FITTINGS IN ACCORDANCE TO TVWD STANDARD SPECIFICATIONS.

21. ALL MATERIALS, TESTING, AND INSPECTION OF THE PIPE SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF TVWD AND THE AWWA STANDARDS. FAILURE TO MEET ANY REQUIREMENTS OF THE ABOVE REFERENCED AGENCIES WILL BE CAUSE FOR REJECTION.

22. FIRE HYDRANT SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWINGS NOS. W-1 AND W-3 OR W-4.

23. WATER LINE CONSTRUCTION SHALL BE ________ INCH (PVC, CML OR STEEL) IN ACCORDANCE WITH STANDARD DRAWINGS NOS. W-17, W-19, AND W-20 (FOR PVC PIPE) AND W-22, W-23 AND W-26 THROUGH W-32.

24. RESTRAINTS SHALL BE USED WITH THRUST BLOCKS IN ACCORDANCE WITH TVWD STANDARD DRAWINGS NO. W-19 AND W-22.

TEMESCAL VALLEY WATER DISTRICT

PART II. Sewer Construction Notes

SEWER NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL FACILITIES IN ACCORDANCE WITH TEMESCAL VALLEY WATER DISTRICT (TVWD) WATER SYSTEM FACILITY REQUIREMENTS, STANDARD SPECIFICATIONS AND STANDARD DRAWINGS. TVWD STANDARD SPECIFICATIONS AND STANDARD DRAWINGS ARE AVAILABLE AT THE DISTRICT OFFICE. CONTRACTOR SHALL BE IN POSSESSION OF DISTRICT'S SPECIFICATIONS AND STANDARD DRAWINGS ON THE JOB SITE AT ALL TIMES.

2. ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED BY THE APPLICANT OR THEIR CONTRACTOR AND ARE MADE PART OF THE SPECIFICATIONS.

3. THE DRAWINGS AND DATA HEREON ARE HEREBY MADE PART OF THE SPECIFICATIONS.

4. REVISIONS WILL NOT BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF TVWD.

5. APPROVAL OF THESE PLANS BY TVWD DOES NOT CONSTITUTE A REPRESENTATION OF THE ACCURACY OF THE LOCATION OR EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY, PIPE OR STRUCTURE WITHIN THE LIMITS OF WORK.

6. CONTRACTOR SHALL NOTIFY THE TVWD ONE WEEK PRIOR TO STARTING CONSTRUCTION.

7. THE TVWD INSPECTOR SHALL BE FURNISHED TWO SETS OF PROJECT DRAWINGS.

8. THE CONTRACTOR SHALL CONFORM TO CURRENT CAL OSHA SAFETY REQUIREMENTS.

9. THE CONTRACTOR SHALL SUBMIT TO THE TVWD A SOILS REPORT BY A QUALIFIED GEOTECHNICAL ENGINEER WHICH CERTIFIES THAT ALL TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TVWD SPECIFICATIONS.

10. EACH LOT SHALL BE SERVICED WITH A FOUR (4)-INCH SEWER LATERAL SET AT A MINIMUM GRADE OF 2.0% WITH A MINIMUM INVERT DEPTH OF 5.0 FEET BELOW THE BOTTOM OF THE CURB AT THE PROPERTY LINE, UNLESS OTHERWISE APPROVED BY THE TVWD.

11. ALL LATERALS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS, ADJUSTED UNDER TVWD INSPECTION TO CLEAR DRIVEWAYS AND OTHER IMPROVEMENTS. LATERALS SHALL BE FOUR (4)-INCH MINIMUM DIAMETER UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL LATERALS SHALL HAVE A CLEAN OUT IN ACCORDANCE WITH STANDARD DRAWINGS NO. S-9 AND S-30. LATERALS SHALL BE INSTALLED IN ACCORDANCE WITH TVWD STANDARD DRAWING NOS. S-4, S-5, S-6, AND S-7.

12. JOB-MIXING OF CONCRETE IS NOT PERMITTED.

13. ALL CONCRETE TESTING REQUIRED BY THE TVWD WILL BE AT THE EXPENSE OF THE CONTRACTOR.

14. THE CONTRACTOR SHALL SECURE APPROVAL FROM THE TVWD INSPECTOR PRIOR TO BACKFILLING OVER ANY SEWER PIPE OR WYE.

15. ALL SEWER LATERALS AND MAINS SHALL BE TESTED BY "AIR TEST METHOD" AFTER CONSTRUCTION AS SPECIFIED BY THE TVWD SPECIFICATIONS.

16. ALL ACCESS HOLES (MAN HOLES) SHALL BE TESTED BY "VACUUM TESTS" AS SPECIFIED IN THE TVWD STANDARD SPECIFICATIONS.

17. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION REQUESTING A SYSTEM SHUTDOWN FOR CONNECTIONS TO EXISTING SYSTEM. SAID NOTIFICATION SHALL BE OF THREE WEEKS PRIOR TO SAID SHUTDOWN TO THE TVWD DISTRICT ENGINEER.

18. CONTRACTOR SHALL DESIGNATE A QUALIFIED SUPERINTENDENT WITH FULL AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR. SAID SUPERINTENDENT SHALL BE ON THE JOB SITE AT ALL TIMES.

19. CONTRACTOR SHALL PERFORM ALL WORK UNDER RIVERSIDE COUNTY ROAD DEPARTMENT JURISDICTION IN ACCORDANCE WITH ALL REQUIREMENTS OF SAID DEPARTMENT INCLUDING TRAFFIC CONTROL, PAVEMENT REMOVAL, TEMPORARY PAVEMENT (INCLUDING BASE MATERIAL) AND TEMPORARY AND PERMANENT TRAFFIC STRIPPING.

20. ALL MATERIALS, TESTING, AND INSPECTION OF THE SEWER SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF TVWD AND RIVERSIDE COUNTY STANDARDS. FAILURE TO MEET ANY REQUIREMENTS OF THE ABOVE REFERENCED AGENCIES WILL BE CAUSE FOR REJECTION.

21. SEWER SHALL BE ______-INCH PVC (SDR 35) OR _______-INCH PVC C900 OR C905 (REQUIRED FOR SEWER DEPTH>15-FEET) IN ACCORDANCE WITH TVWD SPECIFICATIONS AND STANDARDS.

22. FORCE MAINS SHALL BE ______-INCH PVC IN ACCORDANCE WITH TVWD SPECIFICATIONS AND STANDARDS (PROVIDE FORCE MAIN DIAMETER, C900 OR C905, AND PIPE CLASS 200 OR GREATER).

23. STANDARD MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TVWD STANDARD DRAWING NO. S-12. TERMINUS TYPE MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TVWD STANDARD DRAWING NO. S-13.

24. STANDARD MANHOLE COVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TVWD STANDARD DRAWING NO. S-14 AND S-15. IN UPAVED AREAS LOCKING TYPE MANHOLE COVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TVWD STANDARD DRAWING NO. S-17.

25. SEWER BEDDING, BACKFILL, CAPS, AND ENCASEMENT, CAPS SHALL BE IN ACCORDANCE WITH TVWD STANDARD DRAWING NO. S-1, S-2, AND S-3.

26. CONTRACTOR SHALL PROVIDE AND BEAR THE TOTAL COST OF CLOSED CIRCUIT VIDEO INSPECTION OF ALL NEW INSTALLED PIPELINES UNLESS OTHERWISE DIRECTED BY THE DISTRICT INSPECTOR.

27. PRIOR TO POURING OF MANHOLE BASE, CONTRACTOR SHALL INSTALL A MANHOLE ADAPTER MADE BY GPK PRODUCTS, INC FOR ALL INLET(S) AND OUTLET AT THE PROPER GRADE AND DIRECTION.

28. EACH MANHOLE SHALL BE VACUUM TESTED IMMEDIATELY AFTER ASSEMBLY AND PRIOR TO BACKFILLING BY THE CONTRACTOR. AFTER THE CONTRACTOR COMPLETES BACKFILLING AND PRIOR TO ACCEPTANCE BY THE DISTRICT, EACH MANHOLE SHALL BE RE-TESTED IN THE PRESENCE OF THE DISTRICT INSPECTOR.

29. NO GROUT SHALL BE PLACED IN THE HORIZONTAL JOINTS BEFORE TESTING.

30. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN AND THE PUMP SHUT OFF. WITH ALL VALVES CLOSED, THE MANHOLE SHALL HOLD 10 INCHES OF MERCURY FOR 60 SECONDS.

31. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE WITH A NON-SHRINK GROUT TO THE OUTSIDE WHILE THE VACUUM IS STILL BEING DRAWN. RETESTING SHALL PROCEED UNTIL A SATISFACTORY TEST IS OBTAINED.

32. MANHOLE DIAMETERS SHALL BE 48-INCH FOR SEWER DIAMETER 24-INCH AND SMALLER, AND 60-INCH FOR SEWER PIPE DIAMETER 27-INCH AND LARGER AND FOR ALL MANHOLES WITH A DEPTH OF 12-FEET OR MORE. 36-INCH CONE SHALL BE USED WITH A 60-INCH MANHOLE.

33. FOR 1) ALL NEW MANHOLES ON SEWER DIAMETERS 15-INCHES OR GREATER 2) ALL NEW MANHOLES WHERE UPSTREAM SEWER SLOPE IS 5% OR GREATER 3) ALL MANHOLES WITHIN 1000 FEET OF A FORCEMAIN DISCHARGE AND 4) EXISTING MANHOLES WITH NEW CONNECTIONS SHALL BE PROVIDED WITH INTEGRALLY LOCKING PVC OR POLYURETHANE PROTECTIVE LINING SYSTEM PER SECTION 500-2 OF THE GREENBOOK.

TEMESCAL VALLEY WATER DISTRICT

PART III. Approved Materials List

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
ADAPTER, FLANGE COUPLING	4" and larger, mechanical x flange. Steel or Ductile Iron construction without anchor pins, epoxy coated, 304 stainless steel bolts and nuts	Ford FFCA Style Romac FCA501, FC400 Smith-Blair 912, 913 Uni-Flange
AIR/VACUUM VALVE ENCLOSURE	12 Gauge Steel, Clam Shell Hinged Construction, Use Enclosure Size As Indicated on W-5 and W-6. Powder Polyester Coated: Safety Yellow for Potable Water OSHA Safety Purple for Recycled Water Advantage Series virgin LDPE with UV inhibitors allowed.	Pipeline Products VCDD 2436 VCAS 1830 LEEL-2430
AIR/VACUUM VALVE SUCTION SCREEN	For use on 1" and 2" Air/Vacuum Installations. FIP Nylon Nut Style with 20 Mesh Stainless Steel Screen.	Christy VC Series McMaster-Carr 9877K52 McMaster-Carr 9877K65 Northtown Hytech
BACKFLOW PREVENTER	Reduced Pressure Principal Type Assemblies as Approved by the State of California, Department of health Services.	Febco 826 YD, (RPDA) Febco 860, 880V, 860V, 880 Febco 856, 831, 825YA, 825Y Watts 709 DCD AOSY Wilkins 950 DA, 450 DA, 975XLSE, 975XL, 975XLV, 375, 975, 375DA, 975DA
BOLTS AND NUTS, A307	Hex-Head Machine, Fluoropolymer Coated, ASTM A307, Grade A Bolts and A307 2H Heavy Hex Nuts.	Tripac 2000 Blue
BOLTS AND NUTS, A307, BREAK AWAY	Wet Barrel Fire Hydrant Flange Bolts, Hex HeadMachine, Break Away Bolts, 3/4" x 3-1/4" and Nuts. Bolts shall incorporate a 31/64" x 1-7/8" Hole Drilled in the Bolt Shaft and Filled with Silicone Sealant. Bolts and Nuts Shall be Zinc Plated ASTM A307 Carbon Steel.	Submittal Required

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
BOLTS, EXPANSION, DROP-IN ANCHOR	1/2" x 3" Stainless Steel Heavy Duty Anchor Assembly with Hex Head Threaded Rod and Washer, Drop-in Sleeve and Epoxy Resin Adhesive Capsule. For use on Air Valve and Water Test Station Enclosures.	U.S. Anchor W Series Hilti HSLG-R Series
BONDING AGENT, EPOXY	Epoxy Resin Based Bonding Agent for Bonding New Mortar or Concrete to Existing Concrete	Sika Sikadur 32 Hi-Mod
BUSHING, INSULATING	Nylon, 1-1/4" x 1", 1-1/2" x 1", 2-1/2" x 2"	Calpico Corrosion Control Products F. H. Mahoney
CASING END SEAL	1/4" Thick Styrene Butadiene Rubber Sheet End Seal. Use 1" Wide Stainless Steel Bands.	Advanced Products & Systems Calpico Cascade Water Works
CASING SPACER	Polyethylene Casing Spacer, Center Restrained, Position Type with PVC Liner and Non- metallic Anti-friction Runners	Advanced Products & Systems Calpico Cascade Water Works
CHLORINE	Liquid (Gas) or Sodium Hypochlorite Solution. **Chlorination Plan Submittal Required.**	
COATING, MASTIC	Cold Applied Coal Tar or Epoxy Based Single Component, Self-Priming, Heavy duty Protective Exterior Coating for Buried Metal	Carboline Bitumastic 50 DeVoe Devtar SA Tnemec HB Tnemecol 46-465 Tnemec HB Tneme-Tar 46H-413
COATING, WATERPROOF	Epoxy Resin Based Cementious Trowel Grade Protective Waterproofing for Concrete	Sika Top Seal 107 STO CR 241
CORPORATION STOP, MIP X COMPRESSION	Bronze MIP x Flare Ball Valve (T-Head only) 1" and 2" Full Opening	Ford FB700 Series Jones J-1929 A. Y. McDonald 4704B Mueller B-25025

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
COUPLING	Three Part Flare Coupling (Both Ends) for 1 "and 2" Copper Pipe	Ford C22-Q Series A. Y. McDonald 4758 Jones J-1528
COUPLING, C900 PVC DEFLECTION	4" through 12" Solid PVC for Obtaining Deflection Only. Provides 5 Degree Maximum Deflection	Certainteed Vinyl Iron HD
COUPLING, C900 PVC CLOSURE OR REPAIR	4" through 12" Solid PVC for Closure or Repair	Certainteed Vinyl Iron HD
COUPLING, C905 PVC CLOSURE OR REPAIR	16" through 36" Solid PVC for Closure, Deflection, or Repair	IPEX Nyloplast America Scepter Certainteed C905 RJ
COUPLING, INSULATED, COMPRESSION X COMPRESSION	Three Part Compression Insulated Coupling (Both Ends) for 1" Copper Pipe	A. Y. McDonald 4755DBT Mueller N-35403 Ford Jones
COUPLING, STRAIGHT FLEXIBLE	4" and Larger, Ductile Iron Construction, Slip x Slip, Epoxy Coated with 304 or 316 Stainless Steel Bolts and Nuts. For Use on PVC, DI, or Steel Pipe.	Ford FCl (DI) Romac 501 (DI) Smith-Blair 441 (DI), 413 (Stl)
COUPLING, TRANSITION FLEXIBLE	4" and Larger, Ductile Iron Construction, Slip x Slip, Epoxy Coated with 304 or 316 Stainless Steel Bolts and Nuts. For Use on AC, PVC, DI, or Steel Pipe	Ford FC2A (DI) Romac 501 (DI) Smith-Blair 411 (DI), 413 (Stl)
DISMANTLING JOINT	4" and Larger Steel Spigot ASTM A283 Grade C, Flange Adaptor Steel or Ductile Iron ASTM A536 Grade 65-45-12.	Romac DJ405 Dresser 131

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
ELL, FIRE HYDRANT BURY, DUCTILE IRON	6" Ductile Iron Bury Ells, Long Radius, Flg x MJ/PO	Clow South Bay Foundry Sigma
ELL, COMPRESSION TYPE	1" and 2" Bronze Ell Compression x Compression for Copper Pipe	Ford L44-Q Series Jones J-2611 A.Y. McDonald 4761Q Mueller H-15526
EXPANSION JOINT	For Water Pipeline Bridge Crossings	APAC 703 Dresser 63 Smith-Blair 611, 612
FIRE HYDRANT SPOOL, DUCTILE IRON, FLANGED	Ductile Iron Spool with Integrally Cast Flanges and Machined or Cast Exterior Grooves. Grooves Shall be 3/16" Deep and 1/4" Wide, =/- 1/16"	Submittal Required
FIRE HYDRANT, 150 PSI	6" Standard 150 PSI Wet Barrel or Bronze Fire Hydrant with Six-hole Bolt Pattern.	Jones J3700, J3765, J3775 Clow 2050, 2060, 2065 AVK 2470, 2490
FIRE HYDRANT, 200 PSI	6" High Pressure WetBarrel, Ductile Iron Fire Hydrant with Six-Hole Bolt Pattern, Fusion Epoxy Lined. Color Shall be Safety Yellow.	AVK 2470, 2490
FITTING, DUCTILE IRON	Flanged, Mechanical, Joint or Push-on Tees, Bends, Crosses, Reducers, Adapters, etc., for Water Lines 4" and Larger. Manufactured per AWWA C110, C111, C153.	Pipeline Components Tyler U. S. Pipe Star Pipe Products Nappco/Sigma Bachman Griffin

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
GASKET	1/8" Thick Full Ring Gasket Face Aramid Fiber Bound with Nitrile. No Asbestos Content	Calpico Johns-Manville Garlock 3000 Klinger 4401 Tripac 5000 APS
GASKET, RUBBER RING	1/8" Thick, Rubber Ring Type, 250 PSI Maximum. For 4 "Through 24" Pipe Flanges	Calpico Johns-Manville US Pipe APS
JOINT RESTRAINT ASSEMBLY	360 Degree Wedge Type Restraint System for Ductile Iron, C900 PVC, and Steel Pipe, Size 6" through 24".	Ford Uniflange 1300 Series Ford Uniflange 1500 Series Romac EBAA Iron Viking Johnson
LUBRICANT, PIPE GASKET	Rubber Gasket Pipe Lubricant for Use on PVC or Ductile Iron Pipe Joints, NSF-61 Listing Required, and AWWA Compliant	Christy Pro-Lube Seacord Ease-On Whitlam Blue Lube
METER BOX	Plastic Polymer or Polymer Concrete Meter Box and Cover for 1" Water Services.	Carson Industries Armorcast
METER BOX	Plastic Polymer or Polymer Concrete Meter Box with 2-Piece Lid for 2" and 3" Water Services.	Carson Industries Armorcast
METER BOX, TRAFFIC LID REINFORCED FIBERGLASS	1" Water Service Traffic Rated 2" Water Service Traffic Rated	Armorcast

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
METER SETTER	5/8", 5/8" x 3/4", 3/4" or 1" Angle Meter Stop Vertical Inlet by Compression Valve Meter Outlet, Packing Joint Inlet by Double Purpose Union Swivel Outlet.	Ford 70-80 Series Coppersetter (VBG72-82W-41-44) Use Tandem Coppersetter for High Pressure Applications
METER, WATER		District to Supply
MORTAR, REPAIR	Single or Two Component, Low Shrinkage, Cement Based with High Compressive and Bonding Strength	Sika top 122,123 Sto CR701CI, CR702CI
PIPE, COPPER TUBING	1" and 2" type K Soft Seamless Tubing	Halstead Lee Mueller
PIPE, DUCTILE IRON	For Water Lines 4" and Larger Manufactured per AWWA C111, C115, C150, C151. Double Cement Mortar Lined.	American Pipe Pacific States U. S. Pipe Tyler Pipe
PIPE, PVC C900	For Water Lines 4" through 12" and 8" Gate Wells. Manufactured per AWWA C900, Class 200 only	Johns-Manville Pacific Western IPEX Certainteed Vinyltech
PIPE, PVC C905	For Water Lines 16" and Larger. Manufactured per AWWA C905, DR 25 or DR 18.	Johns-Manville Pacific Western IPEX Certainteed Vinyltech
POLYETHYLENE ENCASEMENT	12-mil Thick Polyethylene Encasement Sleeve for Ductile Iron Pipe (DIP) per AWWA C 105 and Recycled PVC, CML&C, or DIP Non-Purple Water Pipe.	PE encasement by US Pipe, Blue for Potable Water, Purple for Recycled Water
PRIMER, WAX TAPE	Surface Primer for Underground Application of Petrolatum Wax Tape.	Carboline Denso Paste Trenton Tem-Coat

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
SERVICE SADDLE FOR ACP AND CI PIPE	Cast Brass ASTM B62 Body with Silicone Bronze Double or Stainless Steel Straps, Outlet Sizes 1" and 2"	Ford 202B Jones J-979 Smith-Blair 323 A. Y. McDonald 3826 Romac 202B Mueller
SERVICE SADDLE FOR PVC C900 AND DI PIPE	Bronze or Brass Saddle with Stainless Steel four Bolt Strap(s), IP Thread Outlet for Sizes 1" and 2" for Pipe Sizes 4" through 12"	Ford 202BS Jones J-969 Mueller BR2S Series Smith Blair 393 Romac 202BS A.Y. McDonald 3846
SERVICE SADDLE FOR PVC C905 AND DI PIPE	Stainless Steel Saddle with Stainless Steel Six Bolt Strap, Thread Outlet for Sizes 1" and 2" for Pipe Sizes 16" and Larger	Ford FS202 Romac 305 Jones J-969
TAPE, OUTER WRAP	Adhesive Plastic Outer Wrap for Wax Petrolatum in Underground Applications	Polyken 960 Trenton polyply
TAPE, UTILITY	10 to 50 Mil x 2" Wide General Utility Tape for Corrosion Protection of Above Ground and Underground Pipes and Fittings	3M Scotchwrap 50 3M Scotchwrap 51 Calpico Christy Northtown Polyken 900
TAPE, WARNING/ IDENTIFICATION	6" Wide, Warning/Identification (Non-Metallic) Marking Tape for Buried Facilities.	Calpico, Type 1 Christy Type 1 Line-Tec, Type B Terra Tape, Standard 250
TAPPING SLEEVE FOR ACP, CI, DI, AND PVC PIPE	Fabricated Stainless Steel Tapping Sleeve for 4" through 12" Hot Taps. Stainless Steel Bolts and Nuts and Full Mat Gasket.	Romac SST III Power Seal Smith-Blair

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
VALVE, AIR RELEASE AND VACUUM RELIEF	Pressure Air Release and Vacuum Relief Valve, Cast Iron Body, Stainless Steel Float, Bronze Plug	A.R.I. APCO Crispin Valmatic
VALVE, BALL	600 WOG, Small Diameter	Milwaukee 20BSOR Apollo 70-100 Nibco T-FP-600
VALVE, BREAK-OFF CHECK	Break-off check valve for fire hydrants. Use when indicated on Approved Plans.	Long Beach LB 400
VALVE, BUTTERFLY	16" and Larger, AWWA C504, Class B. Thermosetting for Fusion Bonded Epoxy Coated and Lined (150 psi Max), Seat in the body.	DeZurik BAW 250B (Ductile Iron) M & H 1450, 4500 Mueller Lineseal XPII #5-5227 Pratt Triton HP250
VALVE, DETECTOR CHECK	Fire Detector Check Detector Assembly	AMES 3000 SS Febco 806YD, 876V Wilkins 350ADA, 450DA
VALVE, GATE, RESILIENT WEDGE (RWGV)	4" through 12" Non-Rising Low Zinc Bronze or Stainless Steel Stem, Ductile or Cast Iron Body and Bonnet, Encapsulated Wedge per AWWA C509 or C515 with Epoxy Coated Interior. Manufactured to AWWA C509 or C515 with 250 psi rating.	American Flow Control, Series 2500 Clow 2368 M&H Style 7000 Mueller A2361 AVK Series 45
VALVE, PRESSURE REDUCING	For Water Main Pressure Reducing, 4" through 16"	Cla-Val 90G-01
VALVE, PRESSURE REGULATING	For Service Connections, 3/4" and 1"	Wilkins Watts Febco
VALVE, STEM EXTENSION	Square 1-1/2" Steel, Welded Construction, Coated with Zinc-Rich Powder Coat, 1/8" thick centering ring, AWWA 2" Operating Nuts Top and Bottom	Pipeline Products SX-908

TEMESCAL VALLEY WATER DISTRICT
POTABLE AND RECYCLED WATER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
VALVE, WELL LID	Ductile Iron Machined Frame with Ductile Iron Lid. See Standard Drawings for Markings	South Bay
WATER TEST STATION ENCLOSURE	12 Gauge Stee18" x 36", Single Lockable Door, Powder Polyester Coated Potable Water Color: Safety Yellow Recycled Water Color: OSHA Safety Purple	Pipeline Products WTS-858E
WIRE, TRACER	#10 AWG Solid Copper UF Type Wire, with Cross Linked Polyethylene Insulation. White or Yellow in Color	Cosberg Industries Paige Baron

TEMESCAL VALLEY WATER DISTRICT
SEWER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
CASING, END SEAL	1/4" Thick Styrene Butadiene Rubber Sheet End Seal. Use 1" Wide Stainless Steel Bands. Zippered End Seals with Stainless Steel Bands may also be used.	Advance Products & Systems Cascade Water Works Calpico Powerseal Raychem
CASING, SPACER	Polyethylene Casing Spacer Center Restrained Position Type with PVC Liner and Non-Metallic Anti- Friction Runners	Advance Products & Systems, Inc (APS) Cascade Water Works Powerseal Pipeline Seal & Insulator, Inc. (PSI)
DAMP-PROOFING	Coating Systems used on the Exterior Surface of Manholes at and below Water Table	Kop-Coat, Bitumastic Super Service Black
FLOWMETER	Magnetic Flowmeter	Sparling Tigermag Krohne Enviromag
LINER SYSTEM	PVC T -Shaped Liner System for Lining of Precast Manholes and Concrete Sewer Pipe	Ameron, T-Lok
MANHOLE, FRAME AND COVER	24" Nominal Diameter Cast Iron frame and Covers per ASTM A48, Class 30, with Machined Seats.	Alhambra Foundry A-1254 South Bay Foundry SBF-1254
MANHOLE, FRAME AND COVER	36" Nominal Diameter Cast Iron frame and Covers per ASTM A48, Class 30, with Machined Seats.	Alhambra Foundry A-1325 South Bay Foundry SBF-1325
MANHOLE, PIPE CONNECTOR	Rubber O-Ring Type Gasket for Pipe to Manhole Connection for Cast-In-Place Manholes and Cemented-In-Place Connections (for existing manholes)	GPK Products, Inc.

TEMESCAL VALLEY WATER DISTRICT
SEWER FACILITIES APPROVED MATERIALS LIST

ITEMS	DESCRIPTION	MANUFACTURER
MANHOLE, PRECAST CONCRETE	Access Manholes for Sewer Mains (Grade Rings, Cones, Risers, and Bases) designed for H-20 Highway Loading	Inland Concrete B&W Precast Mar-Con Products Southwest Concrete Products Jensen Precast JR Concrete
MANHOLE, T-LOCK LINED PRECAST CONCRETE	PVC lined cones and riser for manholes	Inland Concrete Southwest Concrete Products B&W Precast Mar-Con Products
PIPE, PVC	4" through 18" ASTM D 3034, SDR 35 Sewer Pipe	Johns-Mansville Diamond Plastics Pacific Western Pipe Ipex Vinyltech
PIPE, PVC	21" through 54" ASTM D-1784	Submittal Required
PIPE, Vitrified Clay	4" through 42", ASTM C700	Mission Clay Products
SADDLE	4" and 6" Wye and Tee Connections for Sewer Line Installations	Certainteed Inserta Tee J-M Pipe
VALVE, AIR RELEASE	Pressure Air Release and Vacuum Valve, Designed for Sewer Use	Vent-o-Mat A.R.I.
VALVE, BACKWATER	4" Extendable ABS Valve	Clean Check, Inc.
WARNING/IDENTIFICATION TAPE	Warning/identification Tape 6" Wide, Colored Green, with Continuous Warning "CAUTION: SEWER LINE BURIED BELOW"	Calpico, Type 1 Line-Tec, Type B Thor, Elast Tec

TEMESCAL VALLEY WATER DISTRICT

PART IV. Improvement Plan Signature Blocks and Certificate

TEMESCAL VALLEY WATER DISTRICT

APPROVED FOR CONSTRUCTION:

_____ _____

General Manager *Date*

_____ _____ _____

Engineering *R.C.E.* *DATE*

WATER SYSTEM CERTIFICATION

I CERTIFY THAT THE DESIGN OF THE WATER SYSTEM IN _____*_____ *IS IN ACCORDANCE WITH THE WATER SYSTEM MASTER PLAN OF TEMESCAL VALLEY WATER DISTRICT AND THAT THE WATER SERVICE, STORAGE AND DISTRIBUTION SYSTEM WILL BE ADEQUATE TO SUPPLY WATER TO SAID PROJECT. THIS CERTIFICATE DOES NOT CONSTITUTE A GUARANTEE THAT IT WILL SUPPLY WATER TO SAID PROJECT AT ANY SPECIFIC QUANTITIES, FLOWS, OR PRESSURE FOR FIRE PROTECTION OR ANY OTHER PURPOSE.*

_____ _____

General Manager *Date*

SEWER SYSTEM CERTIFICATION

I CERTIFY THAT THE DESIGN OF THE SEWER SYSTEM IN _____*_____ *IS IN ACCORDANCE WITH THE SEWER SYSTEM REQUIREMENTS OF TEMESCAL VALLEY WATER DISTRICT AND THAT THE DISTRICT HAS PROGRAMMED ADEQUATE CAPACITY TO TREAT THE WASTES FROM THE PROPOSED PROJECT.*

_____ _____

General Manager *Date*

** WATER AND SEWER SYSTEM CERTIFICATION BLOCK TO BE COMPLETED BY THE ENGINEER OF RECORD SPECIFIC TO THE PROJECT.*

IMPROVEMENT PLAN SIGNATURE BLOCKS AND CERTIFICATIONS

9/25/2015 5:02:42 PM L:\Agency Standards\Temescal Valley Water District\Sign_Blocks

Sign_Blocks.dwg

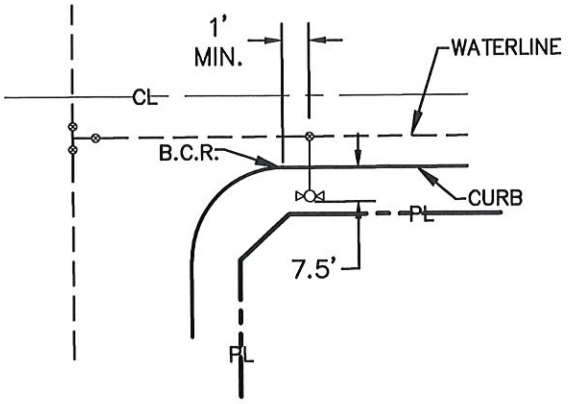
TEMESCAL VALLEY WATER DISTRICT

PART V. Standard Drawings – Water

Temescal Valley Water District

Standard Drawings - Water

TABLE OF CONTENTS



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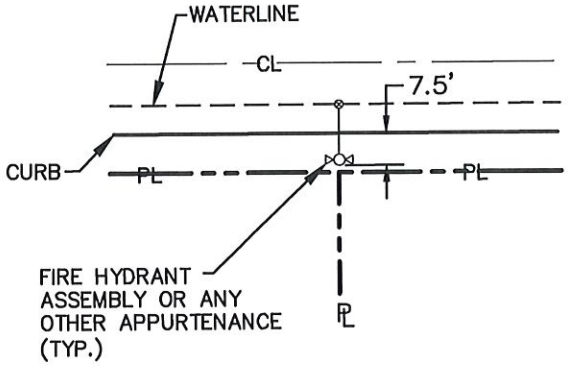

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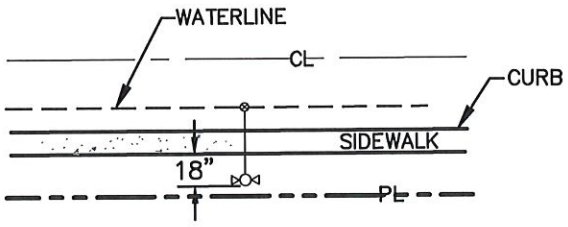
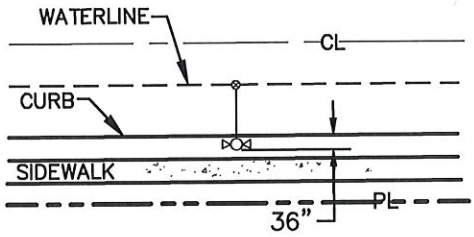


CURB B SIDEWALK
ADJACENT



CURB B SIDEWALK
SEPARATED

NOTES:

1. PAINT
   A. HYDRANTS TO BE PAINTED WITH APPROVED CHROME YELLOW, PER RIVERSIDE COUNTY FIRE ORDINANCE 540
   B. HYDRANT TOPS AND NOZZLE TOPS, MORE THAN 999 G.P.M. TO BE GREEN
   C. HYDRANT TOPS AND NOZZLE TOPS, 500–999 G.P.M. TO BE ORANGE
   D. HYDRANT TOPS AND NOZZLE TOPS, LESS THAN 500 GPM TO BE PAINTED RED

2. FIRE HYDRANT & APPURTENANCE PLACEMENT
   A. CURB AND SIDEWALK SEPERATED: FIRE HYDRANT TO BE 24" BEHIND FACE OF CURB UNLESS DIRECTED OTHERWISE BY DISTRICT ENGINEER.
   B. CURB AND SIDEWALK ADJACENT: FIRE HYDRANT TO BE 18" BEHIND SIDEWALK, BUT NOT LESS THAN 8" WITHIN THE RIGHT–OF–WAY.

3. ALL APPURTENANCES WILL BE STAKED FOR LOCATION AND ELEVATION

4. CONCRETE FOR THRUST BLOCKS AND SUPPORTS TO BE CLASS 'C' (2000 PSI) CONCRETE

5. GUARD POSTS ARE NOT REQUIRED WHERE FIRE HYDRANTS ARE ADJACENT TO SIDEWALKS OR AS DIRECTED BY DISTRICT ENGINEER.

6. APPURTENANCES SHALL MEAN THE FOLLOWING, BUT ARE NOT LIMITED TO, AIR VAC/RELEASE ASSEMBLIES, BLOW OFF ASSEMBLIES, TEST STATIONS, AND WATER METER BOXES.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

FIRE HYDRANT & APPURTENANCES LOCATIONS

DWG. NO. W–1

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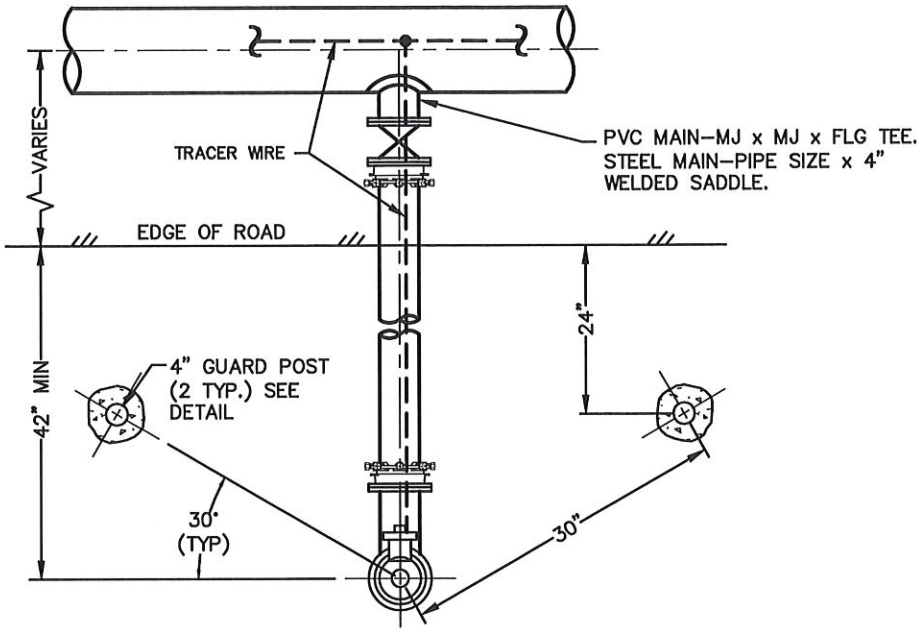
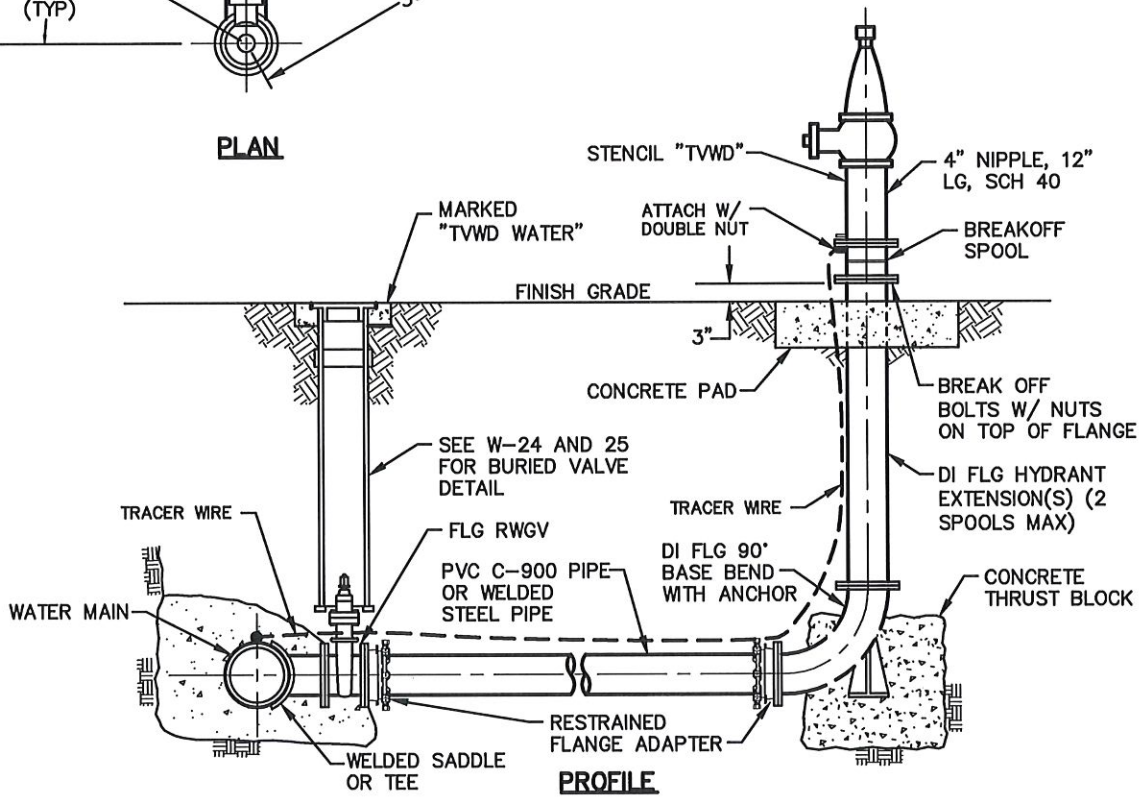


PLAN



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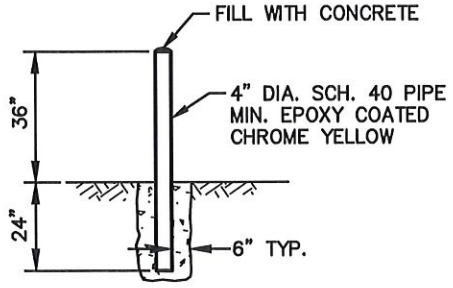

GUARD POST DETAIL

NOTES

1. REFER TO W–1. "APPURTENANCE LOCATIONS & NOTES".
2. BLOW–OFFS SHALL BE EPOXY COATED CHROME YELLOW.
3. GUARD POSTS NOT REQUIRED WHERE BLOW–OFFS ARE LOCATED BEHIND SIDEWALKS (SEE W–1).
4. ALL JOINTS SHALL BE RESTRAINED.
5. GROUT ALL UNDERGROUND BARE IRON & STEEL.
6. FILL BREAK OFF BOLTS HOLES W/ SILICON OR EPOXY

REVISION	DATE	BY	DESCRIPTION
1	8/08	CT	ADDED BREAKOFF SPOOL
2	2/12	JP	ADDED TRACER WIRE

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

4" PVC BLOW OFF

DWG. NO. W–2

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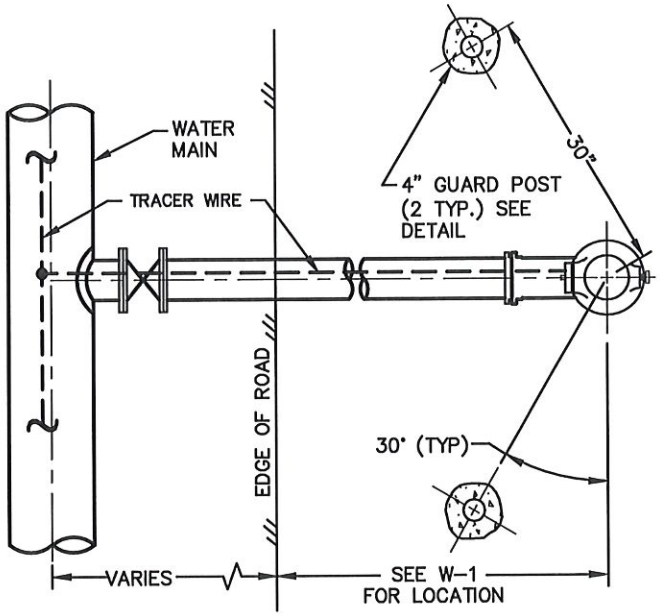
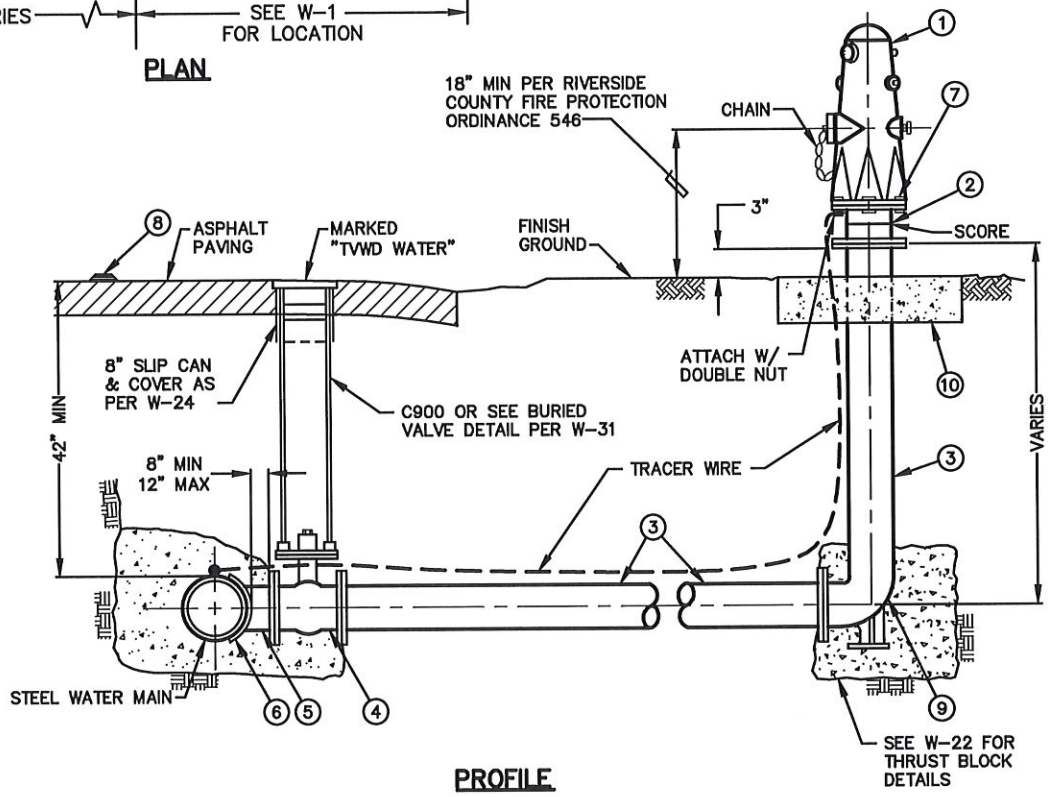


PLAN

LEGEND

1. 6" x 4" x (2) 2-1/2" SUPER FIRE HYDRANT HEAD, ALL BRONZE, YELLOW
2. 6" BREAK-OFF SPOOL
3. 6" FLG CML&C STEEL PIPE
4. 6" RES WEDGE FLG x FLG GATE VALVE
5. SCH. 40 MIN CML&C
6. WELD SADDLE
7. 6 BREAK-OFF BOLTS, 5/8" X 3" HEX HEAD ZINC PLATED
8. REFLECTIVE PAVEMENT MARKER (BLUE) PER FIRE DISTRICT REQUIREMENTS
9. SCH. 40 MIN. CML&C 90° ELL WITH ANCHOR IN THRUST BLOCK
10. CONCRETE PAD 3' X 3' X 6"



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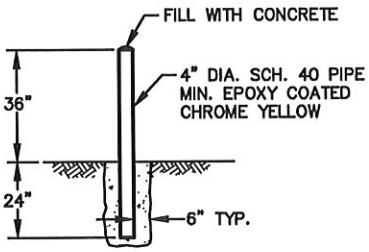

GUARD POST DETAIL

NOTES

1. REFER TO W-1. "APPURTENANCE LOCATIONS & NOTES".
2. FIRE HYDRANTS TO BE EPOXY COATED CHROME YELLOW. (SEE W-1)
3. GUARD POSTS NOT REQUIRED WHERE HYDRANTS ARE LOCATED BEHIND SIDEWALKS (SEE W-1).
4. ONLY ONE VICTAULIC COUPLING REQUIRED WHEN BLOW-OFF RUN IS LESS THAN 5'-0".
5. GROUT ALL UNDERGROUND BARE IRON & STEEL.
6. FILL BREAKOFF BOLT HOLE W/ SILICON OR EPOXY.

REVISION	DATE	BY	DESCRIPTION
1	8/08	CT	LIFTED BREAKOFF ABOVE CONCRETE, UPDATED RCFO ORDINANCE NOTE.
2	2/12	JP	ADDED TRACER WIRE

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

FIRE HYDRANT (STEEL PIPE)

DWG. NO. W-3

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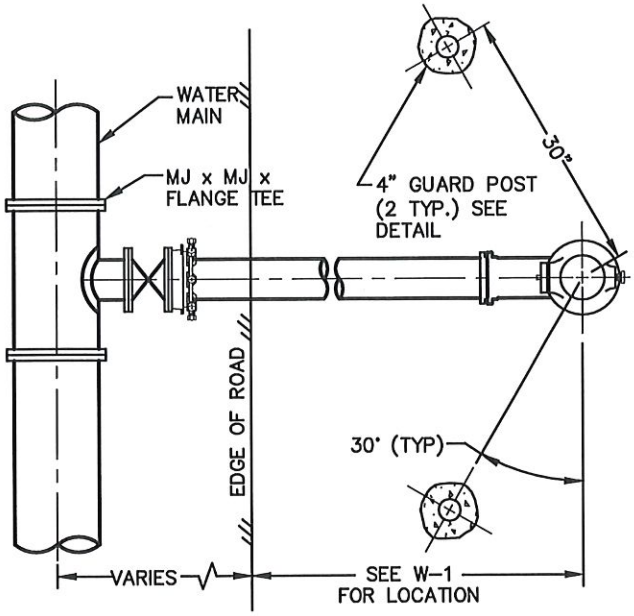
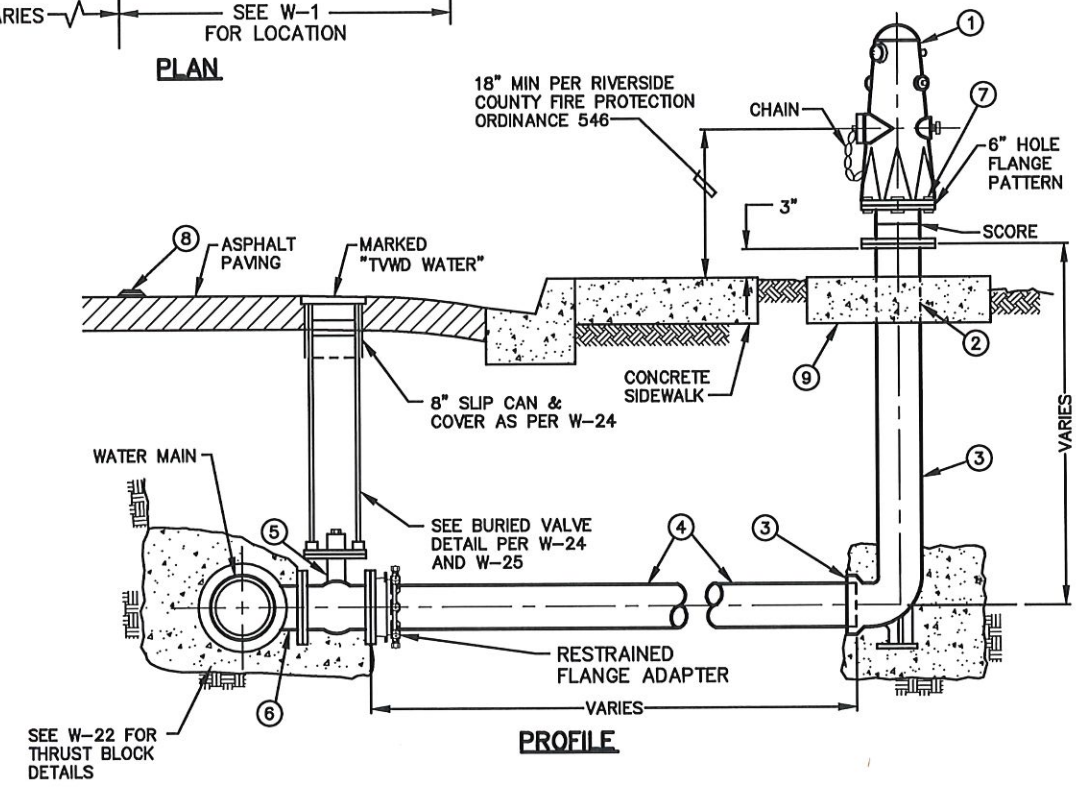


PLAN

LEGEND

1. 6" x 4" x (2) 2-1/2" SUPER FIRE HYDRANT HEAD, ALL BRONZE, YELLOW
2. BREAK-OFF SPOOL
3. HYDRANT BURY INLET, 6" DUCTILE IRON, LENGTH AS REQUIRED, FLG x MJ WITH ANCHOR IN THRUST BLOCK.
4. 6" PVC PIPE C-900, CL-200 MIN.
5. 6" GATE VALVE, FLG x FLG
6. MJ x MJ x 6" FLANGED TEE
7. 6 BREAK-OFF BOLTS, 5/8" x 3" HEX HEAD ZINC PLATED
8. REFLECTIVE PAVEMENT MARKER (BLUE) PER FIRE DISTRICT REQUIREMENTS
9. CONCRETE PAD 3' x 3' x 6"



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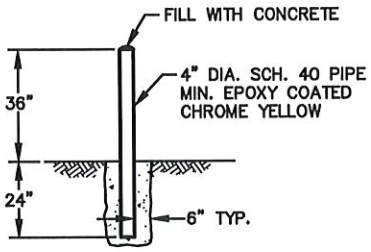

GUARD POST DETAIL

NOTES

1. REFER TO W-1. "APPURTENANCE LOCATIONS & NOTES".
2. FIRE HYDRANTS TO BE EPOXY COATED CHROME YELLOW (SEE W-1)
3. GUARD POSTS NOT REQUIRED WHERE HYDRANTS ARE LOCATED BEHIND SIDEWALKS (SEE W-1).
4. ALL JOINTS ARE REQUIRED TO BE RESTRAINED.
5. GROUT ALL UNDERGROUND BARE IRON & STEEL.
6. FILL BREAKOFF BOLT HOLE W/ SILICON OR EPOXY.

REVISION	DATE	BY	DESCRIPTION
1	8/08	CT	LIFTED BREAKOFF ABOVE CONCRETE, UPDATED RCFO ORDINANCE NOTE.

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

FIRE HYDRANT (PVC PIPE)

DWG. NO. W-4

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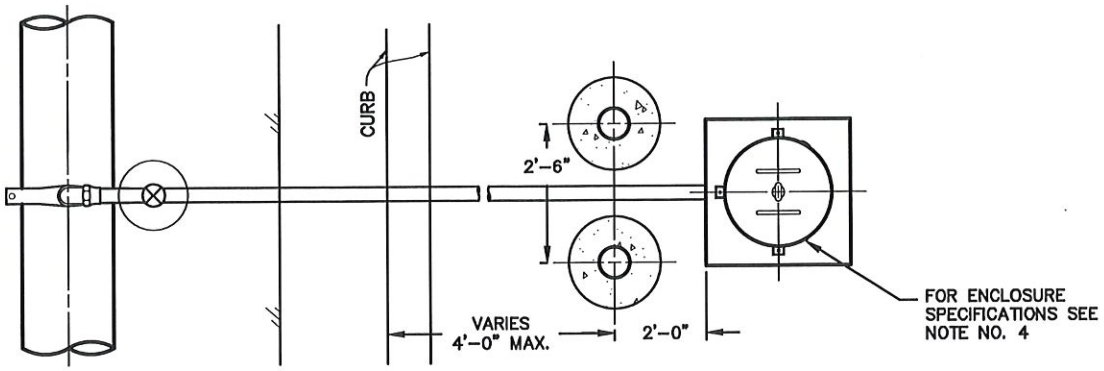
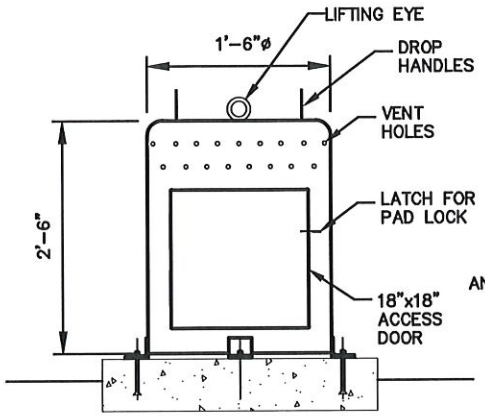
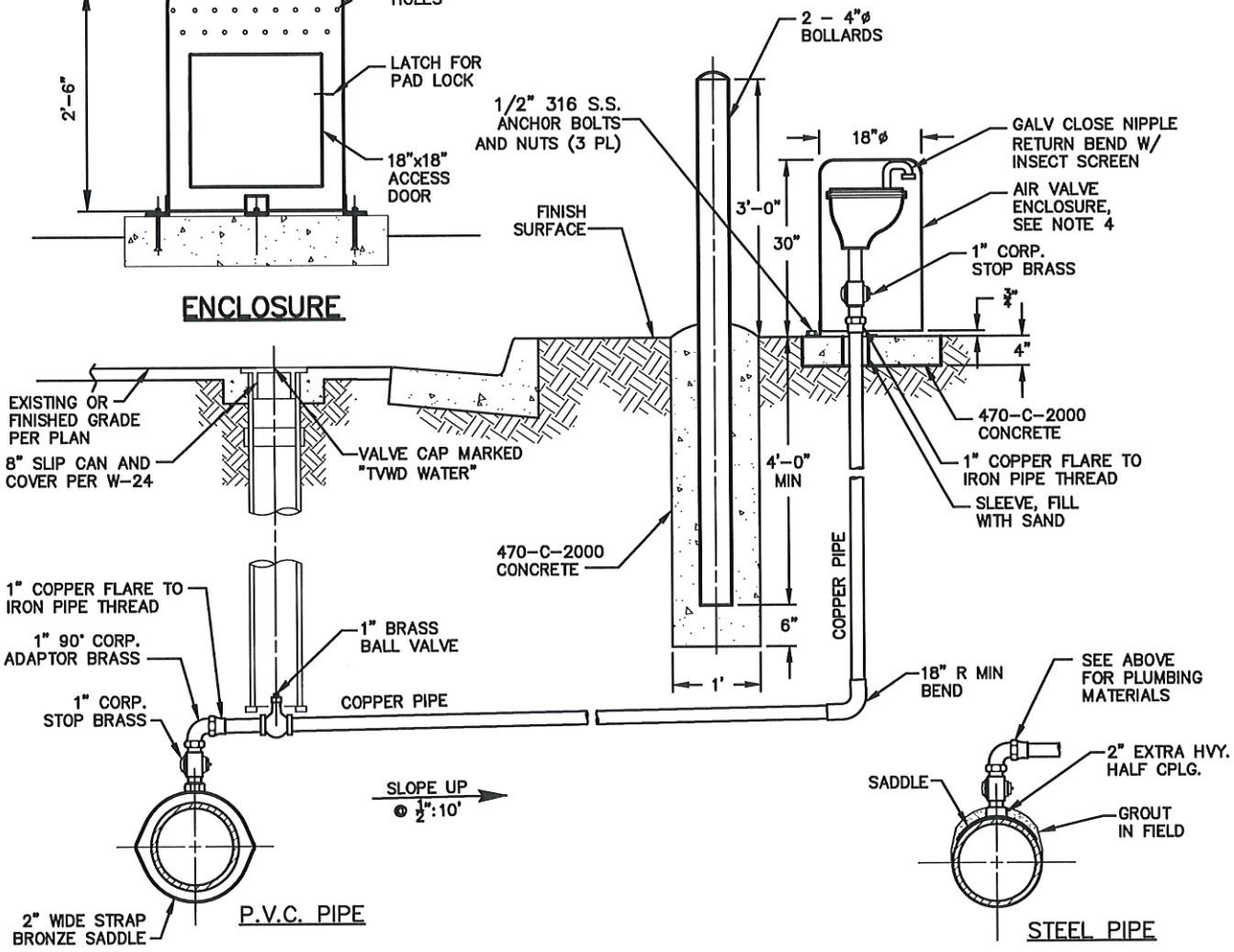




PLAN VIEW

ENCLOSURE



PROFILE

NOTES

1. ALL GALV. AND BRASS BURIED PIPE OR FITTINGS SHALL BE COATED WITH APPROVED WAX TAPE BEFORE BACKFILLING.
2. LOCATIONS OF AIR VAC AND AIR RELEASE ASSEMBLY SHALL BE PLACED IN THE SAME MANNER AS FIRE HYDRANTS. (SEE DWG. W-1)
3. ACCESS DOOR TO BE PAD LOCKED WITH DISTRICT KEYED, S.S. LOCK.
4. VALVE ENCLOSURE PER APPROVED MATERIALS LIST OR APPROVED EQUAL.

REVISION	DATE	BY	DESCRIPTION
1	11/08	CT	REMOVE BALL VALVE, ADD INSECT SCREEN, REVISE NOTES

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

1" AIR VAC & AIR RELEASE ASSEMBLY

DWG. NO. W-5

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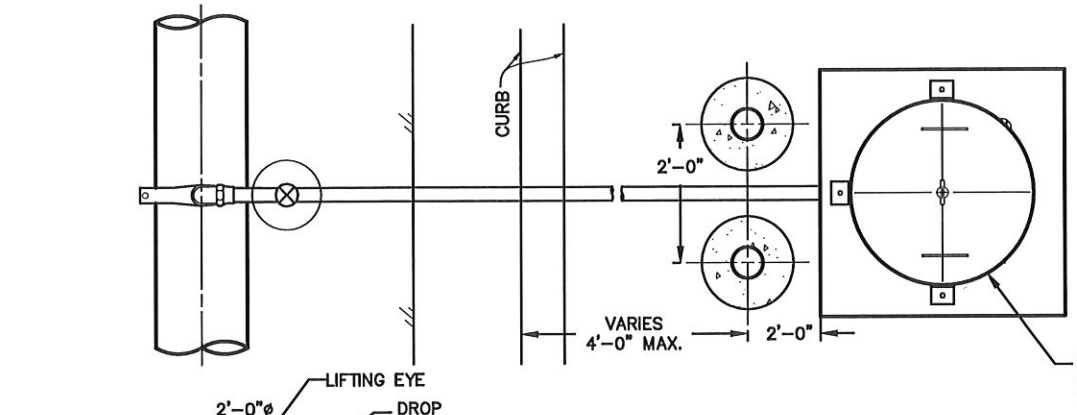
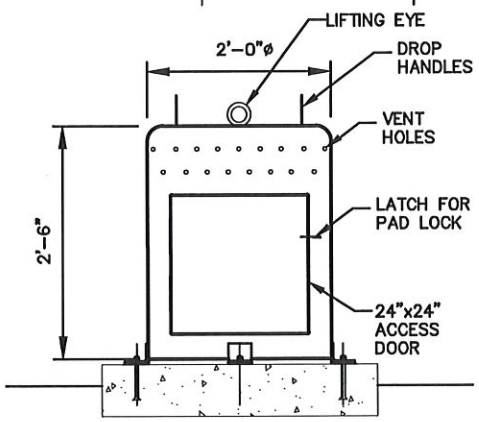


PLAN VIEW



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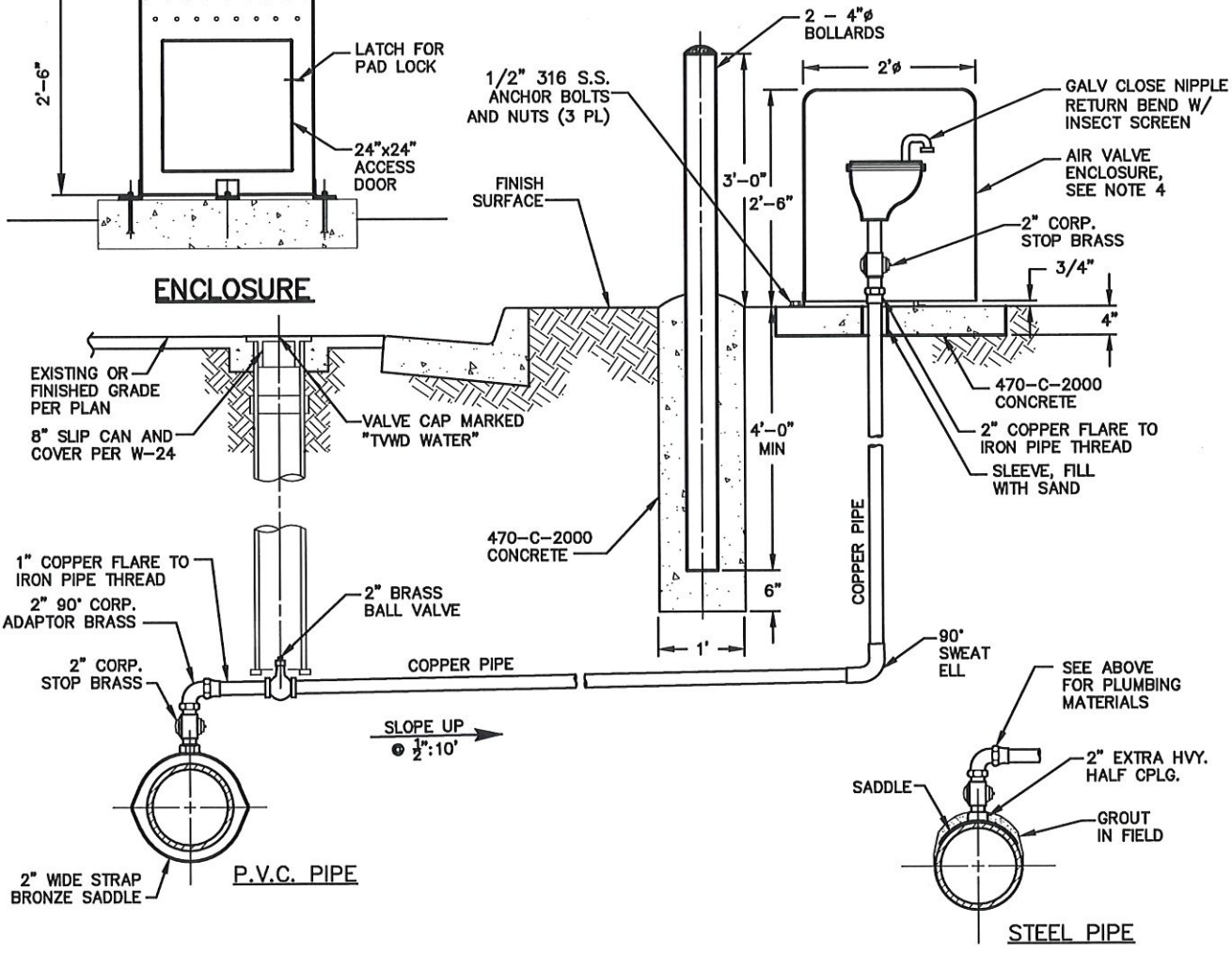

PROFILE

NOTES:

1. ALL GALV. AND BRASS BURIED PIPE OR FITTINGS SHALL BE COATED WITH APPROVED WAX TAPE BEFORE BACKFILLING.
2. LOCATIONS OF AIR VAC AND AIR RELEASE ASSEMBLY SHALL BE PLACED IN THE SAME MANNER AS FIRE HYDRANTS. (SEE DWG. W-1)
3. ACCESS DOOR TO BE PAD LOCKED WITH DISTRICT KEYED, S.S. LOCK.
4. VALVE ENCLOSURE PER APPROVED MATERIALS LIST OR APPROVED EQUAL.

REVISION	DATE	BY	DESCRIPTION
1	11/08	CT	REMOVE BALL VALVE, ADD INSECT SCREEN, REVISE NOTES

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

2" AIR VAC & AIR RELEASE ASSEMBLY

DWG. NO. W-6

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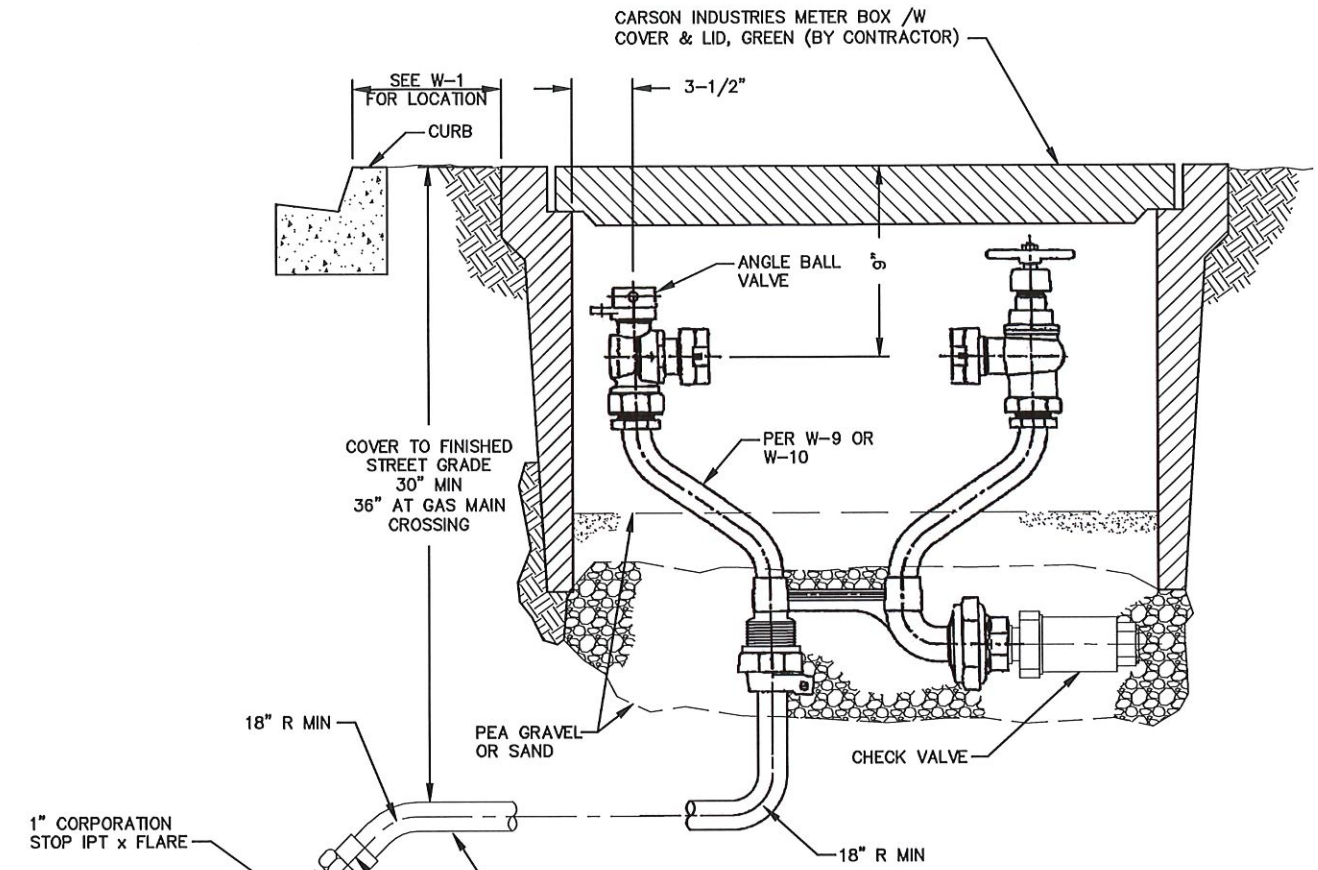
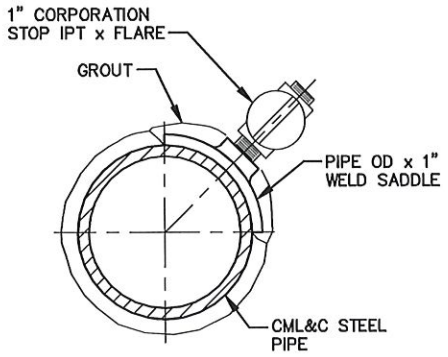
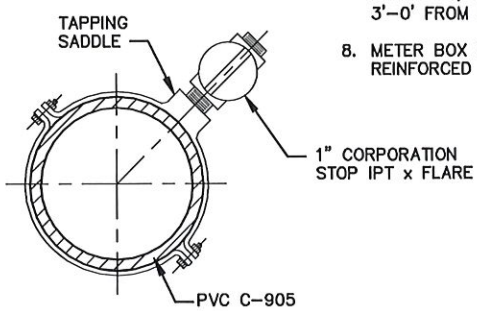


TYPE "A"
PVC PIPE C-900



TYPE "B"
STEEL PIPE



TYPE "C"
PVC PIPE C-905

NOTES

1. STAMP CURB WITH 'W' FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX AND COVER, PER W-9 & W-10.
6. ALL BARE IRON AND STEEL SHALL BE COATED WITH CEMENT MORTAR.
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0' FROM PROPERTY LINE.
8. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

3/4" OR 1" COPPER SERVICE (NON-POTABLE WATER ONLY)

DWG. NO. W-7

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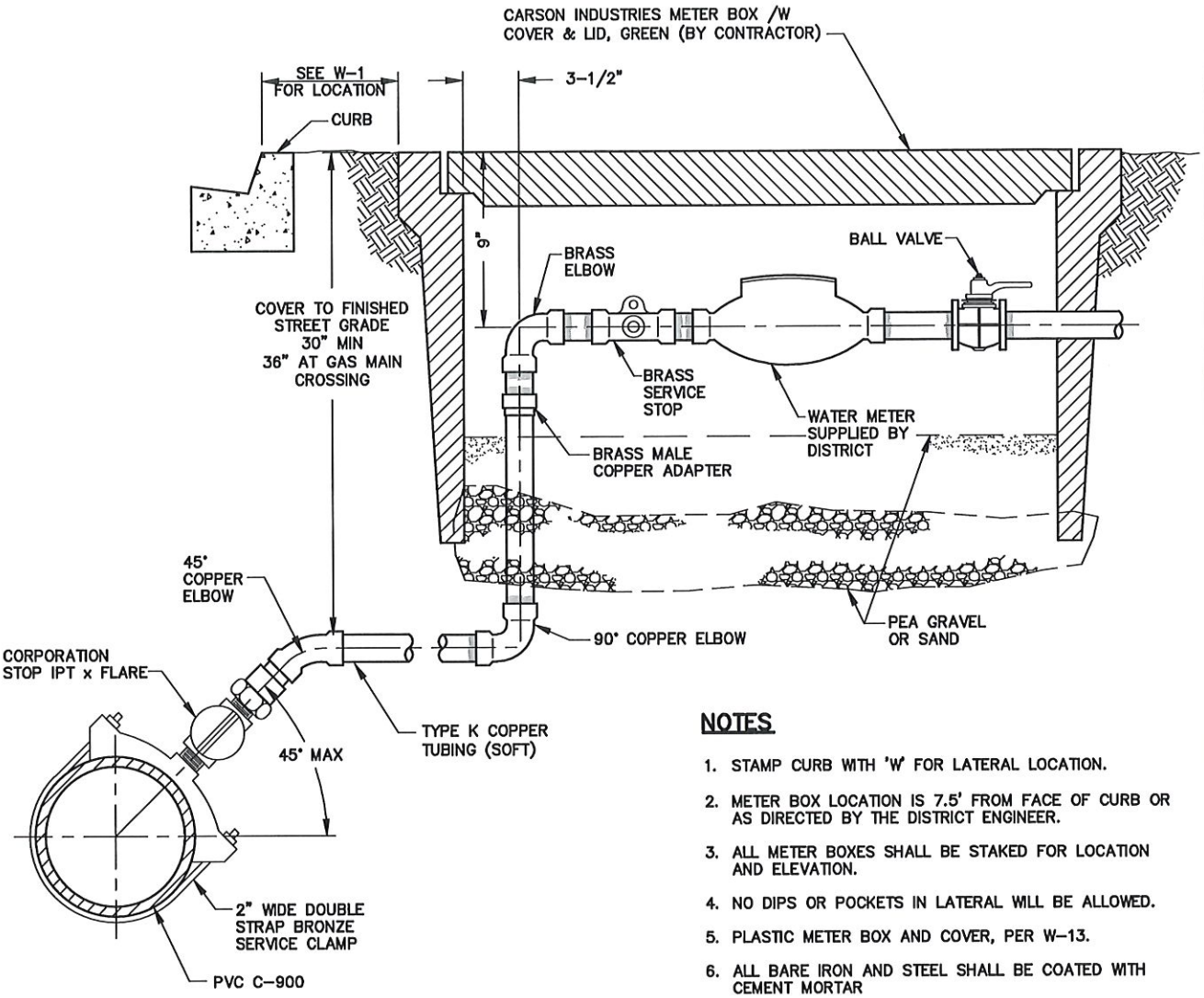
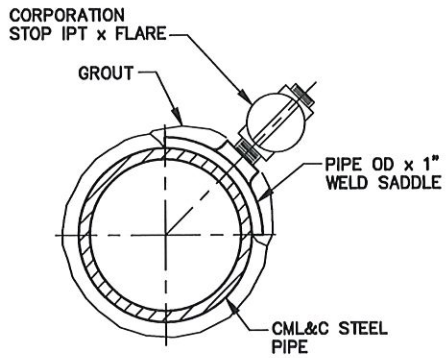


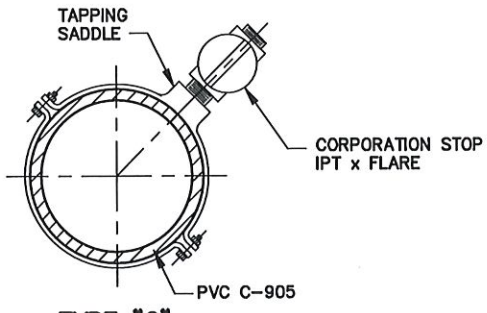
TYPE "A"
PVC PIPE C-900

NOTES

1. STAMP CURB WITH 'W' FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX AND COVER, PER W-13.
6. ALL BARE IRON AND STEEL SHALL BE COATED WITH CEMENT MORTAR
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0" FROM PROPERTY LINE.
8. ALL SWEAT FITTINGS SHALL BE WRAPPED WITH WAX TAPE AND 2" BEYOND, BOTH DIRECTIONS.
9. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.



TYPE "B"
STEEL PIPE



TYPE "C"
PVC PIPE C-905

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

1-1/2" OR 2" COPPER SERVICE LATERAL

DWG. NO. W-8

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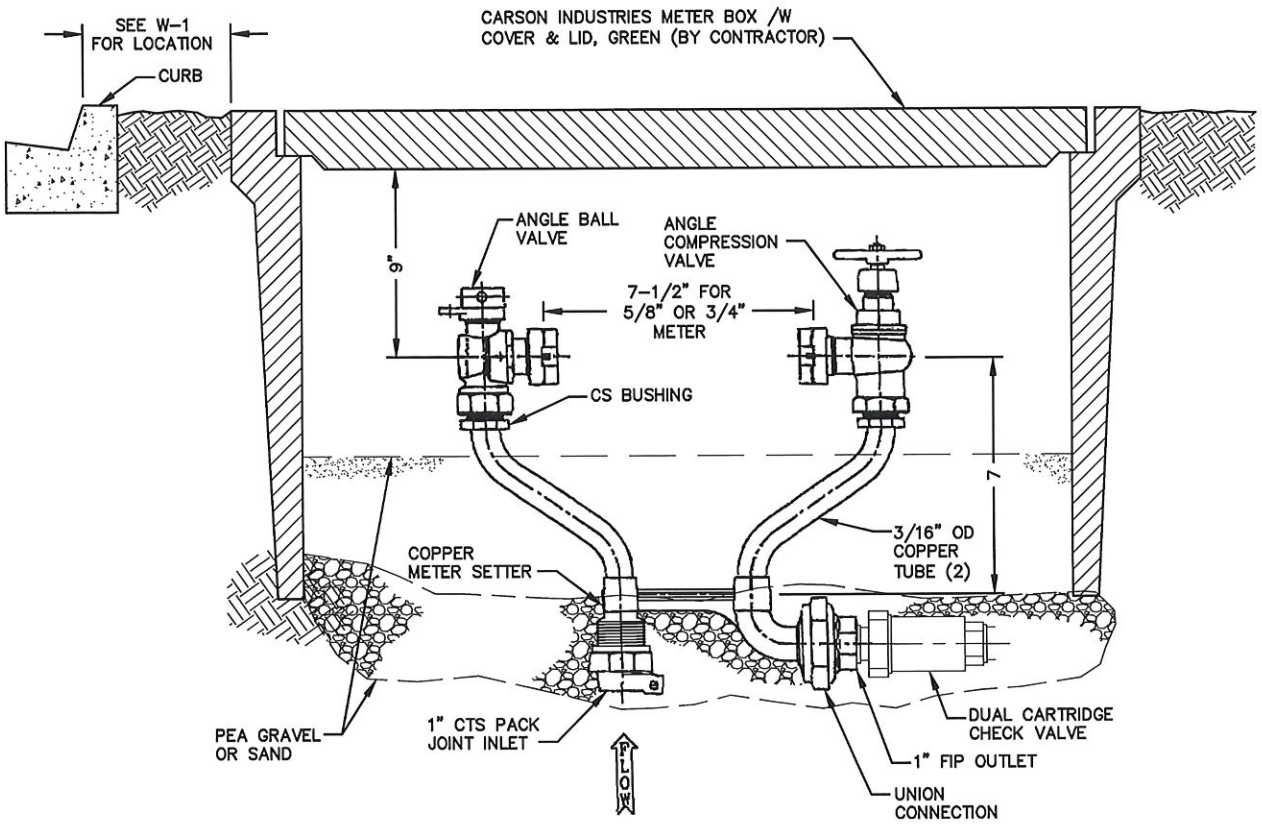
LOW PRESSURE DROP IN METER (90 PSI AND BELOW)



NOTES:

1. STAMP CURB WITH "W" FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX SHALL BE CARSON INDUSTRIES MODEL 1419 WITH COVER, LID, AND METER READER.
6. ALL BARE IRON & STEEL SHALL BE COATED WITH CEMENT MORTAR.
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0" FROM PROPERTY LINE.
8. WATER METERS SHALL BE 5/8" OR 3/4" WITH DIALOG REGISTER.
9. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.
10. 1" COPPER SETTER WITH BALL VALVE INLET AND METER INLET. MODEL No. VBG72-82W-41-44-NL.

REVISION	DATE	BY	DESCRIPTION
1	2/19	IC	MODEL NUMBER UPDATES

APPROVED

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

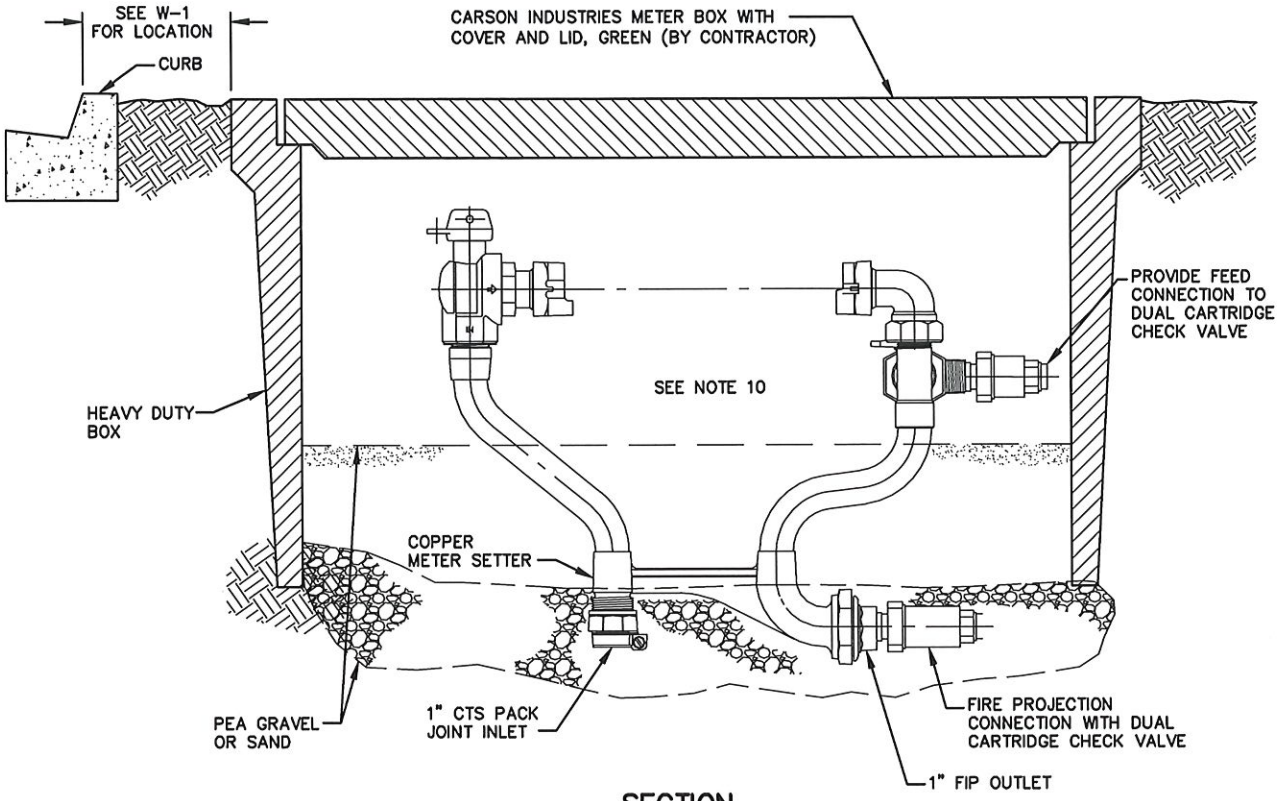
STANDARD DRAWINGS

TYPICAL 3/4" OR 1" DROP-IN METER INSTALLATION (SETTER)

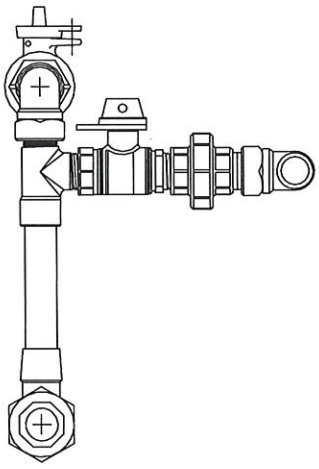
DWG. NO. W-9

2/13/2019 9:46:32 AM P:\101.Engineering\Temescal Valley Water District\TVWD Standards\New Details\W-9

LOW PRESSURE DROP IN METER (90 PSI AND BELOW)



SECTION
N.T.S.



PLAN
N.T.S.

NOTES:

1. STAMP CURB WITH "W" FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX SHALL BE CARSON INDUSTRIES MODEL 1730 WITH COVER AND LID.
6. ALL BARE IRON & STEEL SHALL BE COATED WITH CEMENT MORTAR.
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0" FROM PROPERTY LINE.
8. WATER METERS SHALL BE 1" WITH DIALOG REGISTER.
9. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.
10. 1" COPPER SETTER WITH BALL VALVE INLET AND METER INLET. MODEL No. VBL74-84-95032-18-NL.

REVISION	DATE	BY	DESCRIPTION
1	2/19	IC	MODEL NUMBER UPDATES

APPROVED

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

TYPICAL 1" DROP-IN METER INSTALLATION (SETTER)

DWG. NO.
W-9
FIRE

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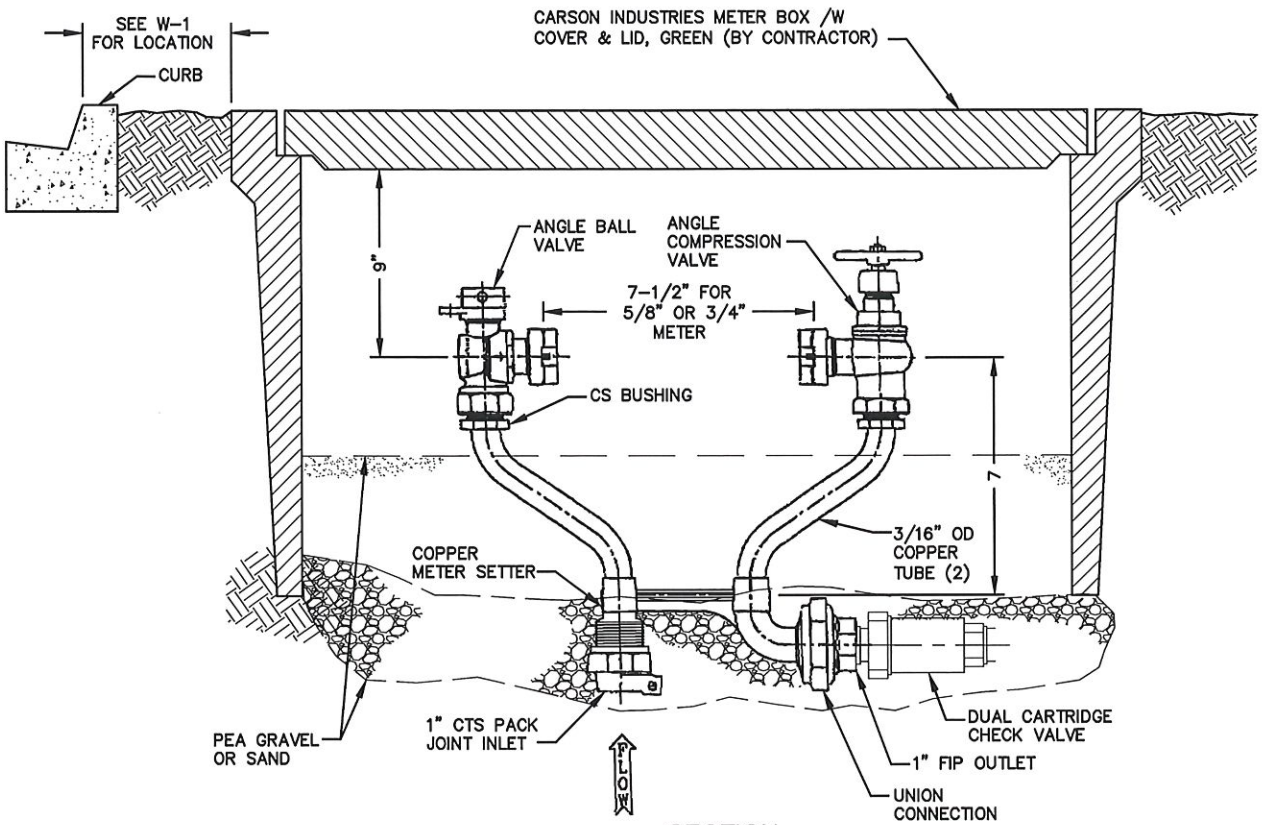
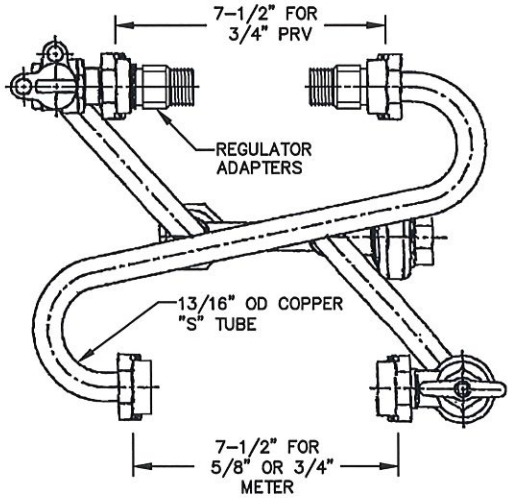
HIGH PRESSURE DROP IN METER (ABOVE 90 PSI)



SECTION
N.T.S.



PLAN
N.T.S.

NOTES:

1. STAMP CURB WITH "W" FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX SHALL BE CARSON INDUSTRIES MODEL 1220 WITH COVER, LID, AND METER READER.
6. ALL BARE IRON & STEEL SHALL BE COATED WITH CEMENT MORTAR.
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0" FROM PROPERTY LINE.
8. WATER METERS WILL BE 5/8" X 3/4" MASTER C.F. WITH DIALOG REGISTER.
9. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.
10. 1" TANDEM COPPER SETTER WITH BALL VALVE INLET ELL OUTLET. MODEL No. TVBG72-82W-41-44-NL.

REVISION	DATE	BY	DESCRIPTION
1	2/19	IC	MODEL NUMBER UPDATES

APPROVED

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

HIGH PRESSURE 3/4" OR 1" DROP-IN METER INSTALLATION (SETTER)

DWG. NO.

W-10

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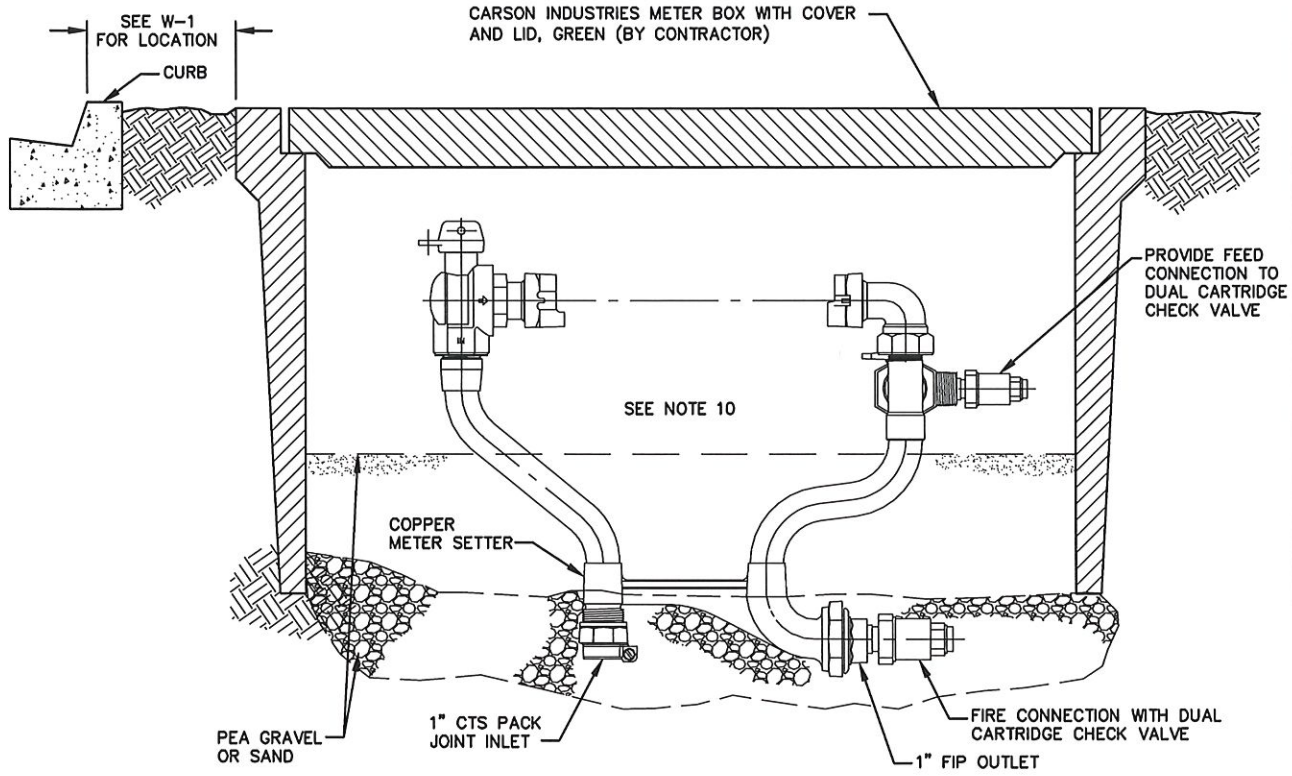
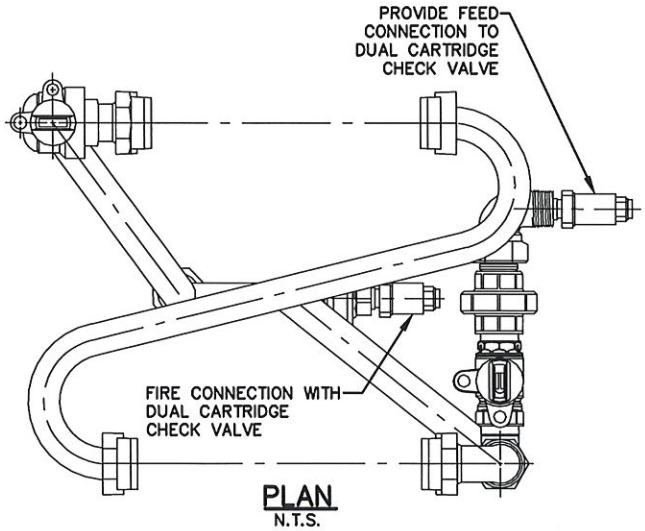
HIGH PRESSURE DROP IN METER (ABOVE 90 PSI)



SECTION
N.T.S.



PLAN
N.T.S.

NOTES:

1. STAMP CURB WITH "W" FOR LATERAL LOCATION.
2. METER BOX LOCATION IS 7.5' FROM FACE OF CURB OR AS DIRECTED BY THE DISTRICT ENGINEER.
3. ALL METER BOXES SHALL BE STAKED FOR LOCATION AND ELEVATION.
4. NO DIPS OR POCKETS IN LATERAL WILL BE ALLOWED.
5. PLASTIC METER BOX SHALL BE CARSON INDUSTRIES MODEL 1730 WITH COVER AND LID.
6. ALL BARE IRON & STEEL SHALL BE COATED WITH CEMENT MORTAR.
7. WHEN NO CURBS ARE EXISTING OR TO BE INSTALLED, PLACE BACK EDGE OF METER BOX 3'-0" FROM PROPERTY LINE.
8. WATER METERS WILL BE 1" MASTER C.F. WITH DIALOG REGISTER.
9. METER BOX COVER AND LID SHALL BE REINFORCED FIBERGLASS IN PAVED AREAS.
10. 1" TANDEM COPPER SETTER WITH BALL VALVE INLET ELL OUTLET. MODEL No. TVBL74-84-95219-022-NL.

REVISION	DATE	BY	DESCRIPTION
1	2/19	IC	MODEL NUMBER UPDATES

APPROVED
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS
HIGH PRESSURE 1" DROP-IN METER INSTALLATION (SETTER)

DWG. NO.
W-10
FIRE

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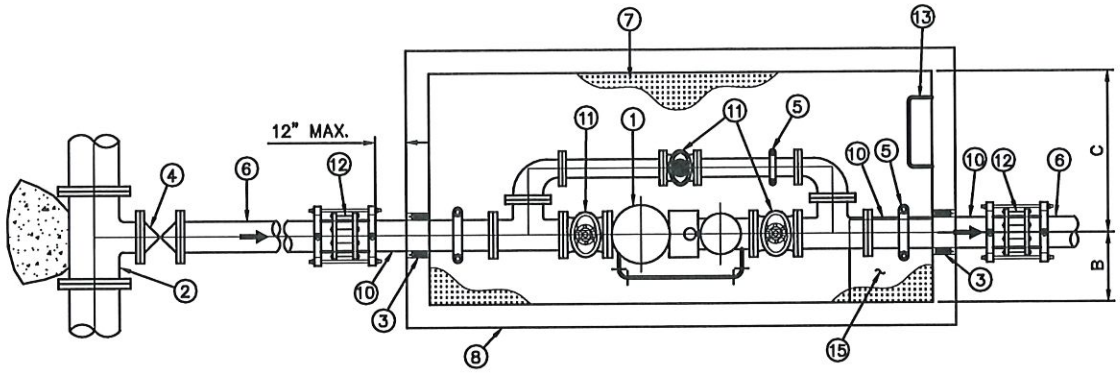
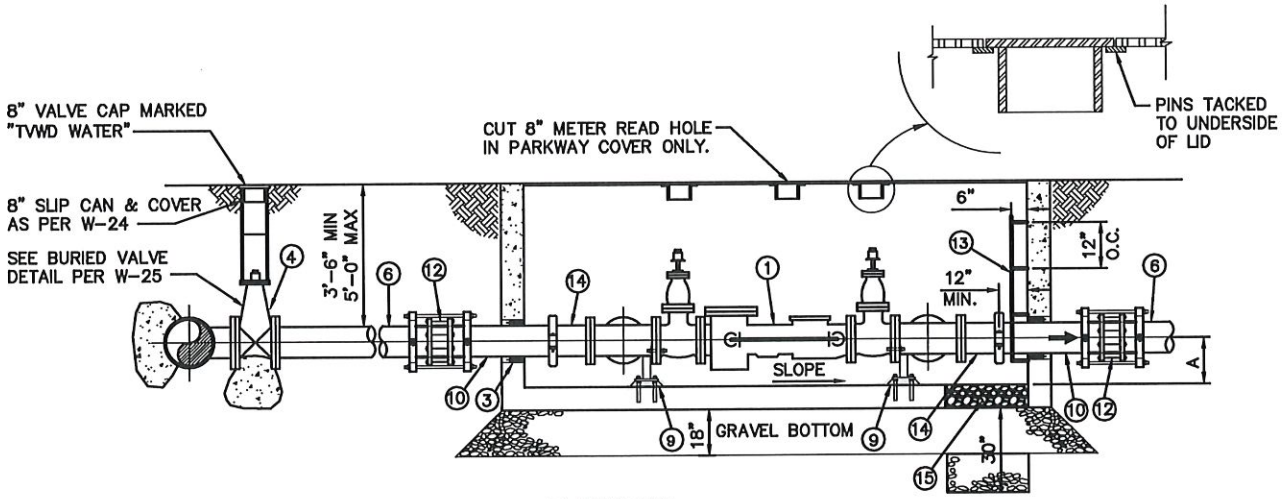


PLAN



ELEVATION

LEGEND

1. TVWD APPROVED FULL-FLOW METER ASSEMBLY
2. FLANGED STEEL TEE
3. LINK SEAL OR A-LOK TYPE GASKET
4. FLG X FLG RESILIENT WEDGE VALVE
5. VICTAULIC COUPLING
6. FLG X PE STEEL SPOOL
7. GALVANIZED VAULT COVER (TRAFFIC OR PARKWAY)
8. CONCRETE UTILITY BOX (SIZE DETERMINED BY SIZE OF FULL-FLOW METER ASSYEMBLY)
9. PIPE SUPPORT
10. PE X GE STEEL PIPE SPOOL
11. GATE VALVES WITH LOCK AND CHAIN
12. SLEEVE COUPLING WITH M-11 RESTRAINT
13. LADDER WITH LADDER-UP
14. FLG X GE STEEL PIPE SPOOL
15. 12" X 12" OPENING FOR DRAINAGE

NOTES

1. GATE VALVE WILL BE INSTALLED BY CUSTOMERS AS PER FIRE UNDERWRITERS REGULATIONS.
2. MOST ITEMS ARE SIZED ACCORDING TO SIZE OF FULL-FLOW METER BEING INSTALLED.
3. AN OPERATING VALVE IS REQUIRED WHEN FULL FLOW-METER ASSEMBLY IS INSTALLED AWAY FROM MAIN WHERE ACCESS TO THE MAIN IS RESTRICTED OR AS REQUIRED BY DISTRICT ENGINEER.
4. ALL BURIED VALVES AND FITTINGS TO BE WRAPPED IN PLASTIC AND ALL NUTS AND BOLTS TO BE 316 S.S. WITH ANTI GALLING LUBRICANT.
5. CUT 8" METER READ HOLE IN PARKWAY COVER ONLY.
6. ON 3 PIECE COVERS, MIDDLE COVER SHALL BE REINFORCED TO PREVENT FROM BUCKLING.
7. ALL BENDS SHALL HAVE WELDED STEEL FITTINGS WITH THRUST BLOCKS.
8. ALL FULL-FLOW METER ASSEMBLIES ARE TO BE PLACED BELOW FINISH GRADE IN A VAULT AND WITHIN THE PUBLIC RIGHT-OF-WAY.
9. ALL VAULTS OVER 4' DEEP ARE REQUIRED TO HAVE ACCESS LADDERS WITH LADDER-UP.
10. BY-PASS TO BE HALF THE DIAMETER OF THE MAIN SERVICE IN INCREMENTS OF 2", 4", AND 6".
11. ADDITIONAL VALVE REQUIRED IF DOMESTIC SERVICE IS TAKEN FROM LATERAL OR IF VALVE AT MAIN CONNECTION IS NOT EASILY ACCESSED.

VAULT SIZE (INSIDE DIMENSIONS IN INCHES)				3 PIECE COVER (INCHES)	A (INCHES)	B (INCHES)	C (INCHES)
OC SIZE	LENGTH	WIDTH	HEIGHT				
4	96	72	60	31.7 x 71	9	42	30
6	120	96	72	39.7 x 95	14	54	38
8	168	84	84	55.7 x 83	17	48	36
10	168	96	96	55.7 x 95	17.5	54	38

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

4", 6", 8", OR 10" FULL-FLOW METER ASSEMBLY (FIREFLOW & DOMESTIC) FOR STEEL PIPE

DWG. NO. W-11

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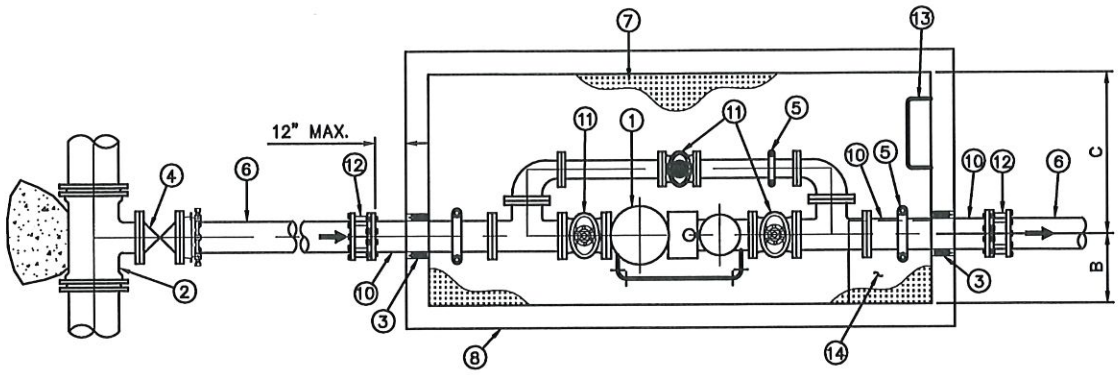
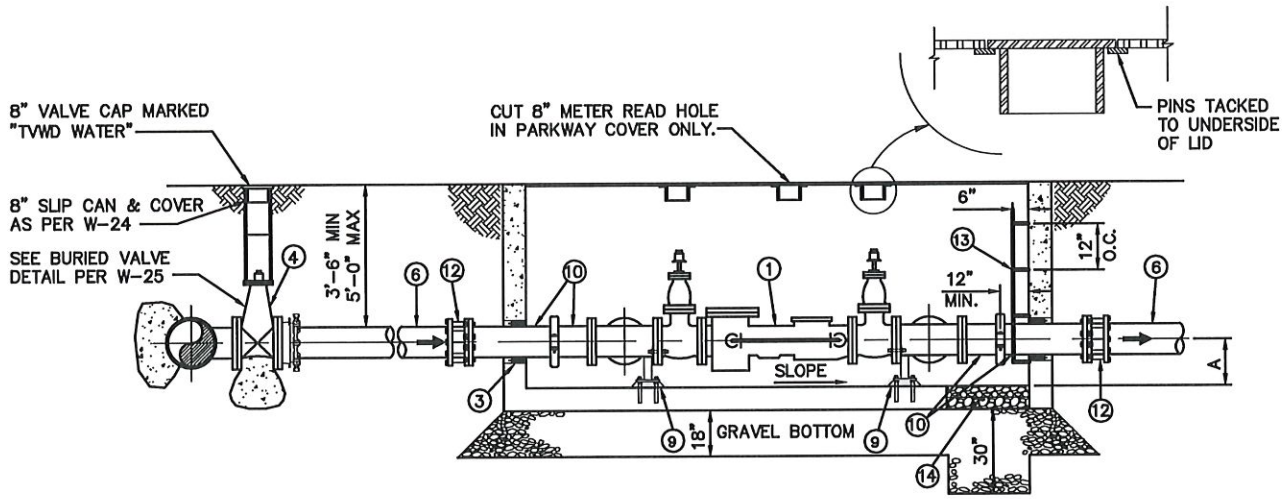


PLAN



ELEVATION

LEGEND

1. TVWD APPROVED FULL-FLOW METER ASSEMBLY
2. MJ X MJ X FLG TEE
3. LINK SEAL OR A-LOK TYPE GASKET
4. FLG X FLG RESILIENT WEDGE VALVE
5. VICTAULIC COUPLING
6. PVC (C-900, CL 200 MIN)
7. GALVANIZED VAULT COVER (TRAFFIC OR PARKWAY)
8. CONCRETE UTILITY BOX (SIZE DETERMINED BY SIZE OF FULL-FLOW METER ASSYEMBLY)
9. PIPE SUPPORT
10. FLG X GE DI PIPE SPOOL
11. GATE VALVES WITH LOCK AND CHAIN
12. RESTRAINED FLANGED COUPLING ADAPTER
13. LADDER WITH LADDER-UP
14. 12" X 12" OPENING FOR DRAINAGE

NOTES

1. GATE VALVE WILL BE INSTALLED BY CUSTOMERS AS PER FIRE UNDERWRITERS REGULATIONS.
2. MOST ITEMS ARE SIZED ACCORDING TO SIZE OF FULL-FLOW METER BEING INSTALLED.
3. AN OPERATING VALVE IS REQUIRED WHEN FULL FLOW-METER ASSEMBLY IS INSTALLED AWAY FROM MAIN WHERE ACCESS TO THE MAIN IS RESTRICTED OR AS REQUIRED BY DISTRICT ENGINEER.
4. ALL BURIED VALVES AND FITTINGS TO BE WRAPPED IN PLASTIC AND ALL NUTS AND BOLTS TO BE 316 S.S. WITH ANTI GALLING LUBRICANT.
5. CUT 8" METER READ HOLE IN PARKWAY COVER ONLY.
6. ON 3 PIECE COVERS, MIDDLE COVER SHALL BE REINFORCED TO PREVENT FROM BUCKLING.
7. ALL BENDS REQUIRE RESTRAINED MECHANICAL JOINTS WITH THRUST BLOCKS.
8. ALL FULL-FLOW METER ASSEMBLIES ARE TO BE PLACED BELOW FINISH GRADE IN A VAULT AND WITHIN THE PUBLIC RIGHT-OF-WAY.
9. ALL VAULTS OVER 4' DEEP ARE REQUIRED TO HAVE ACCESS LADDERS WITH LADDER-UP.
10. BY-PASS TO BE HALF THE DIAMETER OF THE MAIN SERVICE IN INCREMENTS OF 2", 4", AND 6".
11. ADDITIONAL VALVE REQUIRED IF DOMESTIC SERVICE IS TAKEN FROM LATERAL OR IF VALVE AT MAIN CONNECTION IS NOT EASILY ACCESSED.

VAULT SIZE (INSIDE DIMENSIONS IN INCHES)				3 PIECE COVER (INCHES)	A (INCHES)	B (INCHES)	C (INCHES)
OC SIZE	LENGTH	WIDTH	HEIGHT				
4	96	72	60	31.7 x 71	9	42	30
6	120	96	72	39.7 x 95	14	54	38
8	168	84	84	55.7 x 83	17	48	36
10	168	96	96	55.7 x 95	17.5	54	38

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

4", 6", 8", OR 10" FULL-FLOW METER ASSEMBLY (FIREFLOW & DOMESTIC) FOR PVC PIPE

DWG. NO. W-12

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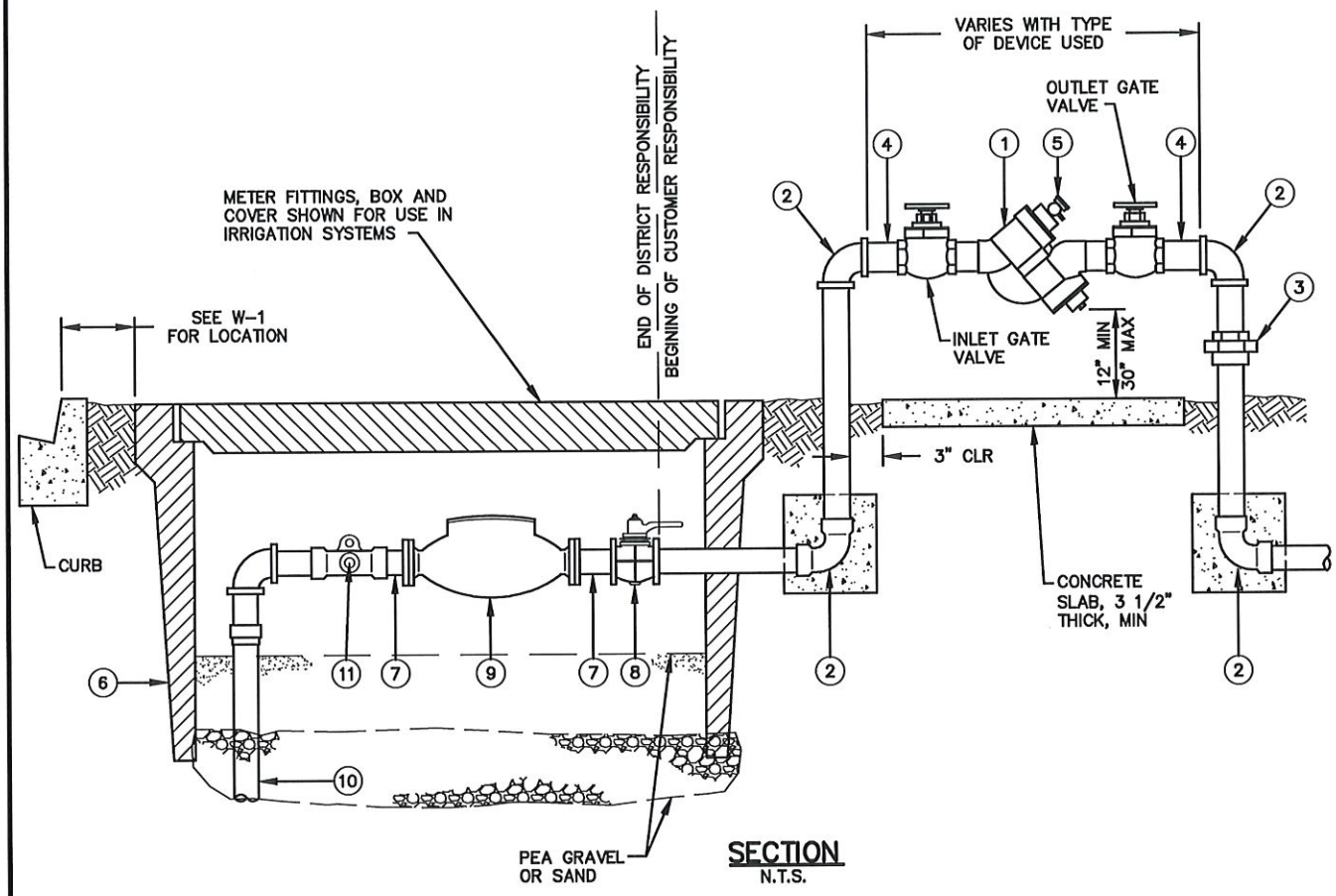

SECTION
N.T.S.

MATERIALS:

1. BACKFLOW PREVENTION DEVICE
2. 90° ELBOW WITH THRUST BLOCK
3. COPPER UNION (THREADED UNION RECOMMENDED FOR REMOVAL AND REPAIR OF DEVICE)
4. NIPPLE, VARIES IN LENGTH
5. TEST COCK (2 REQUIRED)
6. CARSON INDUSTRIES METER BOX WITH COVER LID, AND WATER METER READER MODEL 1324 OR 1730 TO BE PROVIDED BY CONTRACTOR
7. BRASS METER TAILS WITH GASKETS
8. CUSTOMER SERVICE VALVE, BRASS BALL VALVE TO BE PROVIDED BY CONTRACTOR
9. WATER METER TO BE PROVIDED BY TVWD
10. 1-1/2" OR 2" COPPER TUBE
11. BRASS SERVICE STOP

NOTES:

1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL BE AS CLOSE TO THE WATER METER AS POSSIBLE.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. TYPE OF BACKFLOW PREVENTION DEVICE SHALL BE BASED ON THE DEGREE OF HAZARD.
6. APPROPRIATE TEST COCKS SHALL BE IN PLACE AT ALL TIMES.
7. DISTRICT SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
8. CONCRETE PAD SHALL BE A MINIMUM OF 18" WIDE.
9. REFER TO STANDARD DRAWINGS FOR INSTALLATION OF WATER METER & SERVICE.
10. PIPING MATERIAL SMALL BE RED BRASS OR "L" HARD COPPER, PIPING INSTALLATION SHALL BE PER CURRENT UNIFORM PLUMBING CODE, WITH WAX TAPE WRAPPED JOINTS (BELOW GROUND).
11. ALTHOUGH THE DISTRICT REQUIRES THE USE OF RED BRASS OR HARD COPPER PIPING, AGRICULTURAL SERVICES IN NON TRAFFIC AREAS MAY USE SCHEDULE 80 PVC PIPING MATERIALS WITH PRIOR APPROVAL OF THE DISTRICT.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS
BACKFLOW PREVENTION DEVICE 1-1/2" AND 2"

DWG. NO. W-13

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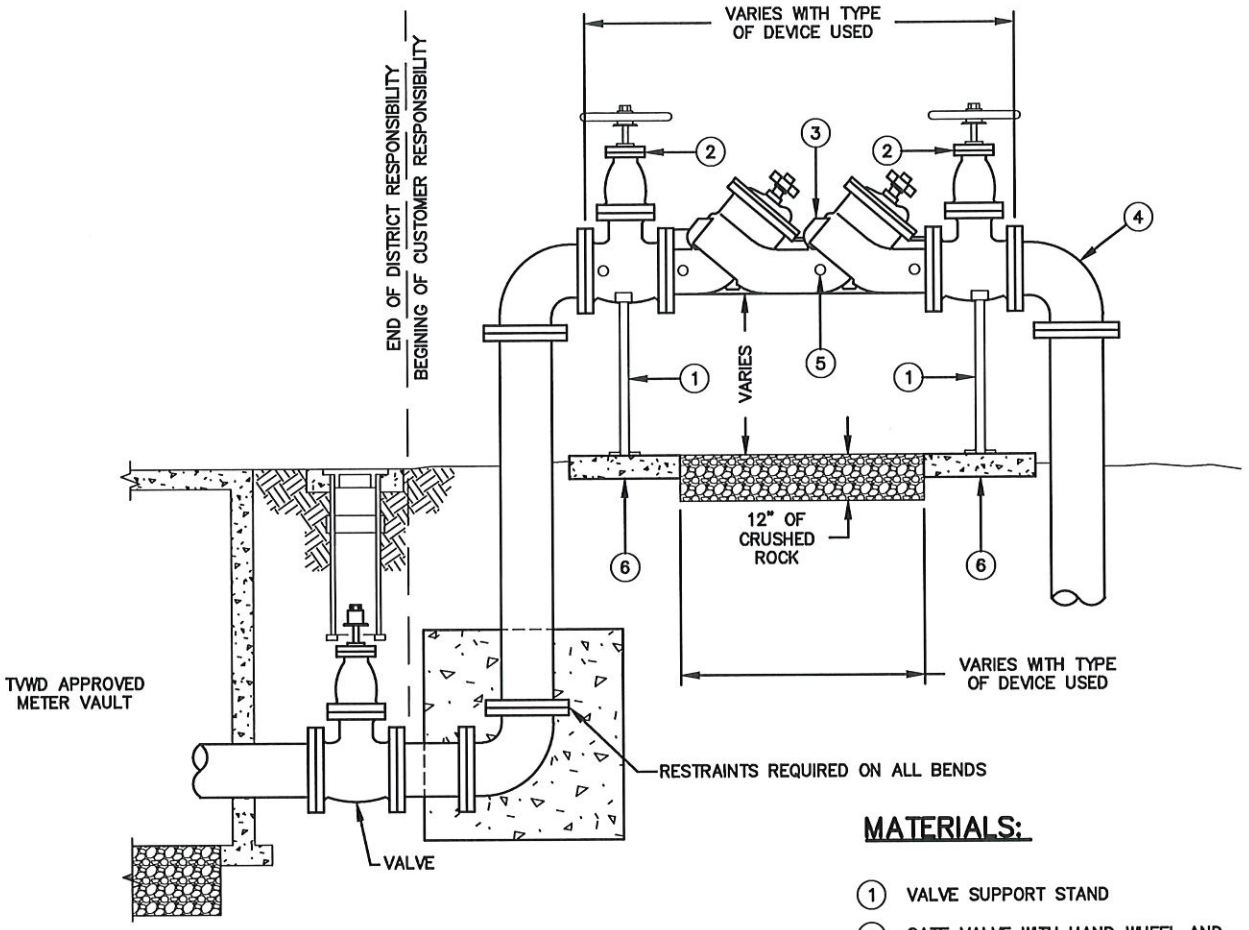
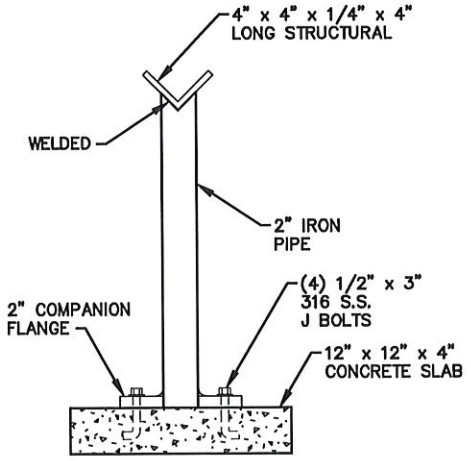


MATERIALS:

1. VALVE SUPPORT STAND
2. GATE VALVE WITH HAND WHEEL AND CHAINED LOCKS
3. BACKFLOW PREVENTION DEVICE
4. 90° DUCTILE IRON ELBOW
5. TEST COCK (4 REQUIRED)
6. CONCRETE PAD, 12" x 12" x 4" WITH WIRE MESH



VALVE SUPPORT DETAIL
N.T.S.

NOTES:

1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL SET AS CLOSE TO THE WATER METER AS POSSIBLE.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST ON FILE WITH THE DISTRICT.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. TYPE OF BACKFLOW PREVENTION DEVICE SHALL BE BASED ON THE DEGREE OF HAZARD.
6. APPROPRIATE TEST COCKS SMALL BE IN PLACE AT ALL TIMES.
7. DISTRICT SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
8. REFER TO STANDARD DRAWINGS FOR INSTALLATION OF WATER METER & SERVICE.
9. ALL EXPOSED PIPE, FITTINGS, AND VALVES TO BE EPOXY COATED (TNEMEC OR EQUAL).
10. ALL PIPES AND FITTINGS SHALL BE RESTRAINED.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

BACKFLOW PREVENTION DEVICE 3" AND LARGER

DWG. NO. W-14

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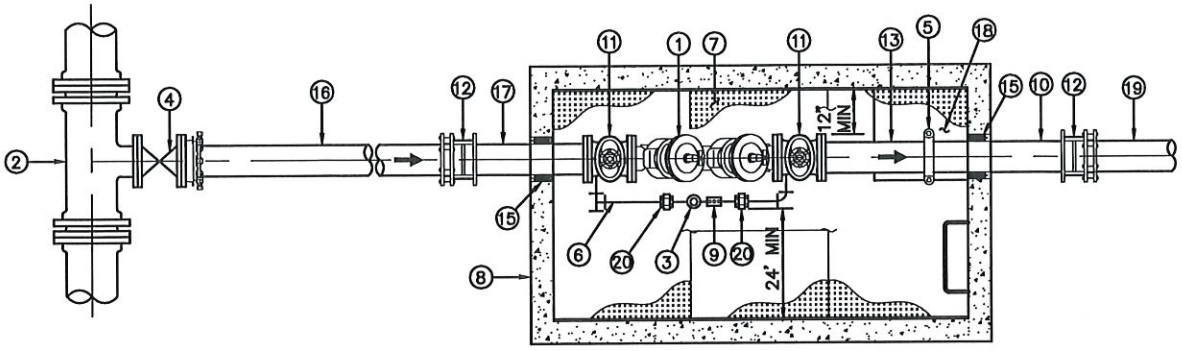
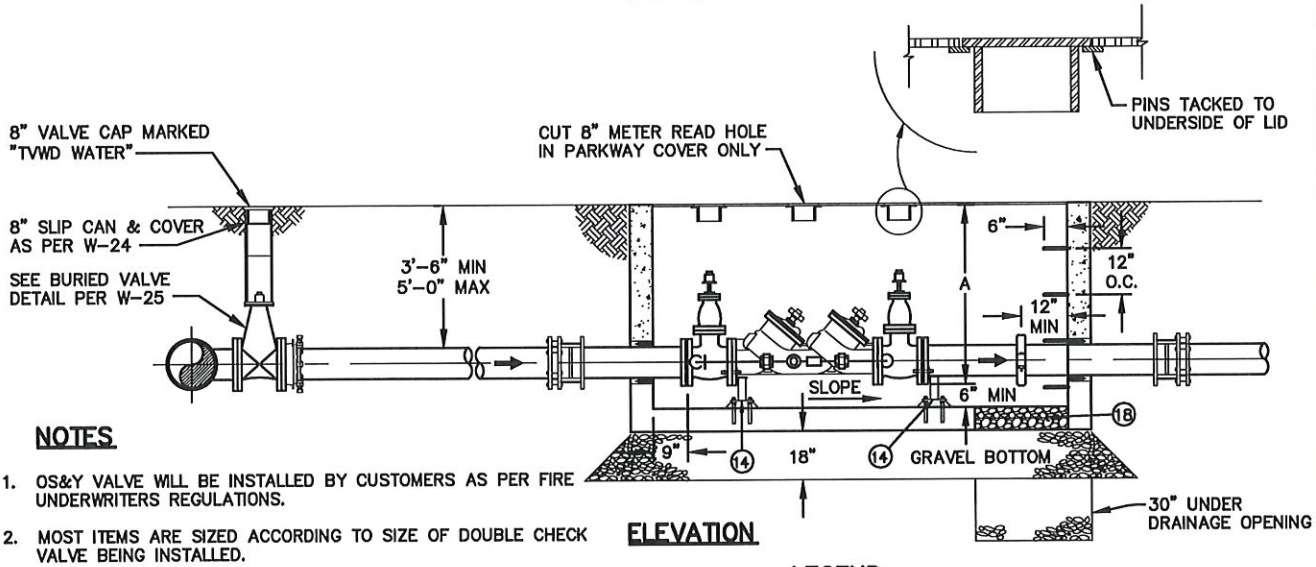


PLAN



ELEVATION

NOTES

1. OS&Y VALVE WILL BE INSTALLED BY CUSTOMERS AS PER FIRE UNDERWRITERS REGULATIONS.
2. MOST ITEMS ARE SIZED ACCORDING TO SIZE OF DOUBLE CHECK VALVE BEING INSTALLED.
3. AN OPERATING VALVE IS REQUIRED WHEN DOUBLE CHECK VALVE ASSEMBLY IS INSTALLED AWAY OR FROM MAIN WHERE ACCESS TO THE MAIN IS RESTRICTED.
4. ALL VALVES, FITTINGS AND PIPE INSIDE VAULT SHALL BE EPOXY COATED. ALL NUTS AND BOLTS SHALL BE 316 SS WITH ANTI-GALLING LUBRICANT.
5. CUT 8" METER READ HOLE IN PARKWAY COVER ONLY.
6. ON 3 PIECE COVERS, MIDDLE COVER SHOULD BE REINFORCED TO PREVENT FROM BUCKLING.
7. ALL VAULTS OVER 4' DEEP ARE REQUIRED TO HAVE ACCESS LADDERS WITH LADDER-UP.
8. ALL BENDS REQUIRE RESTRAINED MECHANICAL JOINTS WITH THRUST BLOCKS.
9. APROVED DOUBLE CHECK VALVE ASSEMBLY SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE USER'S CONNECTION AND SHALL BE INSTALLED BELOW GROUND IF POSSIBLE AND IN A MANNER WHERE IT IS READILY ACCESSIBLE FOR TESTING AND MAINTENANCE. BELOW GROUND DOUBLE CHECK VALVE ASSEMBLIES SHALL BE IN A VAULT.
10. VALVE REQUIRED IF DOMESTIC SERVICE IS TAKEN FROM LATERAL OR IF VALVE AT MAIN CONNECTION IS NOT EASILY ACCESSED.

VAULT SIZE (INSIDE DIMENSIONS IN INCHES)				COVER SIZE (INCHES)	# OF COVER PIECES	A (INCHES)
OC SIZE	LENGTH	WIDTH	HEIGHT			
4	96	54	33	47.5 x 53	2	26.36
6	108	57	42	36 x 56	3	35.50
8	120	60	53	40 x 59	3	47
10	132	63	63	44 x 62	3	57

LEGEND

1. TVWD APPROVED DOUBLE CHECK VALVE ASSEMBLY
2. MJ X MJ X FLG DI TEE OR TAPPING SADDLE
3. TVWD 5/8" METER
4. FLANGED RESILIENT WEDGE VALVE
5. VICTAULIC COUPLING, OR APPROVED EQUAL
6. 1" BYPASS LINE
7. VAULT COVER (TRAFFIC OR PARKWAY)
8. CONCRETE UTILITY BOX (SIZE DETERMINED BY SIZE OF DOUBLE CHECK VALVE ASSEMBLY)
9. 1" BACKFLOW PREVENTION VALVE
10. PE X GE DI PIPE SPOOL
11. OS&Y VALVES
12. RESTRAINED FLANGED COUPLING ADAPTER
13. FLG x GE DI PIPE SPOOL
14. PIPE SUPPORT
15. LINK SEAL OR APPROVED EQUAL
16. FLG X FLG DI PIPE SPOOL
17. FLG x PE DI PIPE SPOOL
18. 12"x 12" OPENING FOR DRAINAGE
19. FLANGED PIPE SPOOL
20. 1" BALL VALVE

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

4", 6", 8", OR 10" DOUBLE CHECK VALVE ASSEMBLY FOR PVC PIPE

DWG. NO. W-15

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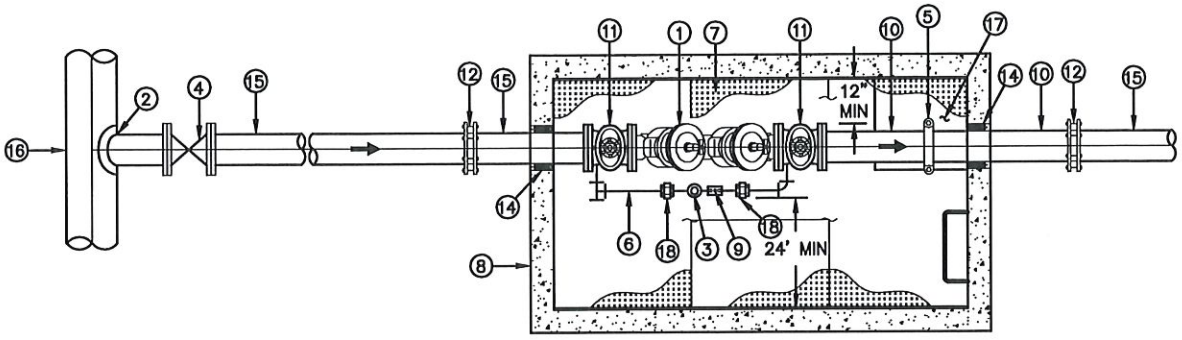
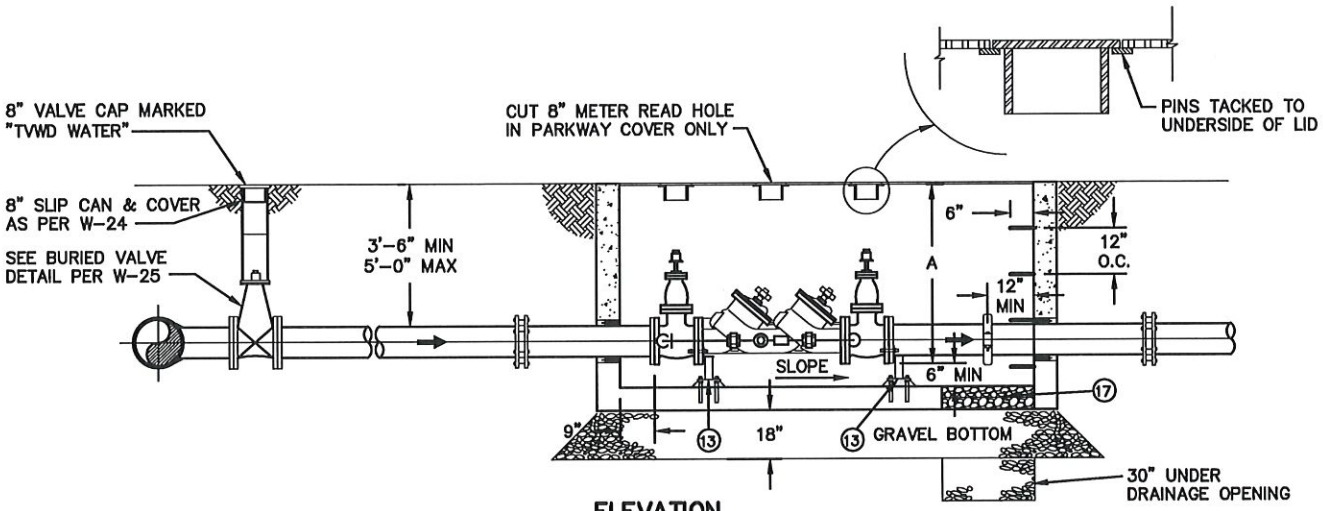


PLAN



ELEVATION

NOTES

1. OS&Y VALVE WILL BE INSTALLED BY CUSTOMERS AS PER FIRE UNDERWRITERS REGULATIONS.
2. MOST ITEMS ARE SIZED ACCORDING TO SIZE OF DOUBLE CHECK VALVE BEING INSTALLED.
3. AN OPERATING VALVE IS REQUIRED WHEN DOUBLE CHECK VALVE ASSEMBLY IS INSTALLED AWAY FROM MAIN WHERE ACCESS TO THE MAIN IS RESTRICTED.
4. ALL VALVES, FITTINGS AND PIPES INSIDE VAULT SHALL BE EPOXY COATED. ALL NUTS AND BOLTS SHALL BE 316 SS WITH ANTI-GALLING LUBRICANT.
5. CUT 8" METER READ HOLE IN PARKWAY COVER ONLY.
6. ON 3 PIECE COVERS, MIDDLE COVER SHOULD BE REINFORCED TO PREVENT FROM BUCKLING.
7. ALL VAULTS OVER 4' DEEP ARE REQUIRED TO HAVE ACCESS LADDERS WITH LADDER-UP.
8. CML&C STEEL PIPE TO BE USED ON ALL VERTICAL RISERS WITH THRUST BLOCKS AND RESTRAINTS INSTALLED AT ALL BENDS.
9. APROVED DOUBLE CHECK VALVE ASSEMBLY SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE USER'S CONNECTION AND SHALL BE INSTALLED BELOW GROUND IF POSSIBLE AND IN A MANNER WHERE IT IS READILY ACCESSIBLE FOR TESTING AND MAINTENANCE. BELOW GROUND DOUBLE CHECK VALVE ASSEMBLIES SHALL BE IN A VAULT.
10. VALVE REQUIRED IF DOMESTIC SERVICE IS TAKEN FROM LATERAL OR IF VALVE AT MAIN CONNECTION IS NOT EASILY ACCESSED.

VAULT SIZE (INSIDE DIMENSIONS IN INCHES)				COVER SIZE (INCHES)	# OF COVER PIECES	A (INCHES)
OC SIZE	LENGTH	WIDTH	HEIGHT			
4	84	54	33	41.5 x 53	2	26.36
6	96	57	42	47.5 x 56	2	35.50
8	108	60	53	36 x 59	3	47
10	120	63	63	40 x 62	3	57

LEGEND

1. TVWD APPROVED DOUBLE CHECK VALVE ASSEMBLY
2. WELDED SADDLE OR FLANGED TEE
3. TVWD 5/8" METER
4. FLANGED RESILIENT WEDGE VALVE
5. VICTAULIC COUPLING, OR APPROVED EQUAL
6. 1" BYPASS LINE
7. GALVANIZED STEEL VAULT COVER (TRAFFIC OR PARKWAY)
8. CONCRETE UTILITY BOX (SIZE DETERMINED BY SIZE OF DOUBLE CHECK VALVE ASSEMBLY)
9. 1" BACKFLOW PREVENTION VALVE
10. PE X GE PIPE SPOOL
11. OS&Y VALVES WITH LOCK AND CHAIN
12. STEEL FLEXIBLE COUPLING WITH RESTRAINTS
13. PIPE SUPPORT WITH 316 SS ANCHOR BOLTS AND NUTS
14. LINK SEAL OR APPROVED EQUAL
15. FLG X PE PIPE SPOOL
16. STEEL PIPE MAIN
17. 12"x 12" OPENING FOR DRAINAGE
18. 1" BALL VALVE

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GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
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STANDARD DRAWINGS

4", 6", 8", OR 10" DOUBLE CHECK VALVE ASSEMBLY FOR STEEL PIPE

DWG. NO. W-16

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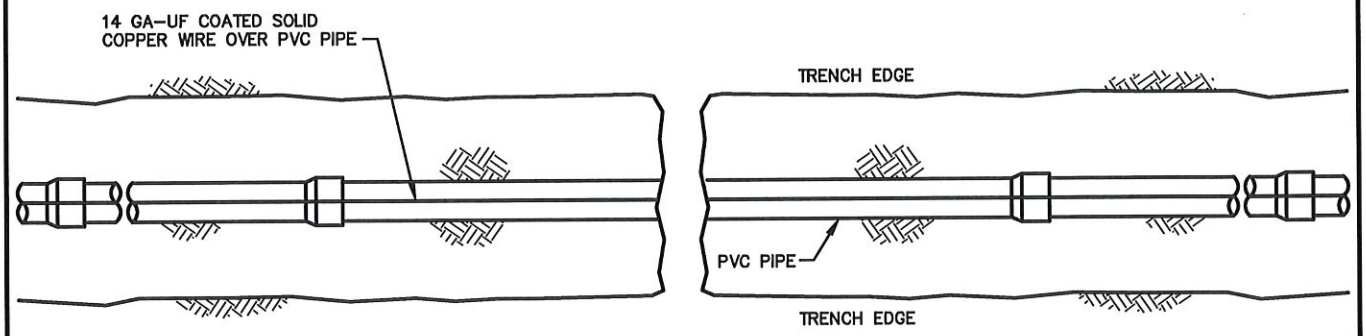
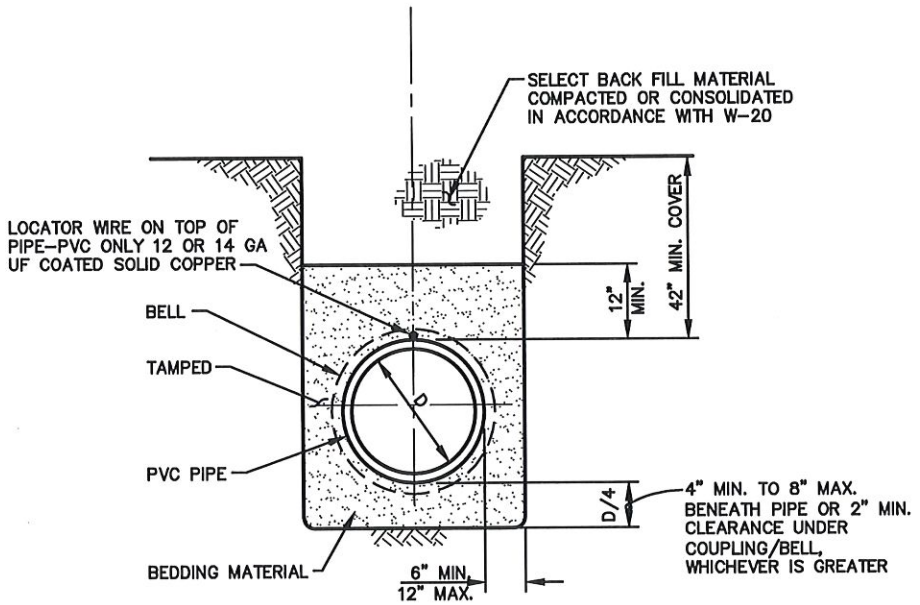


PVC–DIG OUT BELLS, LAY TO GRADED TRENCH BOTTOM

ELEVATION
NO SCALE



SECTION
NO SCALE

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STANDARD DRAWINGS

PVC PIPE INSTALLATION

DWG. NO. W–17

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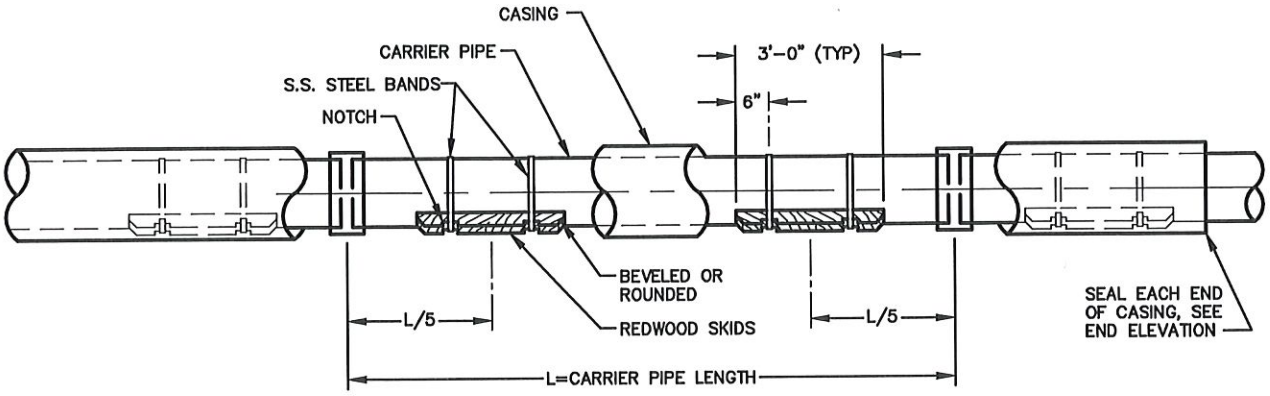

ELEVATION
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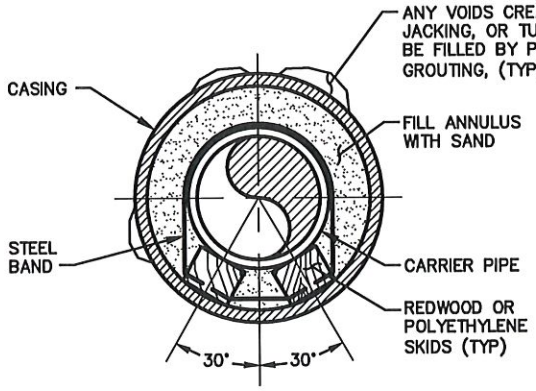

SECTION
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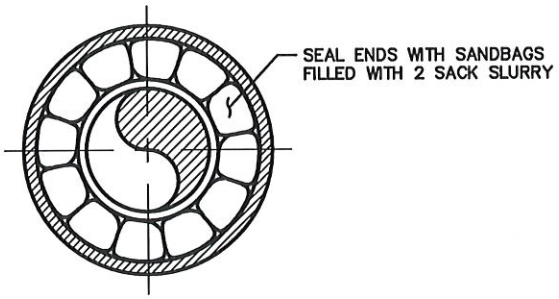

END ELEVATION
NO SCALE

CARRIER PIPE SIZE	CASING SIZE	CASING WALL THICKNESS	SKID SIZE
6"	14"	1/4"	3"X3"
8"	16"	3/8"	3"X3"
12"	24"	3/8"	4"X4"
16"	30"	1/2"	4"X4"
20"	40"	1/2"	6"X6"
24"	44"	1/2"	6"X6"
30"	54"	1/2"	6"X6"
36"	64"	5/8"	8"X8"

NOTES

1. CASING SHALL BE SMOOTH STEEL PIPE.
2. CARRIER PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. CARRIER PIPE SHALL BE TESTED BEFORE SEALING ENDS OF CASING.
4. SKIDS SHALL BE GREASED TO FACILITATE CARRIER PIPE INSTALLATION.
5. AS AN ALTERNATE TO REDWOOD SKIDS, CONTRACTOR MAY USE PREFABRICATED PLASTIC CASING SKIDS ATTACHED AROUND CARRIER PIPE.
6. ALTERNATE FOR END SEAL IS A PULL-ON OR WRAP AROUND RUBBER SEAL.
7. WEEP HOLES SHALL BE PLACED IN THE BOTTOMS OF SAND BAGS.
8. USE OF POLYETHYLENE SKIDS REQUIRES 4 ON BOTTOM WITH 2 ON TOP.

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STANDARD DRAWINGS

STEEL CASING FOR CML&C PVC PIPE

DWG. NO. W-18

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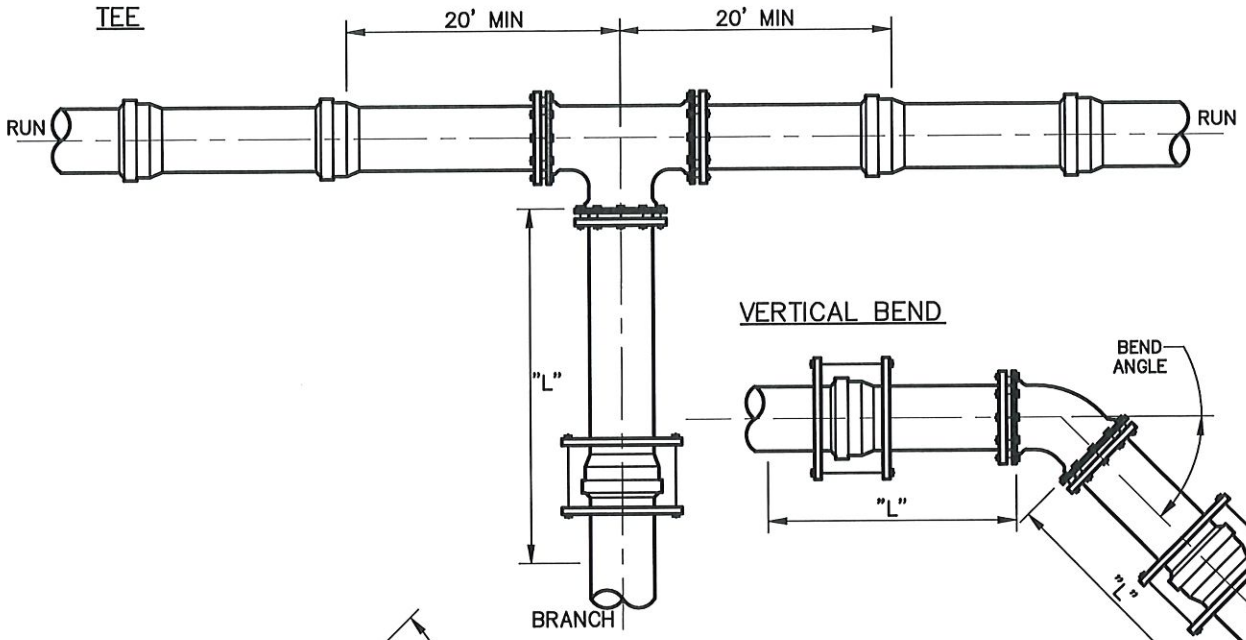
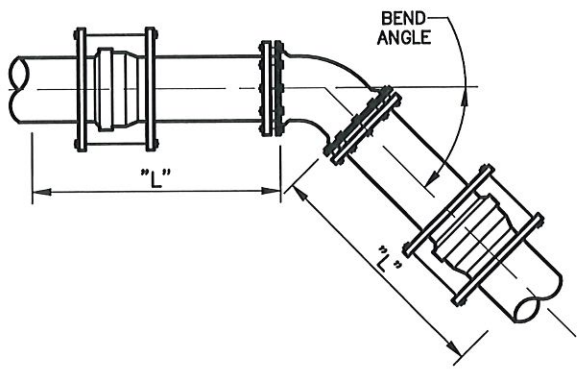
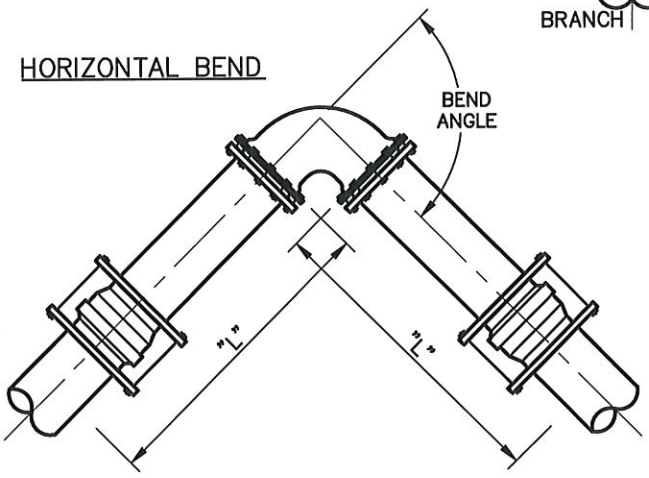
TEE



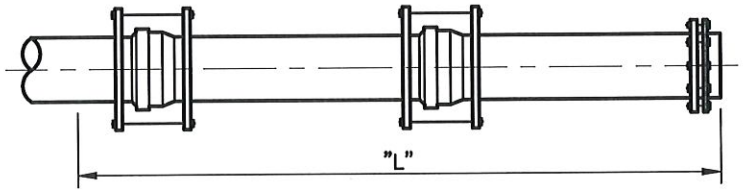
VERTICAL BEND



HORIZONTAL BEND



DEAD END/EACH SIDE OF VALVE TEE



NOTES:

1. ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED, AND LABELED ON PROFILE OF CONSTRUCTION DRAWINGS.
2. FOR TEE, RESTRAIN BOTH RUN-SIDE JOINTS AND INSTALL A FULL LENGTH OF PIPE ON EACH SIDE OF BRANCH.
3. RESTRAINED LENGTH CALCULATION SHALL USE FORTY (40) INCHES MINIMUM DEPTH OF COVER.
4. RESTRAINED LENGTH CALCULATION SHALL USE A MINIMUM SAFETY FACTOR OF 2.0
5. RESTRAINED LENGTH CALCULATION SHALL USE SOIL TYPE ML (INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS) PER UNITED SOIL CLASSIFICATION ASTM D-2487.
   A. NO USE OF PHI = 0 PRINCIPAL.
   B. MUST PROVIDE RESTRAINED CALCULATION BASED ON GEOTECHNICAL REPORT.
6. PIPE BEDDING PER TVWD STANDARD DRAWINGS.
7. A MINIMUM TEST PRESSURE OF 250 PSI. SHALL BE USED TO CALCULATE LENGTH "L"
8. TRENCH TYPE 4 SHALL BE USED FOR DETERMINING RESTRAINED LENGTH.
9. JOINT RESTRAINT SHALL BE EBAA IRON, OR APPROVED EQUAL. RESTRAINED LENGTH SHALL BE DETERMINED BY THE DESIGN ENGINEER BASED ON MANUFACTURERS RECOMENDATIONS AND APPROVED BY THE DISTRICT ENGINEER.
10. THRUST BLOCKS ARE REQUIRED ON ALL BENDS, TEES, AND DEAD ENDS PER W-22.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
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STANDARD DRAWINGS

STANDARD RESTRAINT, TEE, DEAD END, BEND FOR PVC C-900 & C-905

DWG. NO. W-19

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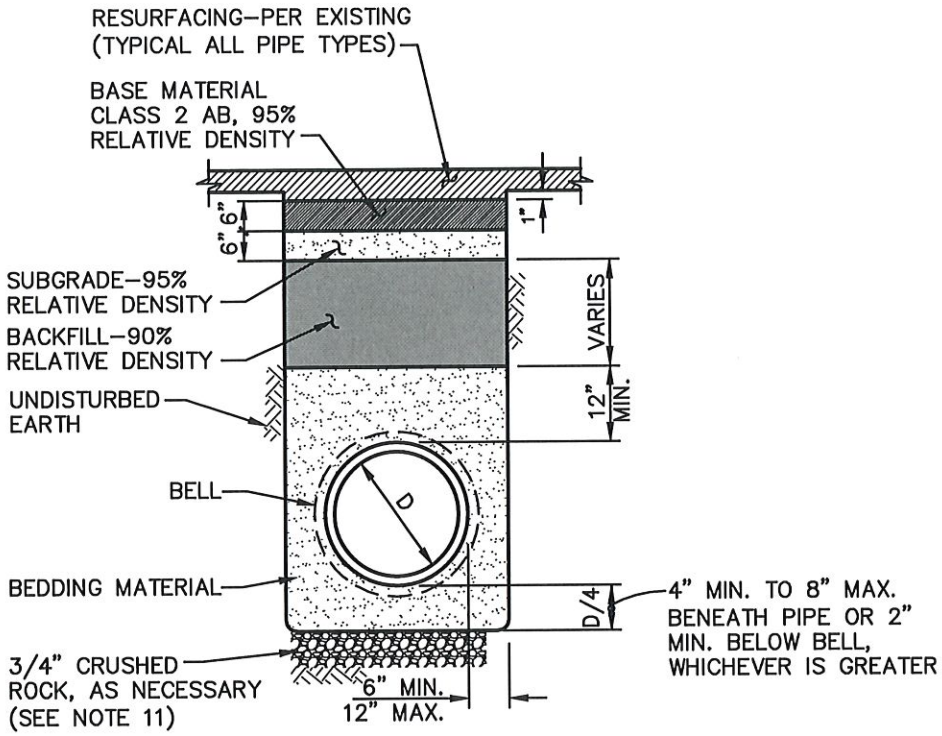

STANDARD INSTALLATION
PVC PIPE

NOTES

1. CONTRACTOR SHALL DETERMINE DEPTH AND LOCATION OF UNDERGROUND FACILITIES PRIOR TO TRENCHING.
2. ALL EXCAVATION, BACKFILL, DISPOSAL OF WASTE, AND OPERATIONS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
3. OPEN TRENCH AT ANY ONE TIME SHALL BE LIMITED TO 1,000 FT. ALONG ROAD RIGHT–OF–WAY AND TO 1/2 MILE (1–1/2 MILES FOR 14" OR LARGER PIPE) IN FIELDS, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER.
4. PIPE SHALL BE HANDLED SO AS TO PROTECT THE PIPE JOINTS, AND COATING, AND CAREFULLY BEDDED SO AS TO PROVIDE CONTINUOUS SEARING AND PREVENT UNEVEN SETTLEMENT.
5. COVER OVER PIPE SHALL BE 3'–6" (MIN.) TO 9'–0" (MAX.) UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. BEDDING MATERIAL SHALL CONSIST OF SAND, GRAVEL, CRUSHED AGGREGATE OR NATIVE FREE–DRAINING GRANULAR MATERIAL HAVING A SAND EQUIVALENT OF NOT LESS THAN 30 OR HAVING A PERMEABILITY GREATER THAN 35mm PER HOUR (1.4IN/HR), OR MATERIAL APPROVED BY THE ENGINEER.
7. BEDDING MATERIAL SHALL BE DENSIFIED BY JETTING (NOT FLOODING) TO 90% RELATIVE COMPACTION PER ASTM 1557.
8. BACKFILL MATERIAL MAY CONSIST OF NATIVE EXCAVATED SOIL PROVIDED THAT ALL ORGANIC MATERIAL, RUBBISH, DEBRIS AND OTHER OBJECTIONABLE MATERIALS ARE FIRST REMOVED. ROCKS GREATER THAN SIX (6) INCHES IN DIAMETER ARE NOT PERMITTED.
9. BACKFILL SHALL BE PLACED IN LIFTS NO GREATER THAN ONE (1) FOOT THICK EXCEPT IN THE TOP ONE (1) FOOT OF TRENCH WHERE THE MAXIMUM LIFT THICKNESS IS SIX (6) INCHES.
10. BACKFILL SHALL BE MECHANICALLY DENSIFIED WITH VIBRATORY EQUIPMENT TO A MINIMUM RELATIVE COMPACTION OF 90% PER ASTM 1557. WATER DENSIFICATION OF BACKFILL IS NOT ALLOWED, ROLLING EQUIPMENT SHALL NOT BE USED TO DENSIFY SOIL WITHIN 18 INCHES OF THE TOP OF PIPE.
11. WHEN FIRM FOUNDATION IS NOT ENCOUNTERED, DUE TO SOFT, SPONGY OR OTHERWISE UNSUITABLE MATERIAL, UNSUITABLE MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DISTRICT, AND RESULTING EXCAVATION SHALL BE BACKFILLED WITH ¾" CRUSHED ROCK.

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GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
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STANDARD DRAWINGS

EXCAVATION & BACKFILL

DWG. NO. W–20

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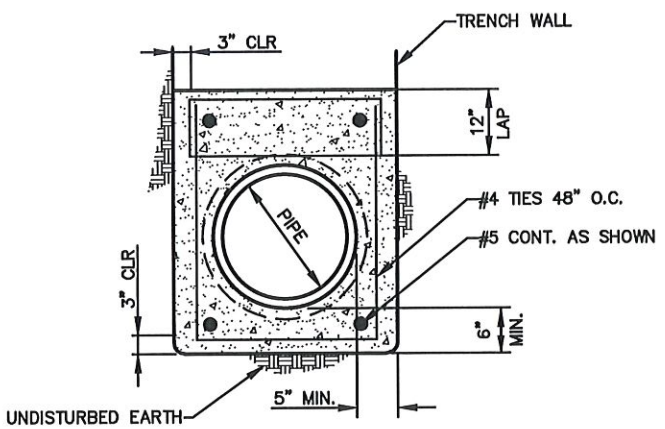
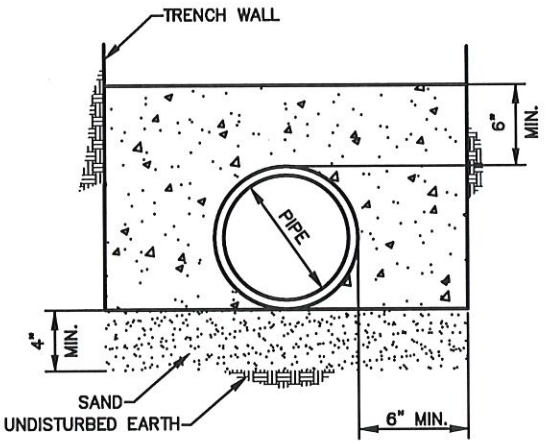
NOTES

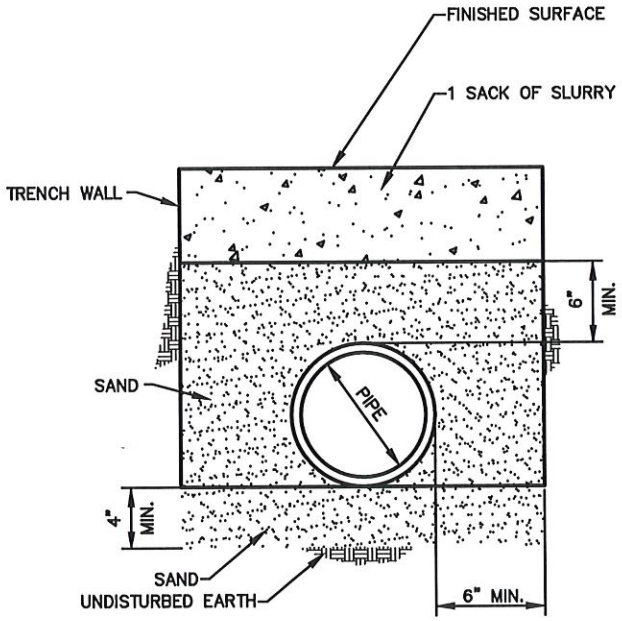
1. USE CONCRETE ENCASEMENT NO. 1 UNLESS OTHERWISE APPROVED BY THE ENGINEER OR SHOWN ON THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. ALL CONCRETE ENCASEMENT SHALL BE CLASS 'C' CONCRETE (4 1/2" SACK MIX)
3. CONCRETE CAP SHALL BE USED IN PAVED AREAS WHEN A 42" MIN. COVER CANNOT BE MAINTAINED. MIN. COVER WITH CONCRETE CAP SHALL BE 30".
4. CONCRETE ENCASEMENT NO. 2 SHALL BE USED IN UNPAVED AREAS WHEN A 42" MIN. COVER CANNOT BE MAINTAINED.



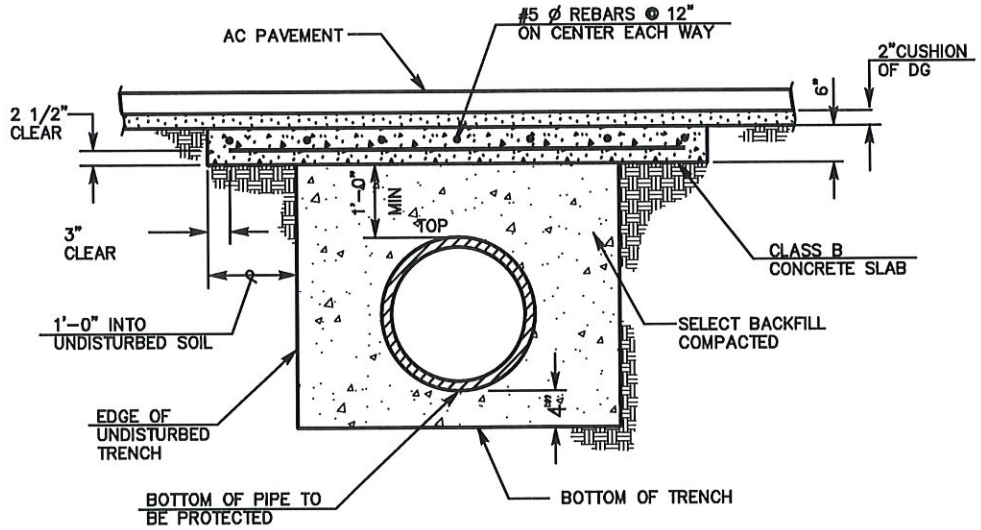
CONCRETE ENCASEMENT NO. 1



CONCRETE ENCASEMENT NO. 2



SLURRY BACKFILL



CONCRETE CAP

REVISION	DATE	BY	DESCRIPTION

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DISTRICT ENGINEER

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Established in 1965

STANDARD DRAWINGS

CONCRETE ENCASEMENT AND CONCRETE CAP

DWG. NO. W-21

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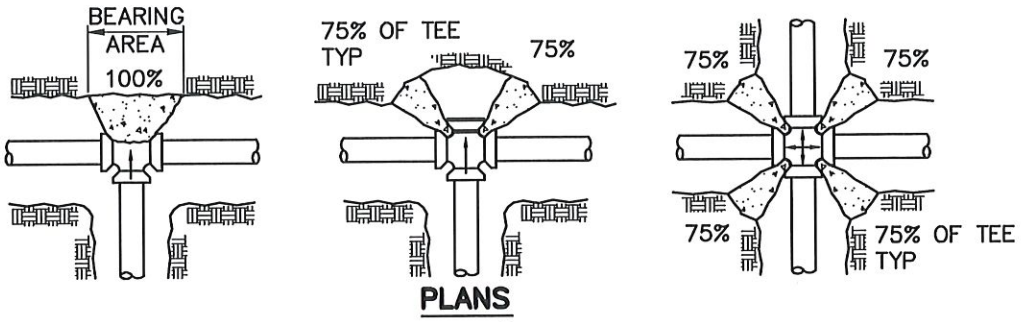
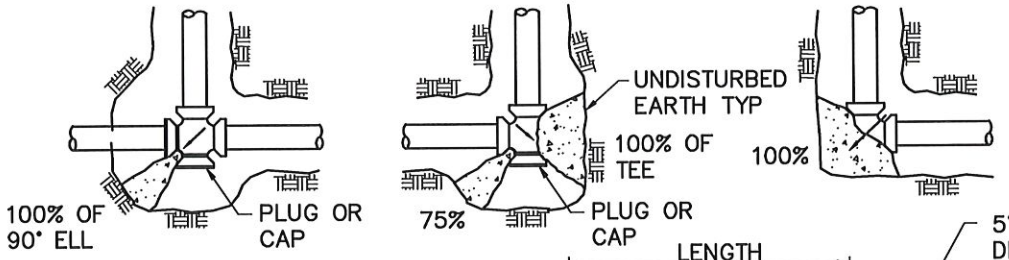
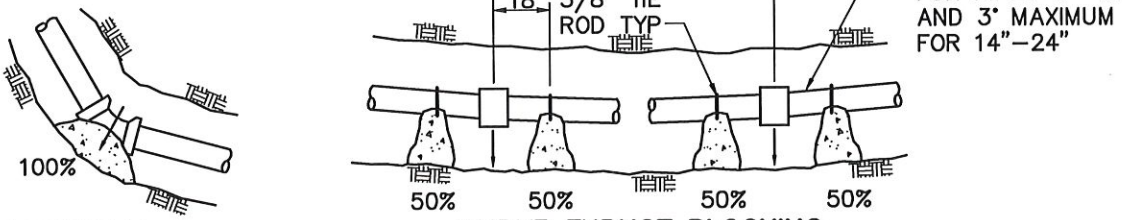
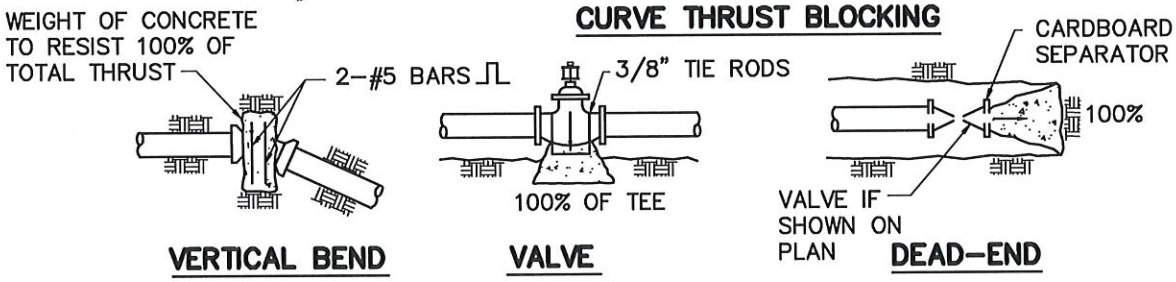


PLANS





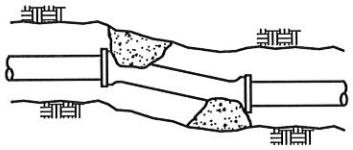
CURVE THRUST BLOCKING



VERTICAL BEND

VALVE

DEAD–END



DEFLECTION

MINIMUM BEARING AREAS IN SQUARE FEET PER 100 PSI OF PRESSURE					
PIPE SIZE	DEAD END OR TEE	90° ELBOW	45° ELBOW	22–1/2° ELBOW	11–1/4° ELBOW
6	3.7	5.3	2.9	1.5	0.7
8	6.4	9.1	4.9	2.5	1.3
10	9.7	13.7	7.4	3.8	1.9
12	13.7	19.4	10.5	5.3	2.7
14	18.4	26.0	14.1	7.2	3.6
16	23.8	33.6	18.2	9.3	4.7
18	24.9	42.2	22.9	11.7	5.9
20	36.6	51.8	28.0	14.3	7.2
24	52.3	73.9	40.0	20.4	10.2
30	80.4	113.7	61.6	31.4	15.8

NOTES:

1. IN USING THE ABOVE TABLES, USE THE MAXIMUM INTERNAL PRESSURE ANTICIPATED (i.e. HYDROSTATIC TEST PRESSURE, POSSIBLE SURGE PRESSURE DUE TO PUMP SHUT–OFF, ETC.)
2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL. IN THE ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 P.S.F.
3. ARROWS (⟶) INDICATE THRUST DIRECTION
4. FIGURE (100%) AT THRUST BLOCK INDICATES PERCENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.
5. CONC. FOR THRUST BLOCKS TO BE 2000 P.S.I.
6. CONCRETE THRUST BLOCK TO BE POURED AGAINST UNDISTURED EARTH.
7. THRUST BLOCKS ARE TO BE USED IN ADDITION TO RESTRINED JOINTS PER W–19

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
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STANDARD DRAWINGS

THRUST BLOCK DETAILS

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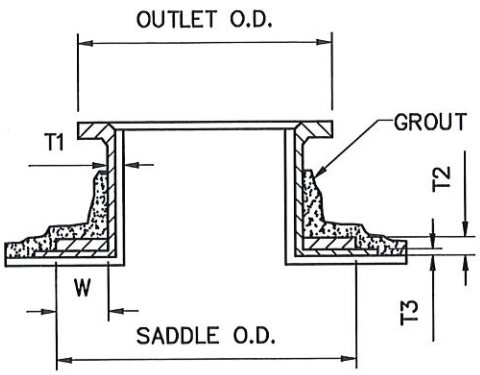
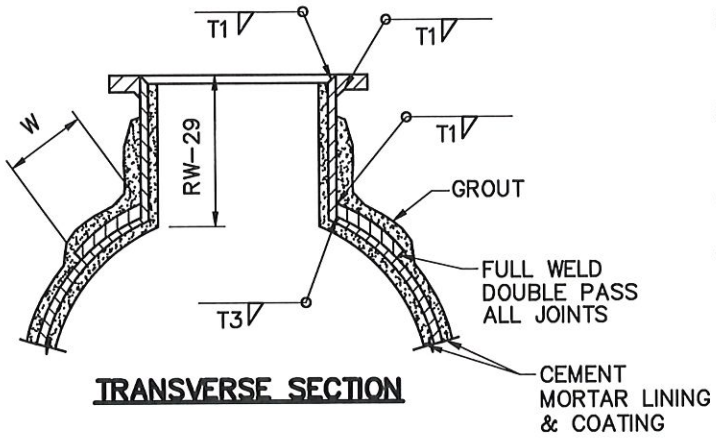


OUTLET DIM.				SADDLE SIZE		SADDLE O.D.	
PIPE SIZE	PIPE O.D.	T3 GAGE	T1 MIN.	LOW PRESS T2=W	HIGH PRESS T2=W	LOW PRESS	HIGH PRESS
4"	4 1/2"	10–12	0.237"	5/16"=2"	5/16"=4 1/2"	10"	13"
8"	8 5/8"	10–12	0.280"	3/8"=3"	3/8"=5"	13"	17"
8"	8 5/8"	10–12	0.322"	3/8"=4"	3/8"=8"	17"	20"
10"	10 3/4"	8–10–12	0.365"	1/2"=5"	1/2"=6"	21"	23"
12"	12 3/4"	10	0.375"	1/2"=6"	1/2"=8"	25"	28"
14"	15 1/4"	10	0.375"	1/2"=7"	1/2"=8"	28"	30"
16"	17 3/8"	10	0.375"	5/8"=7"	5/8"=9"	30"	36"
18"	19 25/32"	10	0.375"	5/8"=8"	5/8"=11"	36"	46"
20"	21 25/32"	10	0.375"	5/8"=9"	5/8"=13"	40"	48"
24"	25 3/4"	10	0.375"	3/4"=10"	3/4"=14"	48"	52"

LONGITUDINAL SECTION

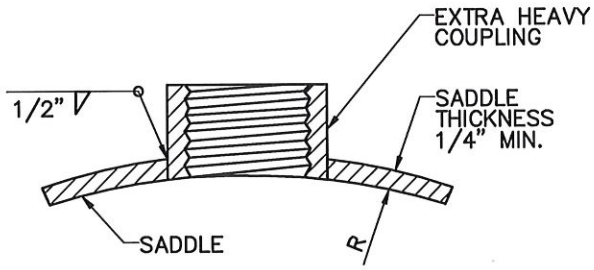


TRANSVERSE SECTION

NOTES:

1. OUTLETS ARE DESIGNED FOR A MAX. TEST PRESS. OF 225 PSI. LOW PRESS, 300 PSI. HIGH PRESS.
2. FABRICATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE LATEST REVISION OF THE API–ASME CODE FOR UNFIRED PRESSURE VESSELS.
3. ALL OUTLETS SHALL BE CEMENT MORTAR LINED AND COATED, ALL OTHER BARE METAL SHALL BE WRAPPED WITH TWO LAYERS OF WAX TAPE.
4. BORE ALL HOLES 3/16" OR 0.187" LARGER THAN O.D. OF PIPE.
5. ALL SADDLES TO BE ROUND

TYPICAL SADDLE INSTALLATION



TRANSVERSE SECTION

SERVICE SADDLE OUTLETS HIGH AND LOW PRESS.		
COUPLING SIZE	SADDLE O.D.	SADDLE THICKNESS
1"	5"	1/4"
1–1/4"	5 1/4"	1/4"
1–1/2"	5 1/2"	1/4"
2"	6"	1/4"
2–1/2"	6 1/2"	1/4"

NOMINAL PIPE SIZE	R
6"	6 5/8"
8"	8 5/8"
12"	12 3/4"
16"	17 3/8"
20"	21 23/32
24"	25 3/4"

NOTES:

1. SADDLE CURVATURE TO BE SHOP FORMED TO MEET OUTSIDE STEEL DIA. OF PIPE.
2. AFTER SHOP SWLDING OF HALF COUPLING TO CURVED SADDLE, SHOP GRIND HALF COUPLING OT MEET DIA. OF PIPE.
3. UNLESS OTHERWISE SPECIFIED, ALL SADDLES TO BE 1/4" PLATE.
4. O.D. OF SADDLE TO BE FREE OF ALL BURRS & IRREGULARITIES.
5. ALL SADDLES TO BE ROUND.

SERVICE SADDLE INSTALLATION

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
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STANDARD DRAWINGS
WELD SADDLE AND SERVICE SADDLE

DWG. NO. W–23

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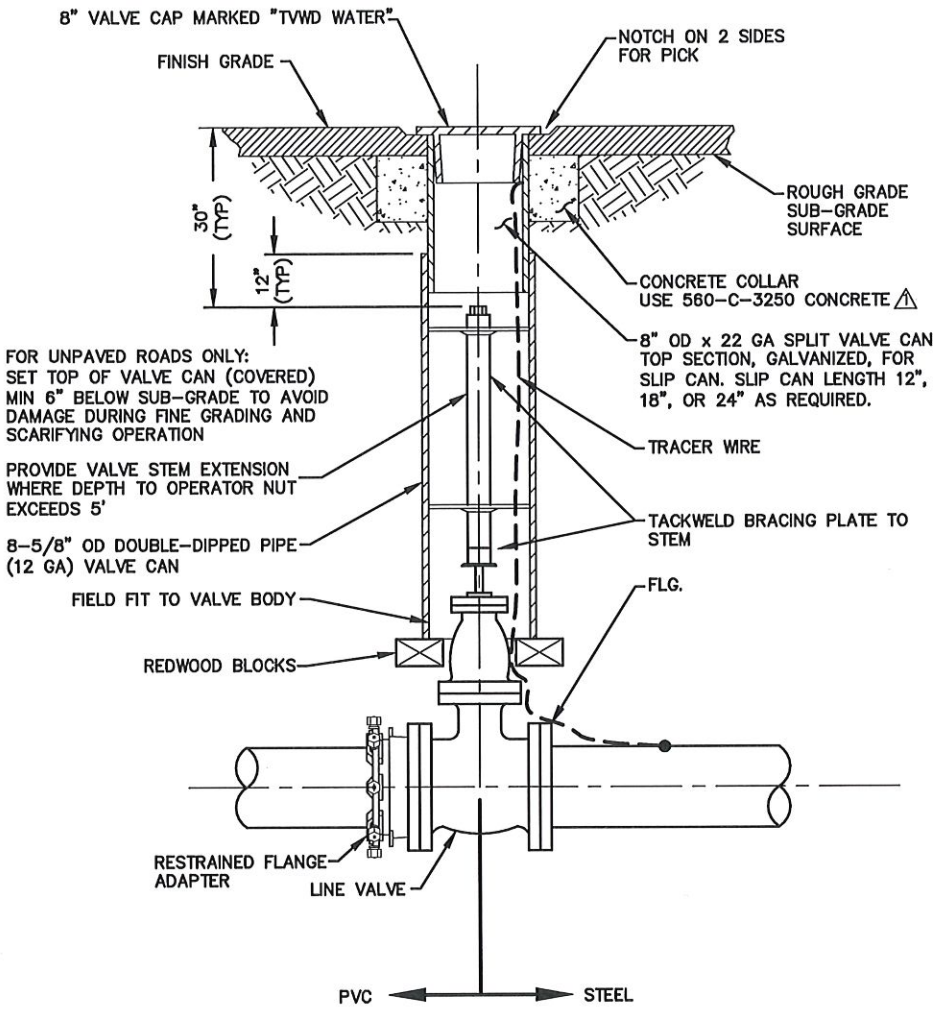
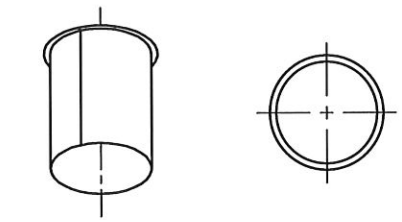


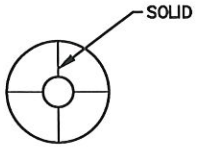
VALVE COVER AND RISER DETAIL
N.T.S.



AXONOMETRIC VIEW

TOP VIEW

SLIP CAN
N.T.S.



BRACING PLATE PLAN DETAIL
N.T.S.

NOTES:

1. CONTRACTOR SHALL RAISE SLIP CAN TO GRADE AFTER STREET IS PAVED, WHERE PAVING IS PROPOSED.
2. IN UNPAVED AREAS, CONTRACTOR SHALL LEAVE CAP AND SLIP CAN 6" BELOW FINISH GRADE (I.E. GRADED SHOULDERS).

REVISION	DATE	BY	DESCRIPTION
⚠1	4/12/07		ADD CONCRETE COLLAR
⚠2	8/04/08		REMOVED VICTAULIC COUPLING

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

VALVE CAP AND RISER DETAIL

DWG. NO. W-24

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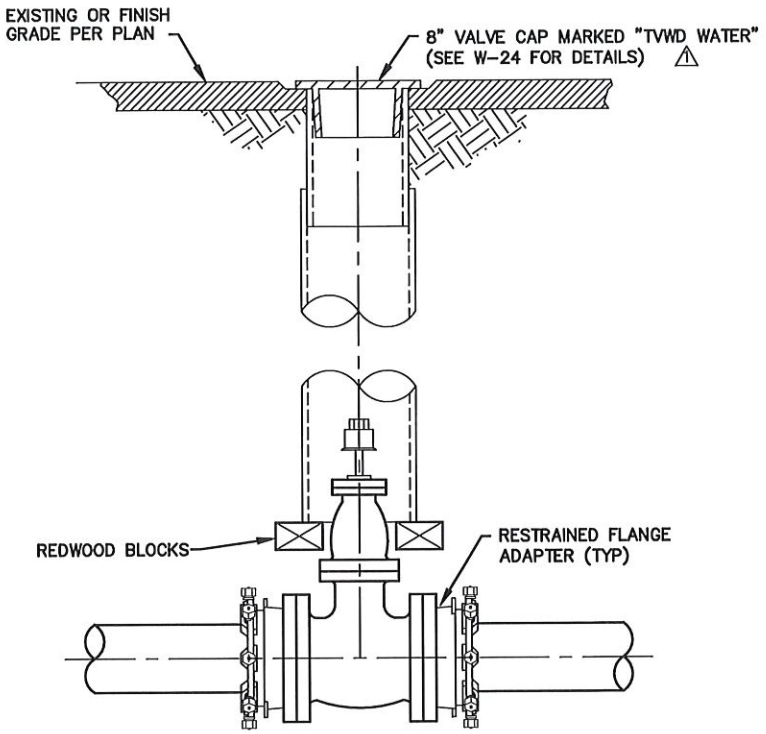
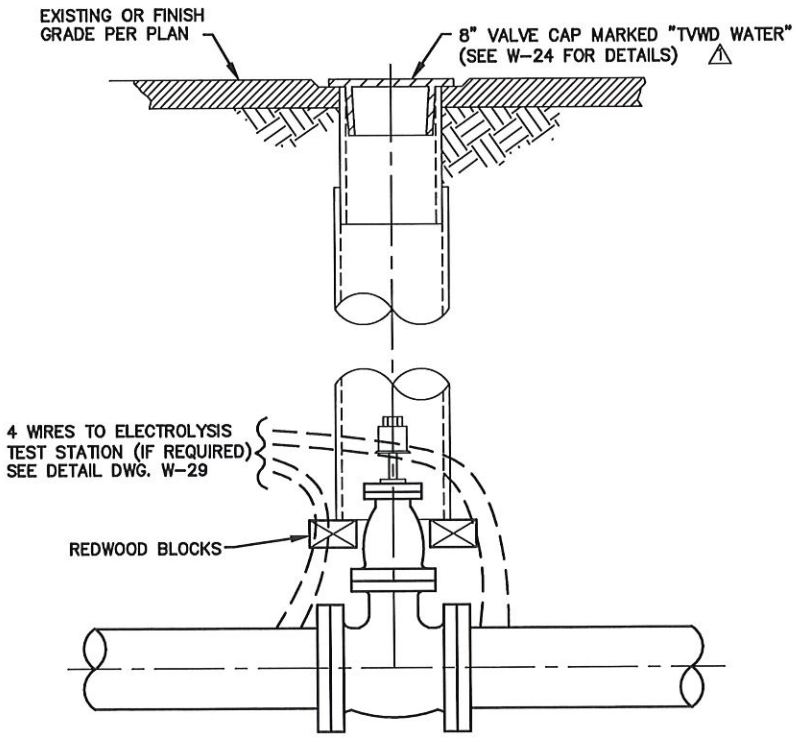


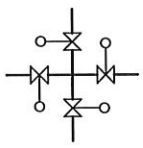
WEDGE VALVE
PVC PIPE



WEDGE VALVE
STEEL PIPE

NOTES:

1. PVC PIPE/VALVES SHALL BE FLG x FLG. STEEL PIPE/VALVES SHALL BE FLG x FLG.
2. PROVIDE VALVE STEM EXTENSION WHERE DEPTH OF OPERATOR NUT EXCEEDS 5 FEET.
3. USE BUTTERFLY VALVE FOR PIPE SIZES LARGER THAN 12 INCH DIA.
4. CONTINUITY TESTS MUST BE CONDUCTED ON PIPELINE TO ENSURE THAT BOND WIRE/STRAP IS FUNCTIONING PROPERLY AFTER INSTALLATION OF EACH PIPE SECTION. (STEEL ONLY)



PLAN VIEW

BUTTERFLY VALVE ORIENTATION
VALVE OPERATOR NUTS TO BE PLACED COUNTER CLOCKWISE

REVISION	DATE	BY	DESCRIPTION
1	4/12/07		ADD NOTE
2	8/04/08		REMOVED VICTAULIC COUPLING

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

BURIED VALVE DETAIL

DWG. NO. W-25

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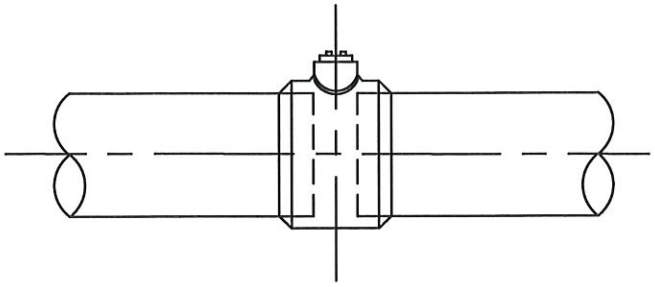
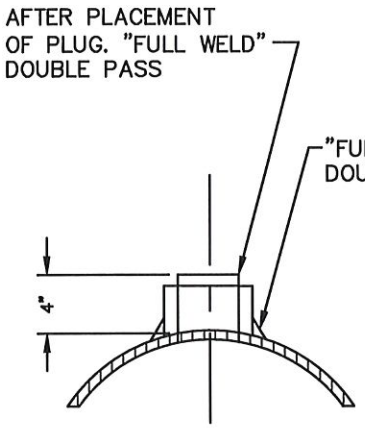
BUTTSTRAP SEQUENCE:

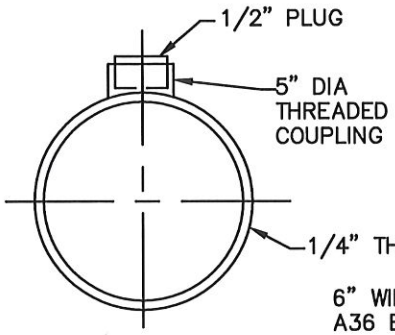
1. DETERMINE LENGTH "L" OF PIPE TO BE REMOVED AND MARK ON PIPE.
2. CAUTIOUSLY CHIP OFF THE COATING 9" FROM THE MARKED POINT OF PIPE TO REMAIN, THEN CHIP OFF THE COATING OF THE PORTION OF PIPE TO BE REMOVED 3" FROM THE MARKED POINT.
3. PLACE NEW CONNECTING PIPE AND INSTALL BOTTOM HALF OF 6" BUTT STRAP AND WELD.
4. MORTAR LINE THE INSIDE BOTTOM OF THE BUTT STRAP.
5. PLACE THE TOP HALF OF THE BUTT STRAP ON THE PIPE AND WELD.
6. MORTAR LINE THE TOP HALF OF THE BUTT STRAP.
7. PLACE CEMENT MORTAR COATING OVER BUTT STRAP IN ACCORDANCE WITH AWWA C205 USING 2x4x12 GA WELDED WIRE FABRIC HELD 3/8" FROM THE STEEL.
8. PIPE SIZES 16" AND LARGER REQUIRE TWO HANDHOLES PER ASSEMBLY.
9. I.D. OF BUTTSTRAP EQUALS O.D. OF PIPE



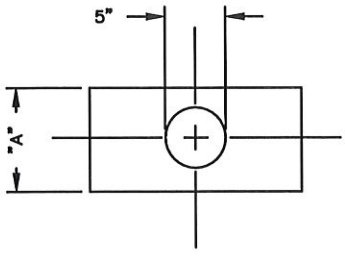
ASSEMBLED



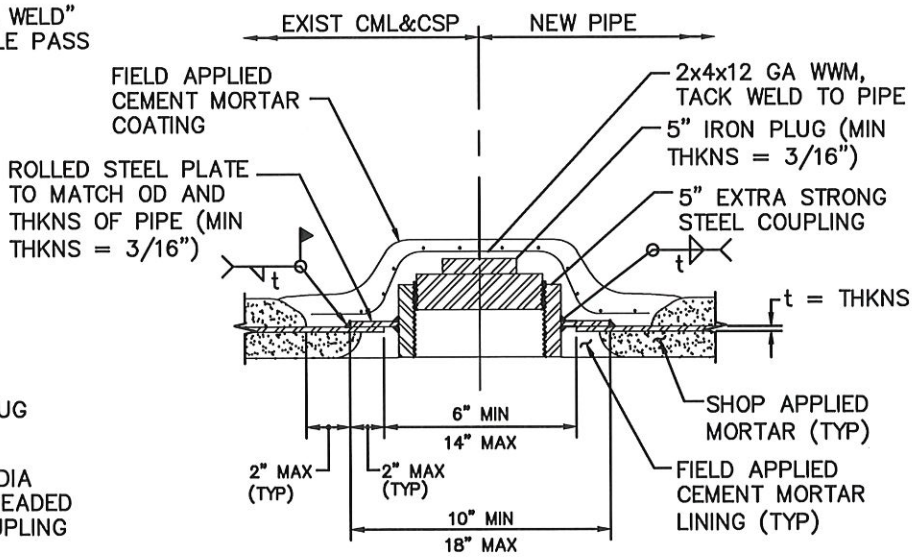
SECTION



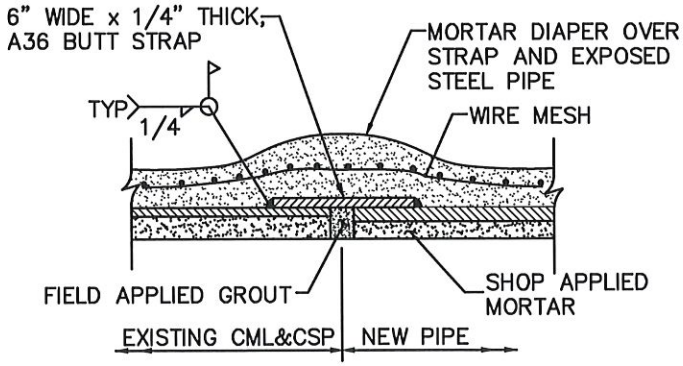
END VIEW



TOP VIEW



BUTT STRAP CONNECTION W/ HANDHOLE



BUTT STRAP CONNECTION TO CML&C

DIMENSIONS	
PIPE DIA.	A
6"	6"
8"	6"
12"	8"
16"	8"
20"	10"
24"	10"
30"	12"
36"	12"

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

BUTTSTRAP WITH HAND HOLE

DWG. NO. W-26

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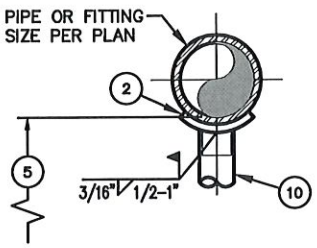
TYPE I



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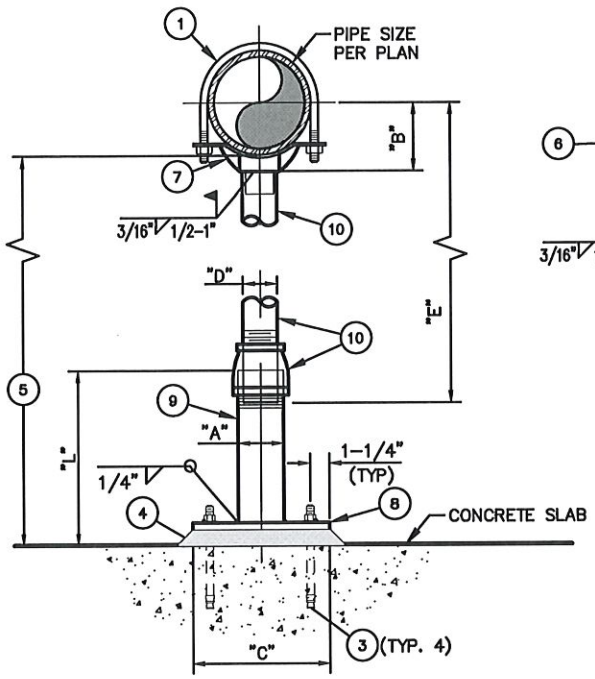
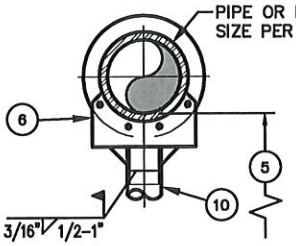


TYPE III



LEGEND

1. GALVANIZED U-BOLT, NUTS AND WASHER (SIZE PER PIPE SIZE)
2. PIPE SADDLE SUPPORT (TOLCO FIG 317, GRINNEL FIG 258, OR APPROVED EQUAL)
3. 5/8" 316 STAINLESS STEEL WEDGE ANCHOR W/ STAINLESS STEEL LEVELING NUT AND WASHER, 5-1/2" MINIMUM EMBED (TYP)
4. 1-1/2" MINIMUM NON-SHRINK GROUT
5. HEIGHT TO BE DETERMINED IN FIELD
6. FLANGE SUPPORT (TOLCO FIG 314) OR APPROVED EQUAL
7. PIPE SADDLE W/ STEEL YOKE (TOLCO FIG 318, GRINNELL FIG 259, OR APPROVED EQUAL)
8. 3/8" THICK STEEL PLATE, SIZE PER TABLE
9. THREADED PIPE STAND (TOLCO FIG 316T OR APPROVED EQUAL), SIZE PER TABLE, SEE NOTES
10. THREADED PIPE WITH ADJUSTER (TOLCO FIG 319 OR APPROVED EQUAL), SIZE PER TABLE, SEE NOTES

NOTES:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO PURCHASE AND FABRICATION
2. GALVANIZE AFTER FABRICATION
3. WHERE NON-ADJUSTABLE PIPE SUPPORTS ARE SPECIFIED, PROVIDE NON-ADJUSTABLE STANCHION (TOLCO FIG 316 OR APPROVED EQUAL), AND DELETE ITEM 10 ABOVE. CONTRACTOR TO DETERMINE DIMENSION "L" IN FIELD.
4. TYPE 3 SHALL BE USED FOR ALL VALVES AND FITTINGS. TYPE 2 SHALL BE USED FOR SUPPORTING PIPE ONLY. TYPE ONE SHALL BE USED ONLY AFTER APPROVAL FROM DISTRICT ENGINEER.

PIPE SIZE (INCHES)	A (INCHES)	B* (INCHES)	C (INCHES)	D (INCHES)	E* (INCHES)	
					MIN.	MAX.
2 1/2	2 1/2	3 1/2	7 1/2	1 1/2	8	13
3	2 1/2	3 3/4	7 1/2	1 1/2	8 1/2	13 1/4
3 1/2	2 1/2	4	7 1/2	1 1/2	8 1/2	13 1/2
4	3	4 1/4	9	2 1/2	9 1/4	14
5	3	4 7/8	9	2 1/2	10	14 3/4
6	3	4 7/8	9	2 1/2	10 1/2	15 1/4
8	3	6 7/8	9	2 1/2	11 3/4	16 1/2
10	3	8 1/2	9	2 1/2	13 1/2	18 1/4
12	3	9 15/16	9	2 1/2	15	19 3/4
14	4	10 15/16	11	3	16 1/4	20 3/4
16	4	12 3/8	11	3	17 3/4	22 1/4
18	6	13 7/8	13 1/2	3 1/2	19 1/2	24
20	6	15 3/8	13 1/2	3 1/2	21	25 1/2
24	6	17 15/16	13 1/2	4	23 3/4	28 1/4

*DIMENSIONS GIVEN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

PIPE SUPPORT DETAIL

DWG. NO. W-27

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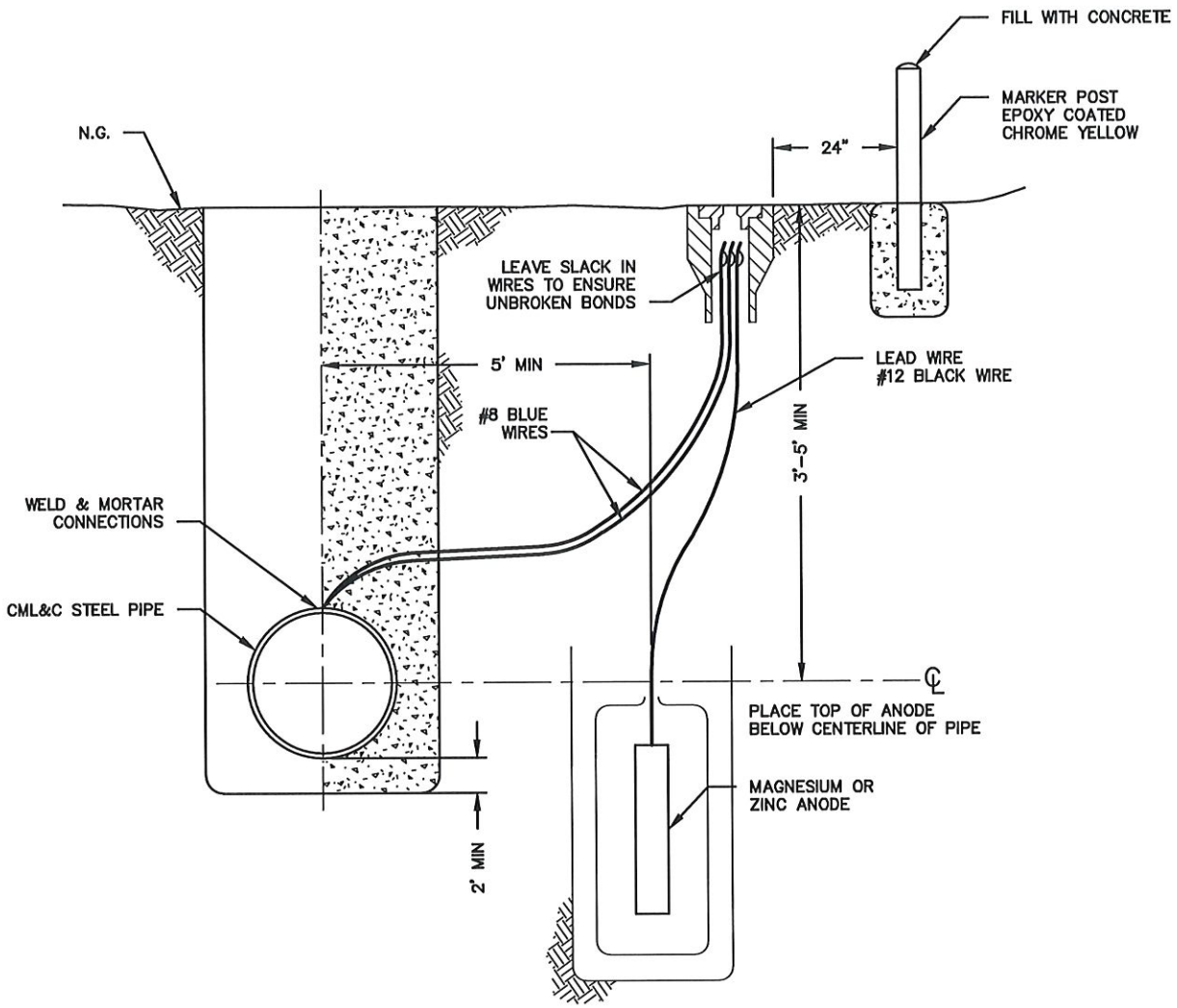

DETAIL 'A'

PREPACKAGED ANODE INSTALLATION

GENERAL NOTES:

1. EACH ANODE SHALL BE INSTALLED IN A HOLE 3' TO 5' IN DEPTH AND 8" GREATER IN DIAMETER THAN THE ANODE TO ALLOW FOR COMPACTION DURING BACKFILL.
2. BACKFILL WITH NATIVE SOIL, NO BASE MIX OR SAND.
3. AFTER INSTALLATION OF ANODE, WATER EXTERIOR UNTIL MOIST SO THAT SOIL STICKS.
4. TEST LEAD WIRE WELD TO PIPE BY STRIKING WITH A TWO POUND HAMMER.
5. CLEAN PIPE TO BARE METAL PRIOR TO WELDING LEAD WIRES.
6. WELD LEAD WIRES TO PIPE AFTER INSTALLATION IN TRENCH.
7. WIRE AND BONDED CONNECTIONS TO BE PROTECTED DURING PIPELINE MORTARING.
8. LEAD WIRE BURY DEPTH TO BE 5' MIN AT CURB OR SHOULDER OF ROAD.
9. TERMINATE ALL WIRES 2' MIN ABOVE GROUND AND COIL EXCESS IN BOX.
10. WHEN NEAR VALVE BOX, PLACE WIRES DEEP ENOUGH TO PREVENT DAMAGE IF VALVE BOX SETTLES.

ANODE WT.	LEAD WIRE SPECIFICATIONS			
WEIGHT	SIZE	INSUL.	TYPE	COLOR
1–17 LB.	NO. 12	AA	SOLID	BLACK
17–32 LB.	NO. 10	AA	SOLID	BLACK
> 32 LB.	NO. 8	AA	STRANDED	BLACK
(AA) TH, THW, THWN				

PREPACKAGED ANODE SPECIFICATIONS (IN LBS.)		
MAGNESIUM WT.	BACKFILL WT.	TOTAL
1	2-1/2	3-1/2
3	6	9
5	9	14
9	19	27
17	28	45
20	32	72
32	40	72
40	65	105
48	58	106
50	60	110
60	70	130

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

PREPACKAGED SACRIFICIAL ANODE

DWG. NO. W-28

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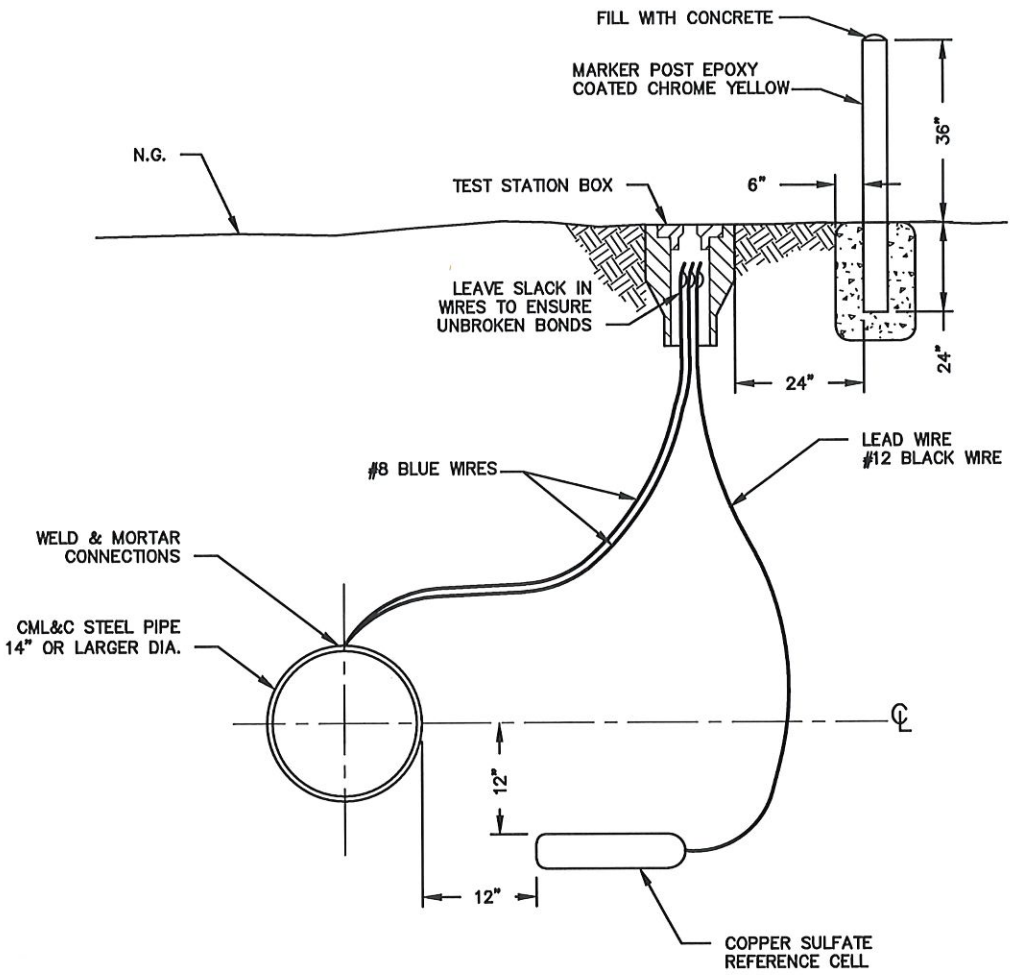

DETAIL 'A'

TEST STATION WITH REFERENCE CELL INSTALLATION

GENERAL NOTES:

1. TEST LEAD WIRE WELD TO PIPE BY STRIKING WITH A TWO POUND (MIN) HAMMER.
2. CLEAN PIPE TO BARE METAL PRIOR TO WELDING LEAD WIRES.
3. WELD LEAD WIRES TO PIPE AFTER INSTALLATION IN TRENCH.
4. WIRE AND BONDED CONNECTIONS TO BE PROTECTED DURING PIPELINE MORTARING.
5. LEAD WIRE BURY DEPTH TO BE 5' MIN AT CURB OR SHOULDER OF ROAD.
6. AFTER INSTALLATION OF REFERENCE CELL, FLOOD WITH 5 GALLONS OF WATER MIN.
7. SEE W-1 FOR TEST STATION LOCATIONS.
8. TERMINATE ALL WIRES 2' MIN ABOVE GROUND AND COIL EXCESS IN BOX.
9. WHEN NEAR VALVE BOX, PLACE WIRES DEEP ENOUGH TO PREVENT DAMAGE IF VALVE BOX SETTLES.

REVISION	DATE	BY	DESCRIPTION

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GENERAL MANAGER

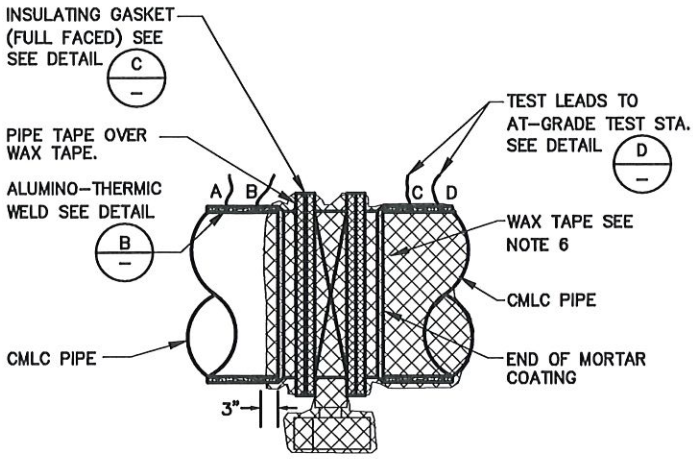
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

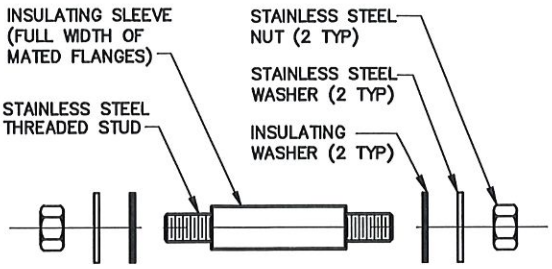
STANDARD DRAWINGS

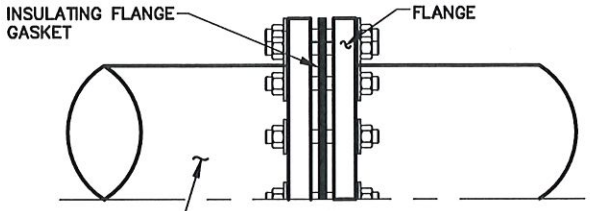
TEST STATION WITH REFERENCE CELL

DWG. NO. W-29

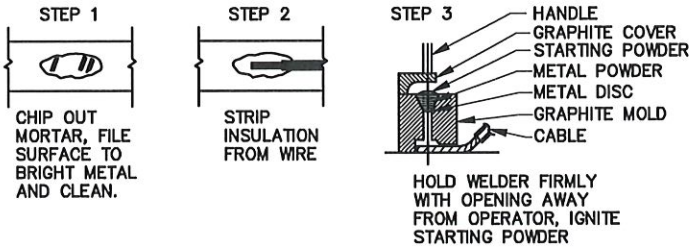


DETAIL A
IN-LINE INSULATED TEST CONNECTION

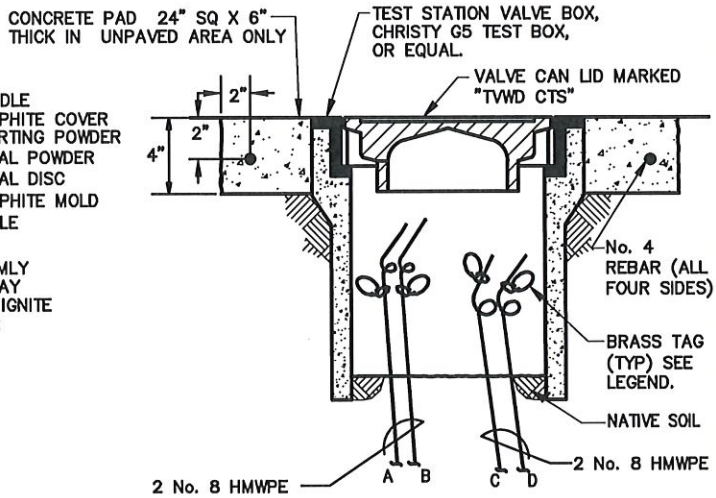




DETAIL C
INSULATED FLANGED JOINT DETAIL



DETAIL B
ALUMINO-THERMIC WELD



BRASS TAG LEGEND

WIRE	SIZE	TAG ID
A1&A2	NO.8 HMWPE	SIZE, MAT. SERVICE (i.e. 36" CML&C W)

DETAIL D
TEST STATION

1. ATTACH 1 WIRE PER WELD. ALL WIRE WELDS SHALL BE 3 INCHES APPART MINIMUM.
2. ALL WELDS SHALL BE TESTED BY STRIKING THE WELD WITH A 2 LB HAMMER WHILE PULLING FIRMLY ON WIRE. ANY WELDS BROKEN OR LOOSENED SHALL BE RE-WELDED AND RE-TESTED. THE SURFACE MUST BE RE-GROUND AND CLEAN BEFORE RE-WELDING. ALL WELD SLAG SHALL BE REMOVED FROM THE WELD.
3. ALL EXPOSED METAL SHALL BE COVERED WITH 2 COATS OF PRIMER AND AN ELASTOMERIC WELD CAP, THEN OVERCOAT WITH BITUMINOUS COMPOUND UP TO THE EDGE OF THE MORTAR. DO NOT COAT MORTAR WITH BITUMEN. FILL MORTAR VOID WITH QUICKSET GROUT.

NOTES

1. CLEAN ALL WELD AREAS TO BRIGHT METAL PRIOR TO WELDING OF WIRES TO PIPE.
2. LEAD WIRES SHALL BE 5' IN DEPTH THROUGH ROAD SHOULDER.
3. PIPELINE SHALL BE ASSEMBLED IN TRENCH PRIOR TO WELDING OF LEAD WIRES TO PIPE.
4. WIRE AND BONDED CONNECTIONS SHALL BE PROTECTED DURING COATING PROCESS OF PIPE JOINTS.
5. FOR VALVES AND COUPLINGS: TWO (2) NO. 2 BONDING WIRES REQUIRED ACROSS VALVES. ONE (1) NO. 6 WIRE REQUIRED FROM PIPE TO VALVE OR COUPLING BODY. BONDING WIRE SHALL BE AS SHORT AS POSSIBLE.
6. APPLY PETROLATUM WAX TAPE PER AWWA C217 TO ALL BURIED, NON-MORTAR COATED SURFACES. BOLTS AND COUPLING RODS SHALL BE INDIVIDUALLY WRAPPED WITH WAX TAPE. OVERWRAP WAX TAPE ON ALL FLANGE EDGE SURFACES WITH TWO WRAPS OF 10 MIL X 2" WIDE PIPE TAPE.
7. AT TEST STATIONS, ORIENT LEAD WIRES IN VALVE BOX TO BE IN THE SAME RELATIVE POSITION AS CONNECTED TO THE PIPE.
8. PLACE TEST STATION VALVE BOX WITHIN THE RIGHT-OF-WAY AT THE PROPERTY LINE UNLESS OTHERWISE NOTED (SEE W-1)
9. MARKER POST TO BE INSTALLED IN UNIMPROVED AREAS FOR PROTECTION.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

INSULATED TEST CONNECTION & INSULATED FLANGE

DWG. NO. W-30

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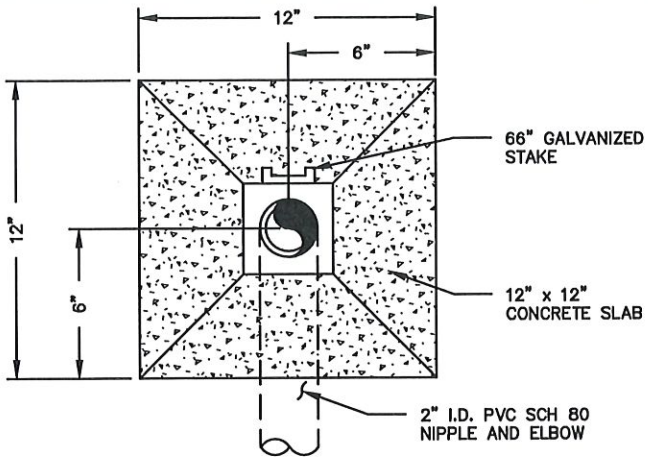
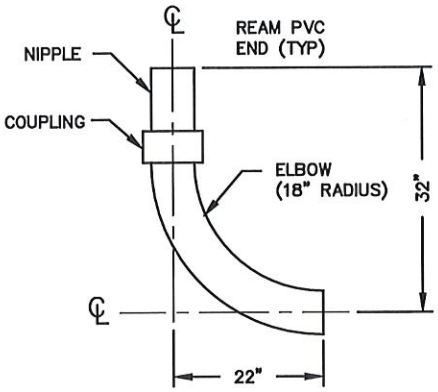
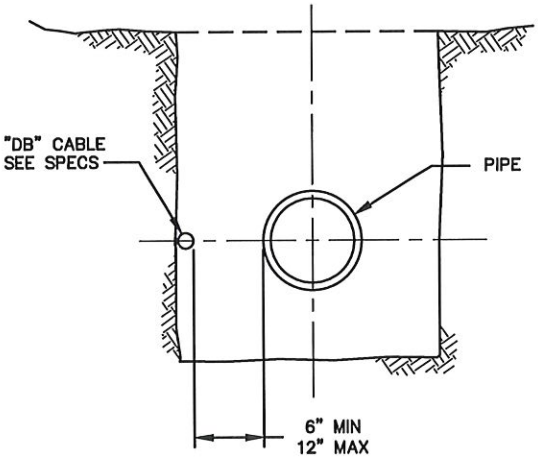


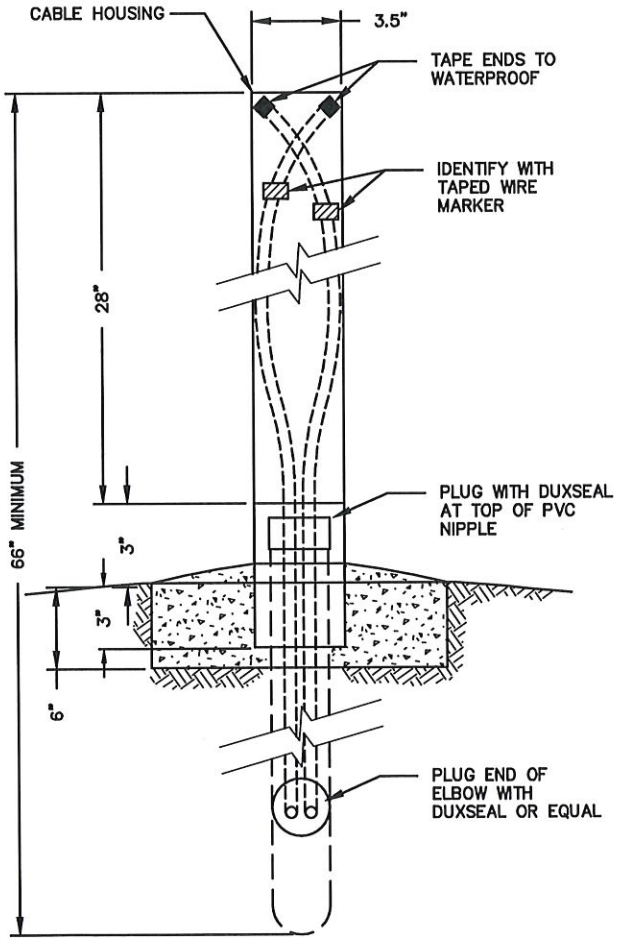
PLAN



PVC DETAIL



NOTE:
WHERE ENCASEMENT IS REQUIRED, INSERT "DB" CABLE IN 1" PVC SCH 40.



PROFILE

GENERAL NOTES:

1. UTILITY PRODUCTS, STEEL HOUSING CAT. NO. UPCBD2 WITH MS 1342 OR EQUAL.
2. EPOXY COAT CHROME YELLOW
3. INSTALL PEDESTAL EVERY 1,000 FT. MAX AND AT EACH END, OR AS SHOWN ON DWGS.
4. PLACE TVWD STICKER ON PEDESTAL.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

TELEMETERING TERMINAL HOUSING

DWG. NO. W-31

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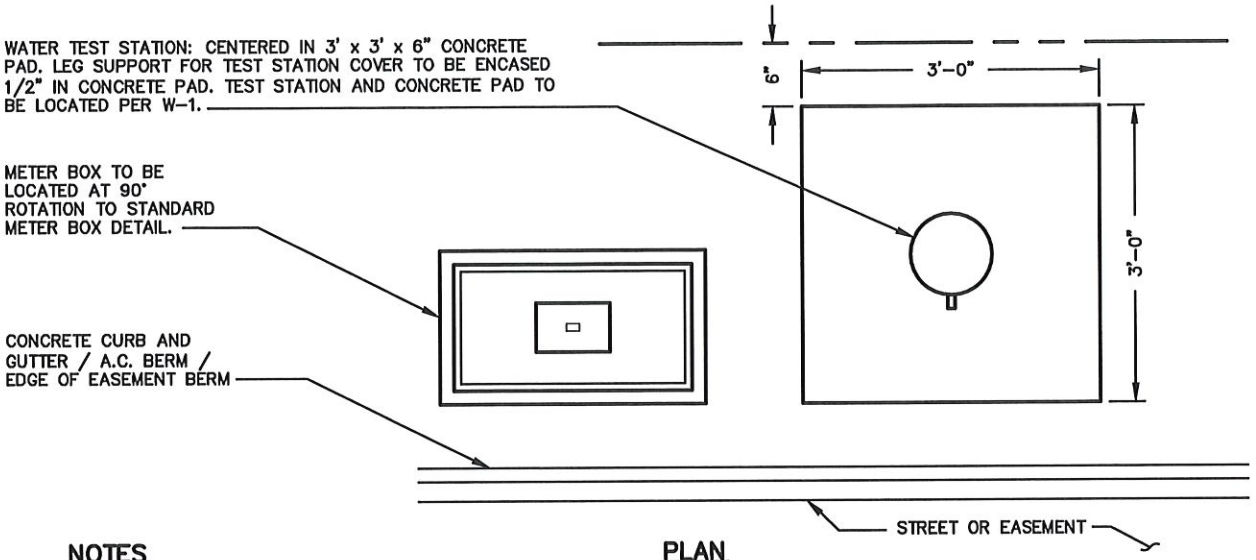
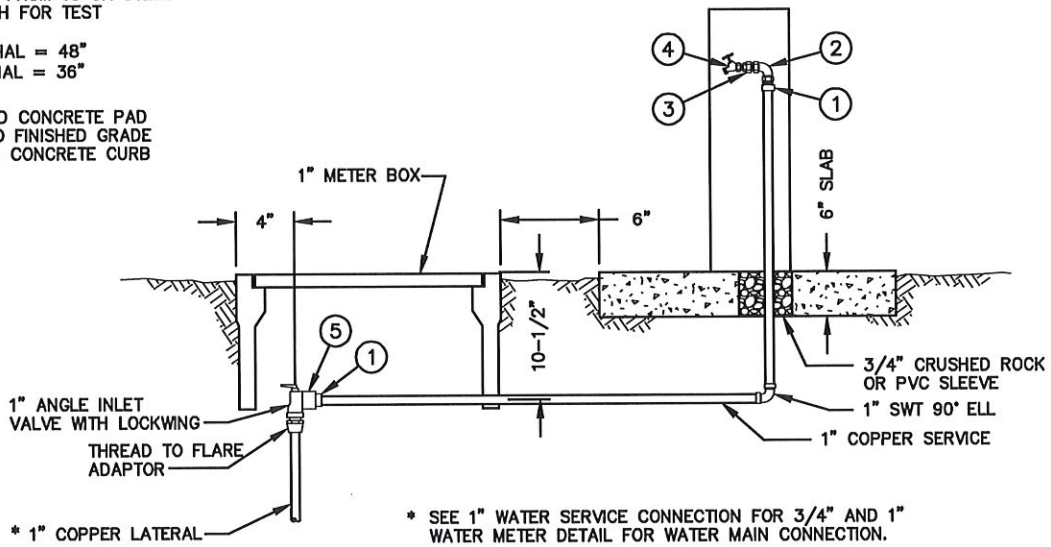


PLAN
N.T.S.

NOTES

1. WATER TEST STATION – PIPELINE PRODUCTS "WTS 858** OR EQUAL. COATED WITH 3-M SKY BLUE EPOXY COATING" VP 705 OR EQUAL – TEST STATION ROTATED 90° FOR CLARITY.
2. ** TEST STATION TO BE MANUFACTURED FROM 10 GA STEEL OVERALL LENGTH FOR TEST STATIONS:
   COMMERCIAL = 48"
   RESIDENTIAL = 36"
3. METER BOX AND CONCRETE PAD WILL BE SET TO FINISHED GRADE OR FLUSH WITH CONCRETE CURB OR SIDEWALK.



* SEE 1" WATER SERVICE CONNECTION FOR 3/4" AND 1" WATER METER DETAIL FOR WATER MAIN CONNECTION.

CROSS SECTION
N.T.S.

MATERIALS:

1. 1" SWT X THREAD ADAPTOR
2. 1" THREADED 90° ELL
3. 1" THREADED MALE x 3/4" THREADED FEMALE REDUCER
4. 3/4" THREADED HOSE BIB
5. 1" METER BUSHING

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

WATER TEST STATION

DWG. NO. W-32

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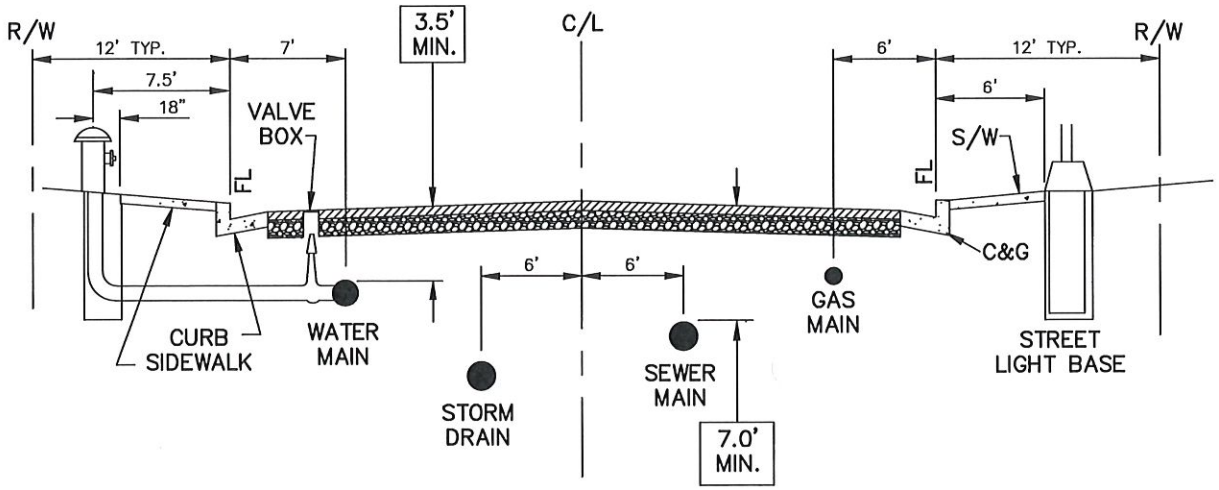
SOUTH SIDE OR WEST SIDE

NORTH SIDE OR EAST SIDE



NOTES

1. LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITES MUST BE PROVIDED BY THE DEVELOPER, AND SHOWN ON ANY PLANS SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR APPROVAL.
2. ABOVE-GROUND FACILITIES SHALL BE LOCATED BEHIND SIDEWALK.
3. REFER TO W-1 FOR LOCATION OF HYDRANT AND OTHER APPURTENANCES.

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REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

UNDERGROUND UTILITY LOCATION

DWG. NO. W-33

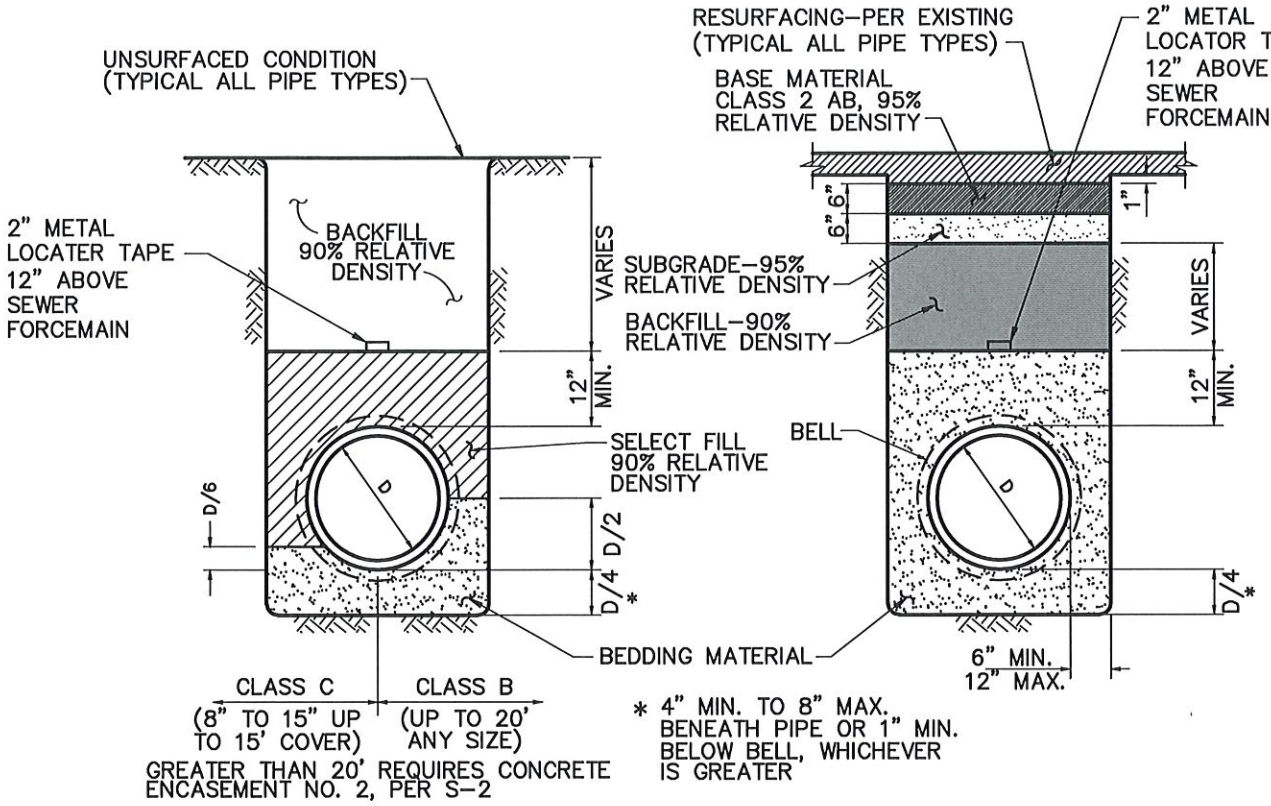
TEMESCAL VALLEY WATER DISTRICT

PART VI. Standard Drawings – Sewer

Temescal Valley Water District

Standard Drawings - Sewer

TABLE OF CONTENTS



STANDARD INSTALLATION
VCP PIPE

STANDARD INSTALLATION
PVC PIPE

NOTES:

1. BEDDING MATERIAL SHALL CONSIST OF SAND, GRAVEL, CRUSHED AGGREGATE OR NATIVE FREE-DRAINING GRANULAR MATERIAL HAVING A SAND EQUIVALENT OF NOT LESS THAN 30 OR HAVING A PERMEABILITY GREATER THAN 35mm PER HOUR (1.4IN/HR), OR MATERIAL APPROVED BY THE ENGINEER.

2. BACKFILL MATERIAL MAY CONSIST OF NATIVE EXCAVATED SOIL PROVIDED THAT ALL ORGANIC MATERIAL, RUBBISH, DEBRIS AND OTHER OBJECTIONABLE MATERIALS ARE FIRST REMOVED. ROCKS GREATER THAN SIX (6) INCHES IN DIAMETER ARE NOT PERMITTED.

3. BACKFILL SHALL BE PLACED IN LIFTS NO GREATER THAN ONE (1) FEET THICK EXCEPT IN THE TOP ONE (1) FOOT OF TRENCH WHERE THE MAXIMUM LIFT THICKNESS IS SIX (6) INCHES.

4. BACKFILL AND BEDDING MATERIAL SHALL BE MECHANICALLY DENSIFIED WITH VIBRATORY EQUIPMENT TO A MINIMUM RELATIVE COMPACTION OF 90% PER ASTM 1557. WATER DENSIFICATION OF BACKFILL IS NOT ALLOWED (NO FLOODING) AND ROLLING EQUIPMENT SHALL NOT BE USED TO DENSIFY SOIL WITHIN 18 INCHES OF THE TOP OF PIPE.

5. IN PVC PIPE APPLICATIONS, C900 PVC PIPE SHALL BE USED WHEN TRENCH DEPTH EXCEEDS 15 FEET. THE MAXIMUM ALLOWABLE TRENCH DEPTH IS 20 FEET, UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.

6. WHEN FIRM TRENCH BASE IS NOT ENCOUNTERED DUE TO SOFT, SPONGY OR OTHERWISE UNSUITABLE MATERIAL WITH LESS THEN 85% RELATIVE COMPACTION, UNSUITABLE MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DISTRICT, AND RESULTING EXCAVATION SHALL BE BACKFILLED WITH 3/4" CRUSHED ROCK UNTIL FIRM SUBGRADE IS FORMED.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

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DISTRICT ENGINEER

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Established in 1965

STANDARD DRAWINGS

PIPE ZONE BEDDING & TRENCH BACKFILL

DWG. NO. S-1

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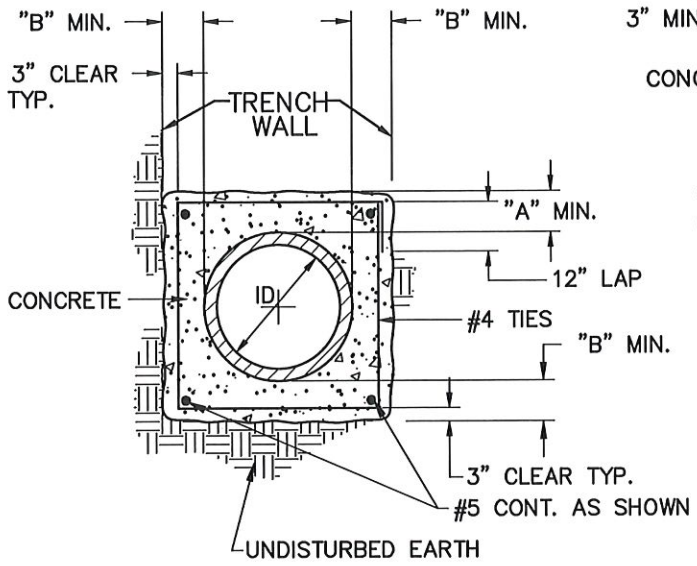
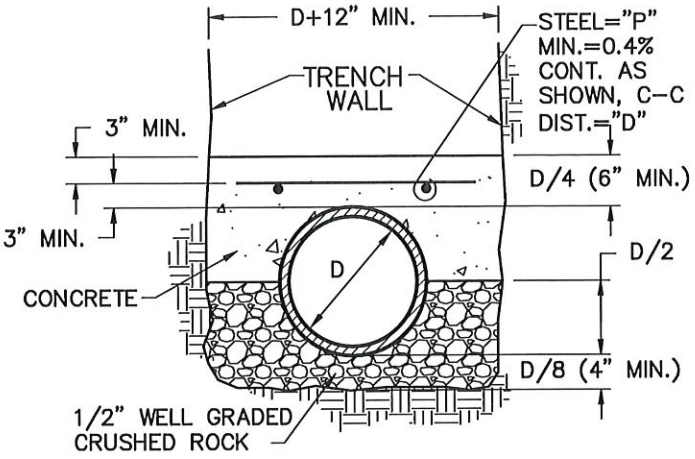
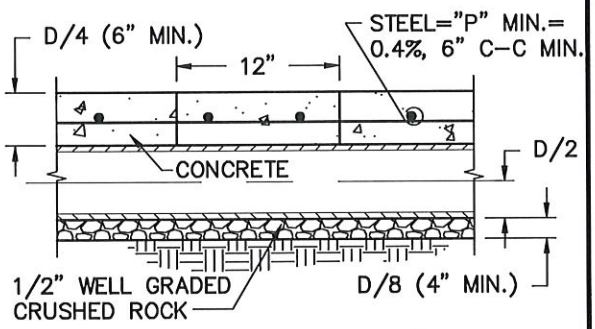
DIMEN-SIONS	PIPE I.D.										
	6"	8"	10"	12"	14"	16"	18"	21"	24"	27"	30"
"A"	6"	6"	6"	6"	6"	6"	6"	6"	6"	7"	8"
"B"	6"	6"	6"	6"	6"	6"	6"	6"	6"	7"	8"

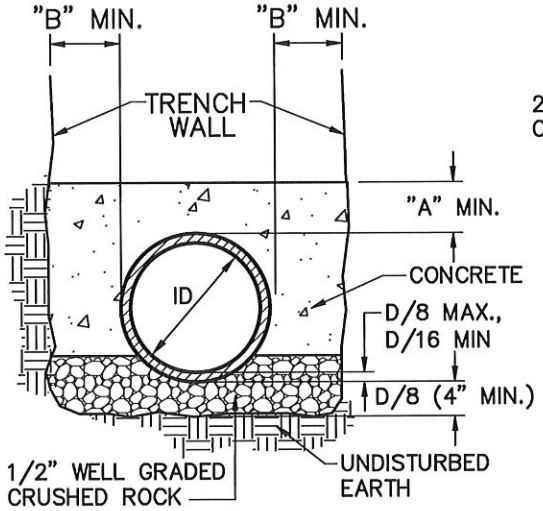


CONCRETE ENCASEMENT NO. 1





REINFORCED CONCRETE CAP CLASS "AA"



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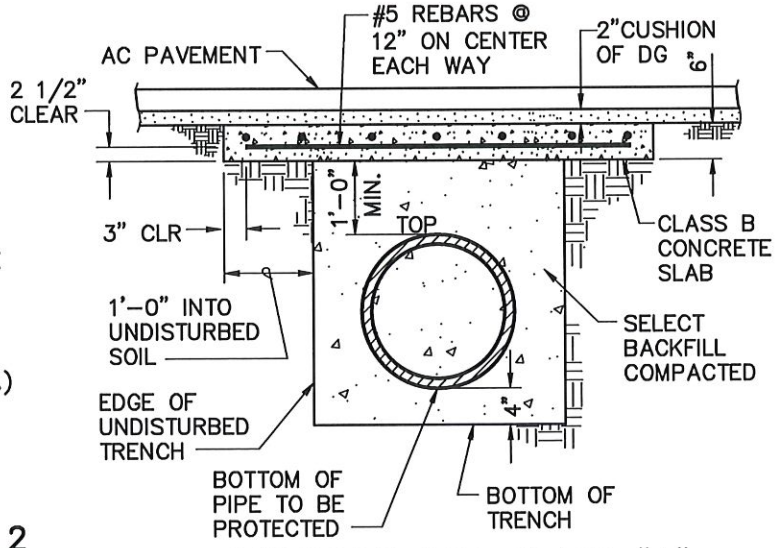

CONCRETE CAP-CLASS "A"

NOTES:

1. CONCRETE ENCASEMENT AND CAPS SHALL BE INSTALLED AS REQUIRED BY THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
2. ALL CONCRETE SHALL BE CLASS 560-C-3250 CONCRETE
3. USE CONCRETE ENCASEMENT NO.2 UNLESS OTHERWISE APPROVED BY THE THE ENGINEER OR SHOWN ON THE CONTRACT DRAWINGS
4. BASED ON 1.25 FACTOR OF SAFETY REFER N.C.P.I. MANUAL, SOIL WT. 130 LB/CU. FT DEPTHS OVER 30' MAY BE CALCULATED FROM MARSTON'S FORMULA. X DENOTES DISTANCE AT WHICH TRENCH WIDTH MAY BE INCREASE WITHOUT ADDING TO THE WEIGHT ON THE PIPE.
5. "P"=RATIO OF AREA OF STEEL TO AREA OF CONCRETE PER LINEAR FOOT (D/4 OR 4"x12" CONCRETE AREA.).
6. CONCRETE CAN BE POURED AGAINST TRENCH WALL, (OPTIONAL)
7. BEDDING CONDITIONS ARE AS FOLLOWS:
   A. BEDDING CLASS SHALL EQUAL OR EXCEED THAT GIVEN IN THE APPLICABLE TABLES PER STANDARD DRAWING S-1.
   B. CLASS "A" SHALL BE USED FOR SEWERS WHEREVER DEPTH OF COVER IS LESS THAN 4'.
   C. CONSOLIDATED BACKFILL BEDDING BY FLOODING IS NOT PERMITTED
   D. DEPTHS OF COVER GREATER THAN 20' REQUIRE A SOIL INVESTIGATION AND ANALYSIS BY THE ENGINEER.
8. TWO APPROVED FLEXIBLE COUPLINGS SHALL BE USED AT EACH END OF SEWER PIPE ENCASEMENTS PURSUANT TO STANDARD DRAWING S-3

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015
GENERAL MANAGER
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

CONCRETE CAPS AND ENCASEMENT

DWG. NO. S-2

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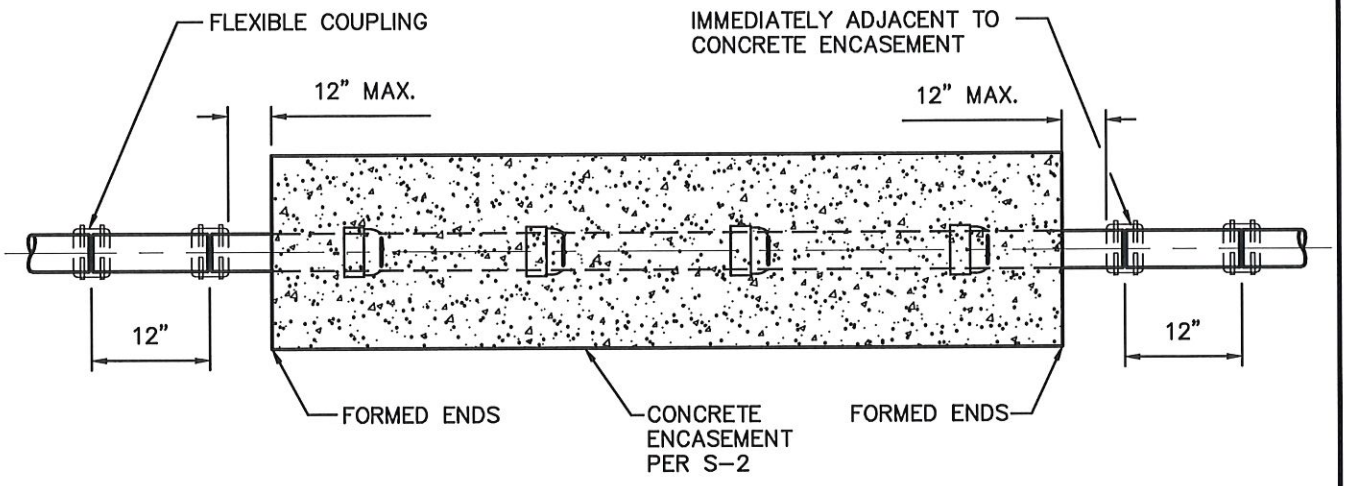

NOTES:

1. TWO FLEXIBLE COUPLINGS AS SHOWN, BOTH SIDES.
2. SUBMIT ROMAC, DRESSER, FORD OR EQUAL SEWER COUPLING WITH 316 SS HARDWARE FOR REVIEW AND APPROVAL. COUPLING SHALL BE PROVIDED WITH EPOXY COATING AND SHALL BE INSTALLED WITH WAX TAPE WRAP.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER CONNECTION AT CONCRETE ENCASEMENT

DWG. NO. S-3

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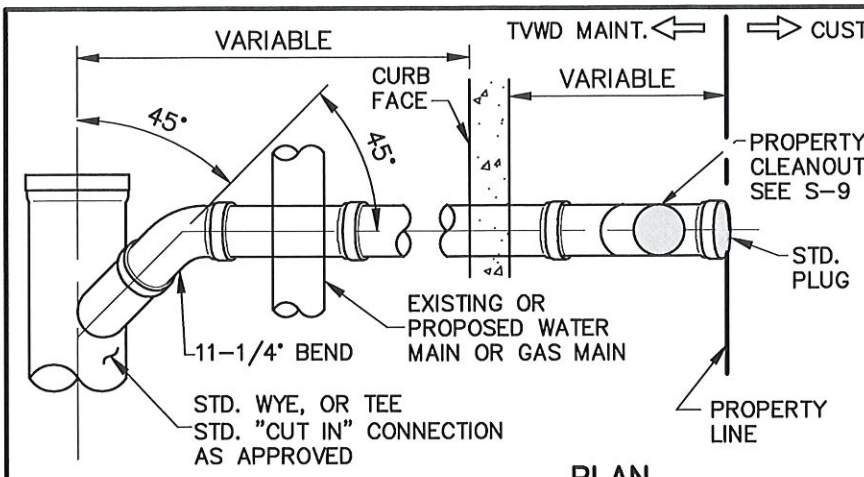
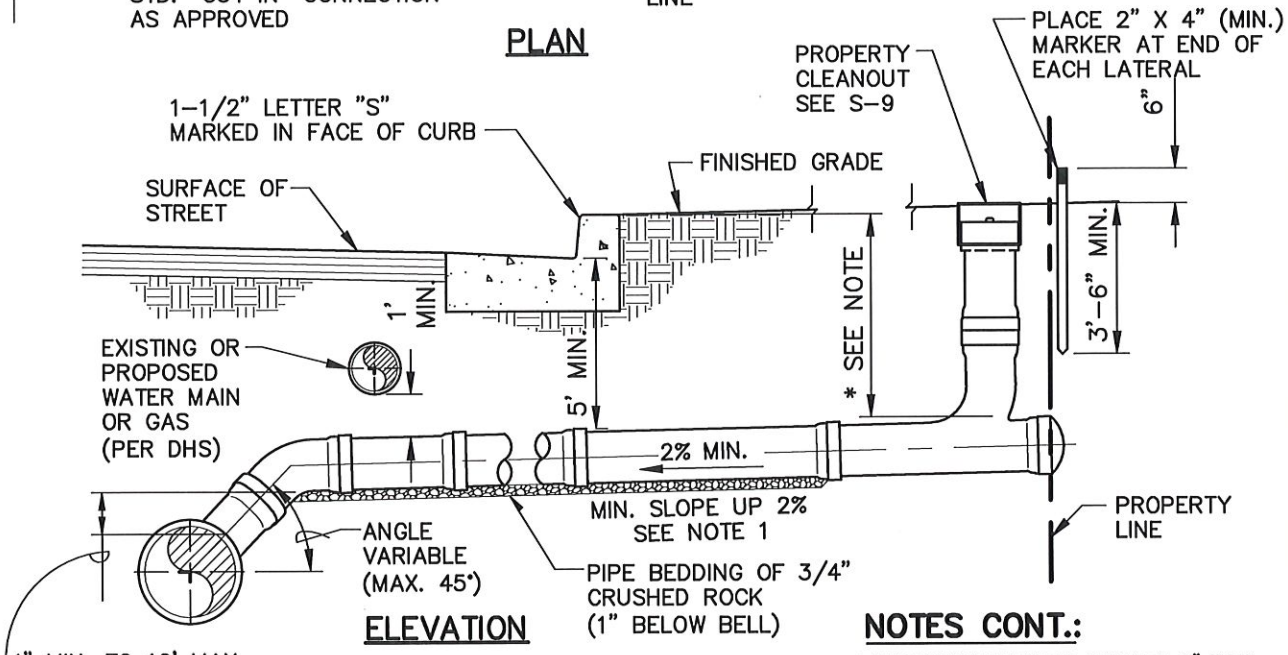


NOTES:

1. SEWER LATERALS SHALL HAVE MINIMUM SLOPE OF 2% EXCEPT AS OTHERWISE SPECIFICALLY NOTED ON THE PLANS.
2. PLUGS SHALL BE CEMENTED IN WITH CEMENT MORTAR, OR SHALL BE NEOPRENE STOPPER OR APPROVED EQUAL.
3. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
4. WHERE A STANDARD SADDLED TEE IS ADDED, IT SHALL BE SURROUNDED WITH 4" OF CLASS "A" PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH STD. DWG. S-6 & S-7.
5. LATERALS SHALL END AT THE PROPERTY LINE, UNLESS OTHERWISE NOTED ON THE PLANS.

PLAN



ELEVATION

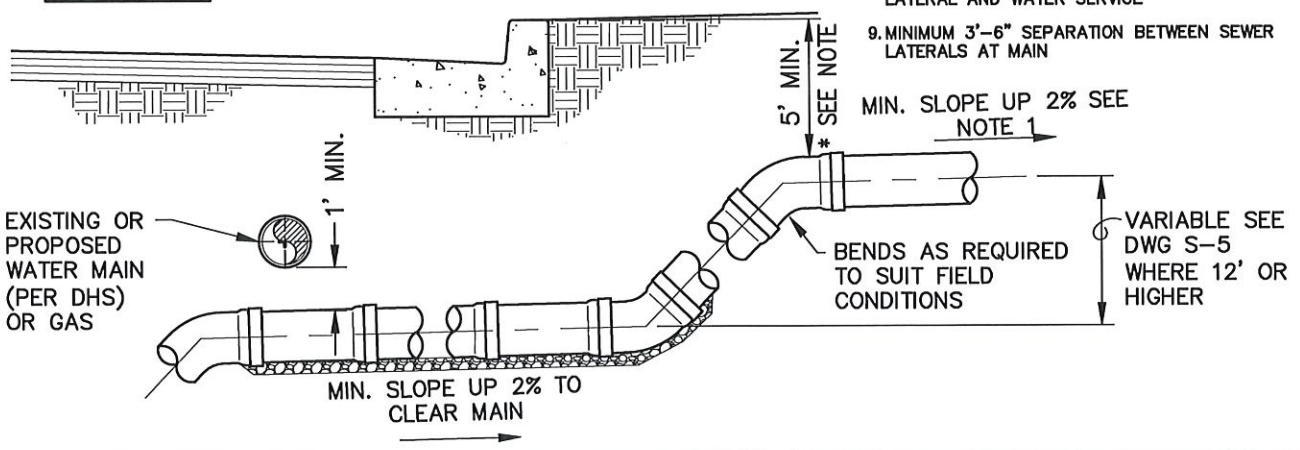
4" MIN. TO 12' MAX. (SEE DWG S-5 WHERE HEIGHT IS OVER 12')

* WHERE UTILITY TRENCH IS PROPOSED BACK OF CURB SEWER LATERAL SHALL HAVE 5'-0" COVER BELOW CURB GRADE AT PROPERTY LINE.

NOTES CONT.:

6. UNLESS WAIVED BY THE ENGINEER, 2" WIDE METALLIC DETECTABLE LOCATOR TAPE SHALL BE PLACED WITH EACH LATERAL APPROX. 6 INCHES ABOVE THE PIPE, BUT NOT GREATER THAN 6 FEET DEEP.
7. WHERE SEWER LATERAL CROSSES ABOVE AN EXISTING OR PROPOSED WATER MAIN, USE D.I. PIPE (4" CL 51/ 4" CL 80) WITH HOT DIP BITUMINOUS COATING 10' EACH SIDE OF WATER MAIN.
8. MINIMUM 10'-0" SEPARATION BETWEEN SEWER LATERAL AND WATER SERVICE
9. MINIMUM 3'-6" SEPARATION BETWEEN SEWER LATERALS AT MAIN

ALTERNATE ELEVATION



REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER LATERAL NORMAL CUT

DWG. NO. S-4

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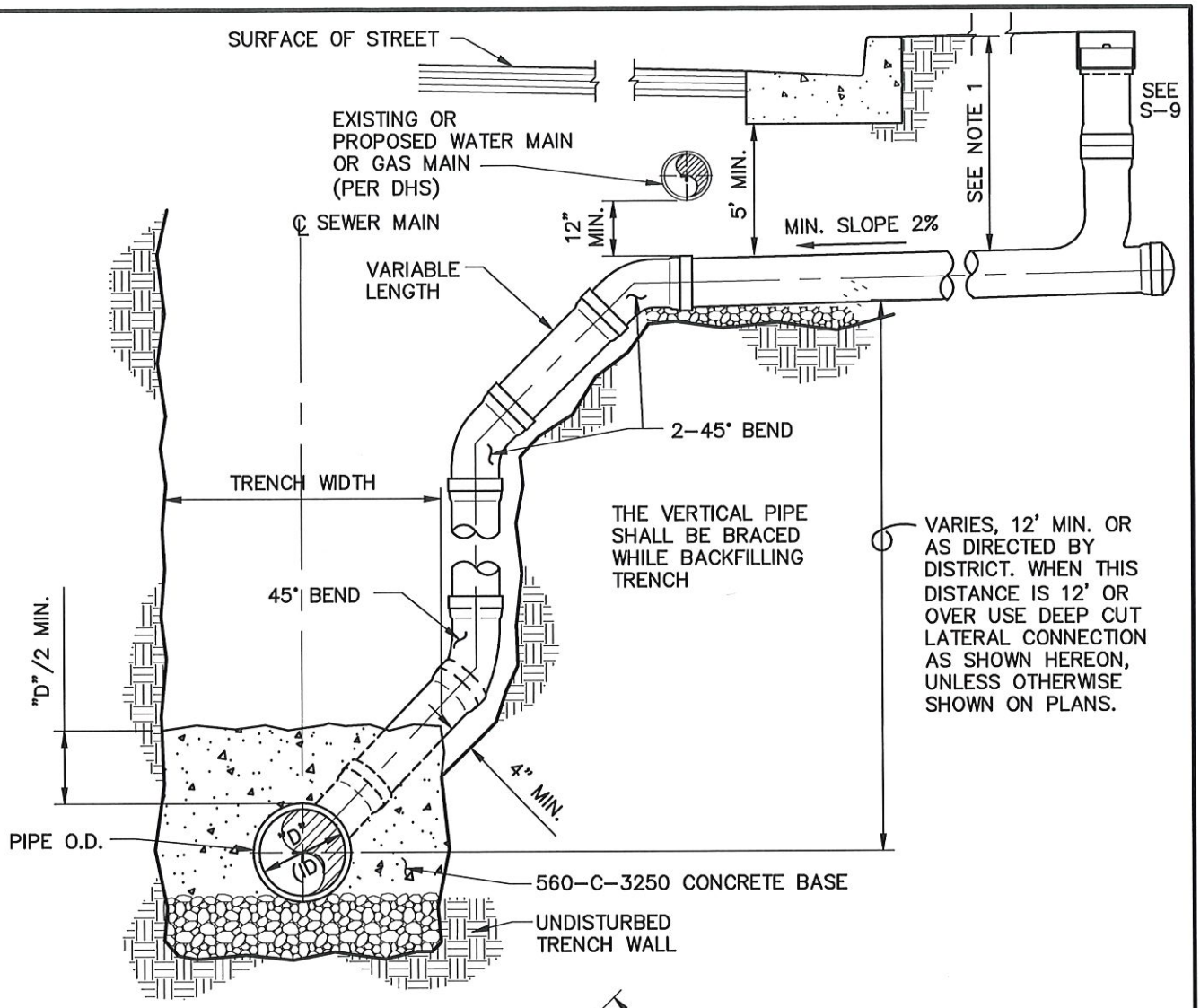

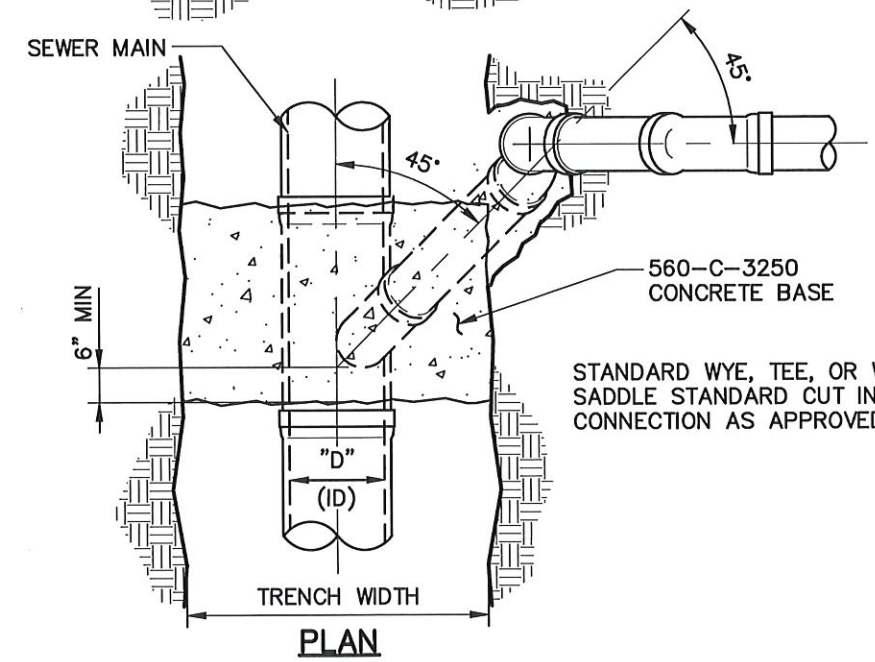

PLAN

STANDARD WYE, TEE, OR WYE SADDLE STANDARD CUT IN CONNECTION AS APPROVED.

NOTES:

1. SEE DRAWING S-4 FOR DETAILS OF SEWER LATERAL TO PROPERTY LINE.
2. USE CLASS 'C' CONCRETE WHERE SHOWN.
3. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
4. UNLESS WAIVED BY THE ENGINEER 2" WIDE METALLIC DETECTABLE LOCATOR TAPE SHALL BE PLACED WITH EACH LATERAL APPRXIMATELY 6" ABOVE THE PIPE.
5. MINIMUM 10' SEPERATION BETWEEN SEWER LATERAL AND WATER SERVICE. (PER DEPARTMENT OF HEALTH AND SAFETY)
6. WHERE UTILITY TRENCH IS PROPOSED BACK OF CURB SEWER LATERAL SHALL HAVE 5'-0" COVER BELOW CURB GRADE AT PROPERTY LINE.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER LATERAL DEEP CUT

DWG. NO. S-5

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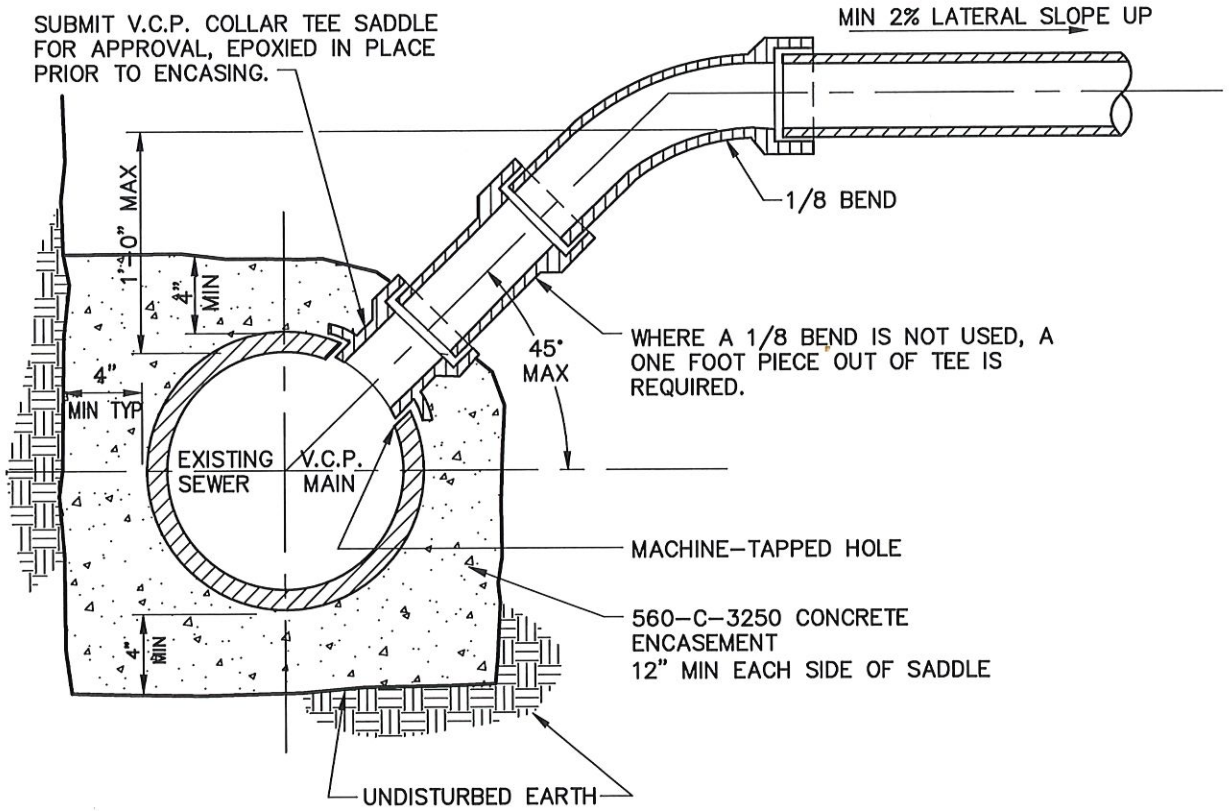

SECTION - SEWER LATERAL

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER LATERAL
VCP SADDLE
CONNECTION

DWG. NO.
S-6

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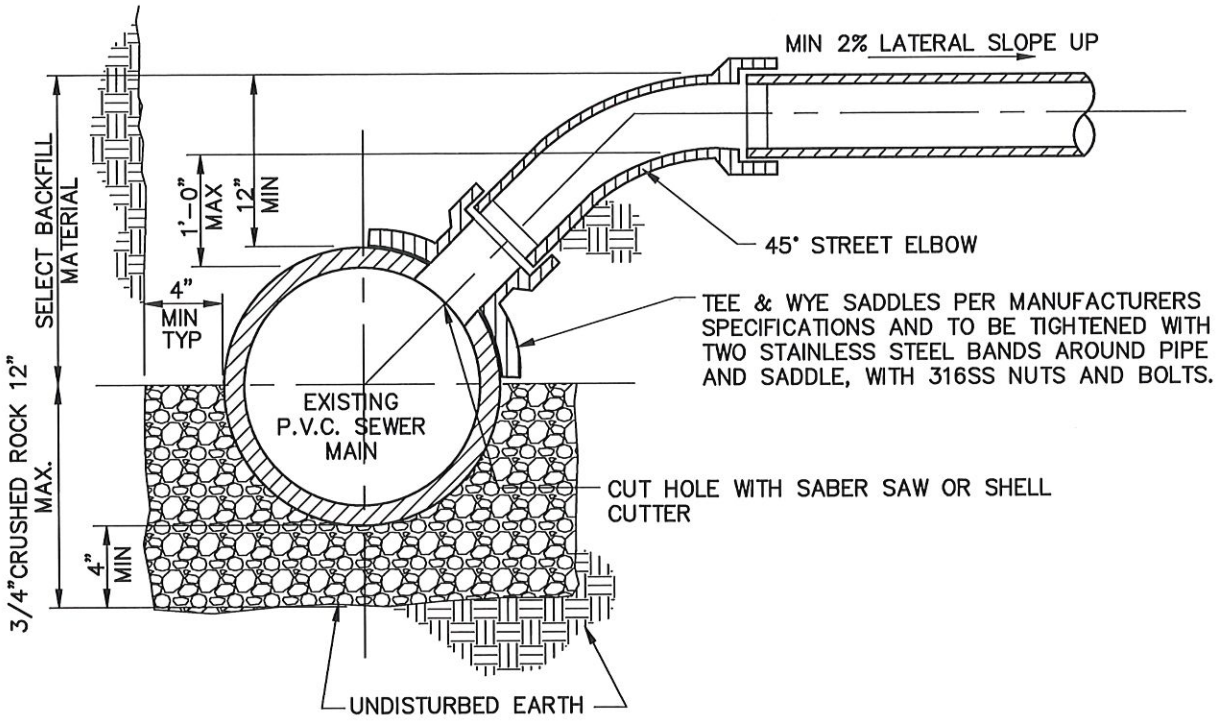

SECTION - SEWER LATERAL

REVISION	DATE	BY	DESCRIPTION

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GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER LATERAL
PLASTIC PIPE
SADDLE CONNECTION

DWG. NO.
S-7

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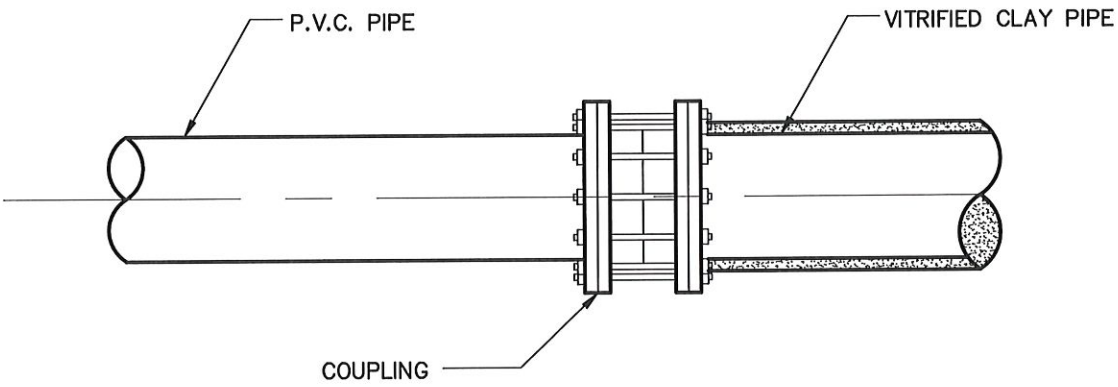

FLEXIBLE COUPLING
(NON-PRESSURE)

NOTES:

1. NO CONNECTION ALLOWABLE AT BELL END OF V.C.P. CUT BELL END OFF V.C.P. PRIOR TO MAKING CONNECTION.
2. SEWER TRANSITION COUPLING SHALL BE ROMAC WITH 316SS NUTS AND BOLTS, OR APPROVED EQUAL.
3. COUPLINGS SHALL BE EPOXY COATED AND WRAPPED IN 10 MIL. POLYETHYLENE BAG.

REVISION	DATE	BY	DESCRIPTION

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GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

CONNECTING DISSIMILAR SEWER PIPES

DWG. NO. S-8

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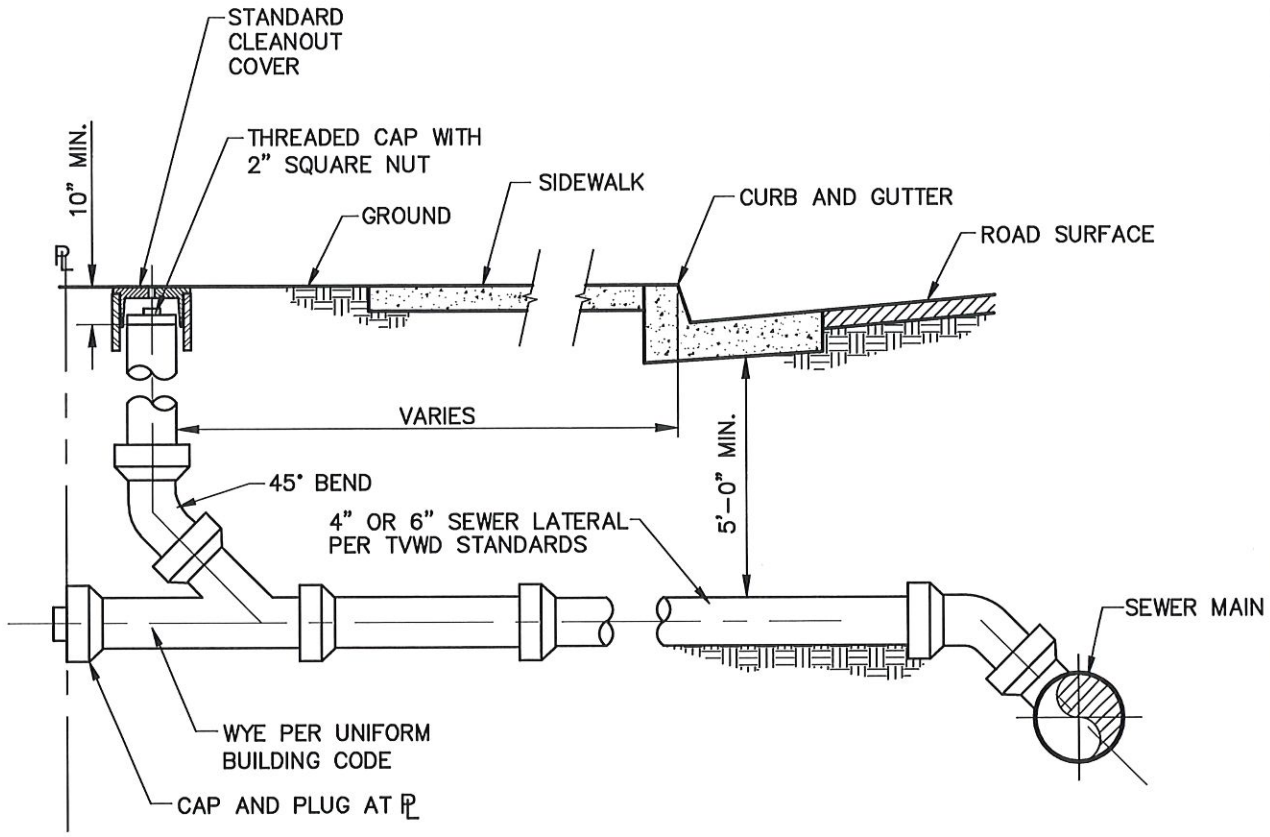

TYPICAL SEWER SERVICE CONNECTION

NO SCALE

NOTES:

1. PLACE CLEANOUT A MAXIMUM OF 1'-0" FROM PROPERTY LINE WITHIN R/W
2. STANDARD CLEANOUT COVER PER S-30
3. INSPECTOR MAY REQUIRE VIDEO TAPING OF LATERAL TO MAIN TO ENSURE LATERAL IS CLEAR AND CONNECTED.
4. CLEANOUT IS REQUIRED FOR ALL RESIDENTIAL LATERALS.
5. ANTI-FLOOD DEVICES TO BE INSTALLED ON ALL LATERALS WHERE THE FINISH FLOOR ELEVATION IS LOWER THAN THAT OF THE FIRST DOWNSTREAM MANHOLE PER S-29
6. FOR PAVED AREAS CLEANOUT COVER SHALL BE INSTALLED IN CONCRETE COLLAR PER S-18

REVISION	DATE	BY	DESCRIPTION

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GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

RESIDENTIAL CLEANOUT

DWG. NO. S-9

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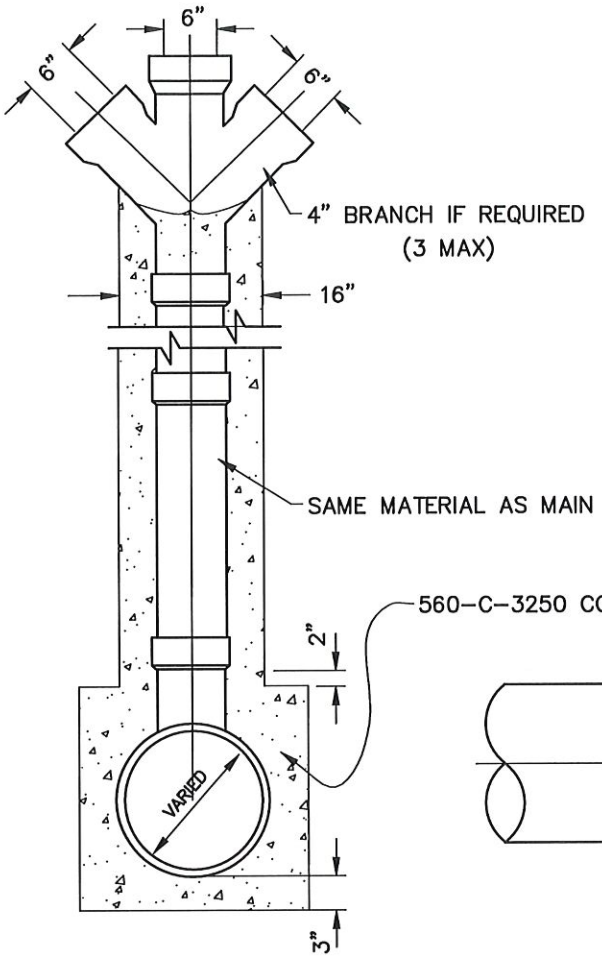
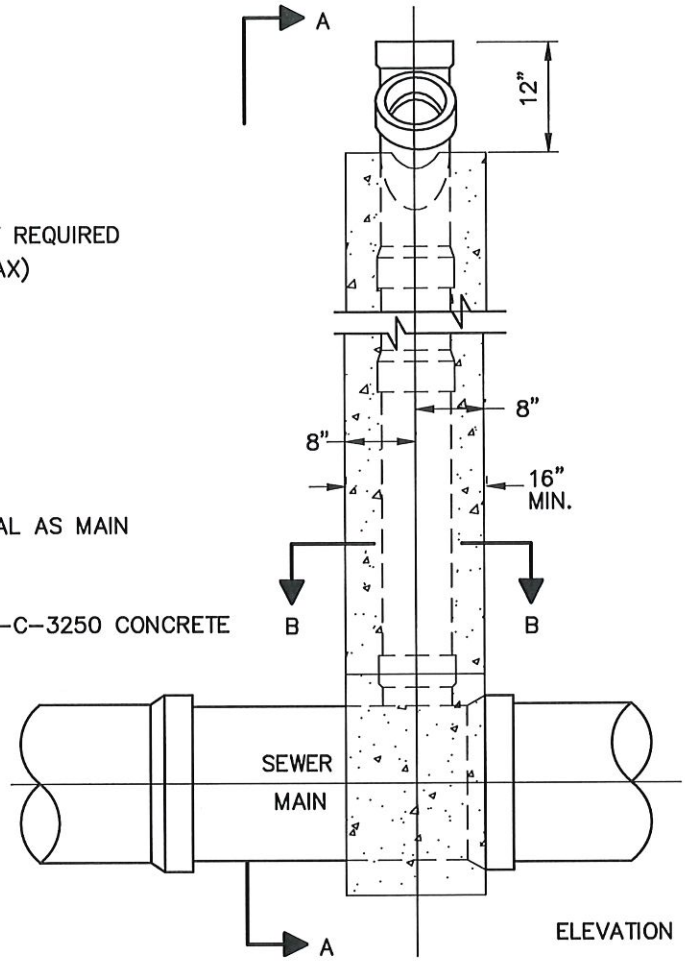
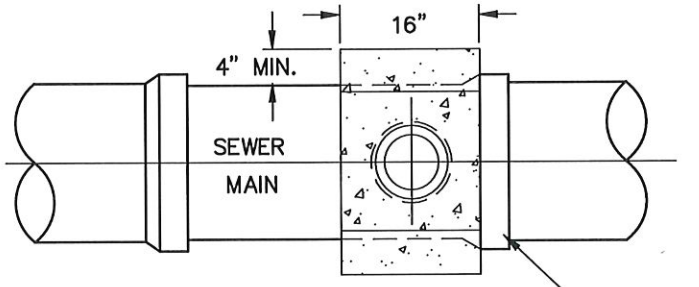


SECTION A-A
ELEVATION



ELEVATION



SECTION B-B
PLAN

DO NOT ENCASE BEYOND BELL

NOTES:

1. THE UPPER END OF THE CHIMNEY PIPE WILL BE 8 FEET BELOW THE GRADE OF THE LOWER CURB, UNLESS OTHERWISE SPECIFIED.
2. WHERE ONE OR TWO HOUSE CONNECTION(S) ARE TO BE JOINED TO THE CHIMNEY PIPE USE A SINGLE "Y" BRANCH; WHERE THREE HOUSE CONNECTIONS ARE TO BE JOINED USE DOUBLE "Y" BRANCH.
3. WHERE THE CHIMNEY PIPE IS TO BE USED FOR A SINGLE HOUSE CONNECTION FACE "Y" TOWARDS PROPERTY TO BE SERVED; WHERE USED FOR HOUSE CONNECTIONS ON BOTH SIDES OF SEWER, THE "Y" WILL FACE TOWARD THE RIGHT (LOOKING UPGRADE) AND THE HOUSE ON THAT SIDE WILL BE CONNECTED TO THE "Y" BRANCH BY A 6-INCH 45°-DEGREE BEND, AND THE HOUSE CONNECTION ON THE LEFT WILL BE CONNECTED TO THE UPPER END OF THE CHIMNEY BY A 6-INCH 45°-DEGREE BEND UNLESS OTHERWISE SPECIFIED.
4. THE SEWER MAIN WILL BE CONSTRUCTED OF THE MATERIAL SPECIFIED ON PLANS.
5. INSTALL 2" X 4" REDWOOD MARKER ABOVE UPPER END OF CHIMNEY FOR REPAIR AND CONNECTION LOCATING.

REVISION	DATE	BY	DESCRIPTION

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GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER CHIMNEY LATERAL

DWG. NO. S-10

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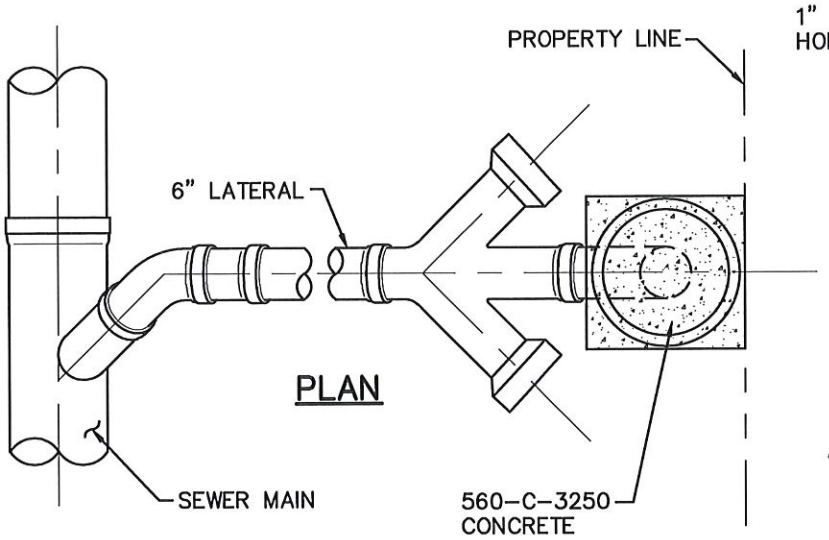
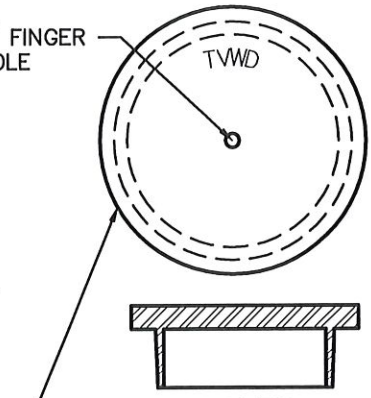
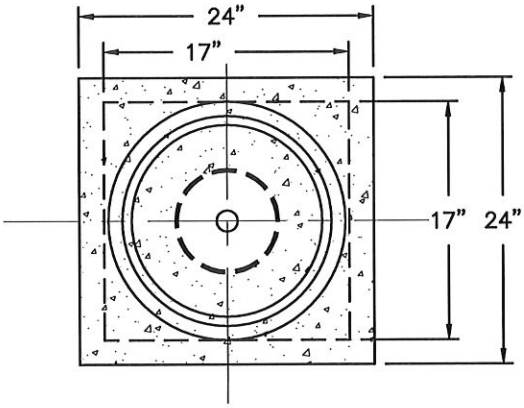


PLAN

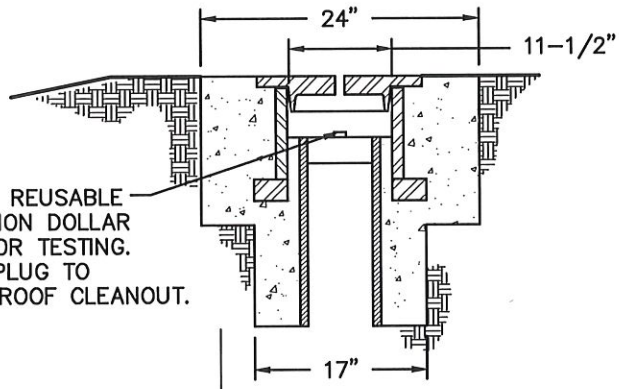


COVER

CASTING SHALL BE ALHAMBRA FOUNDRY NUMBER A-1241 OR EQUAL AS APPROVED BY THE DISTRICT

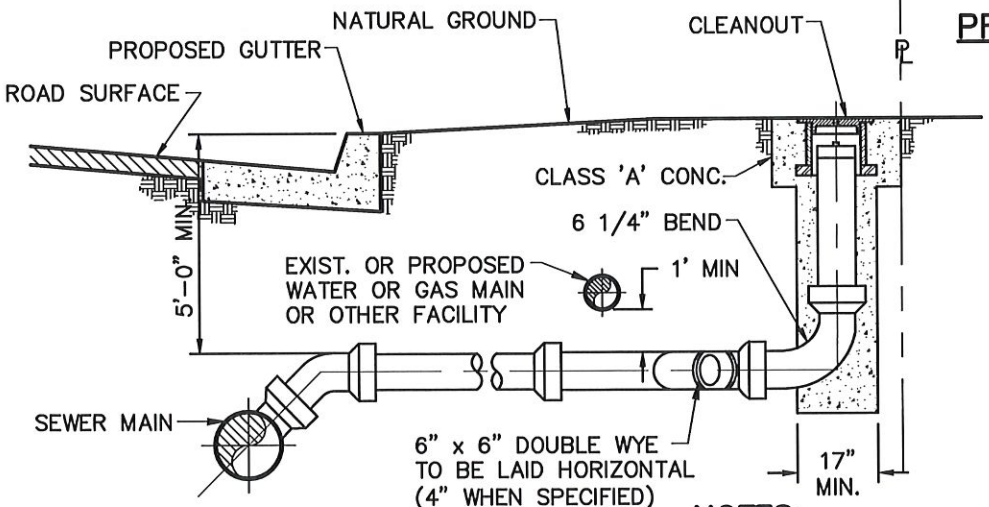


CLEANOUT



INSTALL REUSABLE EXPANSION DOLLAR PLUG FOR TESTING. LEAVE PLUG TO WATERPROOF CLEANOUT.

PROFILE



PROFILE

NOTES:

1. MIN. SLOPE 0.02' RISE PER FOOT UNLESS OTHERWISE SPECIFIED ON PLAN AND PROFILE.

NOTES:

1. UNLESS WAIVED BY ENGINEER. A 2" WIDE METALLIC DETECTABLE LOCATOR TAPE SHALL BE PLACED WITH EACH LATERAL APPROXIMATELY 6" ABOVE THE PIPE, BUT NO GREATER THAN 6' DEEP.
2. SEWER TREES ARE NOT TO BE USED EXCEPT WITH SPECIAL WRITTEN APPROVAL BY THE DISTRICT ENGINEER.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SEWER TREE LATERAL & CLEANOUTS

DWG. NO. S-11

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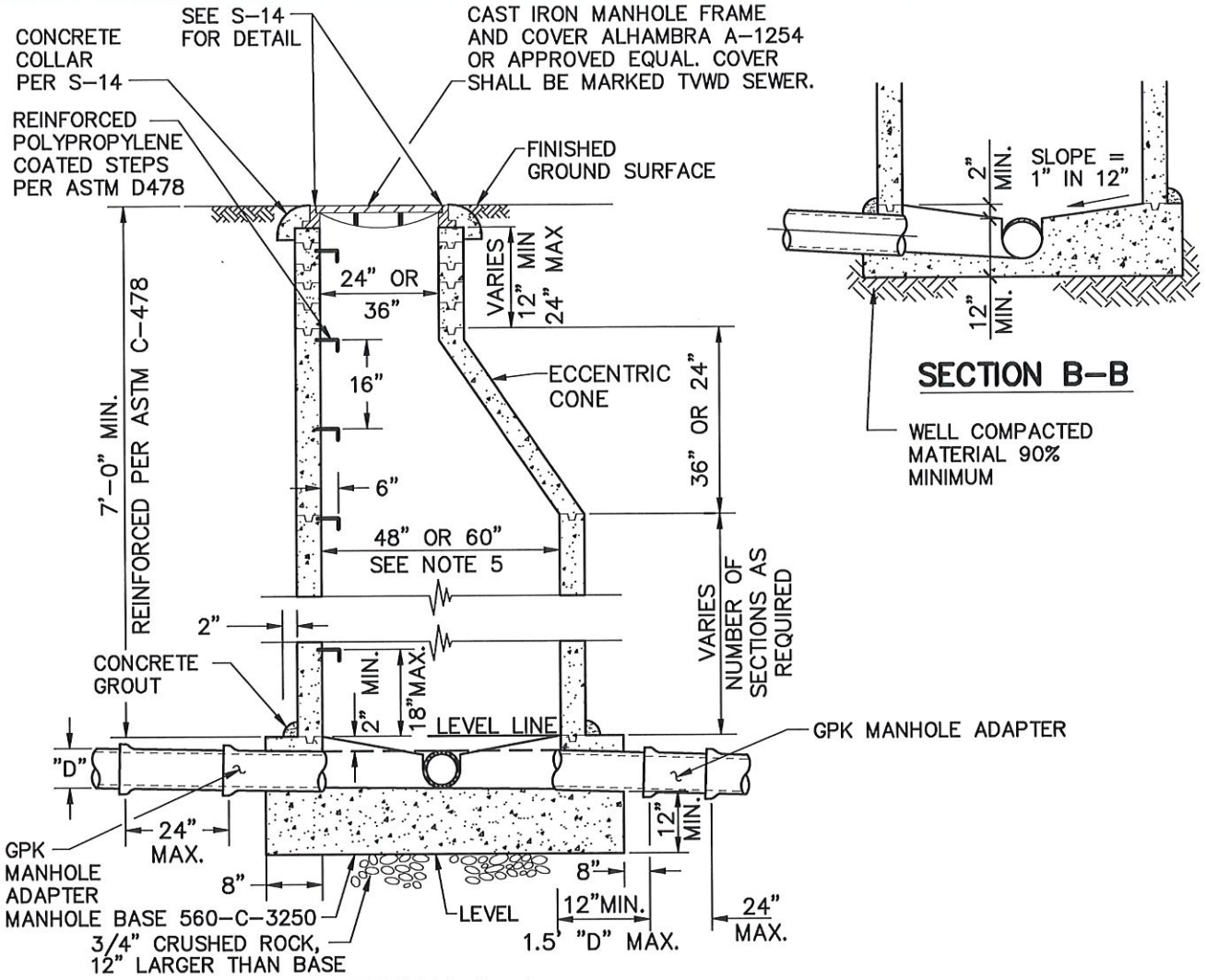
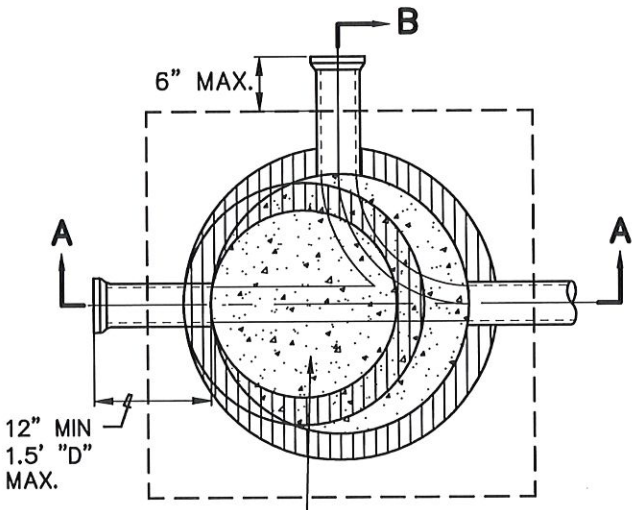


SECTION A-A

SECTION B-B

NOTES:

1. PRECAST REINFORCED CONCRETE MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478, LATEST, AND SHALL BE DESIGNED FOR H-20 LOADING.
2. ALL MANHOLE SECTIONS AND GRADE RINGS SHALL BE JOINED WITH 3/8" THICK CEMENT MORTAR NEATLY STRUCK AND POINTED.
3. VERTICAL WALL OF CONE SHALL BE ON UPSTREAM SIDE OF MANHOLES.
4. WHEN A CHANGE OF PIPE SIZE AT THE MANHOLE IS SPECIFIED, THE PIPES WILL BE PLACED SO THAT THE TOPS OF THE PIPES ARE ALIGNED.
5. MANHOLE DIAMETER SHALL BE 48" FOR SEWER PIPE DIAMETERS 24" AND SMALLER, AND 60" FOR SEWER PIPE DIAMETERS 27" AND LARGER, AND FOR ALL MANHOLES WITH A DEPTH OF 12' OR MORE. 60" DIAMETER MANHOLES SHALL BE USED WITH A 36" CONE.
6. WHEN MANHOLE IS IN A STREET TO BE PAVED, MANHOLE FRAME SHALL BE SET AFTER PAVEMENT HAS BEEN PLACED. TOP OF MANHOLE SHALL BE INSTALLED PER STD. DWG. S-14
7. MANHOLES SHALL BE SPACED AT 500 FEET MAXIMUM INTERVALS, UNLESS SPECIFIED OTHERWISE.
8. ALL NEW MANHOLES ON SEWERS 15-INCHES OR GREATER DIA., ALL NEW MANHOLES WHERE ENTERING PIPE SLOPE IS 5% OR GREATER, ALL EXISTING MANHOLES WITH NEW CONNECTIONS, AND ALL MANHOLES WITHIN 1,000 FEET OF RECEIVING A FORCE MAIN DISCHARGE: THE MANHOLES SHALL BE PROVIDED WITH INTEGRALLY LOCKING PVC OR POLYURETHANE PROTECTIVE LINING SYSTEM PER SECTION 500-2 OF THE GREENBOOK.



PLAN

REVISION	DATE	BY	DESCRIPTION
1	6/1/06	PC	CHANGE ALLOWABLE CONE HEIGHT

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

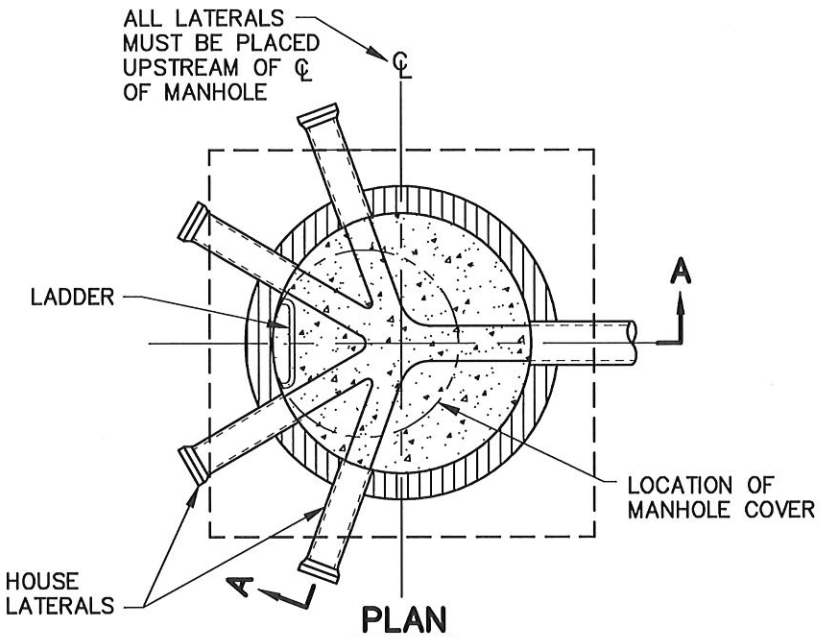
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

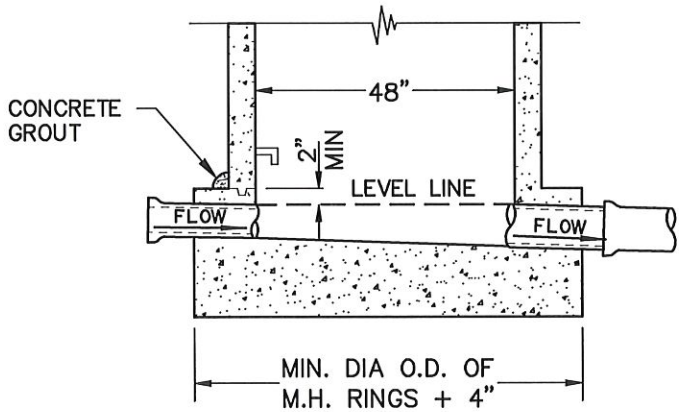
PRE-CAST REINFORCED ECCENTRIC CONC MANHOLE

DWG. NO. S-12

11/2/2015 2:44:42 PM L:\Agency Standards\Temescal Valley Water District\S-12



PLAN



SECTION A–A

NOTES:

1. REFER TO STANDARD DRAWINGS OF MANHOLES FOR DETAILS PERTAINING TO MANHOLES ONLY.
2. THE TOP ½ DIAMETER OF THE PIPE IS TO BE BROKEN OUT TO A NEAT LINE. BROKEN EDGES SHALL BE PLASTERED SMOOTH WITH CEMENT MORTAR.
3. THE MAXIMUM NUMBER OF LATERALS INTO A TERMINUS MANHOLE SHALL BE LIMITED TO FOUR.
4. TERMINUS MANHOLES WITH HOUSE LATERALS ARE NOT TO BE USED EXCEPT WITH SPECIAL WRITTEN APPROVAL BY DISTRICT ENGINEER.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

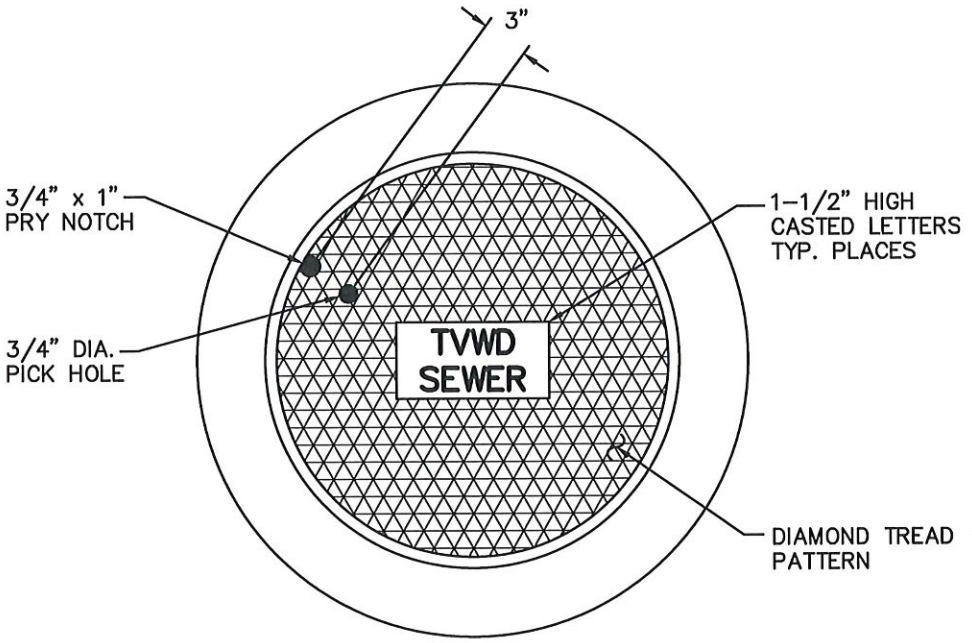
TERMINUS MANHOLE WITH HOUSE LATERALS

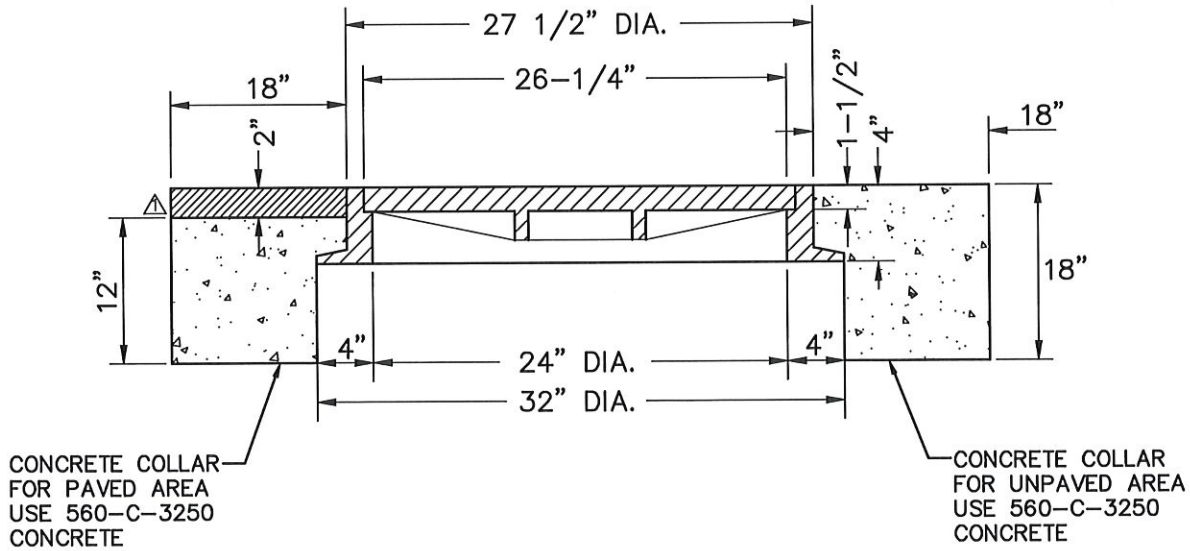
DWG. NO. S–13

11/2/2015 2:44:53 PM L:\Agency Standards\Temescal Valley Water District\S-13

NOTES:

ALHAMBRA FOUNDARY CO. A-1254, OR APPROVED EQUAL





REVISION	DATE	BY	DESCRIPTION
1	4/12/07		SHOW AC PAVEMENT

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

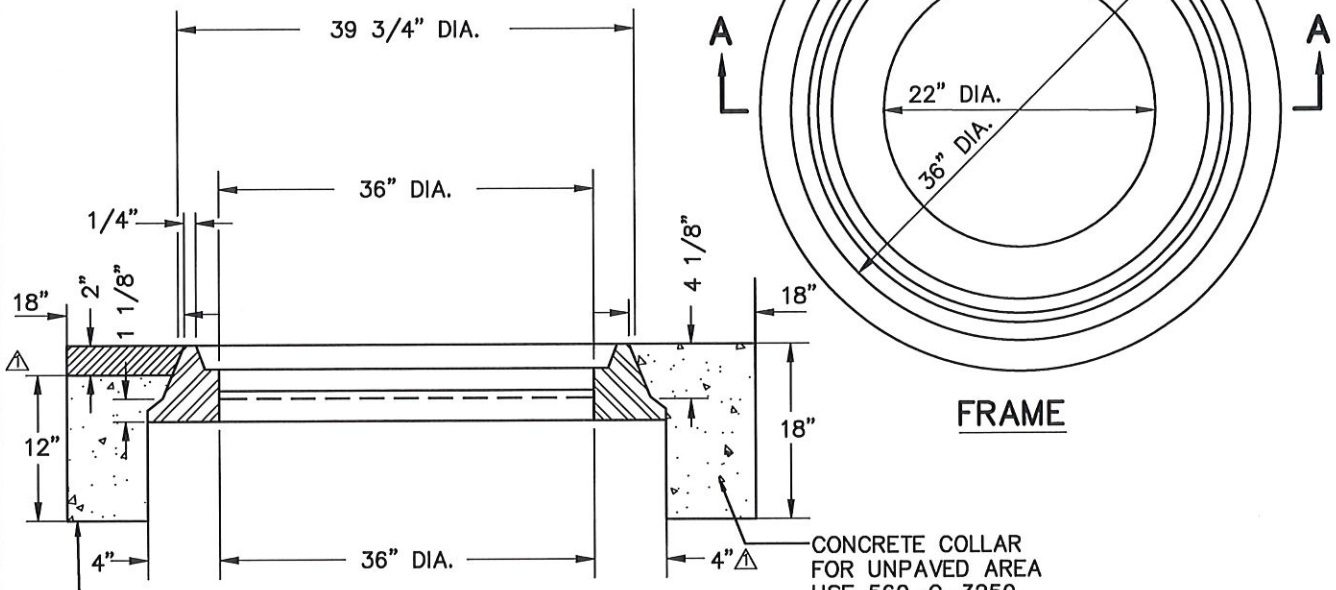
MANHOLE COVER & FRAME
STANDARD & WATERTIGHT

DWG. NO. S-14

11/2/2015 2:45:05 PM L:\Agency Standards\Temescal Valley Water District\S-14

NOTES:

ALHAMBRA FOUNDRY CO. A-1325, SOUTH BAY FOUNDRY 1325 OR APPROVED EQUAL

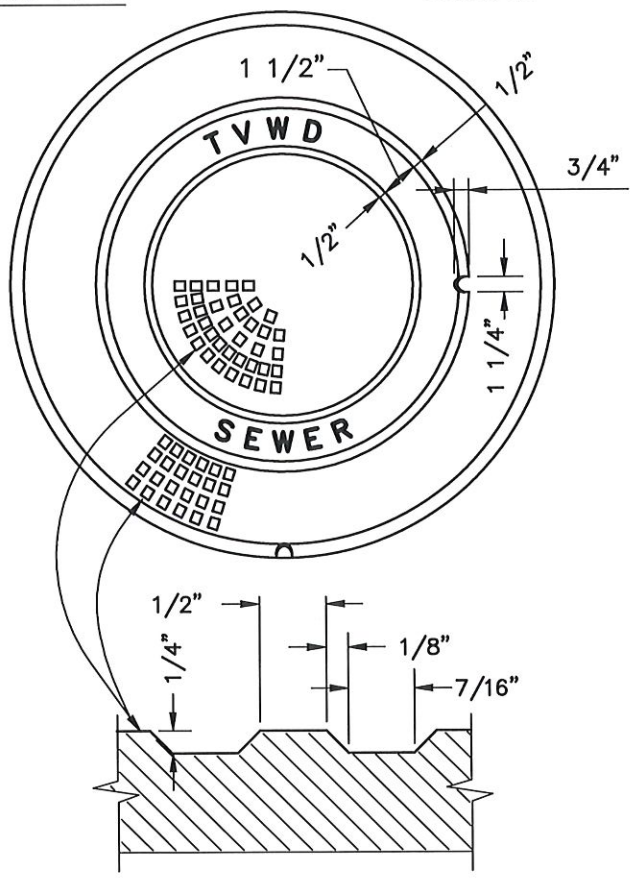


FRAME

SECTION A-A

CONCRETE COLLAR FOR UNPAVED AREA USE 560-C-3250 CONCRETE

CONCRETE COLLAR FOR PAVED AREA USE 560-C-3250 CONCRETE



COVER

REVISION	DATE	BY	DESCRIPTION
1	4/12/07		SHOW AC PAVEMENT, ADD DIMENSION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

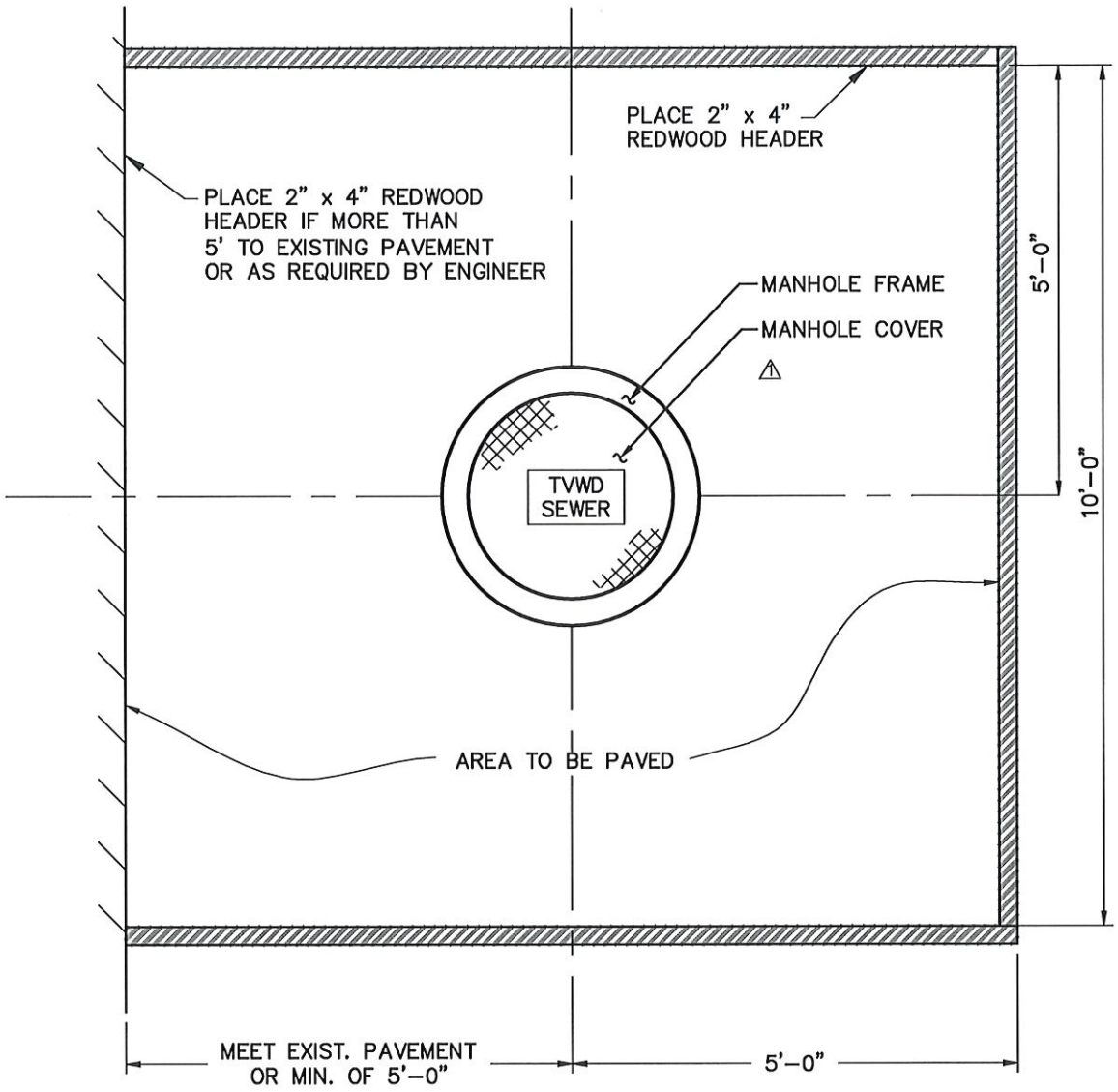
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

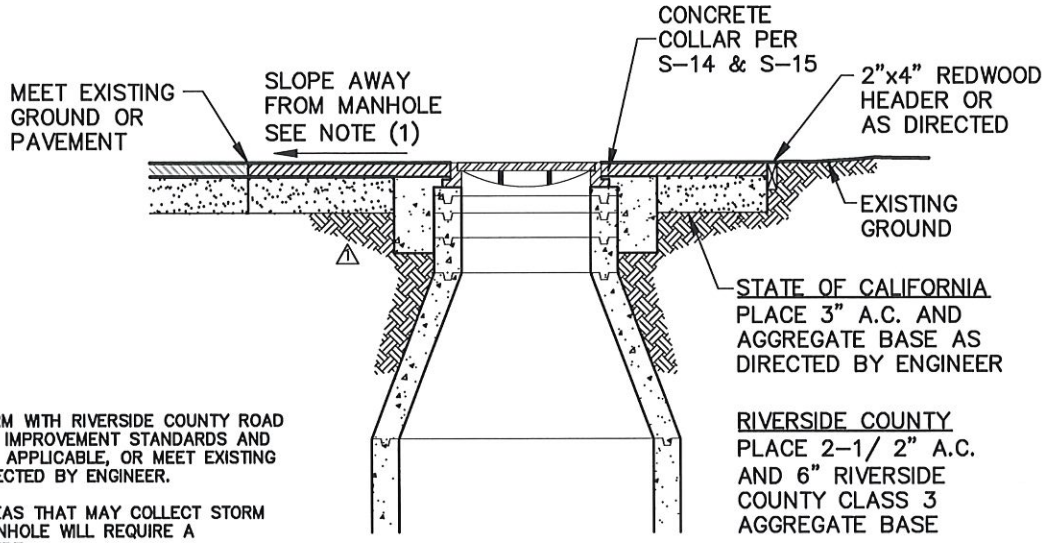
STANDARD DRAWINGS

MANHOLE COVER & FRAME
TWO COVERS

DWG. NO. S-15

11/2/2015 2:45:17 PM L:\Agency Standards\Temescal Valley Water District\S-15





NOTES:

1. SLOPE WILL CONFORM WITH RIVERSIDE COUNTY ROAD OR STATE HIGHWAY IMPROVEMENT STANDARDS AND SPECIFICATIONS, AS APPLICABLE, OR MEET EXISTING CONDITIONS AS DIRECTED BY ENGINEER.
2. ANY PAVEMENT AREAS THAT MAY COLLECT STORM WATER AROUND MANHOLE WILL REQUIRE A RAIN-STOPPER INSERT.

REVISION	DATE	BY	DESCRIPTION
⚠	4/12/07		REMOVE DIMENSION, CHANGE CONCRETE SYMBOL

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

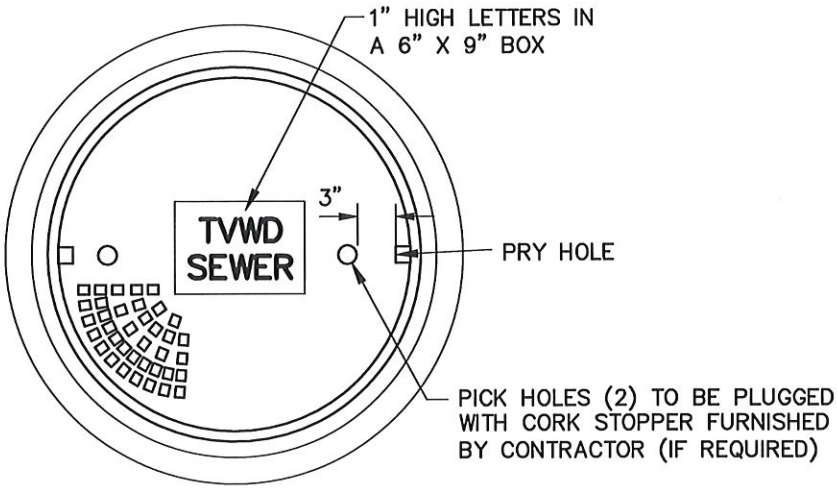
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

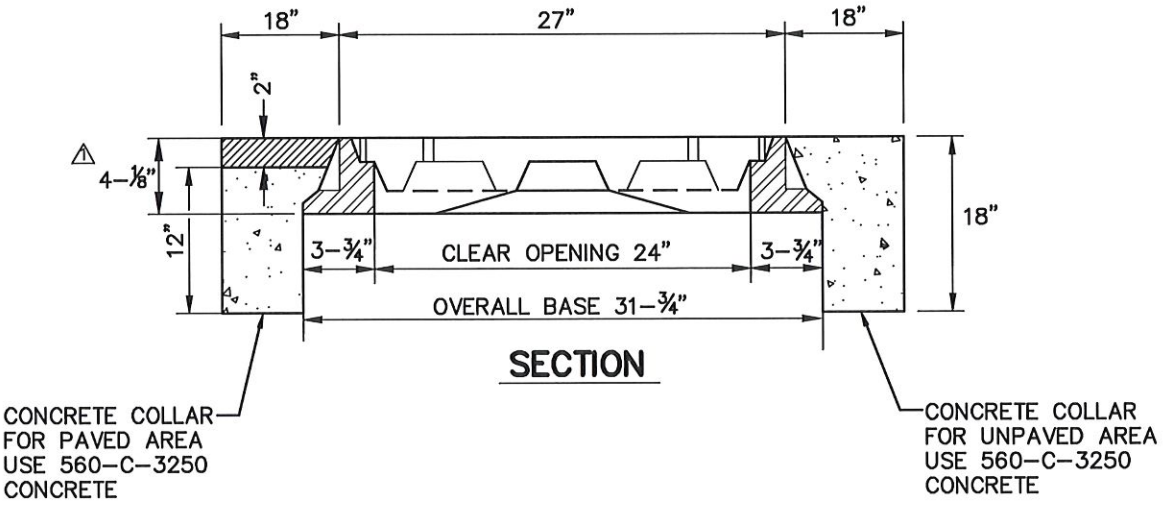
STANDARD DRAWINGS

PAVING DETAIL AROUND MANHOLES

DWG. NO. S-16

11/2/2015 2:45:28 PM L:\Agency Standards\Temescal Valley Water District\S-16





NOTES:

1. MANHOLE COVER SHALL BE DESIGNED FOR A.A.S.H.O. H-20 LOADING.
2. CAST IRON SHALL HAVE MINIMUM TENSILE STRENGTH OF 30,000 LBS. PER SQ. INCH.
3. MANHOLE COVER SHALL BE "ALHAMBRA FOUNDRY CO." TYPE A1176 OR APPROVED EQUAL.
4. RAISE ALL UNIMPROVED AREA MANHOLES ABOVE GRADE AND USE BOLT DOWN COVERS. (INSTALL GAURDPOSTS).
5. RAINSTOPPERS TO BE INSTALLED WHERE STORM WATER COULD COLLECT OVER MANHOLE.

REVISION	DATE	BY	DESCRIPTION
1	4/12/07		SHOW AC CAP

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

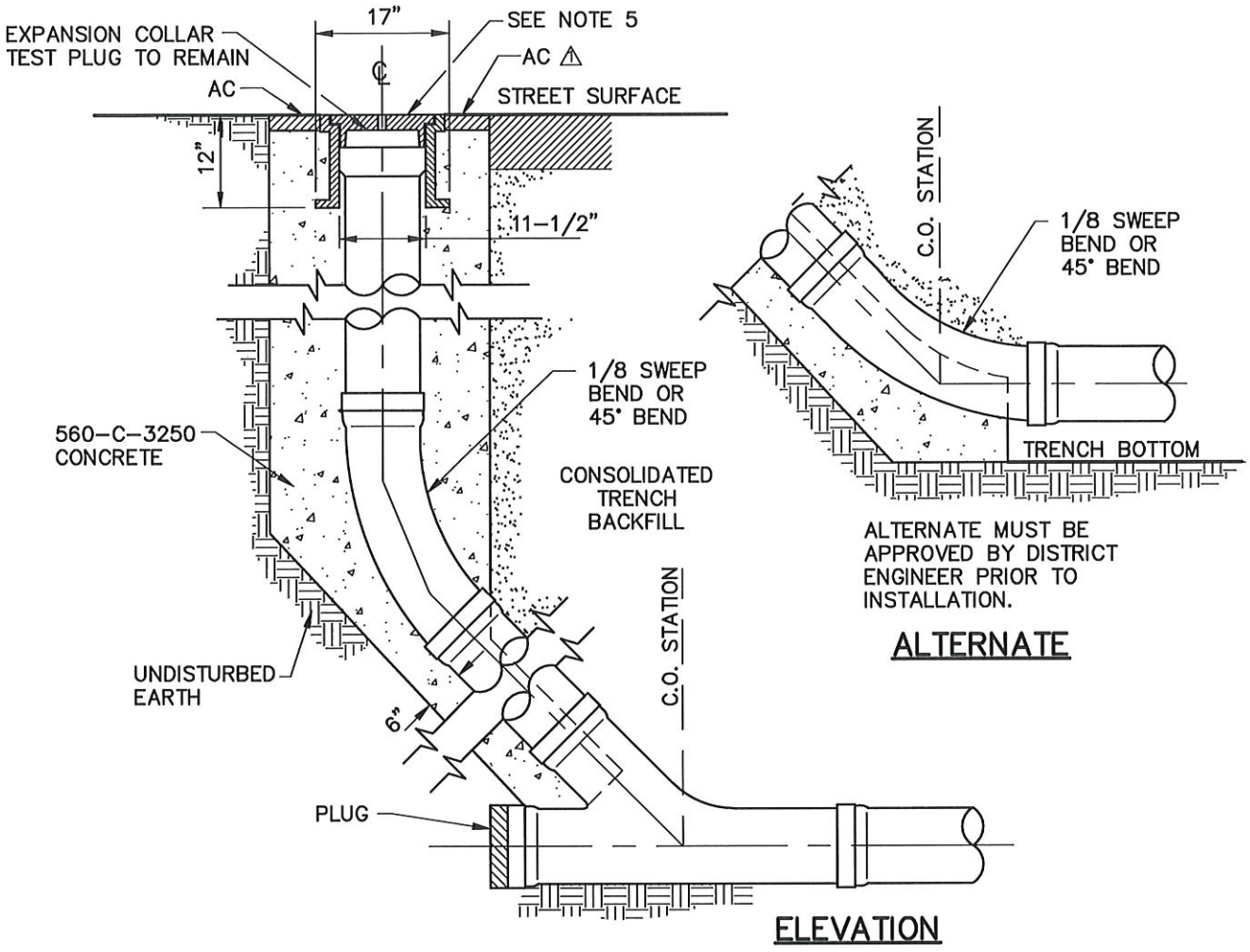
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

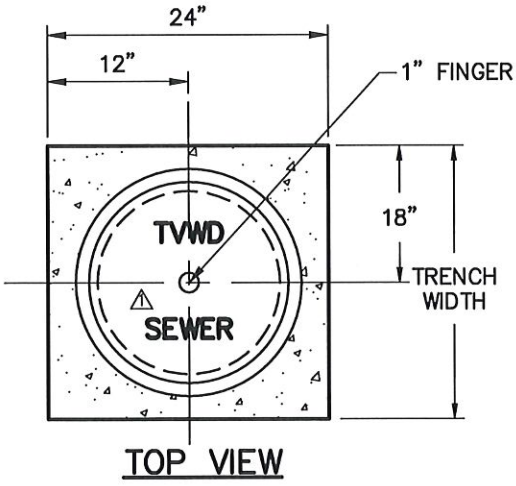
STANDARD DRAWINGS

MANHOLE COVER & FRAME
LOCKING TYPE

DWG. NO.
S-17

11/2/2015 2:45:40 PM L:\Agency Standards\Temescal Valley Water District\S-17





NOTES:

1. CLEAN-OUT IS TO BE USED FOR INDUSTRIAL OR COMMERCIAL INSTALLATIONS ONLY.
2. CLEAN-OUT IS NOT TO BE SUBSTITUTED FOR MANHOLE.
3. CLEAN-OUTS ARE NOT TO BE PLACED ON LATERALS OVER 150' LONG.
4. CLEAN-OUT PIPE MUST BE SAME DIAMETER AND MATERIALS AS MAIN LINE SEWER.
5. CASTING WILL BE ALHAMBRA FOUNDARY NO. A-1241, OR APPROVED EQUAL.
6. COVER FRAME AND CONCRETE PAD ARE TYPICAL FOR 8" I.D. MAIN LINE SEWERS.
7. PLUGS WILL BE CEMENTED IN PLACE WITH CEMENT MORTAR. NEOPRENE PLUGS OR APPROVED EQUALS MAY BE SUBSTITUED.
8. STATION OF WYE OR LOWER 1/8 SWEEP BEND WILL CORRESPOND TO THE CLEAN-OUT STATION SHOWN ON CONSTRUCTION DRAWINGS WITH CLEAN-OUT CONSTRUCTION EXTENDED BEYOND THAT POINT AS NECESSARY.
9. USE ONLY 560-C-3250 CONCRETE FOR CONSTRUCTION.

REVISION	DATE	BY	DESCRIPTION
⚠	4/12/07		SHOW AC PAVEMENT, ADD LABEL TO LID

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

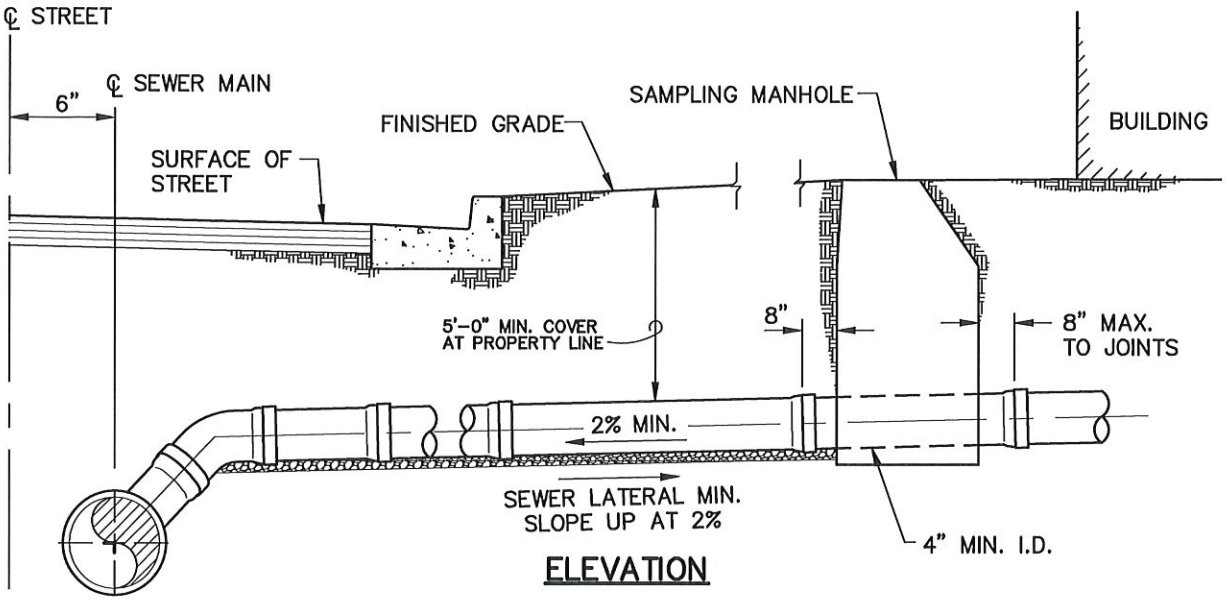
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

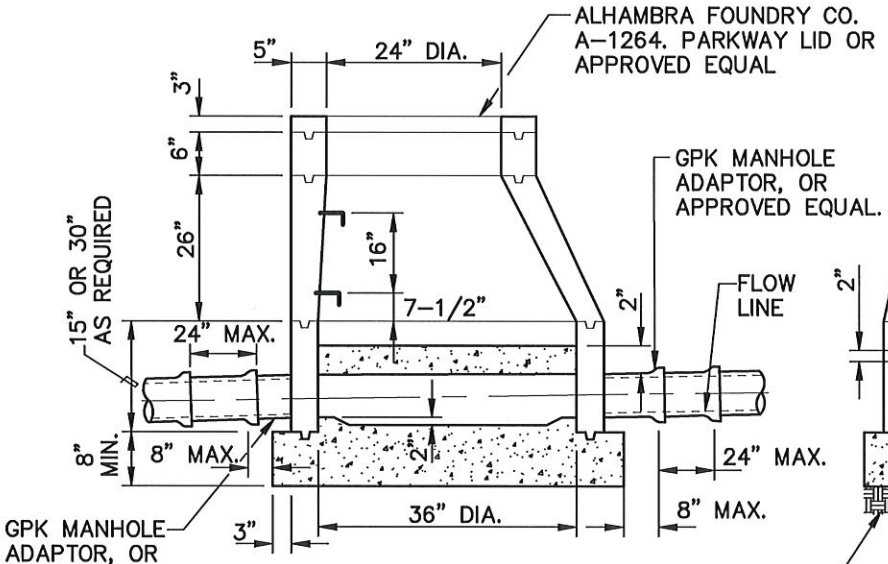
NON-RESIDENTIAL SEWER CLEAN-OUT

DWG. NO. S-18

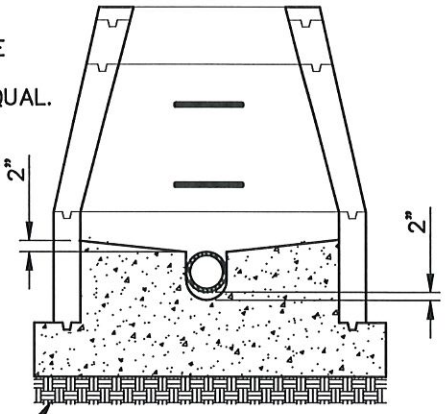
11/2/2015 2:45:51 PM L:\Agency Standards\Temescal Valley Water District\S-18



ELEVATION



LONGITUDINAL VIEW OF SAMPLING MANHOLE



SECTIONAL VIEW OF SAMPLING MANHOLE

NOTES:

1. MANHOLE TO BE INSTALLED ON BUILDING SEWER AND LOCATED SUCH THAT THE MANHOLE WILL BE ACCESSIBLE AT ALL TIMES.
2. 36" MANHOLE TO BE AS CONSTRUCTED BY SOUTHWEST CONCRETE PROD. INLAND CONCRETE ENTERPRISES, OR EQUAL, AND MAY BE REINFORCED, OR NON-REINFORCED.
3. WHERE NO BUILDING SET-BACK IS AVAILABLE, SET MANHOLE IN PARKWAY AREA: WHERE MANHOLE MUST BE SET IN CONCRETE WALK, PLUG PICK HOLE FLUSH. LOCATE MANHOLE TO CLEAR OTHER UTILITIES.
4. CONCRETE BASE SHALL BE OF CLASS 560-C-3250 CONCRETE AND PLACED IN ONE OPERATION. CONCRETE INVERTS SHALL BE TRUE TO GRADE AND ALIGNMENT, AND FINISHED WITH A SMOOTH SURFACE. SPECIAL CARE SHALL BE USED IN FORMING ALL CHANNELS TO FACILITATE THE FLOW OF SEWAGE.
5. ALL MANHOLE TOPS SHALL BE INSTALLED WITH THE MANHOLE COVER OVER THE DOWNSTREAM INLET, EXCEPT AS OTHERWISE SPECIFIED.
6. SEE DWG. NO. S-17 FOR DETAILS AND INSTALLATION OF MANHOLE COVER AND FRAME.
7. GRADE RINGS SHALL BE 24" I.D. EXCEPT AS OTHERWISE NOTED.
8. JOINTS SHALL BE 3/8" THIKCNESS CEMENT MORTAR NEATLY STRUCK AND POINTED.
9. ALL SAMPLING MANHOLES MUST HAVE PROVISIONS FOR POWER AND COMPOSITE SAMPLER IN LOCKABLE CABINET.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

36" I.D. SAMPLING MANHOLE

DWG. NO. S-19

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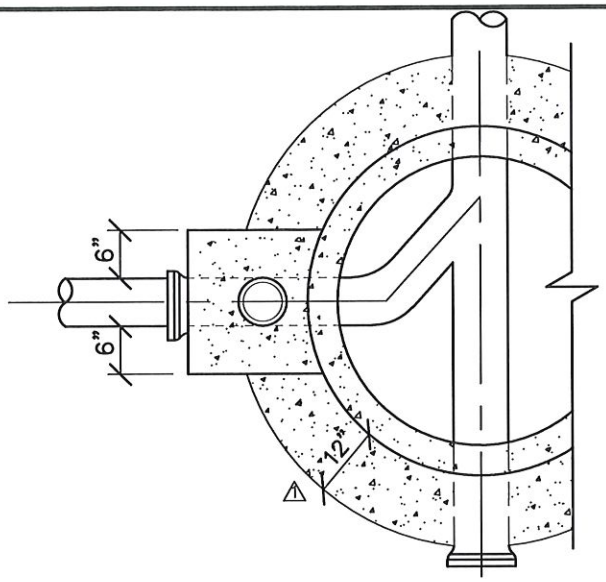
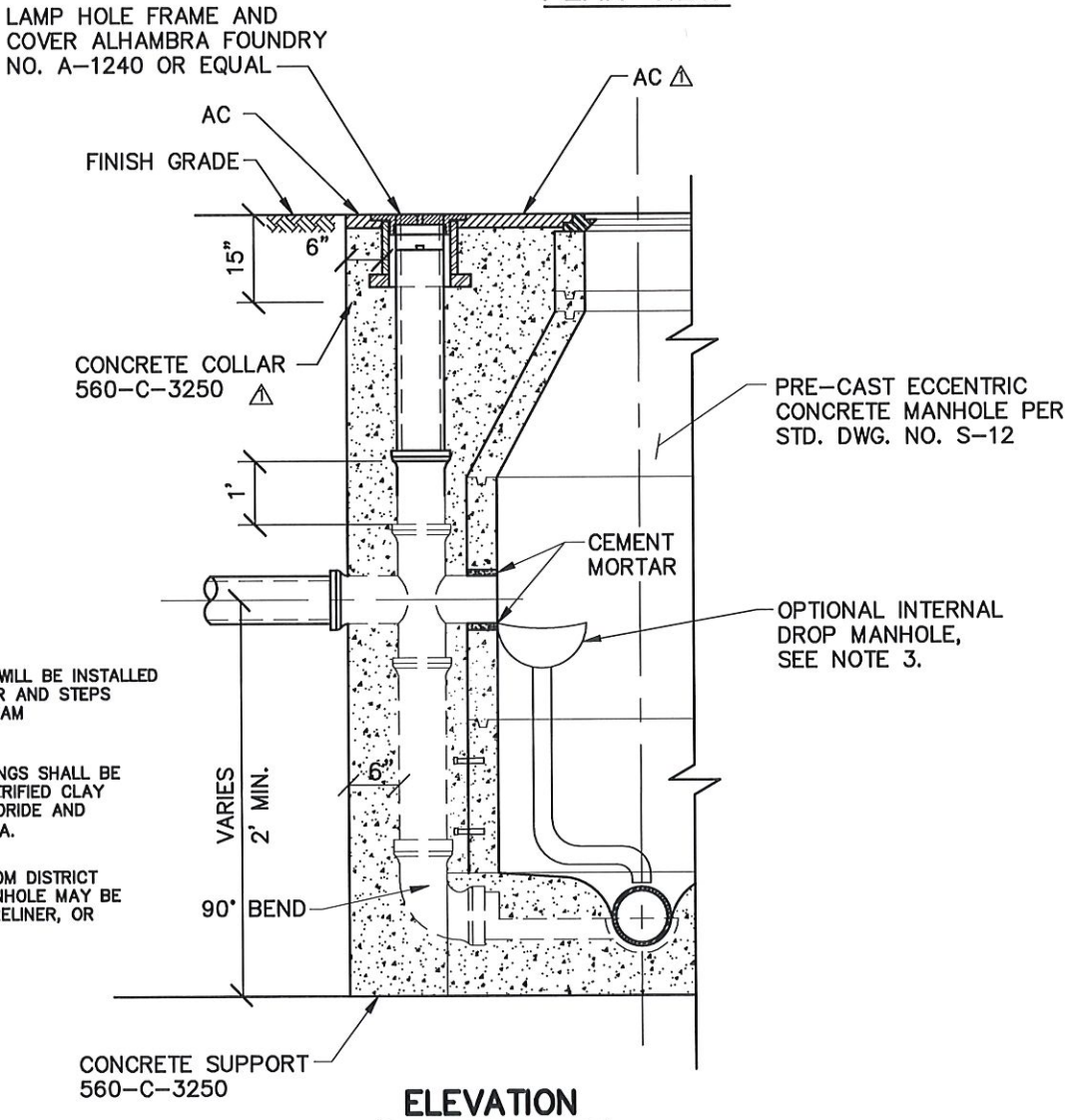


PLAN VIEW



ELEVATION

NOTES:

1. ALL MANHOLE TOPS WILL BE INSTALLED WITH THE M.H. COVER AND STEPS OVER THE DOWNSTREAM OUTLET.
2. ALL PIPES AND FITTINGS SHALL BE CONSTRUCTED OF VITRIFIED CLAY OR POLY-VINYL CHLORIDE AND SHALL BE 8" MIN. DIA.
3. UPON APPROVAL FROM DISTRICT ENGINEER, DROP MANHOLE MAY BE INTERNAL TYPE BY RELINER, OR EQUAL.

REVISION	DATE	BY	DESCRIPTION
1	4/12/07		SHOW AC CAP, SHOW CONCRETE COLLAR, ADD CONCRETE TO SURFACE AROUND CLEANOUT

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

DROP MANHOLE

DWG. NO. S-20

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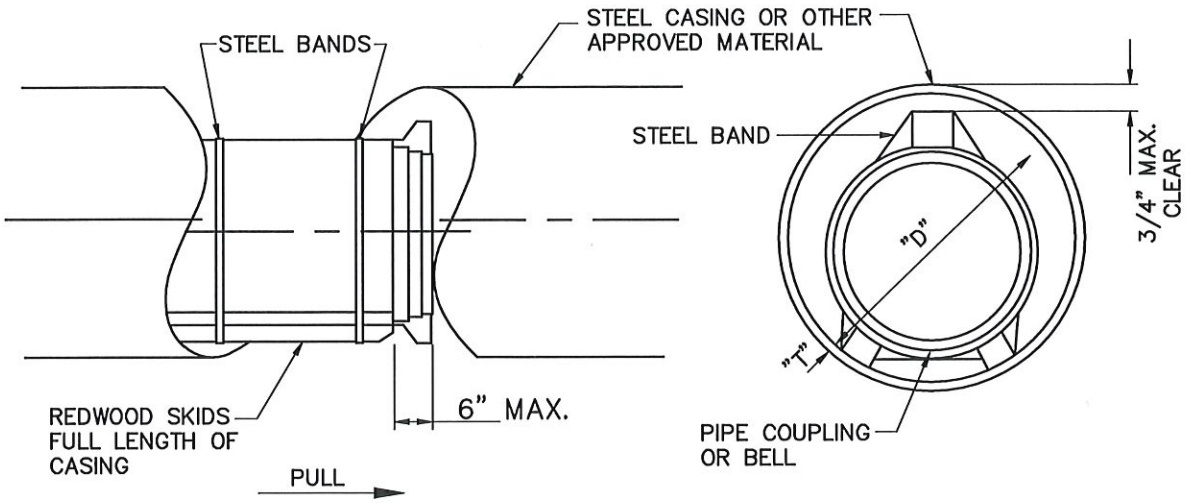
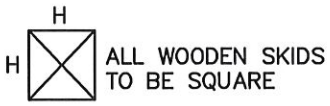
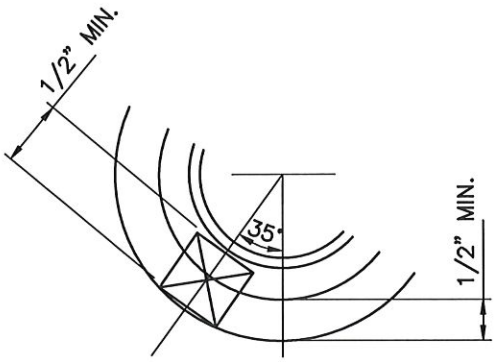






NOTES:

1. ENDS OF THE CASING PIPE SHALL BE CLOSED AROUND THE CARRIER WITH A POURED-IN PLACE PLASTER-OF-PARIS OR CEMENT PLUG WITH A SMALL OPENING LEFT FOR DRAINAGE AT THE BOTTOM OF THE DOWNSTREAM SIDE ONLY (OR AS DIRECTED)
2. STEEL CASING SHALL BE INSTALLED BY MEANS OF JACKING OR DRY BORING, EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS TO BE INSTALLED BY OPEN TRENCH CONSTRUCTION.
3. CASING DIA. SHALL BE MINIMUM OF 4" GREATER THAN THE OUTSIDE BELL DIA., EXCEPT SEWER PIPE CASING SHALL NOT BE LESS THAN 30" IN DIA. WHEN CASING IS BORED, UNLESS SPECIFICALLY NOTED.
4. THE STEEL MIN. CASING THICKNESS SPECIFIED IN "TABLE A" IS REQUIRED FOR CASING IN PLACE AND DOES NOT ACCOUNT FOR CONSTRUCTION LOADS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STRUCTURAL SUFFICIENCY OF THE CASING DURING CONSTRUCTION, AND ALSO THE METHOD OF INSTALLATION.
5. GRAVITY SEWER PIPELINES AND PRESSURE PIPELINES SHALL BE SUPPORTED ON PIPE SKIDS SUBJECT TO THE APPROVAL OF THE ENGINEER. C.M.L. & C. PRESSURE PIPE MAY REST ON THE BOTTOM OF THE CASING, BUT SHALL NOT BE DRAGGED INTO POSITION WITHOUT PIPE SKIDS.
6. ALL SKIDS SHALL BE SQUARE IN CROSS SECTION AND MADE FROM REDWOOD.
7. SKIDS SHALL BE ATTACHED TO PIPE BY STRAPPING WITH A STANDARD STRAPPING MACHINE TO HOLD SKIDS IN PLACE DURING PULLING OPERATION. USE STAINLESS BAND, OR METHOD OF CLEATING SKIDS TOGETHER.
8. FLEXIBLE PIPE (PVC, ETC.) SHALL HAVE SPACER GUIDE ALONG THE TOP TO PREVENT PIPE FROM FLOATING. FOR ENDS OF CASING PIPE, SEE NOTE (1). PIPE WITHIN CASING TO BE BONDED TOGETHER AT THE JOINTS FOR AN INTEGRAL UNIT PER MANUFACTURERS RECOMMENDATION. TWO APPROVED FLEXIBLE COUPLINGS SHALL BE USED AT EACH END OF CASING, PER S-8.
9. NOTICE AS REQUIRED BY THE DISTRICT SHALL BE GIVEN PRIOR TO CONSTRUCTION FOR DISTRICT INSPECTION OF CASING PIPE AND CARRIER PIPE INSTALLATION. THE AS-BUILT LOCATION AND GRADE OF CASING PIPE SHALL BE APPROVED BY THE DISTRICT PRIOR TO INSTALLATION OF THE CARRIER PIPE. DEPARTURES FROM PLANNED LOCATION OR GRADE OF THE CASING PIPE SHALL REQUIRE A FIELD SURVEY FOR CARRIER PIPE REDESIGN IF FEASIBLE, OR ABANDONMENT IN FAVOR OF A NEW INSTALLATION.

TABLE "A" (STEEL)

DIAMETER "D" (INCHES)	THICKNESS "T"		
	STREETS & HWYS.		RAILROADS
	UP TO 150' IN LENGTH	OVER 150' IN LENGTH	
4"–10" I.D.	1/4"	1/4"	4"–12" : 1/4"
12"–16" O.D.	3/8"	3/8"	4"–16" : 9/32"
18"–20" O.D.	3/8"	3/8"	18":5/16" 20:11/32"
22" O.D.	3/8"	3/8"	3/8"
24" O.D.	3/8"	3/8"	13/32"
26" O.D.	3/8"	3/8"	7/16"
28" O.D.	3/8"	3/8"	15/32"
30" O.D.	1/2"	1/2"	1/2"
32" O.D.	1/2"	1/2"	1/2"
34"–36" O.D.	1/2"	1/2"	17/32"
38" O.D.	1/2"	1/2"	9/16"
40" O.D.	1/2"	3/4"	9/16"
42" O.D.	1/2"	3/4"	9/16"
48"–60" O.D.	1/2"	3/4"	AS REQUIRED
62"–72" O.D.	3/4"	3/4"	AS REQUIRED

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

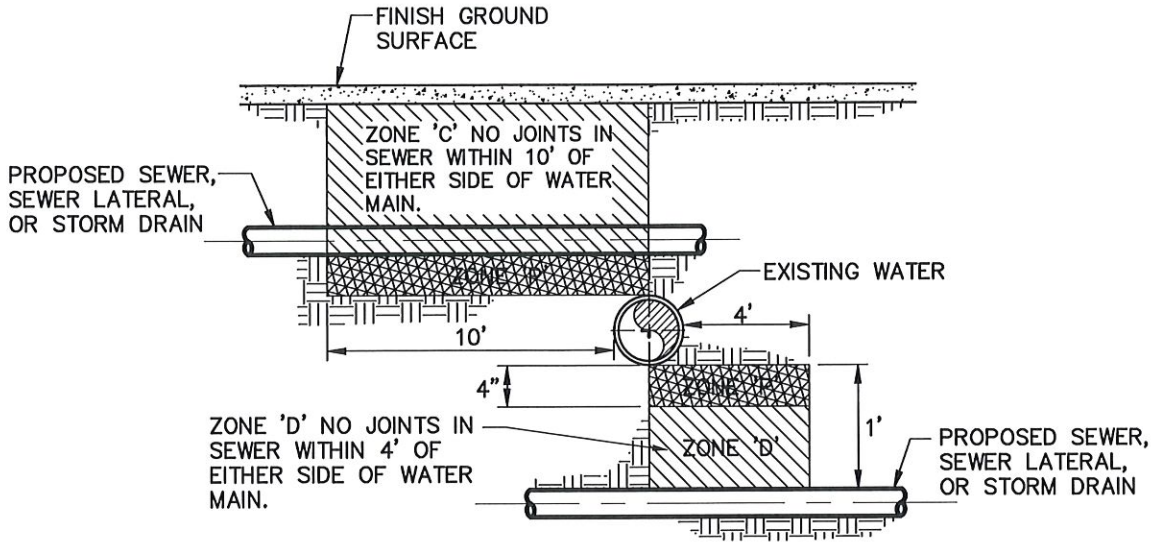
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

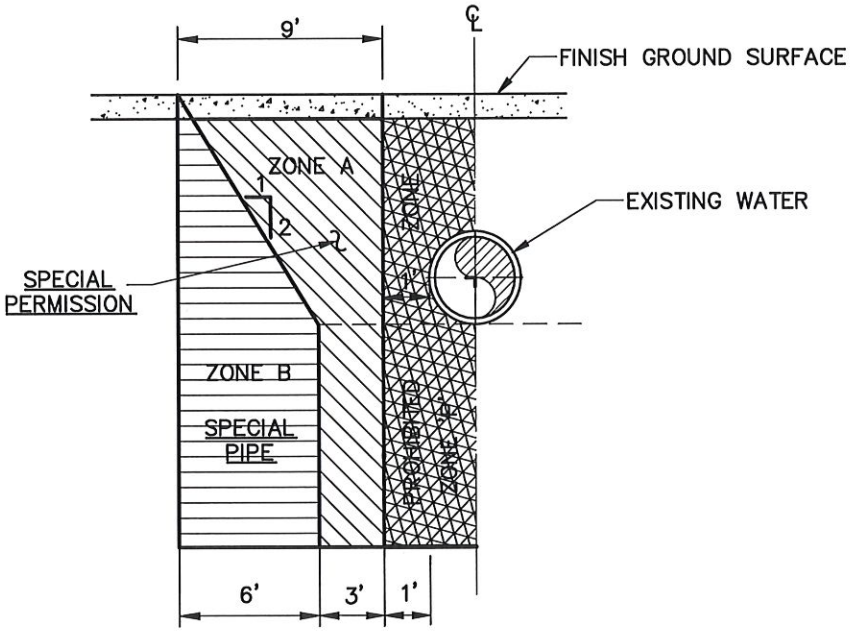
PIPE CASING SEWER MAIN

DWG. NO. S-23

11/2/2015 2:46:27 PM L:\Agency Standards\Temescal Valley Water District\S-23



CROSSING (PERPENDICULAR) CONDITION



PARALLEL CONDITION

NOTES:

ZONE "A" NO SEWER SHALL BE CONSTRUCTED WITHOUT SPECIAL APPROVAL FROM STATE DEPARTMENT OF HEALTH SERVICES AND TEMESCAL VALLEY WATER DISTRICT.

ZONE "B" SEWER SHALL BE CONSTRUCTED OF EXTRA STRENGTH VITRFIED CLAY PIPE WITH COMPRESSION JOINTS, POLYVINYL CHLORIDE PLASTIC PIPE WITH RUBBER RING JOINTS (PER ASTM D 3034), OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS. REQUIRES APPROVAL FROM TEMESCAL VALLEY WATER DISTRICT.

ZONE "C" & "D" SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH APPROVED COATING AND MECHANICAL JOINTS OR CONTINUOUS SECTION OF CLASS 200 (DR14 PER AWWA C-900) POLYVINYL CHLORIDE PLASTIC PIPE CENTERED OVER PIPE BEING CROSSED.

ZONE "P" NO SEWER LINE CONSTRUCTION ALLOWED.

1. UPON APPROVAL FROM DISTRICT ENGINEER HDPE FUSION WELDED PIPE MAY BE USED AS A CASING WHEN MINIMUM JOINT DISTANCE CAN NOT BE MET.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

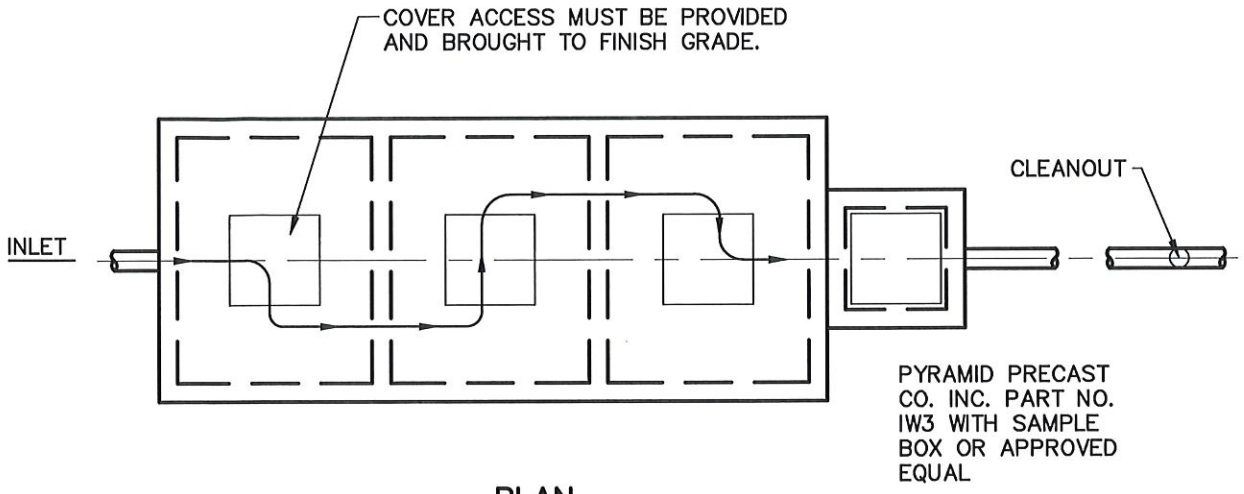
TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

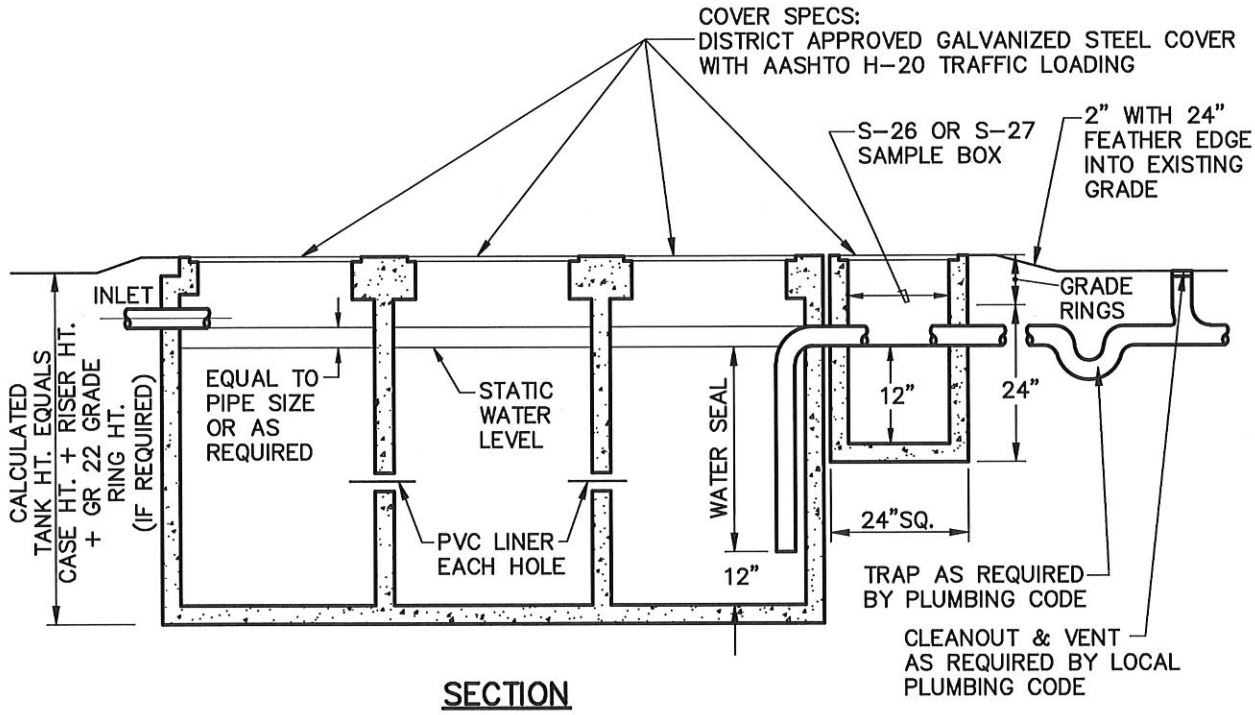
SEWER MAIN CROSSING EXISTING WATER

DWG. NO. S-24

11/2/2015 2:46:39 PM L:\Agency Standards\Temescal Valley Water District\S-24



PLAN
3 CHAMBERED INTERCEPTOR



SECTION

NOTES:

1. LINK SEAL, OR EQUAL, REQUIRED ON ALL PIPES WITH WALL PENETRATIONS.

11/2/2015 2:46:51 PM L:\Agency Standards\Temescal Valley Water District\S-25

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

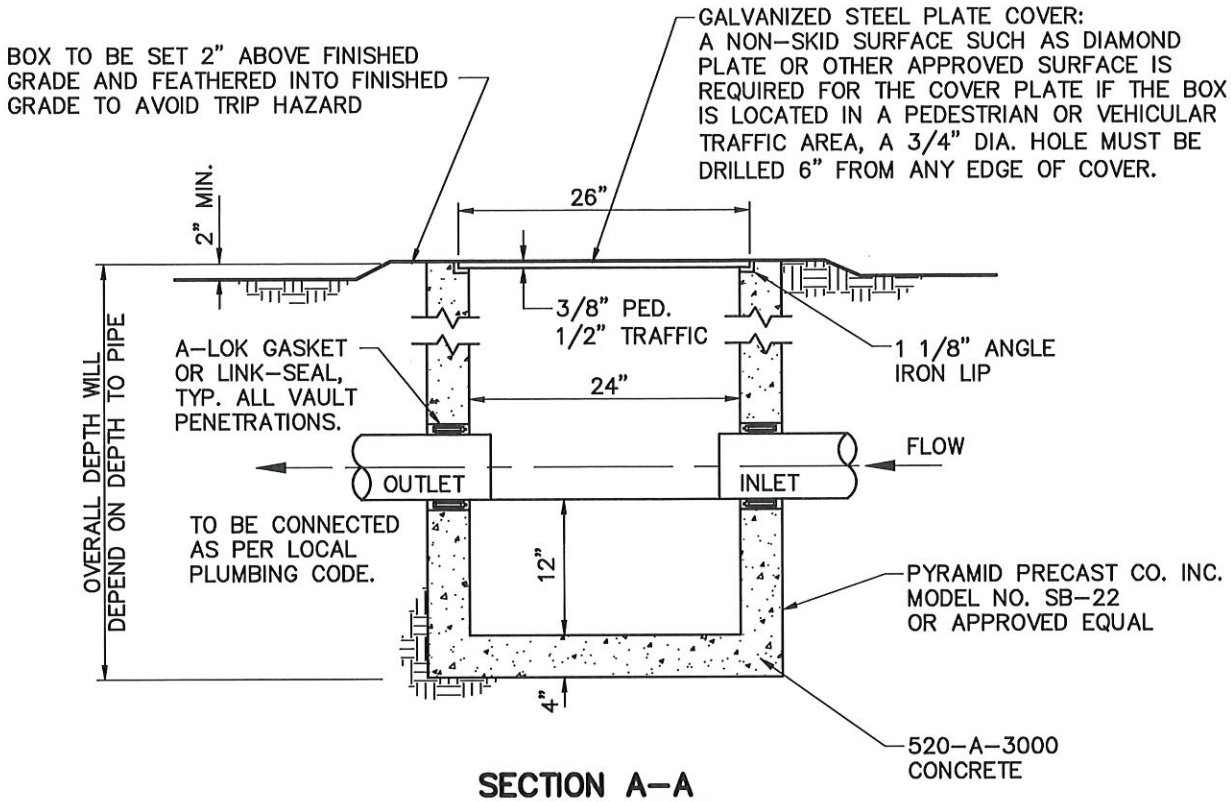
DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

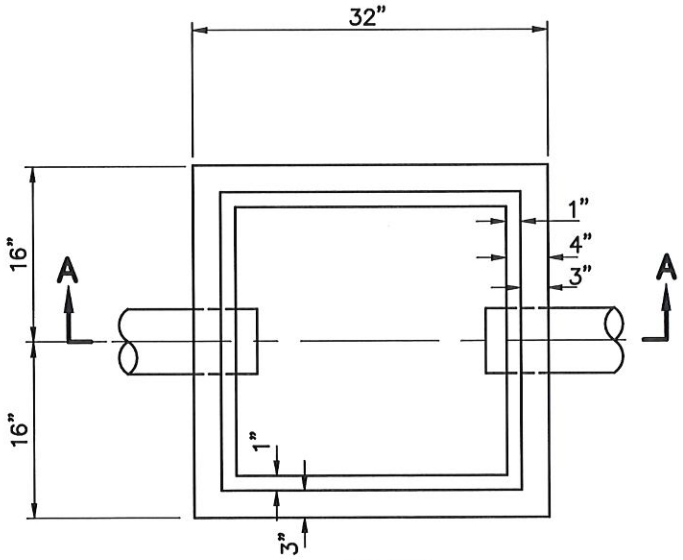
STANDARD DRAWINGS

SAND/OIL SEPARATOR (CONT'D)

DWG. NO. S-25



SECTION A-A



PLAN

NOTES:

1. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE SAMPLE BOX.
2. LID AND ANGLE IRON THICKNESS WILL DEPEND ON TRAFFIC PATTERNS IN SAMPLE BOX AREA.
3. INSTALLATION IN ACCORDANCE WITH ALL LOCAL PLUMBING CODES.
4. ALL PIPE PENETRATIONS REQUIRE LINK-SEAL, OR EQUAL.

REVISION	DATE	BY	DESCRIPTION

APPROVED SEP 1, 2015

GENERAL MANAGER

DISTRICT ENGINEER

TEMESCAL VALLEY WATER DISTRICT
Established in 1965

STANDARD DRAWINGS

SAMPLE BOX #1 (INDUSTRIAL)

DWG. NO. S-26

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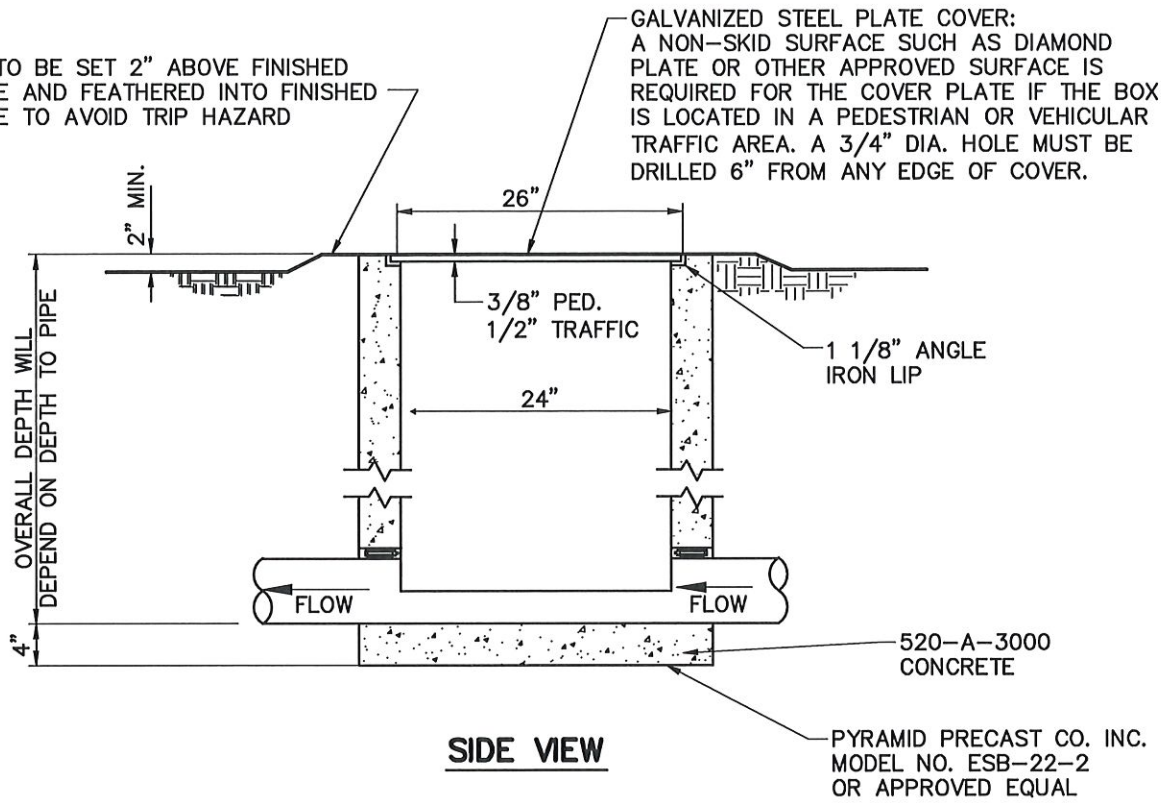
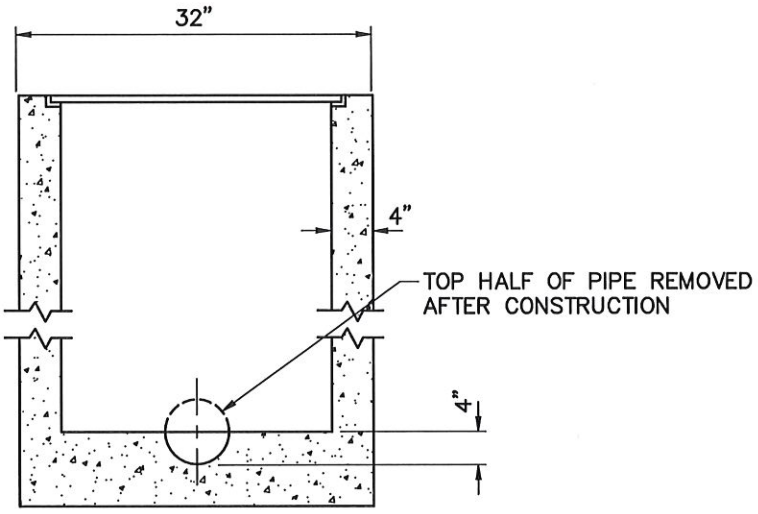


SIDE VIEW



END VIEW

NOTES:

1. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE SAMPLE BOX.
2. LID AND ANGLE IRON THICKNESS WILL DEPEND ON TRAFFIC IN SAMPLE BOX AREA
3. INSTALLATION IN ACCORDANCE WITH ALL LOCAL PLUMBING CODES.
4. A-LOK GASKETS REQUIRED 8" IMMEDIATELY ADGACENT TO SAMPLE BOX.
5. ALL PIPE PENETRATIONS REQUIRE LINK-SEAL, OR EQUAL.

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APPROVED SEP 1, 2015

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STANDARD DRAWINGS

SAMPLE BOX #2 (COMMERCIAL)

DWG. NO. S-27

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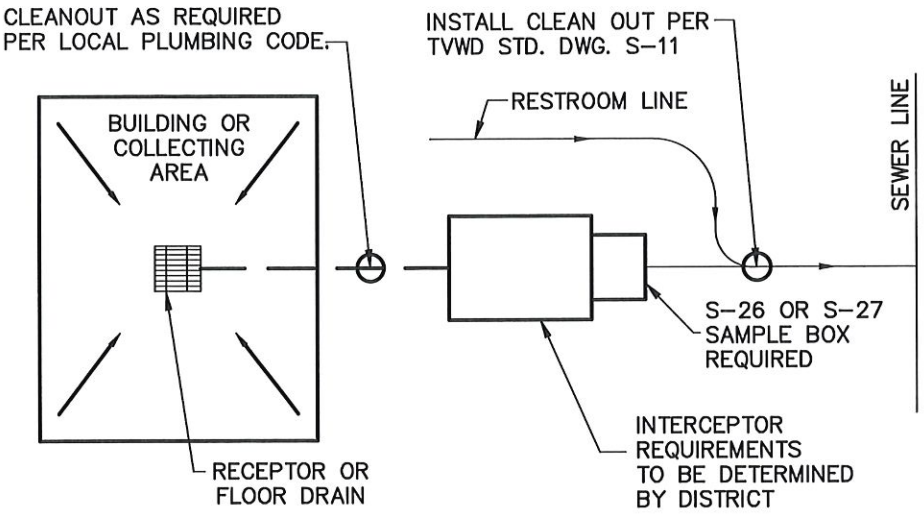
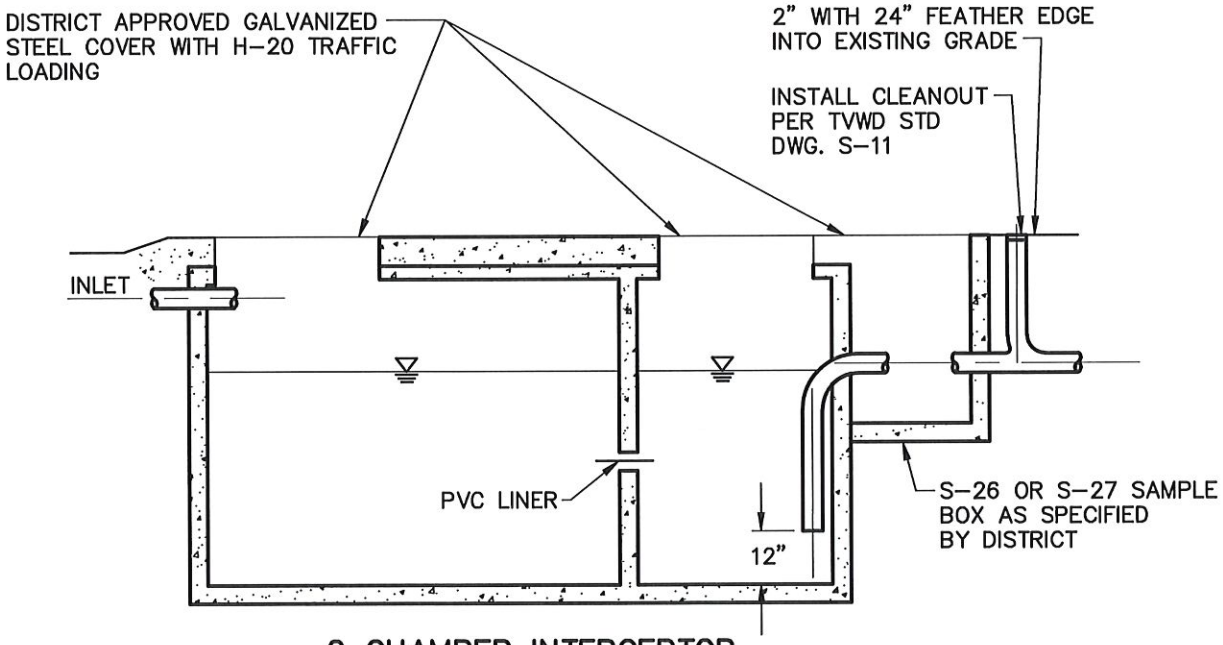


TYPICAL INSTALLATION

PYRAMID PRECAST CO. INC. MODEL NO. IW2 WITH SAMPLE BOX OR APPROVED EQUAL



2 CHAMBER INTERCEPTOR

NOTES:

1. ALL INTERCEPTORS SHALL HAVE A MINIMUM LIQUID CAPACITY OF 750 GALLONS. PROVIDE SIZING CALCULATIONS.
2. ALL WASTEWATER EXCLUDING RESTROOMS, MUST PASS THROUGH THE INTERCEPTOR. KITCHEN DESIGN SHALL BE SUBMITED TO DISTRICT FOR REVIEW AND APPROVAL.
3. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE INTERCEPTOR.
4. GREASE INTERCEPTOR SHALL BE IN ACCORDANCE W/ THE LATEST UNIFORM PLUMBING CODE (UPC) REQUIREMENTS, SECTION 1014.
5. LINK SEAL, OR EQUAL, REQUIRED ON ALL PIPES WITH WALL PENETRATIONS.

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STANDARD DRAWINGS

GREASE INTERCEPTOR

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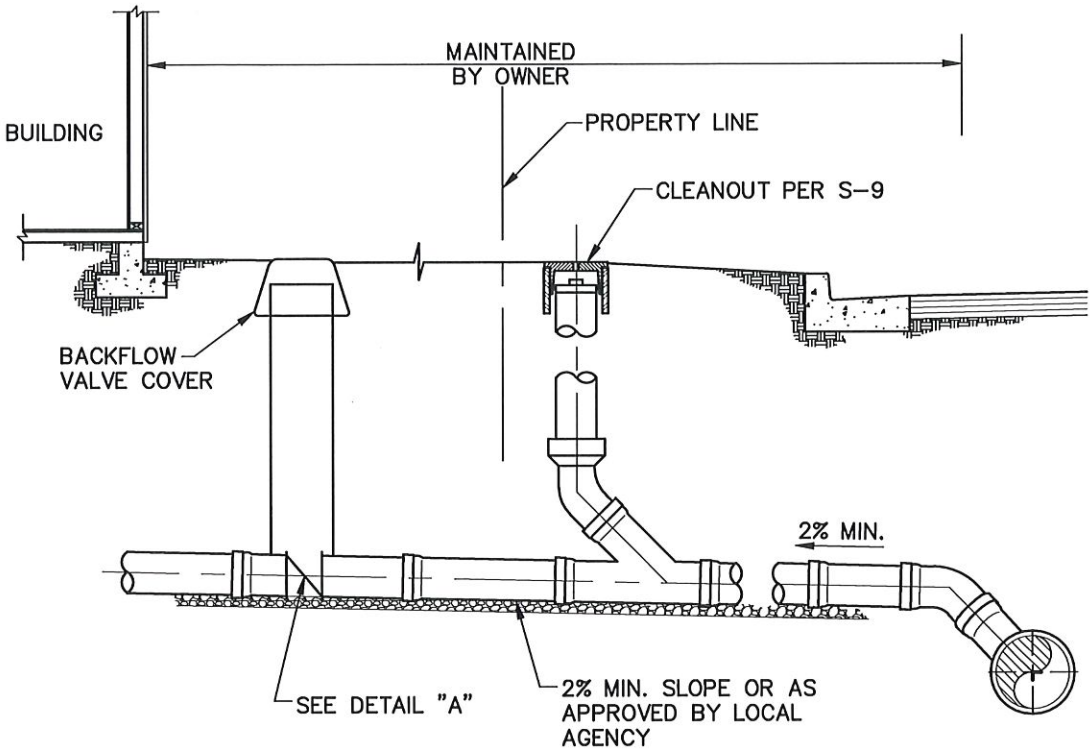
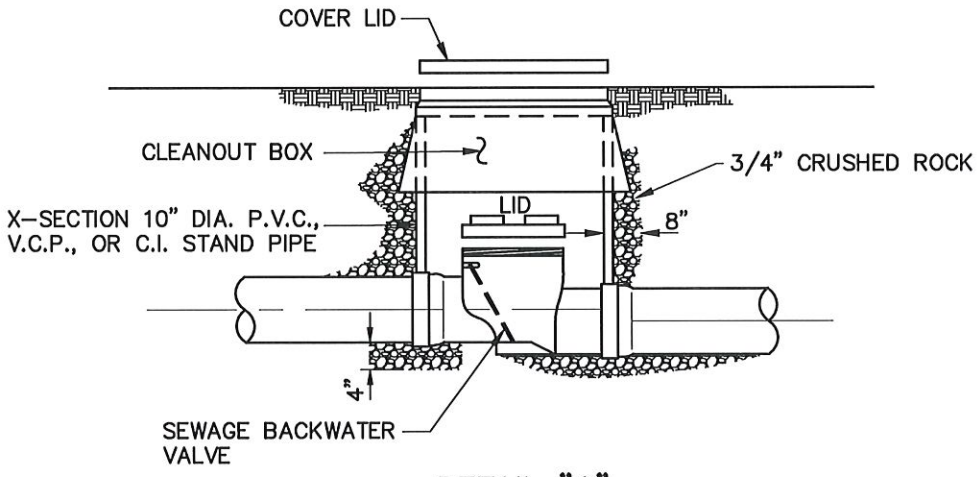
TYPICAL BACKFLOW VALVE ASSEMBLY LOCATION





DETAIL "A"
SEWAGE BACKFLOW VALVE ASSEMBLY

NOTES:

1. BACKWATER VALVE REQUIRED FOR PAD ELEVATIONS BELOW RIM ELEVATION OF UPSTREAM MANHOLE.

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STANDARD DRAWINGS

TYPICAL BACKFLOW VALVE ASSEMBLY & DETAIL

DWG. NO. S-29

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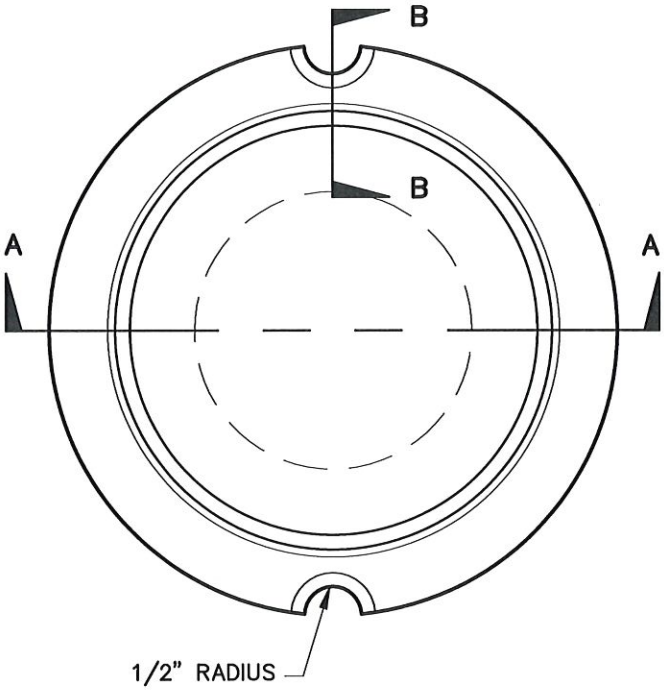
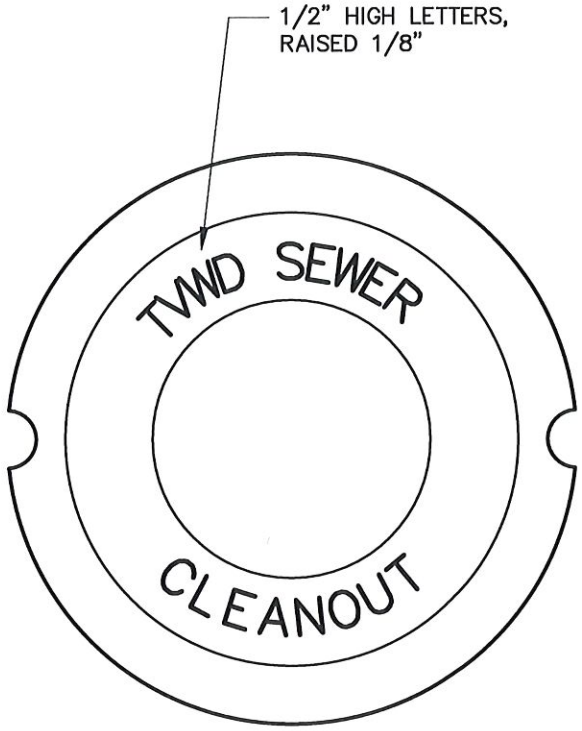
NOTES:

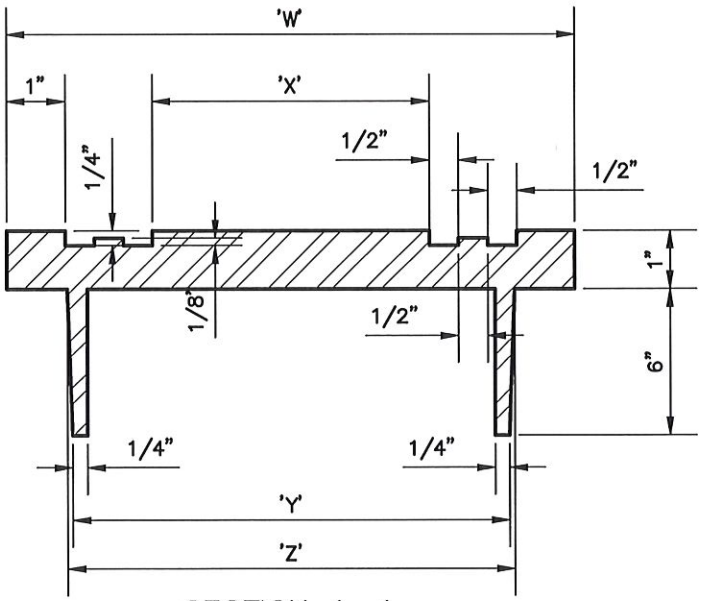
ALHAMBRA FOUNDRY 1208, OR APPROVED EQUAL



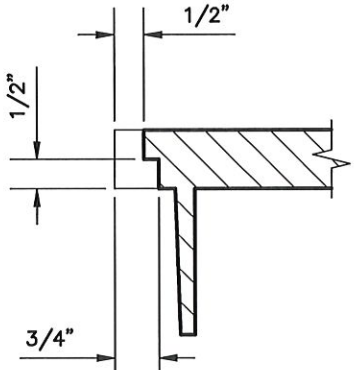


BOTTOM VIEW

TOP VIEW



SECTION A–A



SECTION B–B

SIZE	'W'	'X'	'Y'	'Z'
6"ø PIPE	9–3/4"	4–3/4"	7–1/2"	7–3/4"
8"ø PIPE	11–3/4"	6–3/4"	9–1/2"	9–3/4"

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STANDARD DRAWINGS

RESIDENTIAL CLEANOUT COVER

DWG. NO. S–30

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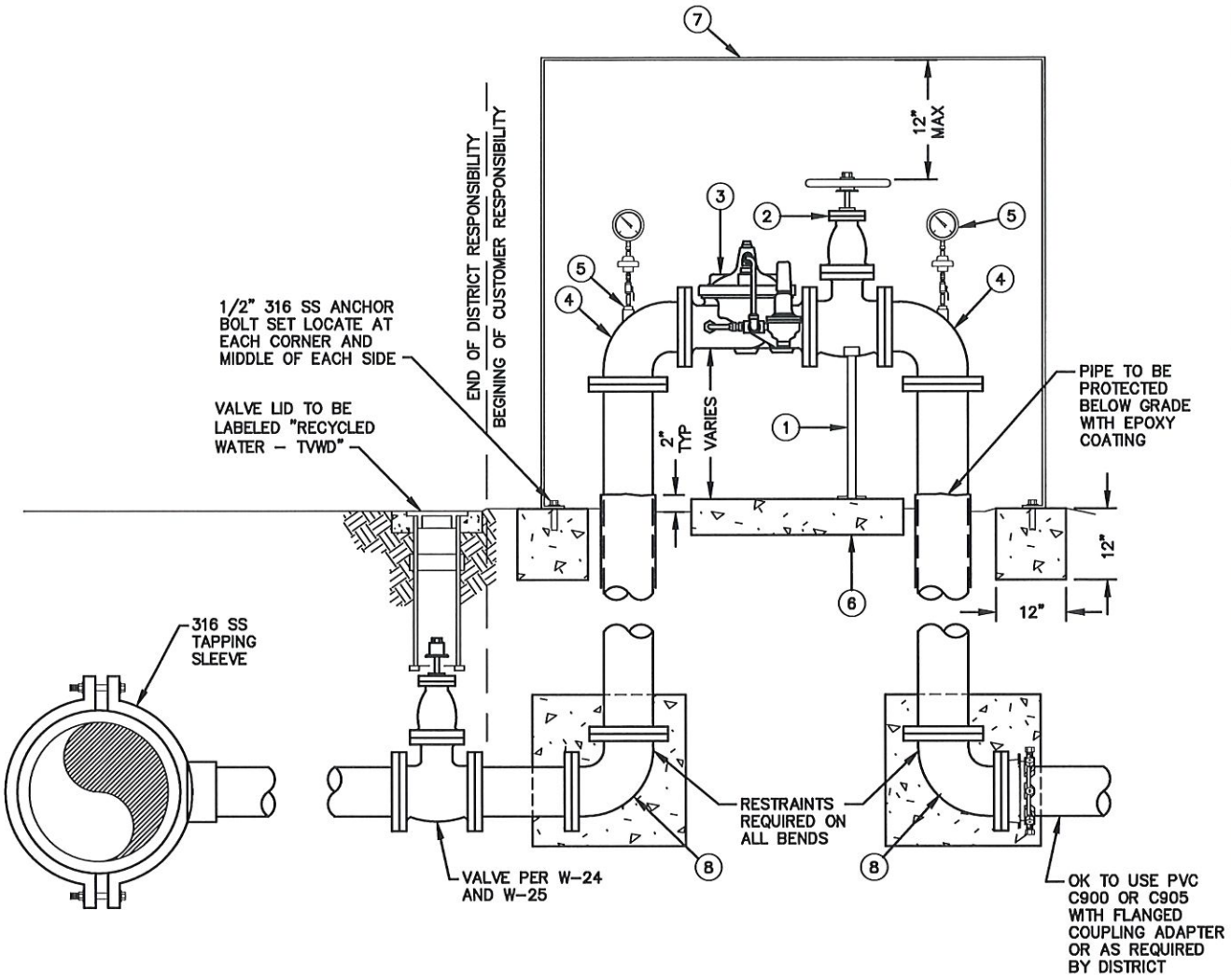

MATERIALS:

1. VALVE SUPPORT STAND – 316 SS
2. GATE VALVE WITH HAND WHEEL AND CHAINED LOCKS – EPOXY COATED
3. PRESSURE REDUCING VALVE, CLA-VALVE 690-01 OR APPROVED EQUAL
4. 90° ELBOW
5. 0-250 PSI PRESSURE GAUGE, 316 SS WITH 316 SS NIPPLES, BALL VALVES, PULSATION DAMPENERS AS REQUIRED BY DISTRICT, ETC.
6. CONCRETE PAD, 12" x 12" x 6" WITH WIRE MESH OR APPROVED EQUAL
7. VALVE PROTECTION CAGE WITH LID 316 SS TO BE APPROVED BY DISTRICT
8. RESTRAINED FLG 90° BEND WITH 316 SS NUTS AND BOLTS

NOTES:

1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL PRESSURE REDUCING VALVES SHALL SET AS CLOSE TO THE RECYCLED WATER METER AS POSSIBLE.
3. THE PRESSURE REDUCING VALVE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST USING ALL 316 SS APPURTENANCE AND PIPING ON FILE WITH THE DISTRICT.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE RECYCLED WATER METER AND THE PRESSURE REDUCING VALVE.
5. DISTRICT SHALL HAVE ACCESS TO PRV AT ALL TIMES.
6. REFER TO STANDARD DRAWINGS FOR INSTALLATION OF RECYCLED WATER METER & SERVICE FOR VALVE.
7. ALL EXPOSED SUPPLY LINE PIPE, FITTINGS, AND VALVES TO BE EPOXY COATED RECYCLED PURPLE (TNEMEC OR EQUAL). BELOW GRADE TO BE CEMENT COATED.
8. ALL PIPES AND FITTINGS SHALL BE RESTRAINED.
9. INSTALLATION SHALL MEET ALL STATE AND DHS REGULATIONS FOR TITLE 22 RECYCLED WATER.

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STANDARD DRAWINGS

RECYCLED WATER SUPPLY LINE PRESSURE REDUCING STATION

DWG. NO. RW-01

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