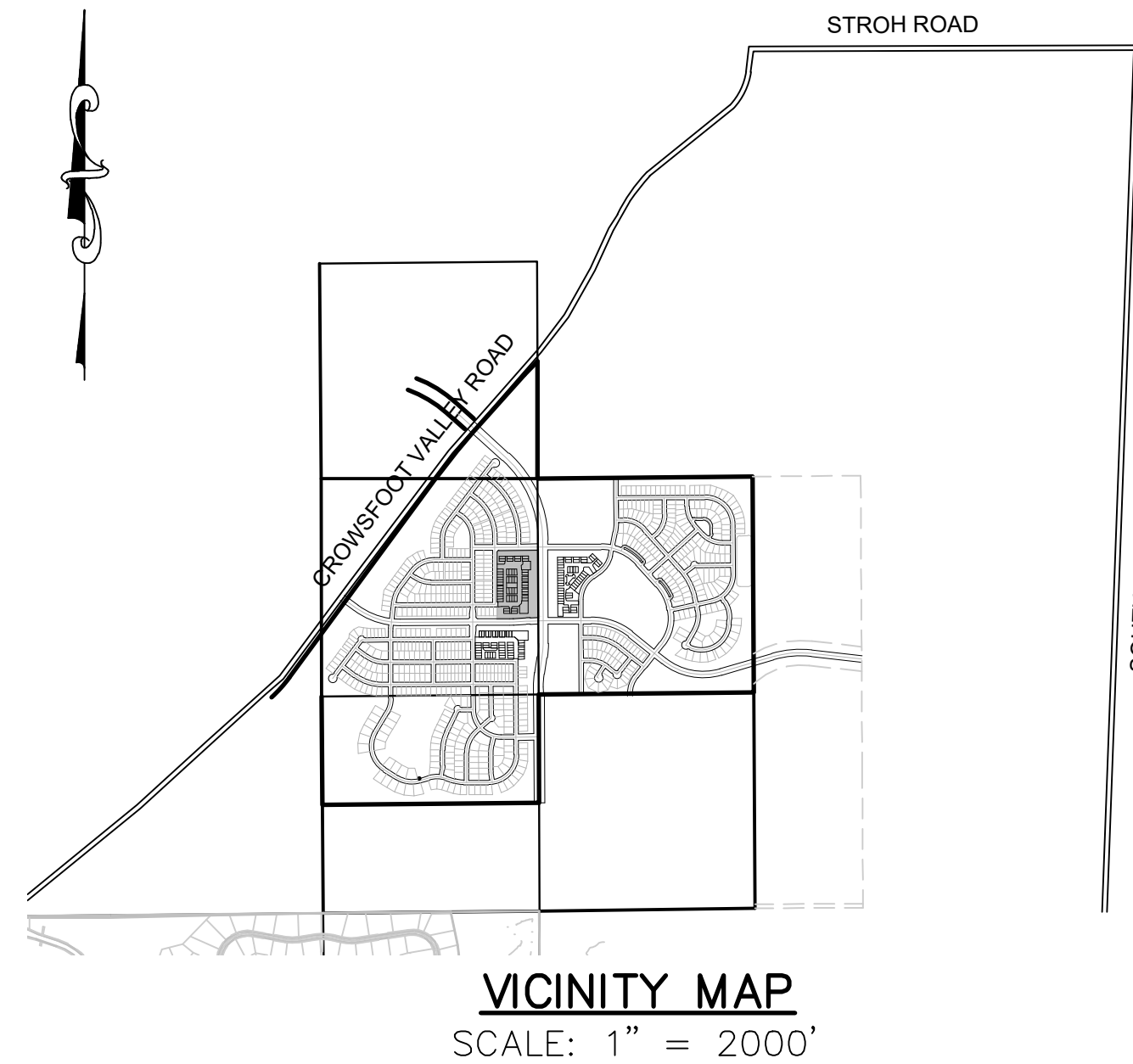


# TRAILS AT CROWFOOT FILING 14

## PARKER WATER AND SANITATION CONSTRUCTION PLANS

SECTIONS 4, 8, AND 9 TOWNSHIP 7 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN COUNTY OF DOUGLAS, STATE OF COLORADO

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	PARKER WATER AND SANITATION NOTES
3	AREA UTILITY PLAN
4	RED COSMOS STREET
5	RED COSMOS PT
6	FILING 14 SS NORTH
7	FILING 14 SS NORTHEAST
8	FILING 14 SS EAST-WEST
9	FILING 14 SS SOUTH
10	FILING 14 SS SOUTHWEST
11	ROSE HEALTH STREET
12	RED COSMOS STREET
13	BLUE COSMOS CT
14	RED COSMOS COURT
15	ROSE HEATH LANE
16	ROSE HEATH ROAD
17	RED COSMOS POINT
18	ZINNIA COURT
19	SANITARY SEWER DETAILS
20	SANITARY SEWER DETAILS
21	SANITARY SEWER DETAILS
22	WATER DETAILS
23	WATER DETAILS
24	WATER DETAILS
25	WATER DETAILS
26	WATER DETAILS
27	WATER DETAILS
28	WATER DETAILS



MATERIALS LIST		
DESCRIPTION	QUANTITY	UNIT
8" SEWER (SDR-35 PVC)	1,568	L.F.
4' DIA. MANHOLE	12	EA.
SEWER SERVICE LATERAL W/ WYE TAP	36	EA.
CONNECTION TO EXISTING MAIN	1	EA.
6" WATERPIPE (DIP)	118	L.F.
8" WATERPIPE (PVC)	2,030	L.F.
6" GATE VALVE W/ BOX	6	EA.
8" GATE VALVE	10	EA.
8" MISC FITTINGS	12	EA.
AIR/VACUUM VALVE	2	EA.
8" CAP WITH BLOW OFF	4	EA.
FIRE HYDRANT WITH 6" LEAD	6	EA.
IRRIGATION SERVICE WITH METER (2")	1	EA.
DOMESTIC WATER SERVICE WITH METER	50	EA.
CONNECTION TO EXISTING MAIN	2	EA.

### FIRE DEPARTMENT APPROVAL

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

(FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE) \_\_\_\_\_ DATE \_\_\_\_\_

(NOTE- UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA24 WHEN SUBMITTING FOR REVIEW.)

THE DISTRICT INSPECTOR MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL PARKER WATER AND SANITATION DISTRICT AT 303-841-4627. THE DISTRICT WILL PROVIDE PERIODIC INSPECTIONS OF THE WORK. 24 HOUR NOTICE TO THE INSPECTOR IS REQUIRED FOR SCHEDULED INSPECTIONS. ANY WORK ACCOMPLISHED WITHOUT THE APPROVAL OF THE INSPECTOR WILL BE SUBJECT TO REJECTION.

REVIEWED FOR CONFORMANCE TO PARKER WATER AND SANITATION DISTRICT STANDARDS.

BY: \_\_\_\_\_  
(DISTRICT REPRESENTATIVE)

DATE SIGNED: \_\_\_\_\_

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT

BY: \_\_\_\_\_  
(DISTRICT ENGINEER)

DATE SIGNED: \_\_\_\_\_

### DEVELOPER

HR 935 LLC  
7353 SOUTH ALTON WAY  
CENTENNIAL, CO 80112  
TEL: (303) 770-9111  
CONTACT: MATT JANKE

### PLANNER/ LANDSCAPE DESIGNER:

PCS GROUP, INC.  
200 KALAMATH STREET  
DENVER, CO 80233  
TEL: (303) 531-4905  
CONTACT: JOHN PRESTWICH

### SURVEYOR/ ENGINEER:

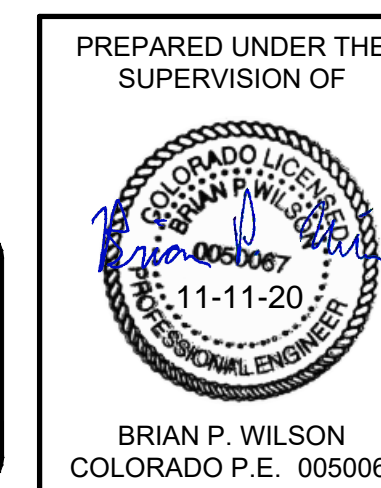
CVL CONSULTANTS  
OF COLORADO, INC.  
10333 E. DRY CREEK RD. STE 240  
ENGLEWOOD, CO 80112  
TEL: (720) 482-9526  
CONTACT: JIM JANNICKE

### UTILITY DISTRICT

PARKER WATER AND  
SANITATION DISTRICT  
18100 E. WOODMAN DRIVE  
PARKER, CO 80134  
TEL: (303) 841-4627

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.



N:\PROJECTS\SHSS RANCH\ENGINEERING\SHSS SETS\MULTIFAMILY\CD\SET 14\PARKER WATER AND SANITATION\COVER.DWG, BRIAN.W, 11/11/2020 8:54 AM



10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	No.	Date	Appr.	Date
	HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112				
	TRAILS AT CROWFOOT FILING 14 CONSTRUCTION DRAWINGS COVER SHEET				
SCALE:	AS SHOWN	FILE NO:	8130283701		
DRAWN BY:	RRR	CHECKED BY:	BPW	DATE:	SEPTEMBER 2018
SHEET NUMBER	1				

**GENERAL NOTES:**

1. ALL CONSTRUCTION SHALL COMPLY WITH PARKER WATER AND SANITATION DISTRICT SPECIFICATIONS.
2. THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES AND THE TOWN OF PARKER PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING UTILITY (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
3. ALL ITEMS SHOWN ON THE PLANS AS EXISTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE ACTUAL LOCATIONS MAY VARY FROM THE PLANS, ESPECIALLY IN THE CASE OF UNDERGROUND UTILITIES. WHENEVER CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS, HE SHALL CONTACT THE ENGINEER IMMEDIATELY.
4. THE DISTRICT ENGINEER AND OTHER APPROVING AGENCIES ARE TO BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS THAT ARE NECESSARY TO PERFORM THE PROPOSED WORK.
6. ALL CONCRETE SHALL BE A MINIMUM OF CLASS "A", 6 SACK, TYPE II, 3000-POUND COMPRESSION STRENGTH.
7. THE DESIGN ENGINEER SHALL SUBMIT ONE (1) SET OF ROLLED "AS-BUILT" BLUELINE PRINTS AND ELECTRONIC FILES TO THE DISTRICT ENGINEER FOR APPROVAL PRIOR TO PRINTING MYLAR SEPIAS FOR THE DISTRICT. AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT ENGINEER, FULL SIZE MYLAR SEPIA PRINTS SHALL BE TRANSMITTED TO THE PARKER WATER AND SANITATION DISTRICT OFFICE.
8. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. COMPACTION TESTS MUST BE SUBMITTED TO DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
9. TRENCHES SHALL BE EXCAVATED AND THE PIPE EXPOSED FOR THE INSPECTION AT ANY LOCATION ON THE PROJECT IF SO ORDERED BY THE INSPECTOR.
10. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF LINES (WATER AND SEWER) FOR UP TO TWO (2) YEARS FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.
11. SURFACE GRADES ARE TO BE WITHIN PLUS OR MINUS ONE FOOT OF FINISHED GRADE AND VERIFICATION OF COMPACTION RESULTS OBTAINED PRIOR TO THE INSTALLATION OF WATER AND SEWER LINES. RESULTS MUST BE SUBMITTED TO THE DISTRICT ENGINEER.
12. NO WORK SHALL BE BACKFILLED UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE DISTRICT ENGINEER OR REPRESENTATIVE OF THE DISTRICT ENGINEER.
13. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS: "X" FOR SANITARY SERVICE SEWERS "V" FOR WATER SERVICES
14. NO TREES SHALL BE ALLOWED IN EASEMENTS OR WITHIN 8' OF ANY WATER OR SANITARY SEWER MAINS IN RIGHT OF WAY.
15. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PARKER WATER AND SANITATION DISTRICT AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PARKER WATER AND SANITATION DISTRICT SPECIFICATION MANUAL.

**WATER MAIN NOTES:**

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PARKER WATER AND SANITATION DISTRICT ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISIONS. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE PARKER WATER SANITATION DISTRICT AND THE DISTRICT ENGINEER.
2. ALL WATER MAINS SHALL BE PER PWS MATERIALS SPECIFICATIONS.
3. ALL BENDS, PLUGS, REDUCERS, AND FIRE HYDRANTS TO BE RODDED OR MEGA-LUGGED. ALL FITTINGS SHALL BE WRAPPED WITH 8-MIL MINIMUM THICKNESS POLYETHYLENE MATERIAL PER PWS MATERIALS SPECIFICATIONS.
4. THERE SHALL BE A MINIMUM COVER OF 4.5 FEET OVER ALL WATER MAINS.
5. FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 "DRY BARREL FIRE HYDRANTS" PIPE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, MATERIALS, AND LABOR WHICH ARE NECESSARY TO INSTALL THE HYDRANT COMPLETE IN PLACE. SEE MATERIALS SPECIFICATIONS FOR APPROVED MODELS.
6. ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFFS AND PLUGS AT DEAD END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS.
7. PRECAUTIONS SHALL BE TAKEN TO PROTECT THE INTERIOR OF PIPES, FITTINGS, AND VALVES AGAINST CONTAMINATION. ALL OPENINGS IN THE PIPELINE SHALL BE CLOSED WITH WATERTIGHT PLUGS WHEN PIPE LAYING IS STOPPED AT THE CLOSE OF THE DAY'S WORK OR FOR OTHER REASONS, SUCH AS REST BREAKS OR MEAL PERIODS. THE MORE CLOSELY THE RATE OF DELIVERY IS CORRELATED TO THE RATE OF PIPE LAYING, THE LOWER THE RISK OF CONTAMINATION.
8. CHLORINATION AND FLUSHING: ALL WATER MAINS SHALL BE INSTALLED AND CHLORINATED PER PARKER WATER AND SANITATION STANDARDS AND SPECIFICATIONS. THE LINES SHALL BE CHLORINATED IN ACCORDANCE WITH ANSI/AWWA C-651-92., "DISINFECTING WATER MAINS." PARKER WATER AND SANITATION DISTRICT REQUIRES THE INITIAL DOSAGE RATE OF DISINFECTION BE AT LEAST 50 MG PER LITER. CHLORINE TABLETS SHOULD BE ADHERED TO THE TOP OF THE PIPE SECTION WITH PERMATEX NO.1 (RED). THE CHLORINATION OF ANY FINISHED PIPELINE SHALL BE DONE PRIOR TO THE HYDROSTATIC TESTING.
9. HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE PARKER WATER AND SANITATION DISTRICT STANDARDS AND SPECIFICATIONS. ALL PIPE SHALL BE FIELD PRESSURE TESTED TO A MINIMUM OF 150 PSI. ALL TESTING SHALL BE DONE IN THE PRESENCE OF A PARKER WATER AND SANITATION DISTRICT INSPECTOR. LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINES VALVES SHALL NOT EXCEED THE LIMITS SET FORTH IN THE PARKER WATER AND SANITATION DISTRICT STANDARDS AND SPECIFICATIONS.
10. VALVES IN STREETS ARE TO BE LOCATED AT PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES WHERE AN ADDITIONAL VALVES SHALL BE PLACED ON THE TAPPING TEE. OTHER VALVE LOCATIONS, SUCH AS WHERE CROSS PANS EXIST, ARE SHOWN ON THE PLANS.
11. WHEN NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSING, A MINIMUM CLEARANCE OF 1.50 FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES.
12. THE CONTRACTOR SHALL NOTIFY THE PARKER WATER AND SANITATION DISTRICT AND THE DISTRICT ENGINEER AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION. IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP, THE CONTRACTOR MUST NOTIFY THE DISTRICT ENGINEER 48 HOURS PRIOR TO RE-START.
13. PIPE BEDDING SHALL BE A CLEAN, WELL-GRADED SAND OR SQUEEGEE SAND IN ACCORDANCE WITH PARKER WATER AND SANITATION DISTRICT STANDARDS AND SPECIFICATIONS, LATEST REVISION.
14. THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINED THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH THE EXCAVATION. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
15. COMPACTION OF ALL TRENCHES MUST BE ATTAINED IN ACCORDANCE WITH THE SOILS REPORTS AND COMPACTION TEST RESULTS SUBMITTED TO THE DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
16. VALVE BOXES: TYLER SCREW-TYPE 6 INCHES CAST IRON VALVE BOX ASSEMBLY SERIES 6860 WITH NO. 160 OVAL BASE. CLAY AND BAILEY SCREW-TYPE 6 INCH CAST IRON VALVE BOX ASSEMBLY NO. P-108 WITH NO. 106 LARGE OVAL BASE.
17. ALL PIPE LENGTHS ARE APPROXIMATE.
18. AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVE OF OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER.

**SANITARY SEWER NOTES:**

1. ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE PARKER WATER AND SANITATION DISTRICT SPECIFICATION.
2. ALL SEWER MAINS SHALL BE PVC, ASTM D-3034, SDR 35 OR APPROVED EQUAL. ALL SEWER MAIN SIZE IS 8" IN DIAMETER UNLESS OTHERWISE NOTED.
3. SEWER LINES SHALL BE INSTALLED 5.0 FEET SOUTH OR WEST OF STREET CENTERLINE, UNLESS OTHERWISE SHOWN ON PLANS. SEWER LINES SHALL BE 10.00 FEET FROM WATER LINES EXCEPT WHEN CROSSING EACH OTHER. SEWER LINES WHICH CROSS LESS THAN 1.50 FEET VERTICALLY FROM THE WATER MAIN SHALL BE ENCASED IN CONCRETE AS PER PARKER WATER AND SANITATION DISTRICT STANDARD AND SPECIFICATIONS. USE RUBBER GASKETS FOR PVC ENCASEMENT.
4. SEWER RIM ELEVATIONS SHOWN ARE APPROPRIATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. RING AND COVER SHALL BE SET IN CENTERED CONCRETE RINGS WITH RAM-NECK FOR ADJUSTMENT TO MATCH FINAL PAVEMENT ELEVATIONS.
5. THE CONTRACTOR AND SURVEY CREW SHALL VERIFY ELEVATIONS OF EXISTING SEWER LINES AND MANHOLES TO BE TIED TO PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER.
6. NO UNDERDRAIN SYSTEM WILL BE ALLOWED TO BE PLACED IN MAINLINE OR SEWER SERVICE TRENCHES.
7. SEWER SERVICE TEES FOR EACH UNIT SHALL BE STAKED BY A SURVEY CREW AND FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF TEES. SEWER WYES SHALL BE USED RATHER THAN TEES.
8. ALL MANHOLES SHALL BE 48-INCHES IN DIAMETER WITH 24-INCH RING AND COVER, ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED.
9. PIPE BEDDING SHALL BE CLASS "B" AND SHALL CONFORM TO ASTM C-33 OR D-448 GRADATION NO. 6 OR NO. 67.
10. AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVES OF THE OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER TO SCHEDULE THIS MEETING.
11. ALL PIPE LENGTHS ARE APPROXIMATE.
12. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PARKER WATER AND SANITATION DISTRICT AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PARKER WATER AND SANITATION DISTRICT SPECIFICATION MANUAL.
13. ALL MANHOLES SHALL HAVE SHAPED INVERTS.
14. ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE PARKER WATER AND SANITATION DISTRICT STANDARDS AND SPECIFICATIONS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
15. PRIOR TO START WORK WHERE SEWER MAIN TO BE INSTALLED INTO EXISTING DISTRICT SEWER SYSTEMS. THE NEAREST MANHOLE TO THE POINT OF TIE-IN SHALL BE PLUGGED WITH A PLUMBER'S PLUG ON THE INLET SIDE BY THE CONTRACTOR. THIS PLUG SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE BY THE DISTRICT. ITS PURPOSE SHALL BE TO PREVENT ANY MUD, WATER OR OTHER MATERIALS FROM ENTERING THE LINE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN SO INSTRUCTED BY THE DISTRICT.
16. PRIOR TO PROBATIONARY ACCEPTANCE WALK-THROUGH, THE CLIENT SHALL JET CLEAN THE ENTIRE SANITARY SEWER SYSTEM AND PUMP OUT AT THE PLUGGED MANHOLE.

**DISTRICT ACCEPTANCE NOTES:**

1. UPON COMPLETION OF SANITARY SEWER AND WATER CONSTRUCTION AND TESTING, THE DEVELOPER OR CONTRACTOR SHALL CONTACT THE DISTRICT FOR PROBATIONARY ACCEPTANCE INSPECTION. A PUNCHLIST WILL BE PROVIDED THE DEVELOPER AND CONTRACTOR UPON COMPLETION OF THE INITIAL WALK-THRU AND PROBATIONARY ACCEPTANCE WILL BE ISSUED FOLLOWING COMPLETION AND ACCEPTANCE OF THE WORK OUTLINED IN THE PUNCHLIST.
2. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE LINES FOR UP TO TWO (2) YEARS FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.
3. THE DATE OF FINAL ACCEPTANCE WILL BE INDICATED IN THE CONDITIONS OF THE PROBATIONARY ACCEPTANCE LETTER. THE DEVELOPER SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT FOR FINAL INSPECTION AND FINAL ACCEPTANCE.

N:\PROJECTS\SHSS RANCH\CAD\ENGINEERING\DRG SHEET\MULTIFAMILY\CDSF-14\PARKER WATER AND SANITATION\COVER.DWG, BRIANW, 11/11/2020, 8:54 AM

CALL 811  
TWO WORKING DAYS  
BEFORE YOU DIG  
UNCC  
1-800-922-1987

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON  
COLORADO P.E. 0050067

SHEET NUMBER	DRAWN BY:	KID	CHECKED BY:	BFW	DATE:	SEPTEMBER 2018	SCALE:	AS SHOWN	FILE NO:	8130283701	TRAILS AT CROWFOOT FILING 14 CONSTRUCTION DRAWINGS PARKER WATER AND SANITATION NOTES	HR 95 LLC 7353 South Alton Way CENTENNIAL, CO 80112		10335 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9526 Fax: (720) 482-9546	No.	Revisions	Date	Appr.	Date

2

THE DISTRICT INSPECTOR MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL PARKER WATER AND SANITATION DISTRICT AT 303-841-4627. THE DISTRICT WILL PROVIDE PERIODIC INSPECTIONS OF THE WORK. 24 HOUR NOTICE TO THE INSPECTOR IS REQUIRED FOR SCHEDULED INSPECTIONS. ANY WORK ACCOMPLISHED WITHOUT THE APPROVAL OF THE INSPECTOR WILL BE SUBJECT TO REJECTION.

REVIEWED FOR CONFORMANCE TO PARKER WATER AND SANITATION DISTRICT STANDARDS.

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(DISTRICT REPRESENTATIVE)

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(DISTRICT ENGINEER)

**WATER SERVICE TABLE**

FILING, BLOCK, LOT	STREET	STATIONING
F14.B1.L1	BLUE COSMOS CT	11+08.33
F14.B1.L2	BLUE COSMOS CT	10+63.67
F14.B1.L3	BLUE COSMOS CT	11+10.83
F14.B1.L4	BLUE COSMOS CT	10+61.17
F14.B1.L5	RED COSMOS CT	11+35.85
F14.B1.L6	RED COSMOS CT	10+91.19
F14.B1.L7	RED COSMOS CT	11+38.35
F14.B1.L8	RED COSMOS CT	10+88.69
F14.B1.L9	RED COSMOS ST	14+49.48
F14.B1.L10	RED COSMOS ST	13+99.82
F14.B1.L11	RED COSMOS ST	13+70.48
F14.B1.L12	RED COSMOS ST	13+20.82
F14.B1.L13	RED COSMOS ST	12+91.48
F14.B1.L14	RED COSMOS ST	12+41.82
F14.B1.L15	RED COSMOS ST	12+12.48
F14.B1.L16	RED COSMOS ST	11+62.82
F14.B1.L17	RED COSMOS ST	11+33.48
F14.B1.L18	RED COSMOS ST	10+83.82
F14.B1.L19	ZINNIA CT	10+50.77
F14.B1.L20	ZINNIA CT	11+00.43
F14.B1.L21	ZINNIA CT	10+53.27
F14.B1.L22	ZINNIA CT	10+97.93
F14.B2.L1	ROSE HEATH ST	10+47.67
F14.B2.L2	ROSE HEATH ST	10+97.33
F14.B2.L3	ROSE HEATH ST	11+11.67
F14.B2.L4	ROSE HEATH ST	11+61.33
F14.B2.L5	ROSE HEATH ST	11+75.67
F14.B2.L6	ROSE HEATH ST	12+25.33
F14.B2.L7	ROSE HEATH ST	12+53.17
F14.B2.L8	ROSE HEATH ST	13+02.83
F14.B2.L9	ROSE HEATH ST	13+17.17
F14.B2.L10	ROSE HEATH ST	13+66.83
F14.B2.L11	ROSE HEATH ST	13+81.17
F14.B2.L12	ROSE HEATH ST	14+30.83
F14.B3.L1	ROSE HEATH LN	10+36.73
F14.B3.L2	ROSE HEATH LN	10+86.39
F14.B3.L3	ROSE HEATH LN	11+00.73
F14.B3.L4	ROSE HEATH LN	11+50.39
F14.B3.L5	ROSE HEATH LN	10+39.23
F14.B3.L6	ROSE HEATH LN	10+83.89
F14.B3.L7	ROSE HEATH LN	11+03.23
F14.B3.L8	ROSE HEATH LN	11+47.89
F14.B3.L9	ROSE HEATH RD	10+36.73
F14.B3.L10	ROSE HEATH RD	10+86.39
F14.B3.L11	ROSE HEATH RD	11+00.73
F14.B3.L12	ROSE HEATH RD	11+50.39
F14.B3.L13	ROSE HEATH RD	10+39.23
F14.B3.L14	ROSE HEATH RD	10+83.89
F14.B3.L15	ROSE HEATH RD	11+03.23
F14.B3.L16	ROSE HEATH RD	11+47.89

**SANITARY SERVICE TABLE**

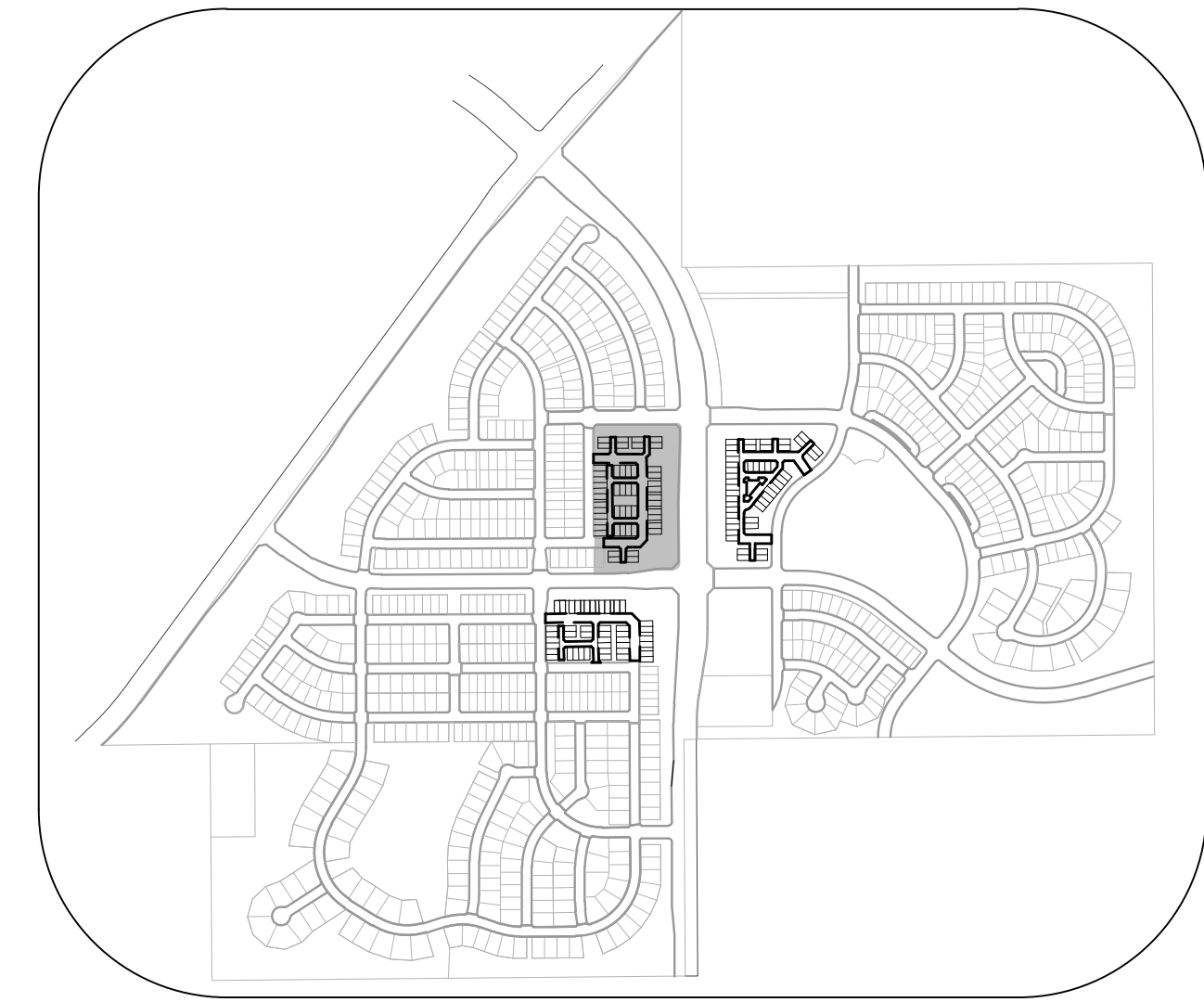
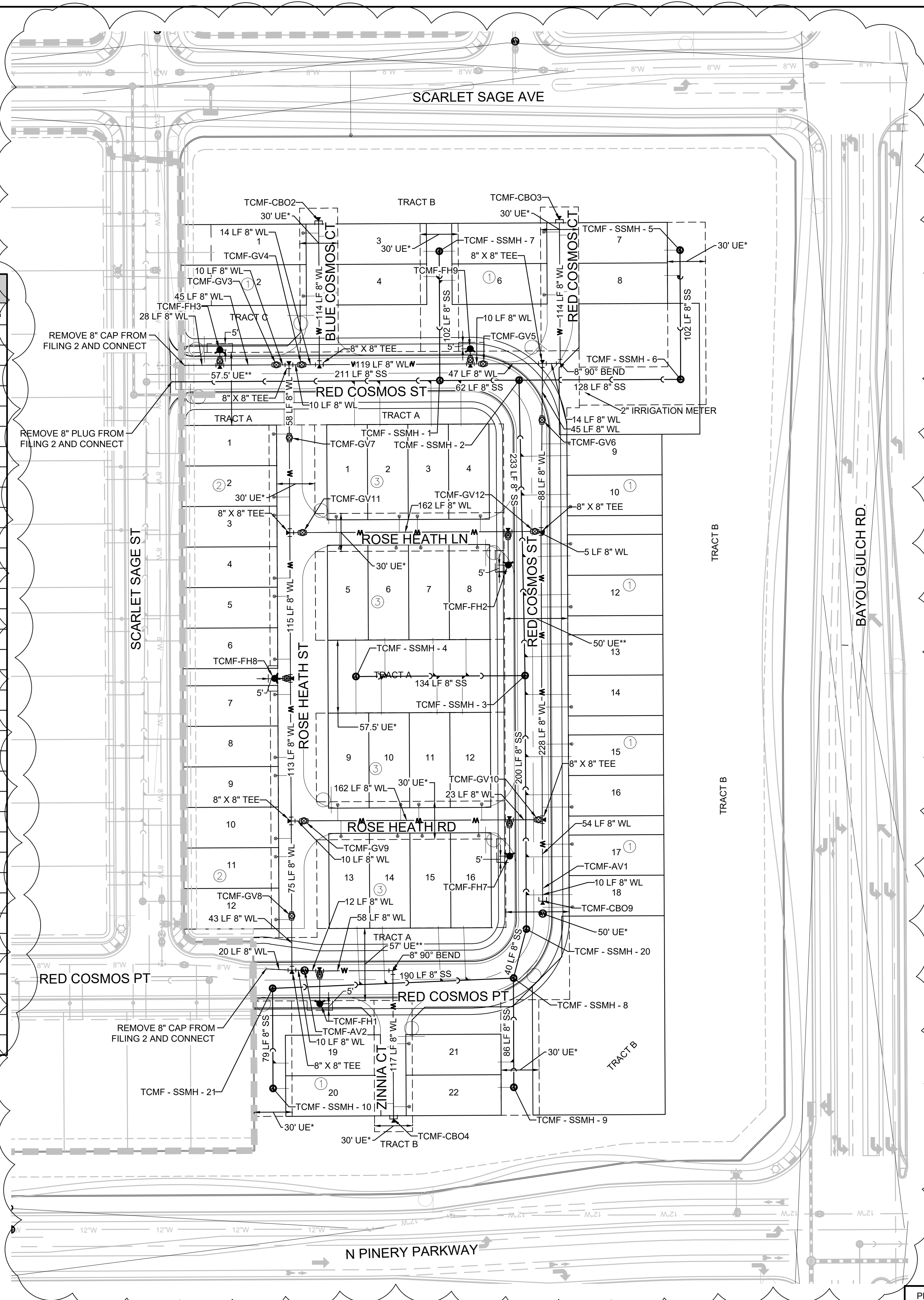
FILING, BLOCK, LOT	STREET	STATIONING
F14.B1.L3	FILING 14 SS NORTH	10+99.00
F14.B1.L4	FILING 14 SS NORTH	10+79.00
F14.B1.L5	FILING 14 SS NORTH	10+99.00
F14.B1.L6	FILING 14 SS NORTH	10+76.00
F14.B1.L7	FILING 14 SS NORTHEAST	12+51.97
F14.B1.L8	FILING 14 SS NORTHEAST	12+31.97
F14.B1.L9	RED COSMOS ST	14+39.68
F14.B1.L10	RED COSMOS ST	14+09.04
F14.B1.L11	RED COSMOS ST	13+60.42
F14.B1.L12	RED COSMOS ST	13+30.06
F14.B1.L13	RED COSMOS ST	12+81.44
F14.B1.L14	RED COSMOS ST	12+51.65
F14.B1.L15	RED COSMOS ST	12+02.65
F14.B1.L16	RED COSMOS ST	11+72.65
F14.B1.L17	RED COSMOS ST	11+23.65
F14.B1.L18	RED COSMOS ST	10+93.65
F14.B1.L19	FILING 14 SS SOUTHWEST	10+68.60
F14.B1.L20	FILING 14 SS SOUTHWEST	10+86.60
F14.B1.L21	FILING 14 SS SOUTH	10+82.67
F14.B1.L22	FILING 14 SS SOUTH	11+02.67
F14.B3.L1	RED COSMOS ST	16+24.86
F14.B3.L2	RED COSMOS ST	16+04.86
F14.B3.L3	RED COSMOS ST	15+64.42
F14.B3.L4	RED COSMOS ST	15+40.86
F14.B3.L5	FILING 14 SS EAST-WEST	10+00.00
F14.B3.L6	FILING 14 SS EAST-WEST	10+23.00
F14.B3.L7	FILING 14 SS EAST-WEST	10+61.00
F14.B3.L8	FILING 14 SS EAST-WEST	10+87.00
F14.B3.L9	FILING 14 SS EAST-WEST	10+00.00
F14.B3.L10	FILING 14 SS EAST-WEST	10+20.00
F14.B3.L11	FILING 14 SS EAST-WEST	10+64.00
F14.B3.L12	FILING 14 SS EAST-WEST	10+84.00
F14.B3.L13	RED COSMOS PT	24+13.51
F14.B3.L14	RED COSMOS PT	24+33.49
F14.B3.L15	RED COSMOS ST	9+74.09
F14.B3.L16	RED COSMOS ST	9+94.06

**NOTES:**  
 1. SANITARY SERVICES FOR BLOCK 1, LOTS 1-2 & BLOCK 2, LOTS 1-12 WILL BE INSTALLED WITH TRAILS AT CROWFOOT FILING 2.  
 2. THE PROPOSED UTILITY CONNECTION WILL REQUIRE A TOWN RIGHT-OF-WAY PERMIT PRIOR TO COMMENCING WORK. THE TOWN PREFERS CONNECTIONS TO BE BORED TO THE EXTENT POSSIBLE, AND ANY STREET CUT ALLOWED BY THE TOWN WILL BE REQUIRED TO BE PATCHED ACCORDING TO THE TOWN'S CONSTRUCTION STANDARDS AND DETAILS. THE LIMITS OF PATCHING WILL BE DETERMINED BY THE TOWN AT THE TIME OF CONSTRUCTION. THE TOWN OF PARKER DOES NOT ALLOW ROADWAY CLOSURES FOR UTILITY WORK.  
 \* ALL 30' UE ARE 30' PWS EXCLUSIVE EASEMENTS.  
 \*\* ALL 50' UE ARE 50' PWS NON-EXCLUSIVE EASEMENTS.  
 3. FIRE HYDRANT EASEMENTS ARE 5 BEHIND AND 10' EACH SIDE OF PROPOSED HYDRANTS.

**FIRE DEPARTMENT APPROVAL**  
 ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

(FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE) \_\_\_\_\_ DATE \_\_\_\_\_

(NOTE: UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA24 WHEN SUBMITTING FOR REVIEW.)



SCALE: 1" = 50'

**KEYMAP N.T.S. LEGEND**

②	BLOCK NUMBER	△	PROPOSED RANGE POINT
Ⓐ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
⊗	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
⊔	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
⊘	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
⊙	PROPOSED VALVE	↗	PROPOSED SLOPE & DIRECTION
⊕	PROPOSED FIRE HYDRANT	---	EXISTING 5' CONTOUR
⊕	PROPOSED WL FITTING WITH THRUST BLOCK	---	EXISTING 1' CONTOUR
⊕	PROPOSED FLARED END SECTION	---	PROPOSED 5' CONTOUR
⊕	PROPOSED LOW POINT BLOW-OFF	---	PROPOSED 1' CONTOUR
⊕	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊕	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊕	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
⊕	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
⊕	PROPOSED SIDEWALK RAMP	---	PROPOSED LATERAL W/ METER
10.00	EXISTING ELEVATION	---	SECTION LINE
10.00	PROPOSED DESIGN ELEVATION	---	FILING BOUNDARY
⊕	PROPOSED STORM DRAIN INLET	---	EXISTING FIBER OPTIC LINE
⊕	PROPOSED STORM DRAIN MANHOLE	---	EXISTING OVERHEAD POWER
		---	EXISTING TELEPHONE LINE

**ABBREVIATIONS**

AD	ANGLE DIFFERENCE	MH	MANHOLE
AV	AIR VAC RELEASE VALVE	N.T.S.	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
BVP	BEGIN VERTICAL PROFILE	PVI	PT. OF VERTICAL INTERSECTION
CBO	CAP WITH BLOW OFF	PVT	POINT OF VERTICAL TANGENT
CRR	CURB RETURN RADIUS	RCBC	REINFORCED CONCRETE BOX CULVERT
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EVC	END VERTICAL CURVE	SC	SANITARY CAP
EVP	END VERTICAL PROFILE	SD	STORM DRAIN
FL	FINISHED GROUND	SL	SECTION LINE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	STA	STATION
GV	GATE VALVE	T.O.P.	TOP OF PIPE
HCR	HANDICAP CURB RAMP	UE	UTILITY EASEMENT
HP	HIGH POINT	VC	VERTICAL CURVE
INV	INVERT	WL	WATER LINE
K	CURVATURE COEFFICIENT	WLC	WATER LINE CONNECTION
LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES. SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD, REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF PARKER.

PREPARED UNDER THE SUPERVISION OF  
  
 BRIAN P. WILSON  
 COLORADO P.E. 0050067

TOWN OF PARKER, DIRECTOR OF ENGINEERING \_\_\_\_\_ DATE \_\_\_\_\_

R:\PROJECTS\HSH\CHOCOA\ENGINEERING\SET\MULTIFAMILY\CSIF-HP\PARKER WATER AND SANITATION\AREA UTILITY PLAN.DWG, BRUNAW, 11/11/2020 8:56 AM

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**CVL CONSULTANTS**

HR 935 LLC  
 7363 South Alton Way  
 CENTENNIAL, CO 80112

**TRAILS AT CROWFOOT FILING 14 CONSTRUCTION DRAWINGS**  
 AREA UTILITY PLAN

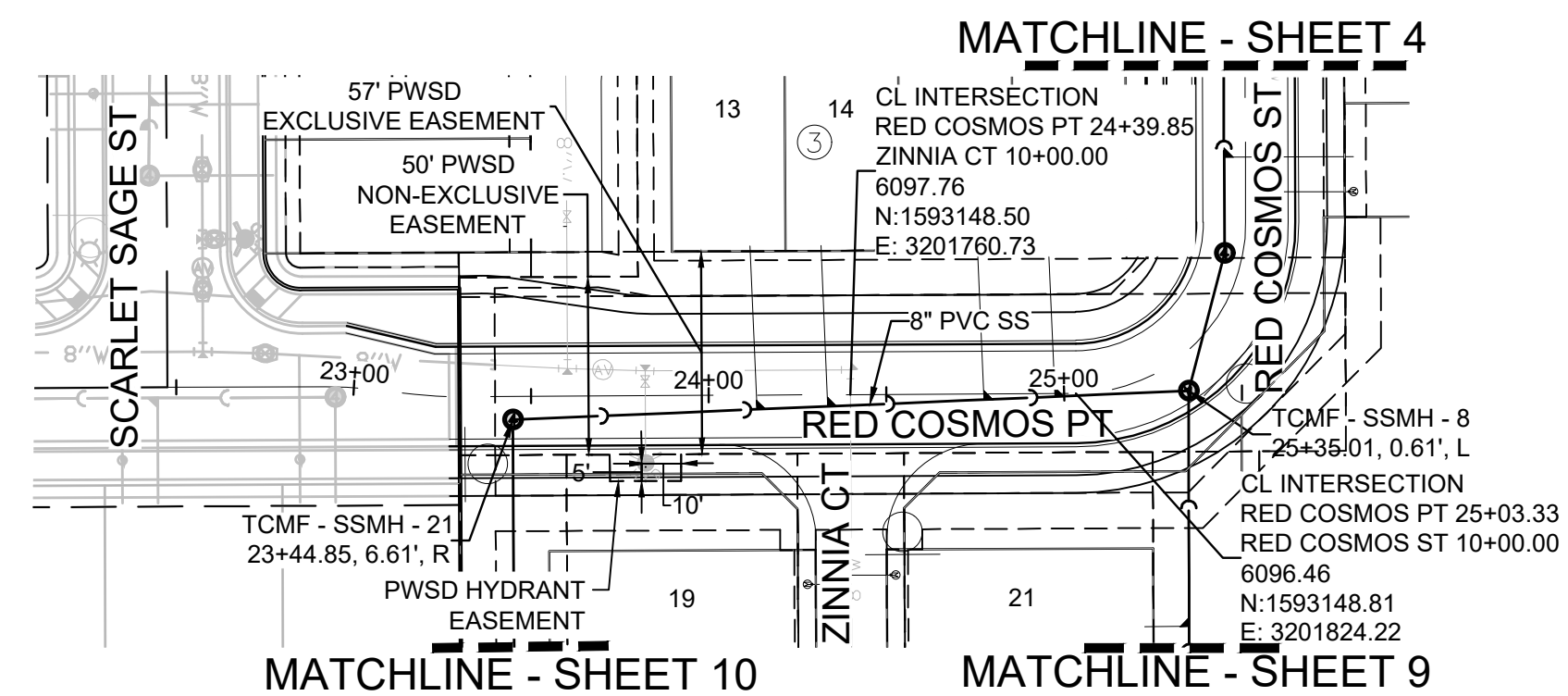
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 DATE: SEPTEMBER 2018

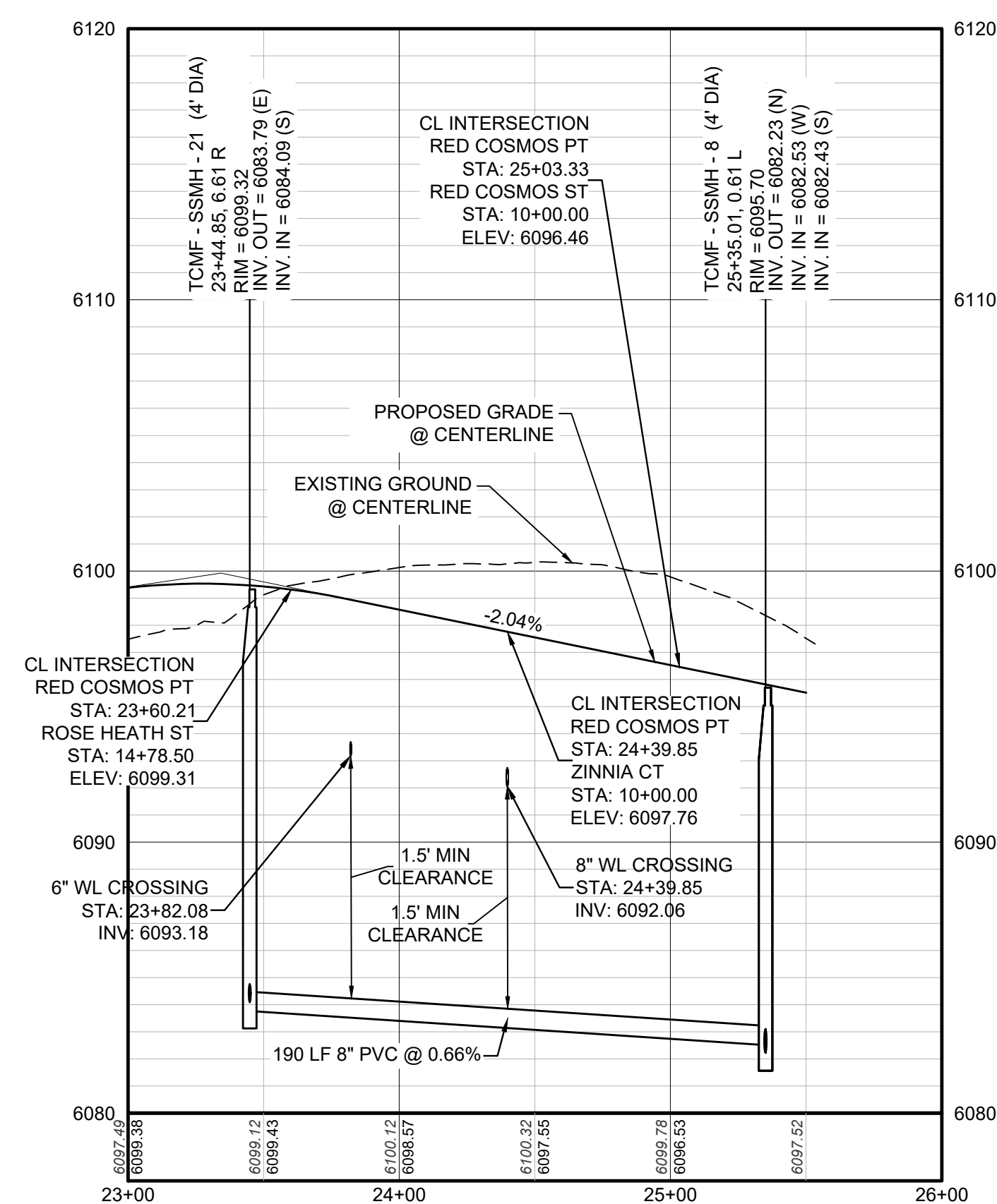
SHEET NUMBER **3**

No.	Revisions	Date	Appr.	Date
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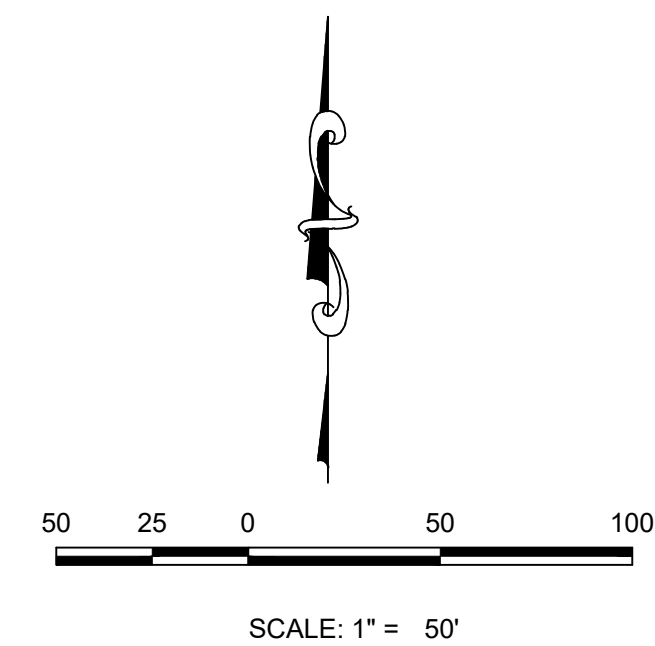




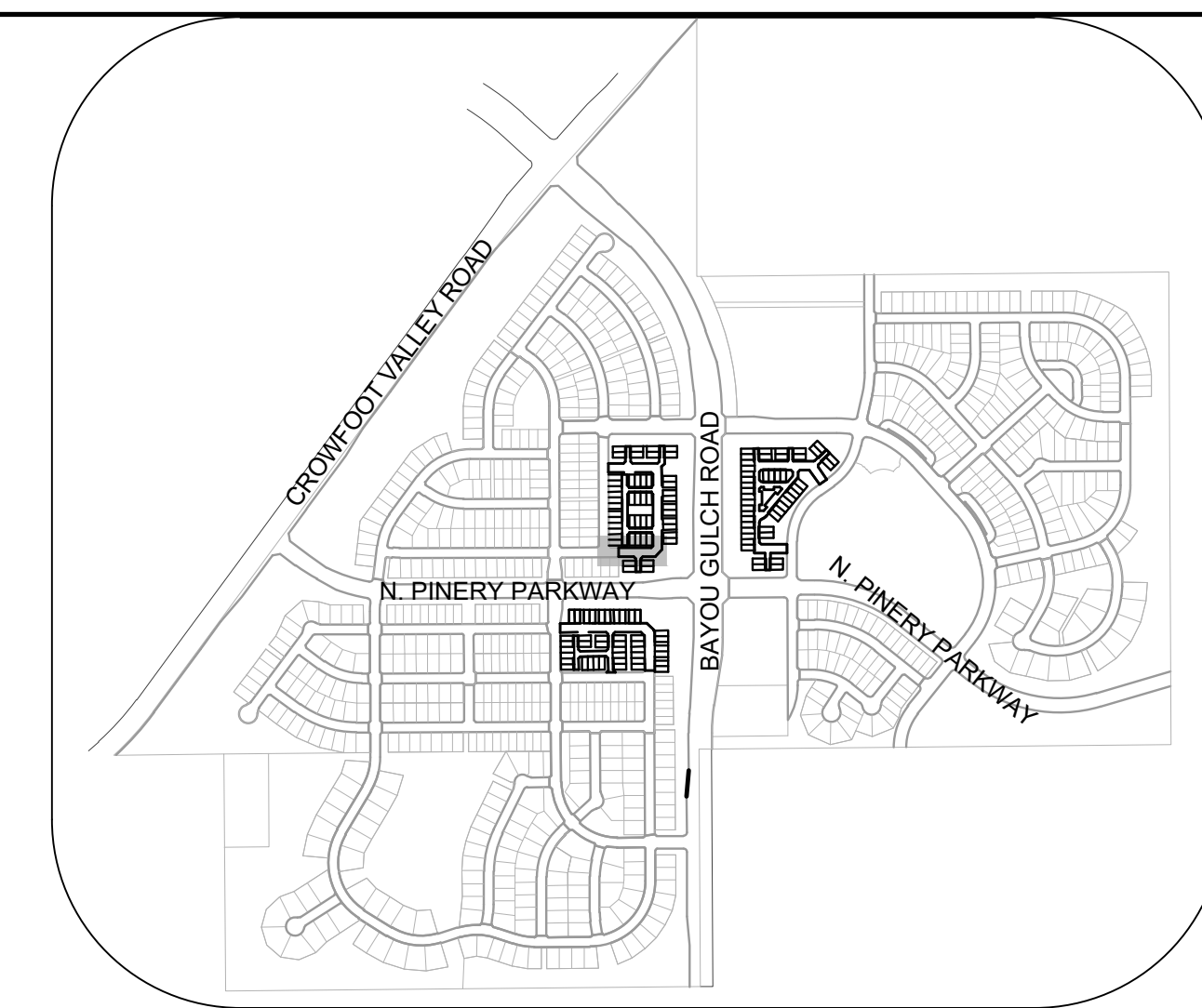
PLAN: RED COSMOS PT STA: 23+00.00 TO 26+00.00  
HORIZONTAL SCALE: 1" = 50'



PROFILE: RED COSMOS PT STA: 23+00.00 TO 26+00.00  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'



SANITARY SERVICE TABLE		
ILING, BLOCK, LOT	STREET	STATIONING
F14.B3.L13	RED COSMOS PT	24+13.51
F14.B3.L14	RED COSMOS PT	24+33.49
F14.B3.L15	RED COSMOS ST	9+74.09
F14.B3.L16	RED COSMOS ST	9+94.06



KEYMAP  
N.T.S.

### LEGEND

Ⓜ	BLOCK NUMBER	△	PROPOSED RANGE POINT
Ⓛ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
Ⓜ	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
Ⓜ	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
Ⓜ	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
Ⓜ	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
Ⓜ	PROPOSED FIRE HYDRANT	---	EXISTING 5' CONTOUR
Ⓜ	PROPOSED WL FITTING WITH THRUST BLOCK	---	EXISTING 1' CONTOUR
Ⓜ	PROPOSED FLARED END SECTION	---	PROPOSED 5' CONTOUR
Ⓜ	PROPOSED LOW POINT BLOW-OFF	---	PROPOSED 1' CONTOUR
Ⓜ	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
Ⓜ	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
Ⓜ	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
Ⓜ	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
Ⓜ	PROPOSED SIDEWALK RAMP	---	PROPOSED WATER LATERAL W/ METER
10.00	EXISTING ELEVATION	---	SECTION LINE
10.00	PROPOSED DESIGN ELEVATION	---	FILING BOUNDARY
Ⓜ	PROPOSED STORM DRAIN INLET	---	FO
Ⓜ	PROPOSED STORM DRAIN MANHOLE	---	OH
		---	TEL

### ABBREVIATIONS

AD	ANGLE DIFFERENCE	MH	MANHOLE
AV	AIR VAC RELEASE VALVE	N.T.S.	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
BVP	BEGIN VERTICAL PROFILE	PVI	PT. OF VERTICAL INTERSECTION
CBO	CAP WITH BLOW OFF	PVT	POINT OF VERTICAL TANGENT
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EL	ELEVATION	ROP	REINFORCED CONCRETE PIPE
EP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
EVC	END VERTICAL CURVE	SC	SANITARY CAP
EVP	END VERTICAL PROFILE	SD	STORM DRAIN
FG	FINISHED GROUND	SL	SECTION LINE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	STA	STATION
GV	GATE VALVE	T.O.P.	TOP OF PIPE
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10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9529 Fax: (720) 482-9546		10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9529 Fax: (720) 482-9546
<b>HR 935 LLC</b> 7353 South Alton Way CENTENNIAL, CO 80112		
TRAILS AT CROWFOOT FILING 14 CONSTRUCTION DRAWINGS SANITARY SEWER PLAN & PROFILE RED COSMOS PT	SCALE: AS SHOWN	FILE NO: 8130283701
DRAWN BY: RRR	CHECKED BY: BPW	DATE: SEPTEMBER 2018
SHEET NUMBER <b>5</b>	PREPARED UNDER THE SUPERVISION OF 	Revisions No. Date Init. Appr. Date

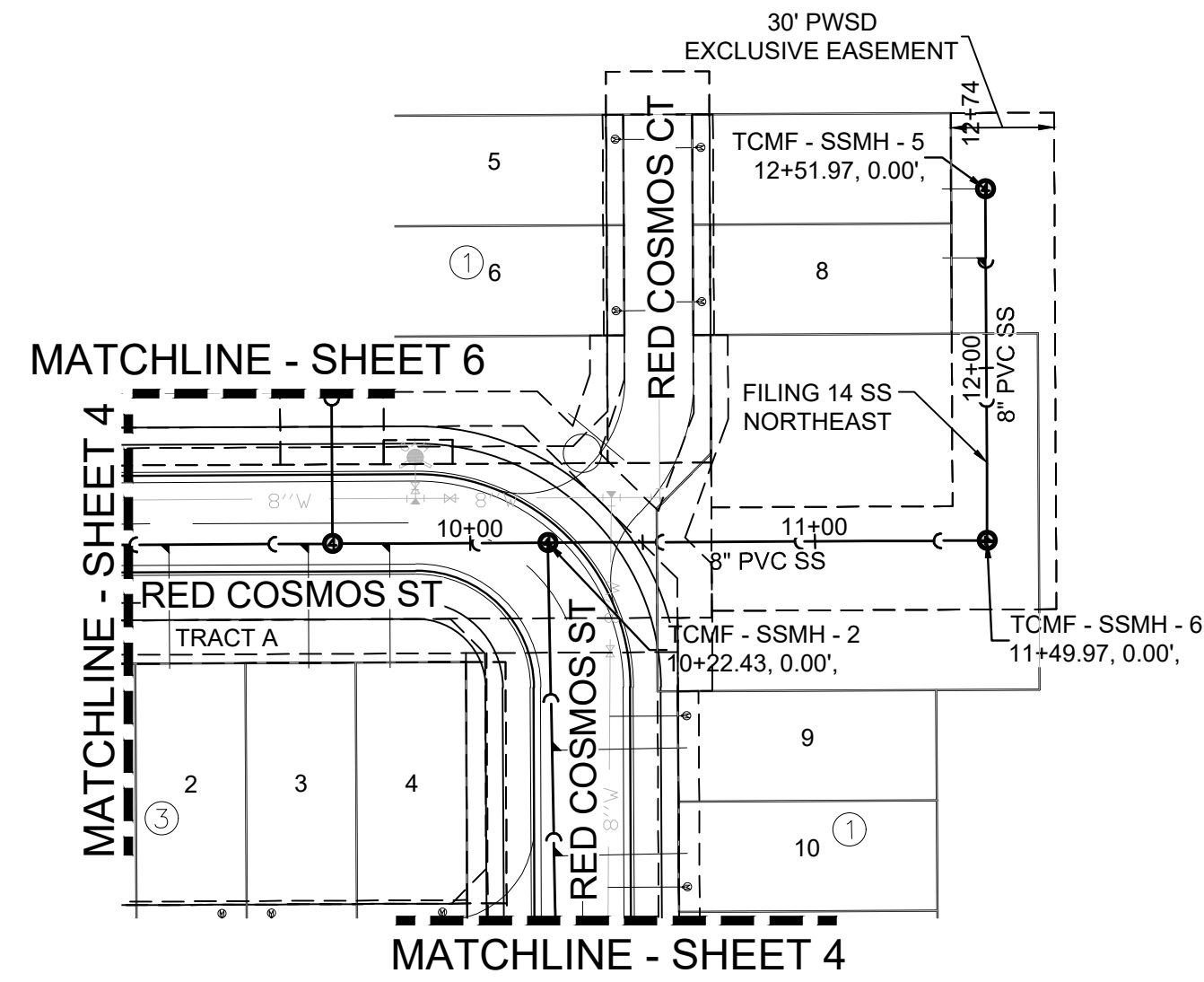
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**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

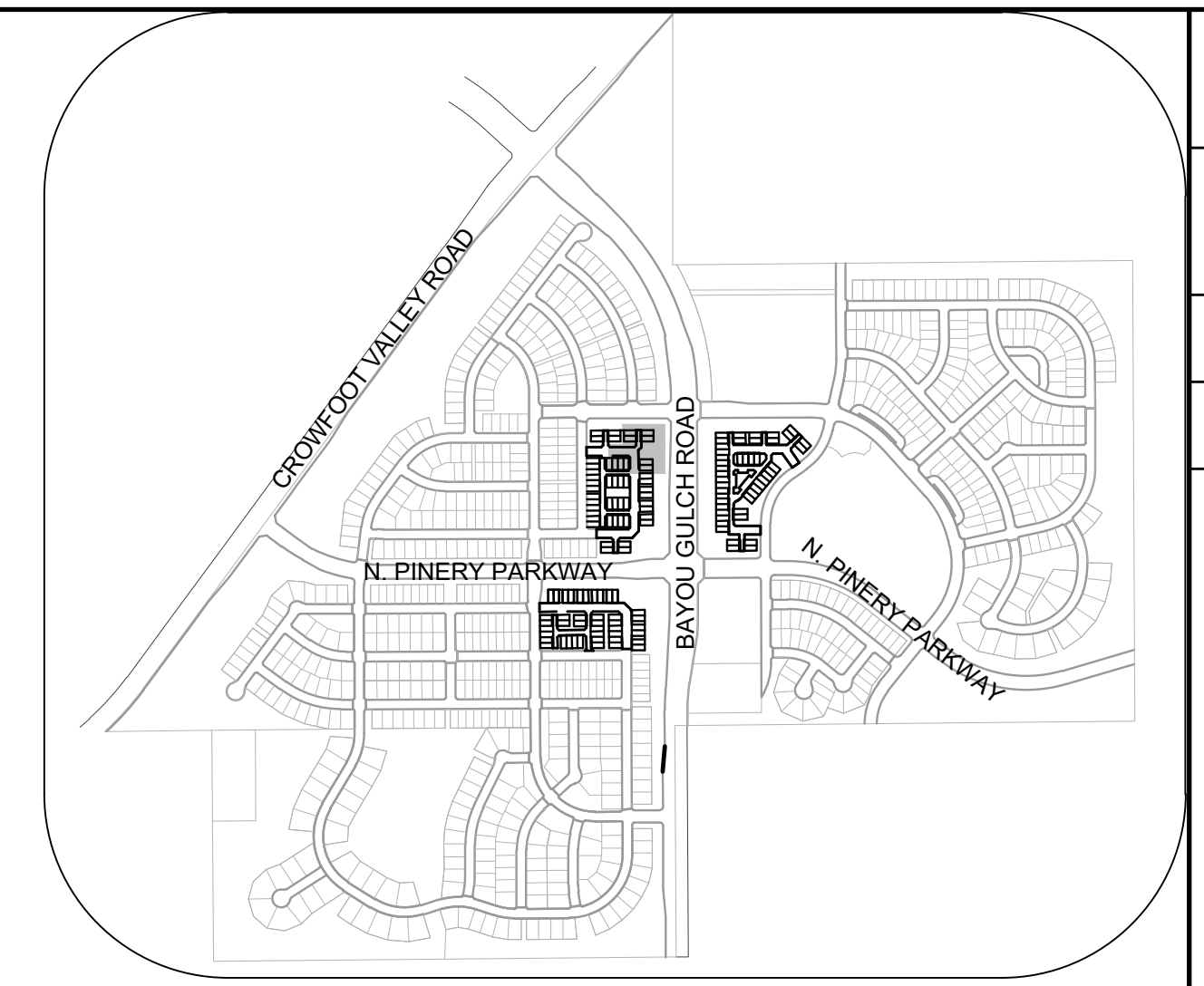
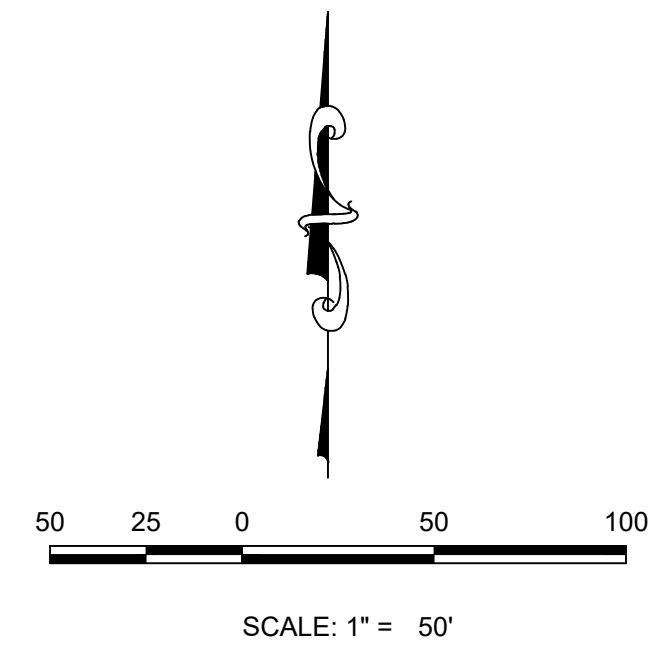
**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF  
  
 BRIAN P. WILSON  
 COLORADO P.E. 0050067



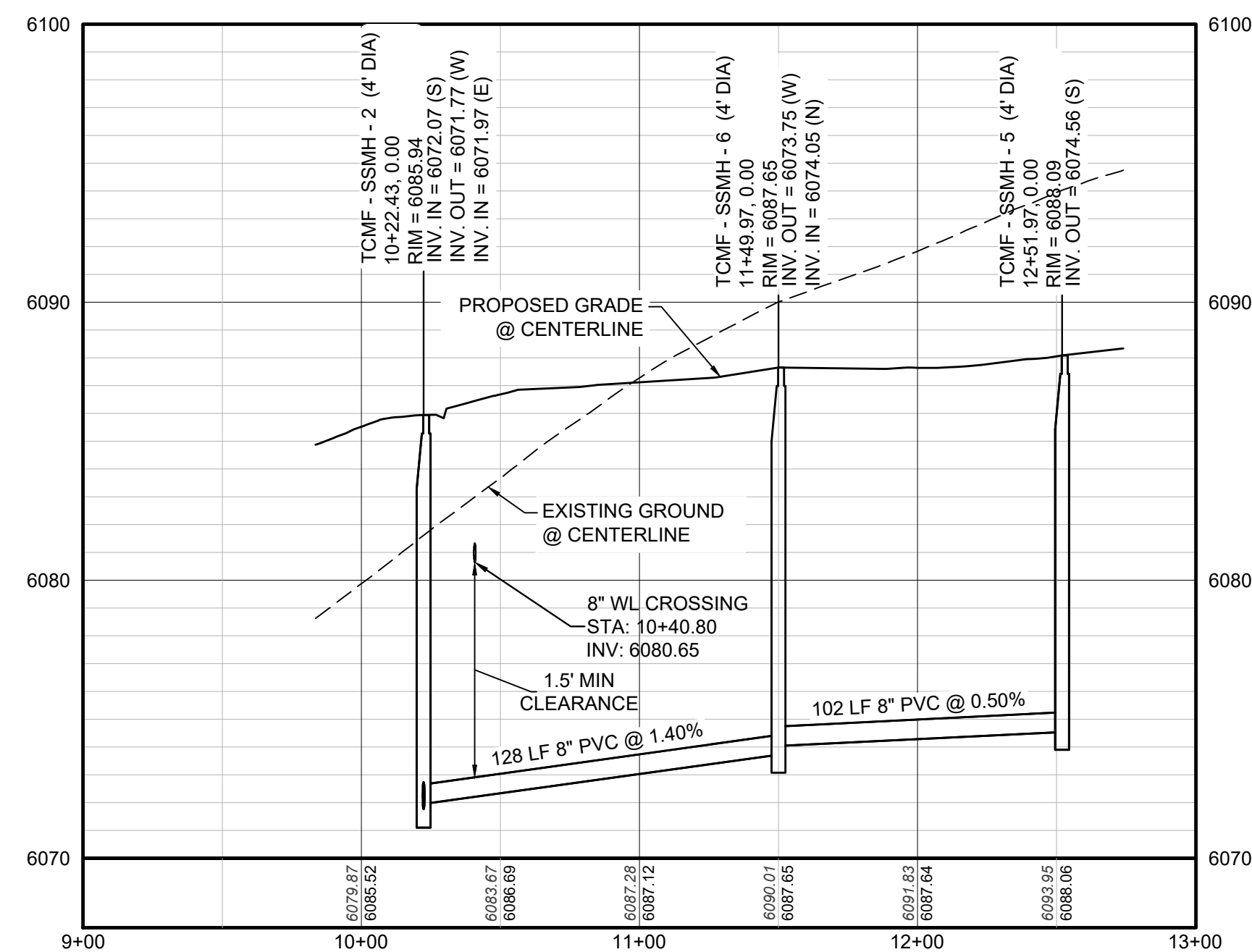


PLAN: FILING 14 SS NORTHEAST STA: 9+00.00 TO 13+00.00  
HORIZONTAL SCALE: 1" = 50'



KEYMAP  
N.T.S.

SANITARY SERVICE TABLE		
ILING, BLOCK, LOT	STREET	STATIONING
F14.B1.L7	FILING 14 SS NORTHEAST	12+51.97
F14.B1.L8	FILING 14 SS NORTHEAST	12+31.97



PROFILE: FILING 14 SS NORTHEAST STA: 9+00.00 TO 13+00.00  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'

### LEGEND

Ⓜ	BLOCK NUMBER	△	PROPOSED RANGE POINT
ⓐ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
Ⓜ	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
Ⓜ	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
Ⓜ	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
Ⓜ	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
Ⓜ	PROPOSED FIRE HYDRANT	---	EXISTING 5' CONTOUR
Ⓜ	PROPOSED WL FITTING WITH THRUST BLOCK	---	EXISTING 1' CONTOUR
Ⓜ	PROPOSED FLARED END SECTION	---	PROPOSED 5' CONTOUR
Ⓜ	PROPOSED LOW POINT BLOW-OFF	---	PROPOSED 1' CONTOUR
Ⓜ	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
Ⓜ	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
Ⓜ	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
Ⓜ	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
Ⓜ	PROPOSED SIDEWALK	---	PROPOSED WATER LATERAL W/ METER
Ⓜ	PROPOSED SIDEWALK RAMP	---	SECTION LINE
10.00	EXISTING ELEVATION	---	FILING BOUNDARY
10.00	PROPOSED DESIGN ELEVATION	---	EXISTING FIBER OPTIC LINE
Ⓜ	PROPOSED STORM DRAIN INLET	---	EXISTING OVERHEAD POWER
Ⓜ	PROPOSED STORM DRAIN MANHOLE	---	EXISTING TELEPHONE LINE

### ABBREVIATIONS

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10333 E. Dry Creek Rd., Suite 240, Englewood, CO 80112 Tel: (720) 482-9528 Fax: (720) 482-9546	Revisions	Date	Appr.	Date
	No.			
<b>HR 935 LLC</b> 7353 South Alton Way CENTENNIAL, CO 80112	<b>TRAILS AT CROWFOOT</b> <b>FILING 14 CONSTRUCTION DRAWINGS</b> SANITARY SEWER PLAN & PROFILE FILING 14 SS NORTHEAST	SCALE: <b>AS SHOWN</b>	DRAWN BY: RRR	SHEET NUMBER <b>7</b>
FILE NO: <b>8130283701</b>	CHECKED BY: BPW	DATE: SEPTEMBER 2018	PREPARED UNDER THE SUPERVISION OF 	DATE

N:\PROJECTS\SS RANCH\ENGINEERING\SSHEET SETS\MULTIFAMILY\CD\14 PARKER WATER AND SANITATIONS\SANITARY SEWER SHEET SHEET 7.DWG, BRANW, 11/11/2020 9:08 AM

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**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

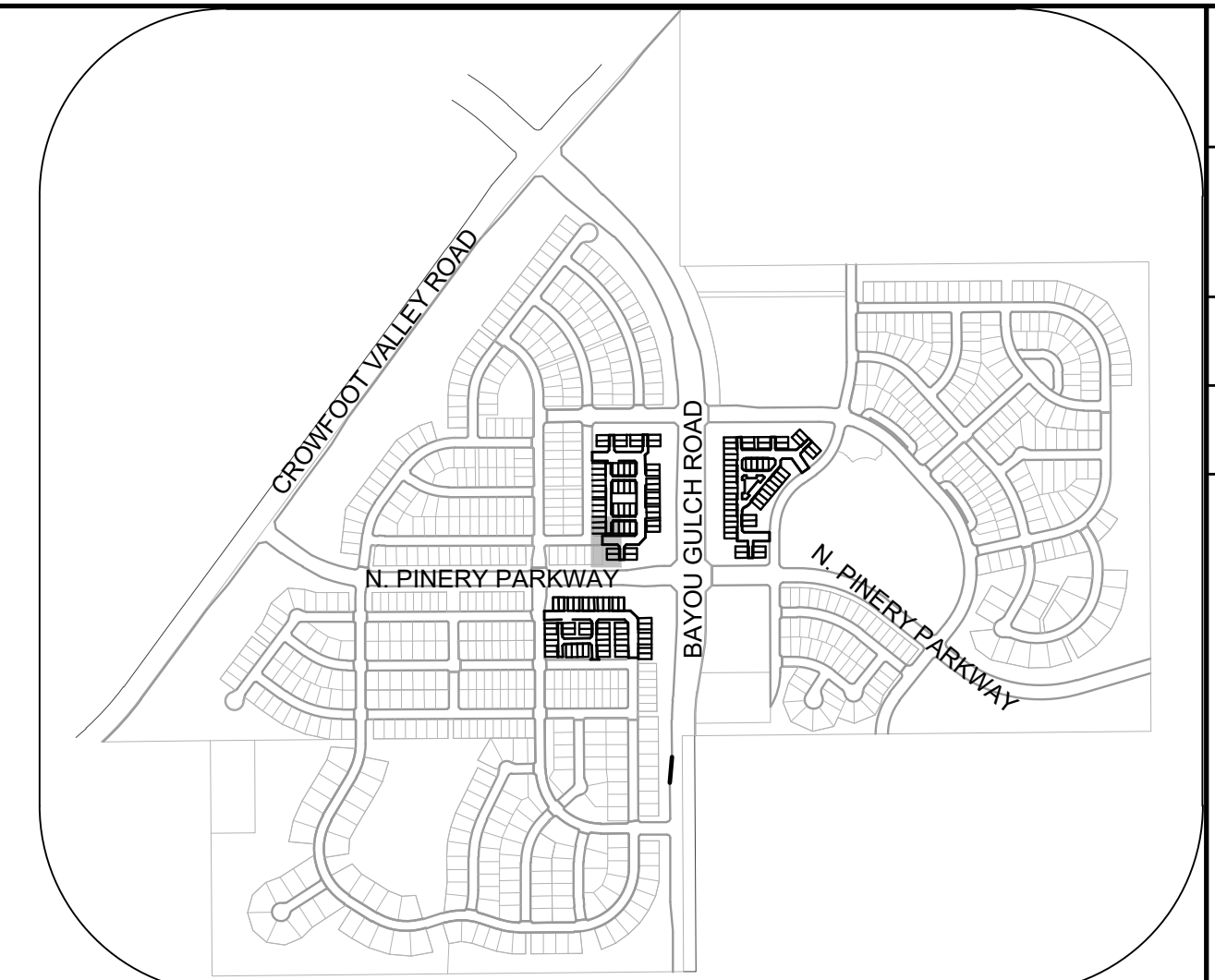
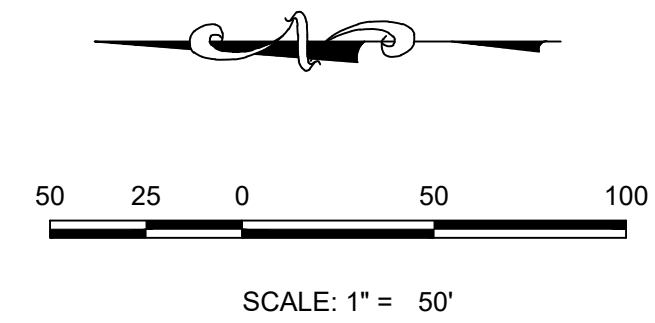
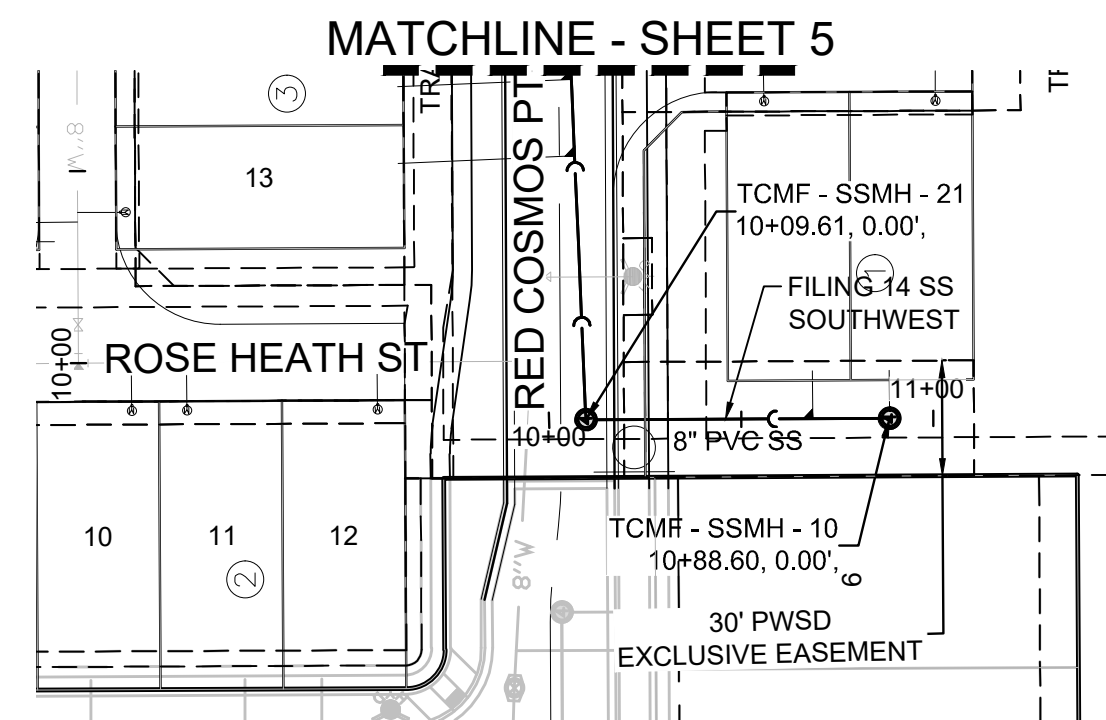
**BASIS OF BEARINGS:**  
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PREPARED UNDER THE SUPERVISION OF  

 BRIAN P. WILSON  
 COLORADO P.E. 0050067







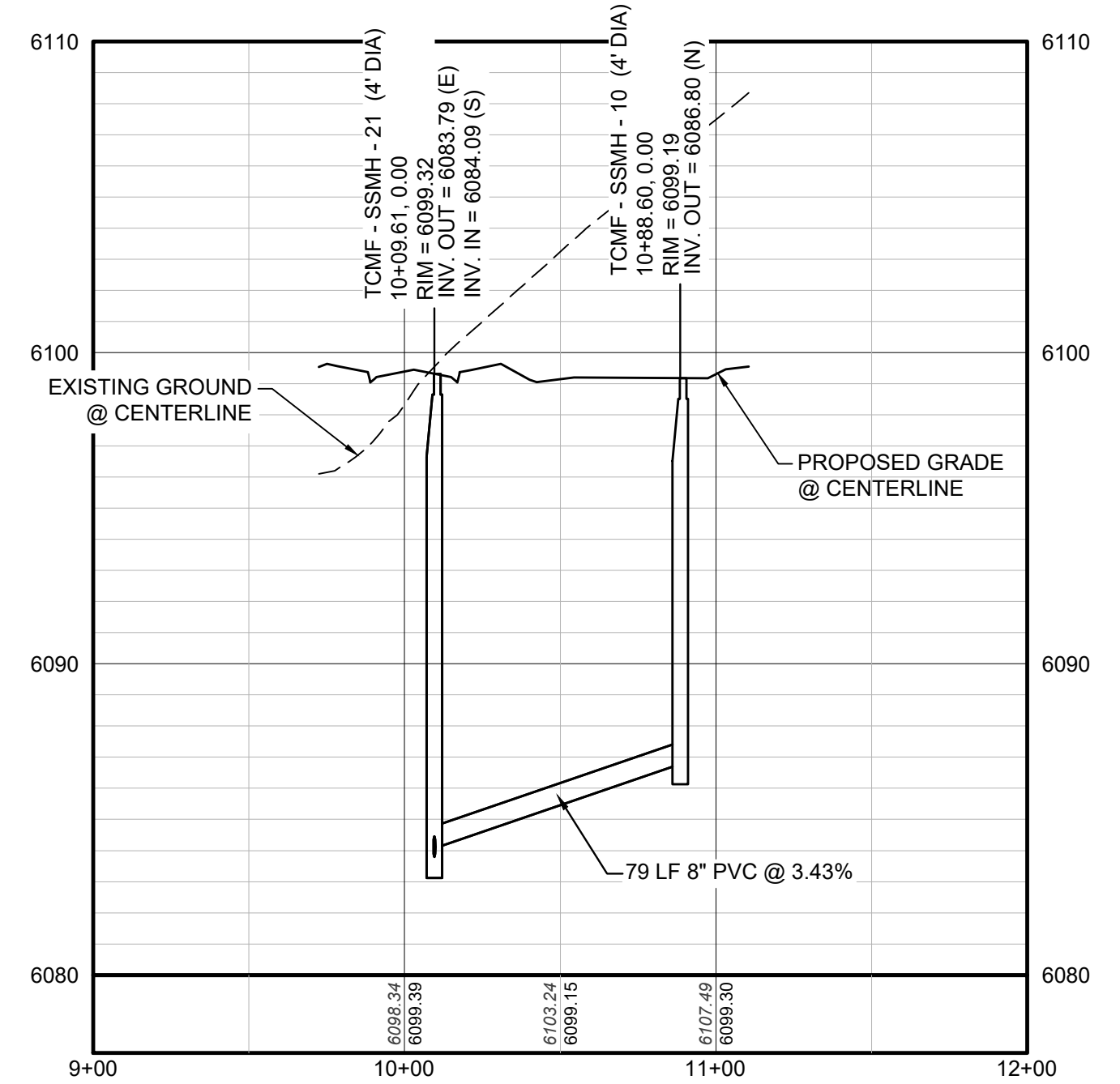
**KEYMAP**  
N.T.S.

**PLAN: FILING 14 SS SOUTHWEST STA: 9+00.00 TO 12+00.00**  
HORIZONTAL SCALE: 1" = 50'

SANITARY SERVICE TABLE		
ILING, BLOCK, LOT	STREET	STATIONING
F14.B1.L19	FILING 14 SS SOUTHWEST	10+68.60
F14.B1.L20	FILING 14 SS SOUTHWEST	10+88.60

**LEGEND**

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Ⓐ	LOT TYPE	---	CENTERLINE
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⊠	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
⊠	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
⊠	PROPOSED FIRE HYDRANT	5615	EXISTING 5' CONTOUR
⊠	PROPOSED WL FITTING WITH THRUST BLOCK	5616	EXISTING 1' CONTOUR
⊠	PROPOSED FLARED END SECTION	5620	PROPOSED 5' CONTOUR
⊠	PROPOSED LOW POINT BLOW-OFF	5607	PROPOSED 1' CONTOUR
⊠	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊠	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊠	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
⊠	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
⊠	PROPOSED SIDEWALK	---	PROPOSED WATER LATERAL W/ METER
⊠	PROPOSED SIDEWALK RAMP	---	SECTION LINE
10.00	EXISTING ELEVATION	---	FILING BOUNDARY
10.00	PROPOSED DESIGN ELEVATION	---	EXISTING FIBER
⊠	PROPOSED STORM DRAIN INLET	---	EXISTING OPTIC LINE
⊠	PROPOSED STORM DRAIN MANHOLE	---	EXISTING OVERHEAD POWER
		---	EXISTING TELEPHONE LINE



**PROFILE: FILING 14 SS SOUTHWEST STA: 9+00.00 TO 12+00.00**  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'

**ABBREVIATIONS**

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UTILITY NOTIFICATION CENTER OF COLORADO

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF  
BRIAN P. WILSON  
COLORADO P.E. 0050067

10333 E. Dry Creek Rd., Suite 240, Englewood, CO 80112  
Tel: (720) 482-9529 Fax: (720) 482-9546

**CVL CONSULTANTS**

HR 935 LLC  
7353 South Alton Way, CENTENNIAL, CO 80112

TRAILS AT CROWFOOT  
FILING 14 CONSTRUCTION DRAWINGS  
SANITARY SEWER PLAN & PROFILE  
FILING 14 SS SOUTHWEST

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: RRR  
CHECKED BY: BPW  
DATE: SEPTEMBER 2018

SHEET NUMBER **10**

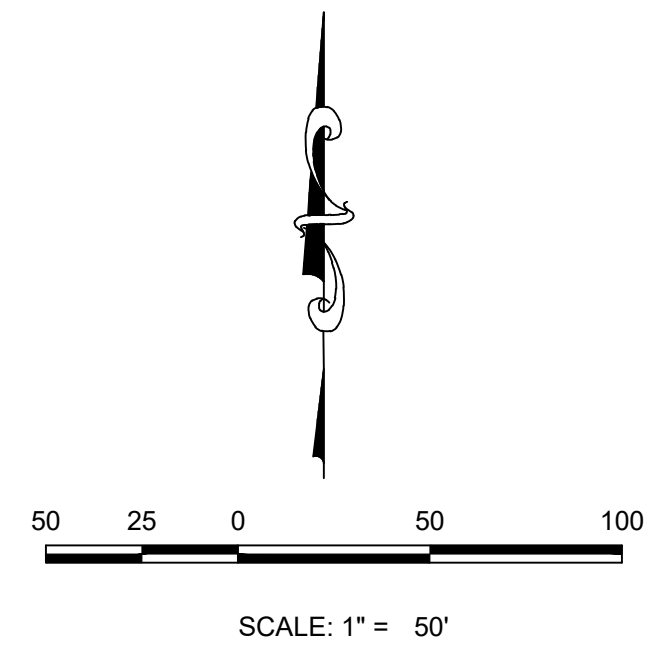
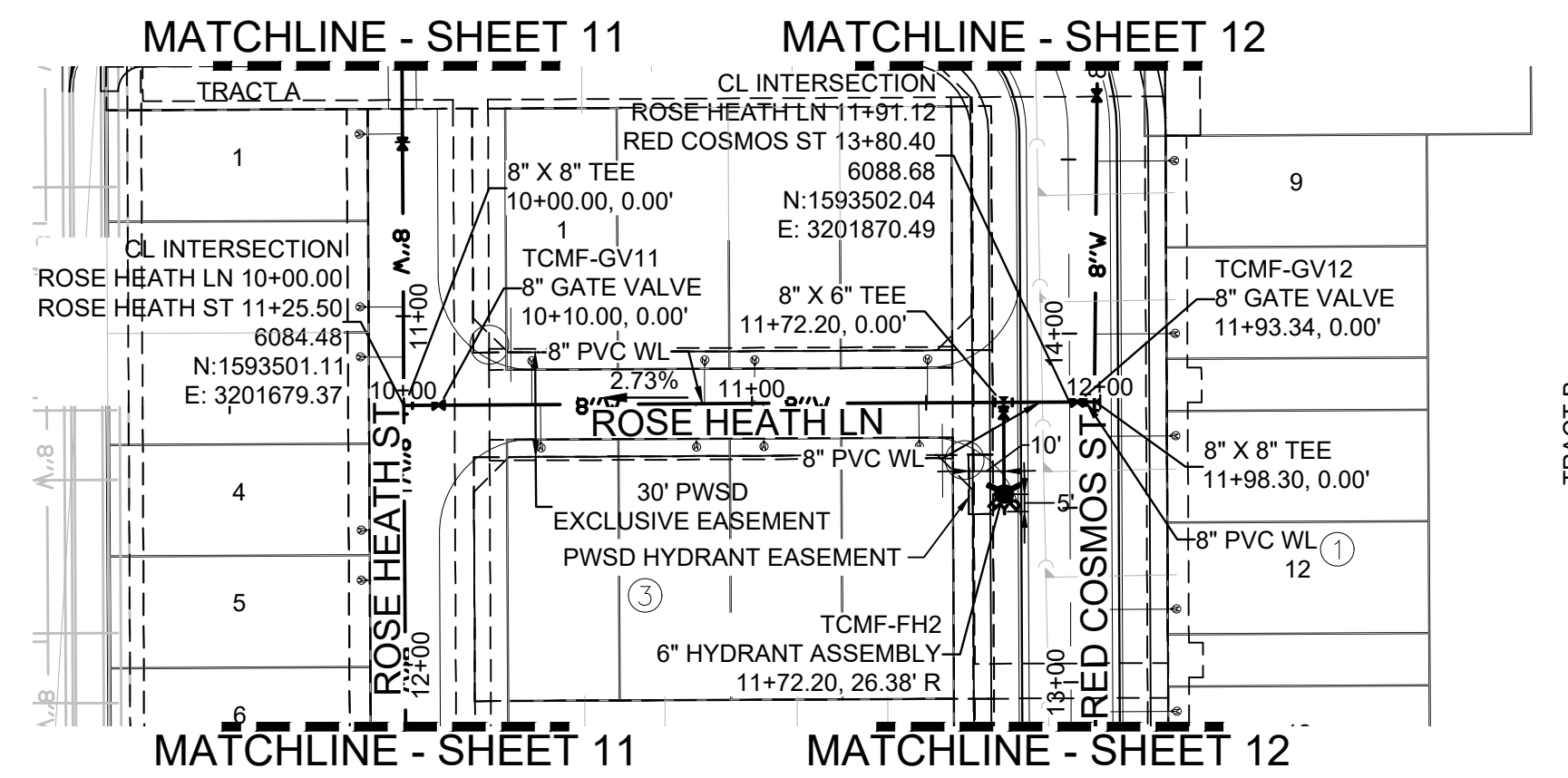
No.	Revisions	Date	Init.	Appr.	Date





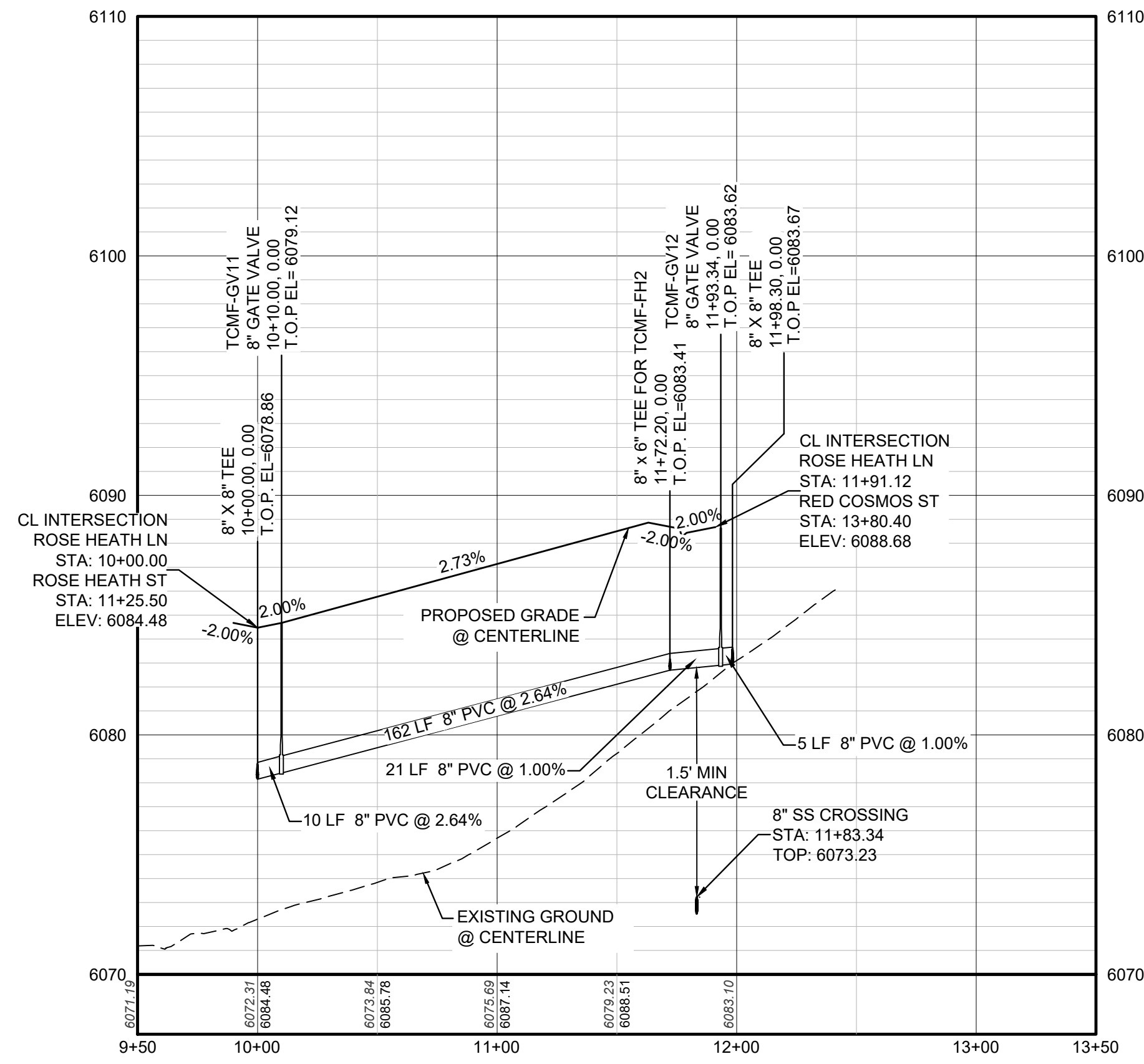






KEYMAP  
N.T.S.

PLAN: ROSE HEATH LN STA: 9+50.00 TO 13+50.00  
HORIZONTAL SCALE: 1" = 50'



PROFILE: ROSE HEATH LN STA: 9+50.00 TO 13+50.00  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'

WATER SERVICE TABLE		
FILING, BLOCK, LOT	STREET	STATIONING
F14,B3,L1	ROSE HEATH LN	10+36.73
F14,B3,L2	ROSE HEATH LN	10+86.39
F14,B3,L3	ROSE HEATH LN	11+00.73
F14,B3,L4	ROSE HEATH LN	11+50.39
F14,B3,L5	ROSE HEATH LN	10+39.23
F14,B3,L6	ROSE HEATH LN	10+83.89
F14,B3,L7	ROSE HEATH LN	11+03.23
F14,B3,L8	ROSE HEATH LN	11+47.89

**LEGEND**

⊙	BLOCK NUMBER	△	PROPOSED RANGE POINT
Ⓐ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
⊕	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
⊕	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
⊕	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
⊕	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
⊕	PROPOSED FIRE HYDRANT	---	EXISTING 5' CONTOUR
⊕	PROPOSED WL FITTING WITH THRUST BLOCK	---	EXISTING 1' CONTOUR
⊕	PROPOSED FLARED END SECTION	---	PROPOSED 5' CONTOUR
⊕	PROPOSED LOW POINT BLOW-OFF	---	PROPOSED 1' CONTOUR
⊕	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊕	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊕	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
⊕	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
⊕	PROPOSED SIDEWALK RAMP	---	PROPOSED WATER LATERAL W/ METER
10.00	EXISTING ELEVATION	---	SECTION LINE
10.00	PROPOSED DESIGN ELEVATION	---	FILING BOUNDARY
⊕	PROPOSED STORM DRAIN INLET	---	EXISTING FIBER
⊕	PROPOSED STORM DRAIN MANHOLE	---	EXISTING OPTIC LINE
		---	EXISTING OVERHEAD POWER
		---	EXISTING TELEPHONE LINE

**ABBREVIATIONS**

AD	ANGLE DIFFERENCE	MH	MANHOLE
AV	AIR VAC RELEASE VALVE	N.T.S.	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
BVP	BEGIN VERTICAL PROFILE	PVI	PT. OF VERTICAL INTERSECTION
CBD	CAP WITH BLOW OFF	PVT	POINT OF VERTICAL TANGENT
CRR	CURB RETURN RADIUS	RCBC	REINFORCED CONCRETE BOX CULVERT
EL	ELEVATION	ROP	REINFORCED CONCRETE PIPE
EP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
EVC	END VERTICAL CURVE	SC	SANITARY CAP
EVP	END VERTICAL PROFILE	SD	STORM DRAIN
FG	FINISHED GROUND	SL	SECTION LINE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	STA	STATION
GV	GATE VALVE	T.O.P.	TOP OF PIPE
HCR	HANDICAP CURB RAMP	UE	UTILITY EASEMENT
HP	HIGH POINT	VC	VERTICAL CURVE
INV	INVERT	WL	WATER LINE
K	CURVATURE COEFFICIENT	WLC	WATER LINE CONNECTION
LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9529 Fax: (720) 482-9546		10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9529 Fax: (720) 482-9546
<b>HR 935 LLC</b> 7353 South Alton Way CENTENNIAL, CO 80112		
<b>TRAILS AT CROWFOOT</b> <b>FILING 14 CONSTRUCTION DRAWINGS</b> WATER PLAN & PROFILE ROSE HEATH LANE	SCALE: AS SHOWN FILE NO: 8130283701	DRAWN BY: KID CHECKED BY: BPW DATE: SEPTEMBER 2018
SHEET NUMBER	15	DATE

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UNCC  
1-800-922-1987

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON  
COLORADO P.E. 0050067

N:\PROJECTS\SSR\SSR\ENGINEERING\SSR\SSR\14\CONSTRUCTION DRAWINGS\WATER AND SANITATION\WATER PLAN AND PROFILE\ROSE HEATH LN.DWG. BPWILSON, 11/11/2018 4:24 PM

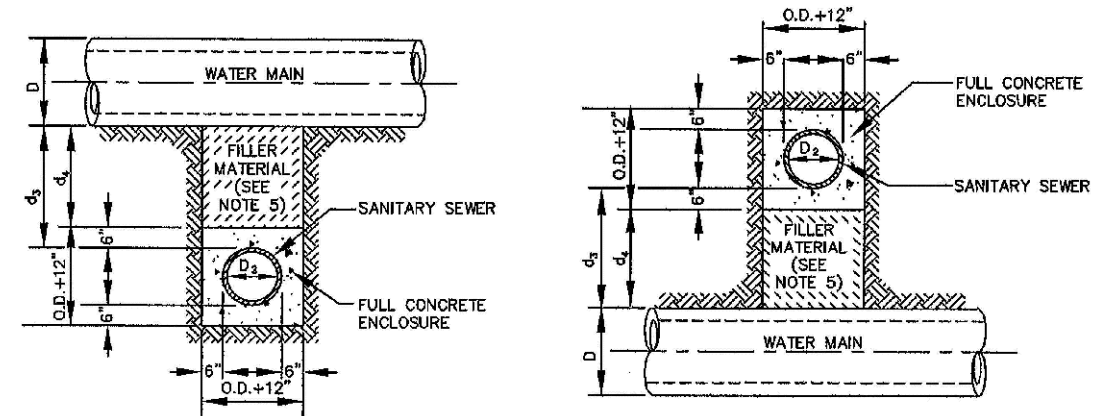












**TYPE IIa**  
SANITARY SEWER CROSSING UNDER WATER MAIN  
If  $d_2 > 2$  ft., ENCASMENT NOT REQUIRED

**TYPE IIb**  
SANITARY SEWER CROSSING OVER TOP OF WATER MAIN  
FULL ENCASMENT REQUIRED REGARDLESS OF DIMENSION  $d_2$ .

**TYPE II**  
CONCRETE ENCASMENT FOR SANITARY SEWERS CROSSING OVER OR UNDER WATER MAIN

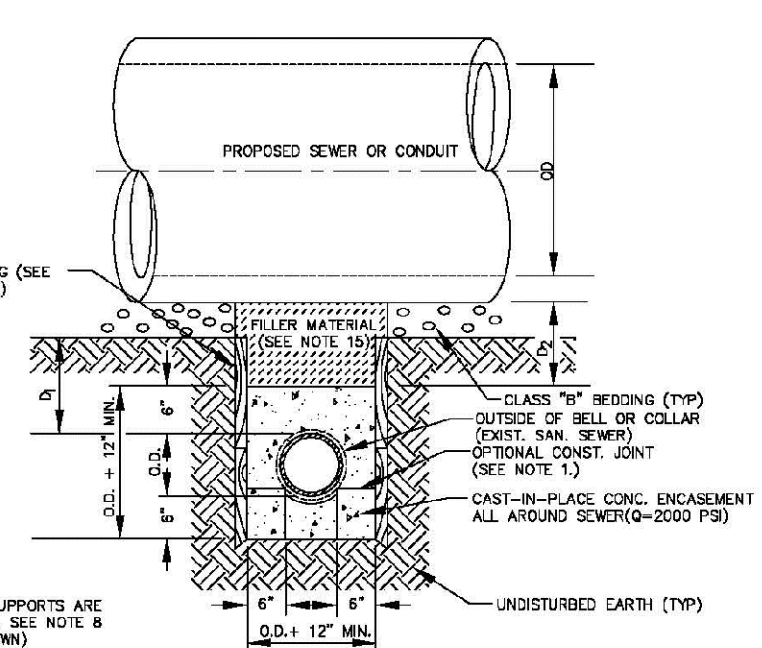
**GENERAL NOTES FOR TYPE I, II & III ENCASMENT**

- CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIONAL CONSTRUCTION JOINT IS USED, BOTTOM HALF OF ENCASMENT IS POURED SEPARATELY. A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
- LENGTH OF ENCASMENT FOR:
  - TYPE I & TYPE II ENCASMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT.
  - TYPE III ENCASMENT SHALL EXTEND AT LEAST TO FEET EACH SIDE OF WATER MAIN.
- UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE I, II & III ENCASMENTS NEED NOT BE REINFORCED. REINFORCEMENT, IF REQUIRED, SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
- TYPE I, II OR III ENCASMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS:
  - TYPE I OR TYPE II IF  $d_1 \leq 18"$  (IF  $d_1 \leq 12"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS.
  - TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION  $d_2$ .
  - EXCEPT FOR UNUSUAL CIRCUMSTANCES, WATER MAIN CROSSINGS, OR WHERE UNUSUAL SOIL CONDITIONS ARE ENCOUNTERED, TYPE I ENCASMENT WILL NORMALLY BE SATISFACTORY.
  - IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF DUCTILE IRON PIPE (AWWA C-152 OR C-151), CONCRETE ENCASMENT MAY NOT BE REQUIRED.
- FILLER MATERIAL BETWEEN CONDUITS TO BE:
  - APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF  $d_2 \leq 4'$  OR  $d_2 \leq 6'$ .
  - COMPACTED CLASS "B" BEDDING IF  $d_2 \leq 4'$  OR  $d_2 > 6'$  (IF  $d_2 > 6'$  FOR TYPE III ENCASMENT POUR CONCRETE ON UNDISTURBED SOIL).
- SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASMENT.
- THESE ENCASMENT DETAILS MAY ALSO BE APPLICABLE FOR CONDUITS OTHER THAN STORM OR SANITARY SEWER INSTALLATIONS. IN CERTAIN SITUATIONS WHERE CONDUIT DIAMETER "D" IS EXTREMELY LARGE, PIPE SUPPORTS ON EACH SIDE OF SANITARY SEWER MAY ALSO BE REQUIRED. IF REQUIRED, SUPPORTS SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN AND PROFILE DRAWINGS.

PARKER WATER & SANITATION DISTRICT	
CONCRETE ENCASMENT TYPE II	
SCALE: NONE	DATE: 2/98
APPROVED: JFN	5/98
	4/01
DISTRICT ENGINEER	1/08

2008 REVISION

SHEET 7



**TYPE III**  
CONCRETE ENCASMENT FOR SANITARY SEWERS  
(FULL ENCASMENT) NO SCALE

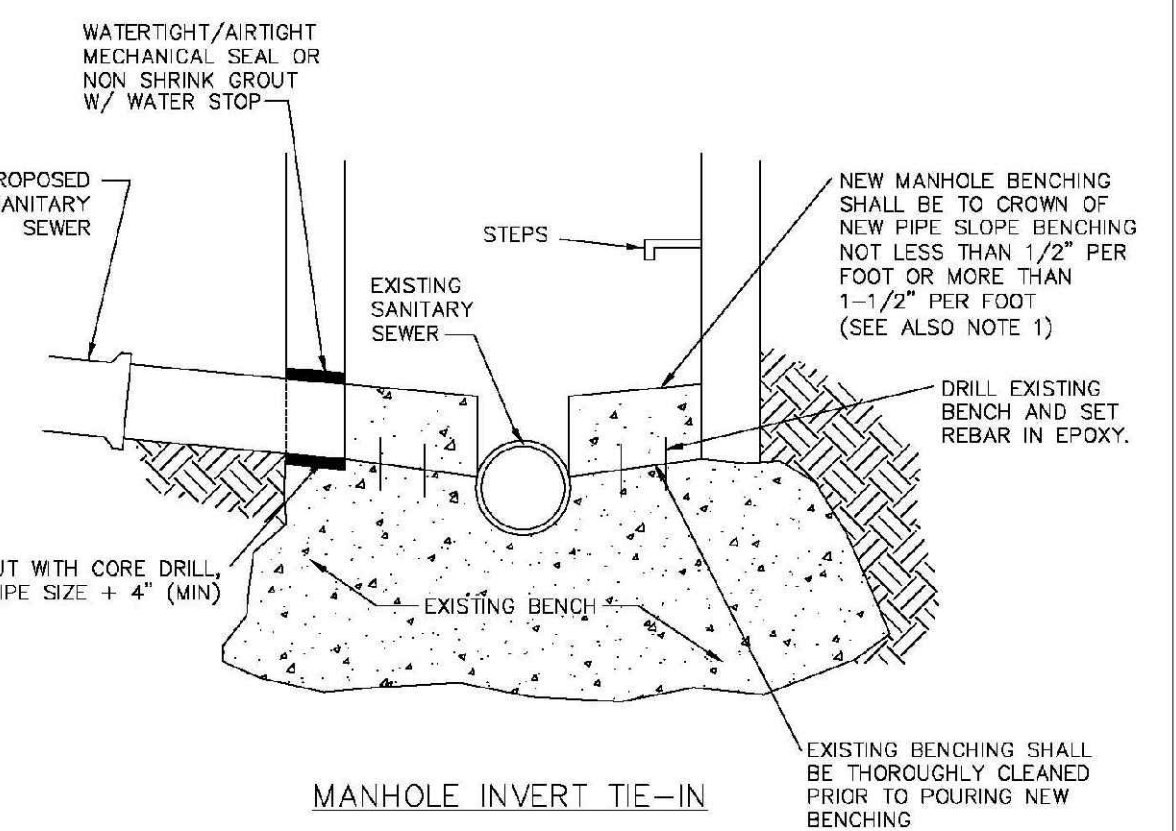
**GENERAL NOTES FOR TYPE I, II & III ENCASMENT**

- CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIONAL CONSTRUCTION JOINT IS USED, BOTTOM HALF OF ENCASMENT IS POURED SEPARATELY. A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
- LENGTH OF ENCASMENT FOR:
  - TYPE I & TYPE II ENCASMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT.
  - TYPE III ENCASMENT SHALL EXTEND AT LEAST TO FEET EACH SIDE OF WATER MAIN.
- UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE I & II ENCASMENTS NEED NOT BE REINFORCED. REINFORCEMENT, IF REQUIRED, TO BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
- TYPE I, II OR III ENCASMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS:
  - TYPE I OR TYPE II IF  $d_1 \leq 18"$  (IF  $d_1 \leq 12"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS.
  - TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION  $d_2$ .
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  - IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF DUCTILE IRON PIPE (AWWA C-152 OR C-151), CONCRETE ENCASMENT MAY NOT BE REQUIRED.
- FILLER MATERIAL BETWEEN CONDUITS TO BE:
  - APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF  $d_2 \leq 4'$  OR  $d_2 \leq 6'$ .
  - COMPACTED CLASS "B" BEDDING IF  $d_2 \leq 4'$  OR  $d_2 > 6'$  (IF  $d_2 > 6'$  FOR TYPE III ENCASMENT POUR CONCRETE ON UNDISTURBED SOIL).
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- CONCRETE ENCASED PIPING SHALL BE LINED WITH FILL.

PARKER WATER & SANITATION DISTRICT	
CONCRETE ENCASMENT TYPE III	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	5/98
	1/78
DIRECTOR OF ENGINEERING	10/78

2016 REVISION

SHEET 8.8



**MANHOLE INVERT TIE-IN**

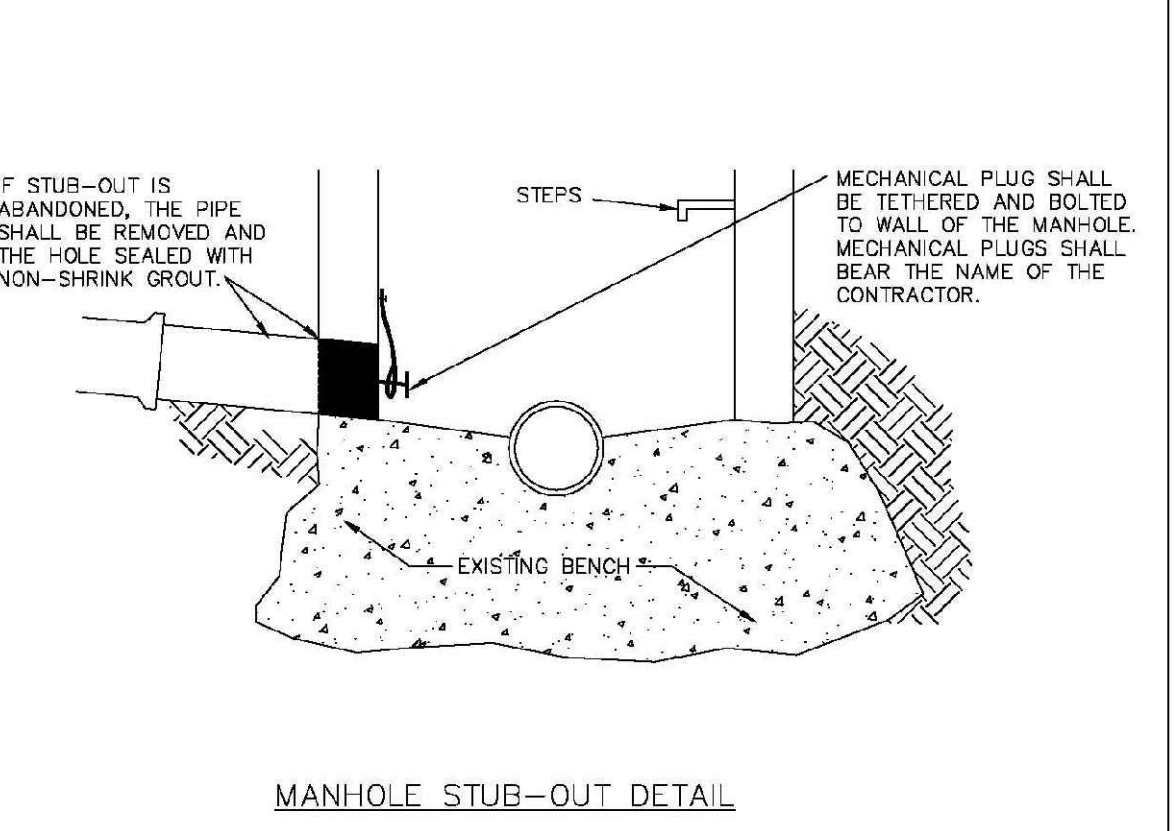
**NOTES**

- NEW BENCH SHALL INCLUDE REINFORCEMENT TO CONTROL CONCRETE CRACKING.

PARKER WATER & SANITATION DISTRICT	
MANHOLE INVERT TIE-IN DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	5/98
	1/78
DIRECTOR OF ENGINEERING	10/78

2016 REVISION

SHEET 9.9



**MANHOLE STUB-OUT DETAIL**

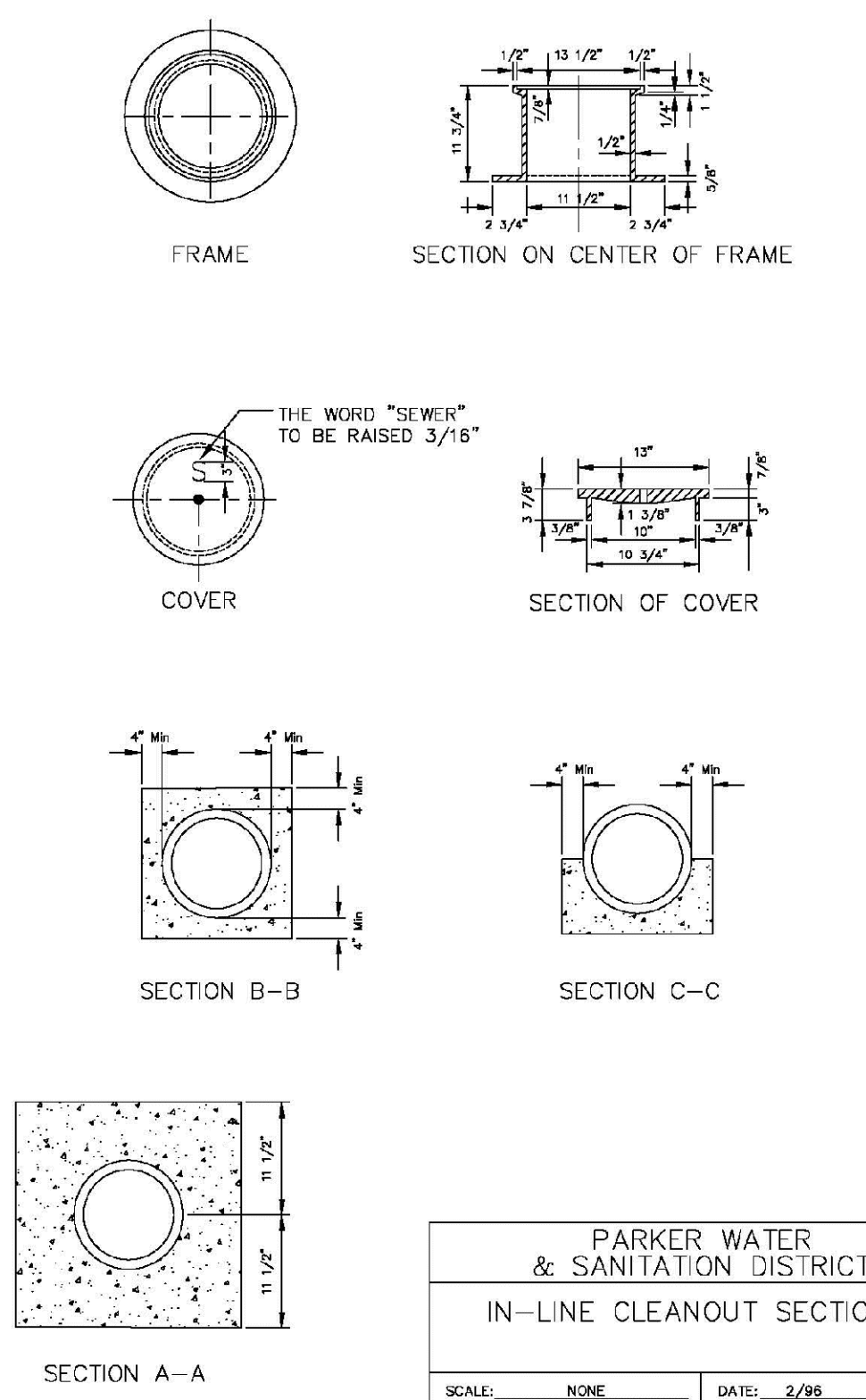
**NOTES**

- IF STUB-OUT IS ABANDONED, THE PIPE SHALL BE REMOVED AND THE HOLE SEALED WITH NON-SHRINK GROUT.
- MECHANICAL PLUG SHALL BE TETHERED AND BOLTED TO WALL OF THE MANHOLE. MECHANICAL PLUGS SHALL BEAR THE NAME OF THE CONTRACTOR.

PARKER WATER & SANITATION DISTRICT	
MANHOLE STUB-OUT DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	5/98
	1/78
DIRECTOR OF ENGINEERING	10/78

2016 REVISION

SHEET 10.10

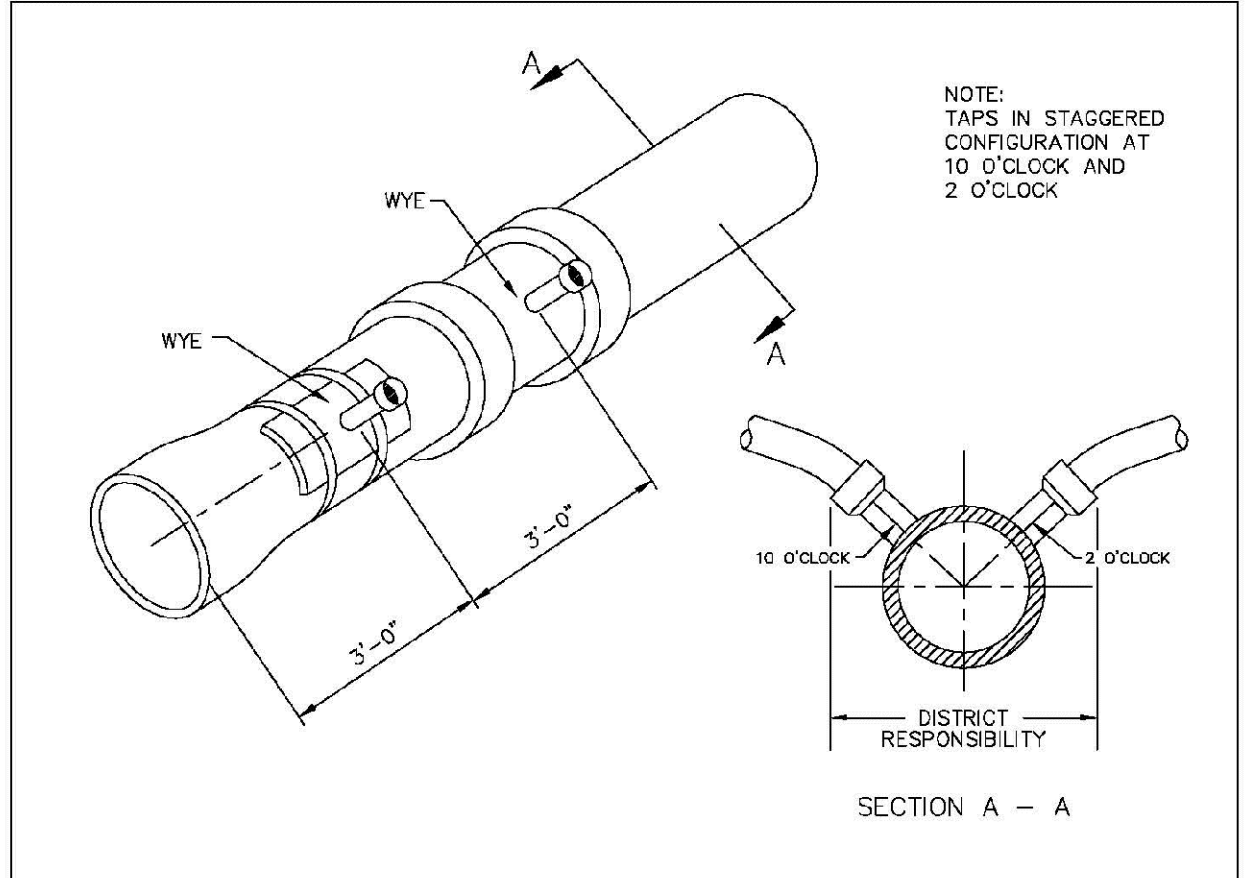


**IN-LINE CLEANOUT SECTIONS**

PARKER WATER & SANITATION DISTRICT	
IN-LINE CLEANOUT SECTIONS	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	2/00
	7/98
DIRECTOR OF ENGINEERING	10/78

2016 REVISION

SHEET 14.12

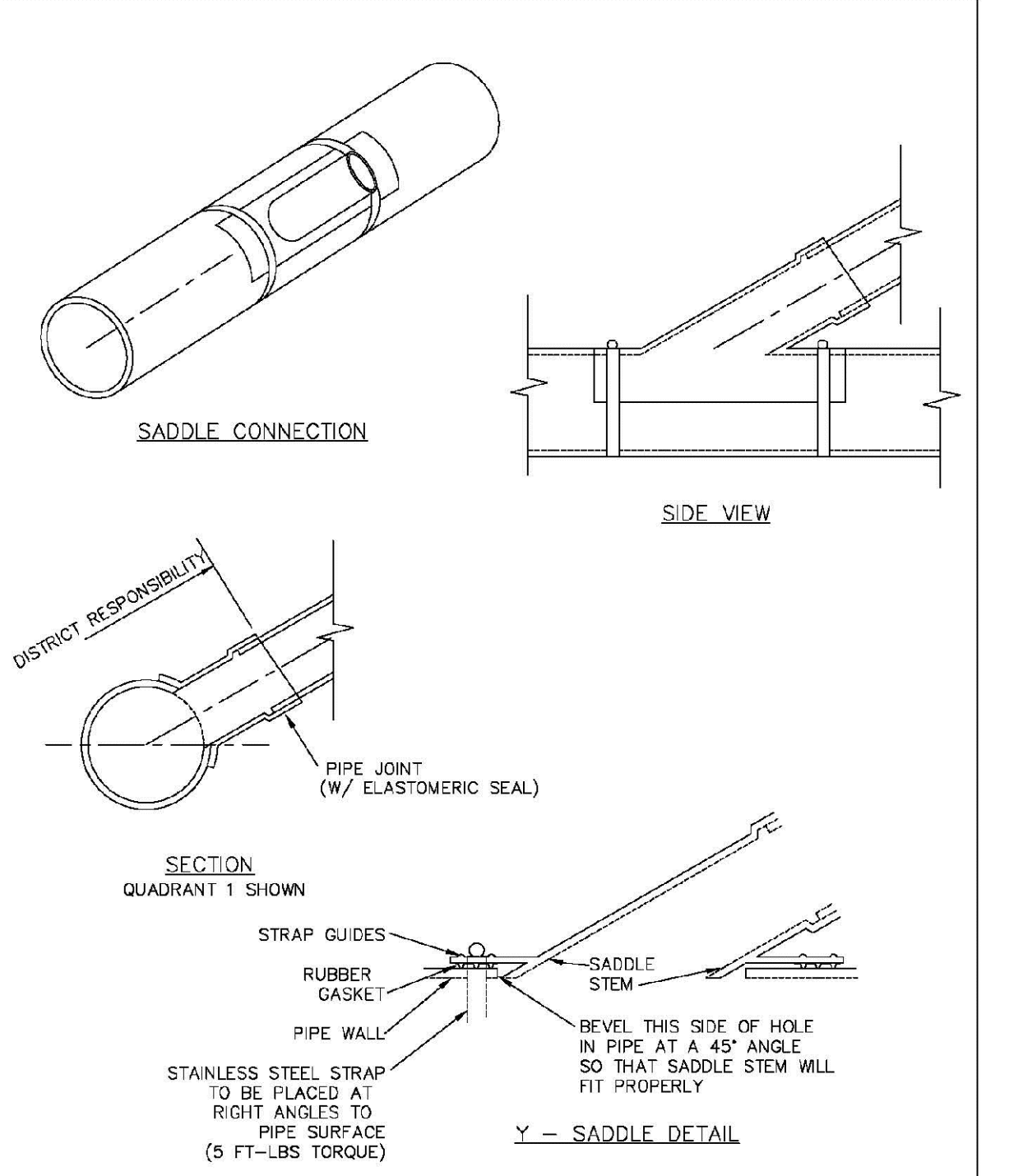


Sewer connections shall be positioned at either the 2 o'clock or the 10 o'clock position on the circumference of the sewer main. On new installations, tee or wye fittings shall be used. When tapping into existing sewer main, a saddle connection and approved coring method shall be used. The minimum distance between service connections made along the pipe shall be 3 feet. The minimum distance from either the bell or spigot end of a pipe shall be 3 feet. The minimum distance from the center of a manhole to a service connection shall be either 7 feet or the transition point from the manhole trench to the normal pipe trench, whichever is greater. A maximum of 4 sewer service connections shall be allowed per 20 foot length of pipe. In all cases, a specific soils investigation should be conducted to assure that the external loading will be within allowable limits regardless of the number of taps involved.

PARKER WATER & SANITATION DISTRICT	
DOMESTIC SEWER TAPPING DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	4/01
	1/98
DIRECTOR OF ENGINEERING	10/78

2016 REVISION

SHEET 14.13



**NOTES:**

- SADDLE FITTINGS TO BE PER ASTM D3034.
- CONNECTION SHALL BE Y - SADDLE WITH TWO BONDS.

PARKER WATER & SANITATION DISTRICT	
P.V.C. SADDLE CONNECTION DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	1/78
	10/78
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET 14.14

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UTILITY NOTIFICATION CENTER OF COLORADO

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Englewood, CO 80120  
Tel: (720) 482-9528  
Fax: (720) 482-9546

**CVL CONSULTANTS**

TRAILS AT CROWFOOT  
FILING 14 CONSTRUCTION DRAWINGS  
SANITARY SEWER DETAILS

HR 935 LLC  
7352 South Alton Way  
CENTENNIAL, CO 80112

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: RRR  
CHECKED BY: BPW  
DATE: SEPTEMBER 2018

SHEET NUMBER: 21

No.	Revisions	Date	Init.	Appr.	Date

**INSPECTION POLICY:**

1. ALL SERVICE INSPECTIONS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
2. SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
3. IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE OR SERVICE FAILS, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE AND A RE-INSPECTION FEE CHARGED.
4. SHOULD THE SERVICE LINES BE DAMAGED BY LATER CONSTRUCTION, AN INSPECTION OF THE REPAIR WILL BE REQUIRED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
5. THE CONTRACTOR SHALL LEAVE ALL PIPE AND FITTINGS EXPOSED FOR THE INSPECTOR TO OBSERVE. INSPECTORS WILL NOT ENTER ANY EXCAVATIONS TO CHECK MATERIALS. THE TOP LAYER OF BEDDING CAN BE ADDED AFTER THE INSPECTION HAS BEEN COMPLETED.
6. ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
7. LOTS WITHOUT BUILDING ADDRESSES BEFORE DISTRICT INSPECTION OR METER SET WILL FAIL AUTOMATICALLY.
8. CONTRACTOR MUST BE PRESENT AT TIME OF INSPECTION, UNLESS COORDINATED WITH DISTRICT INSPECTOR.

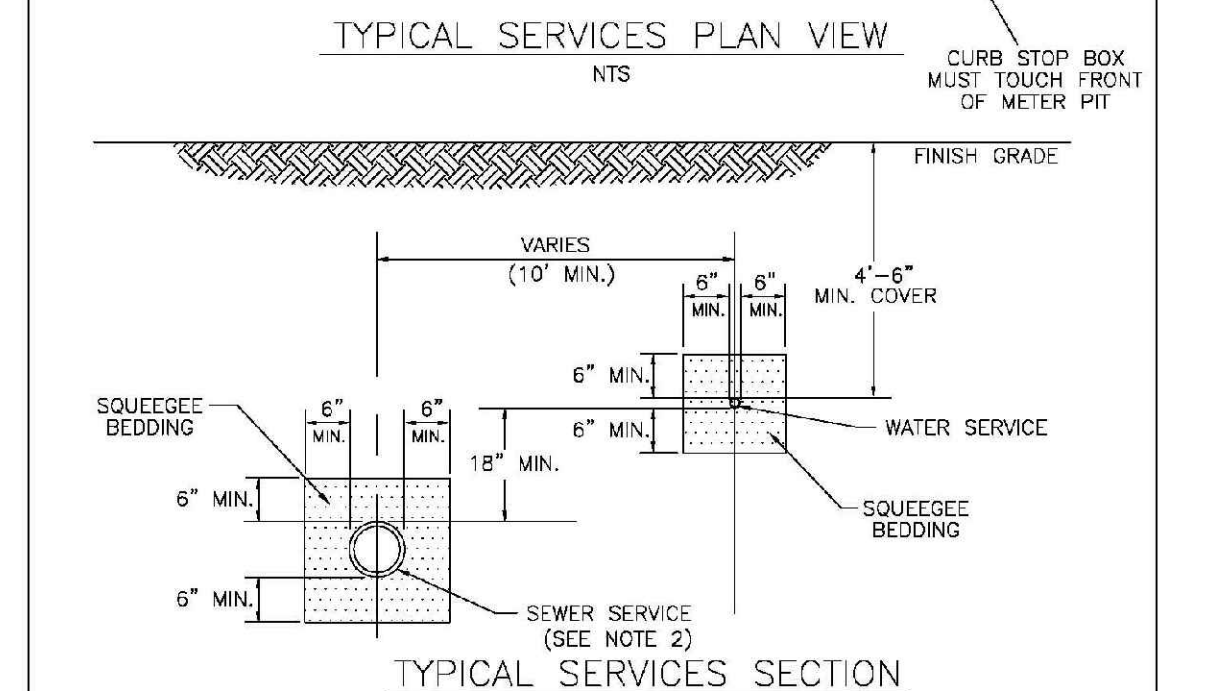
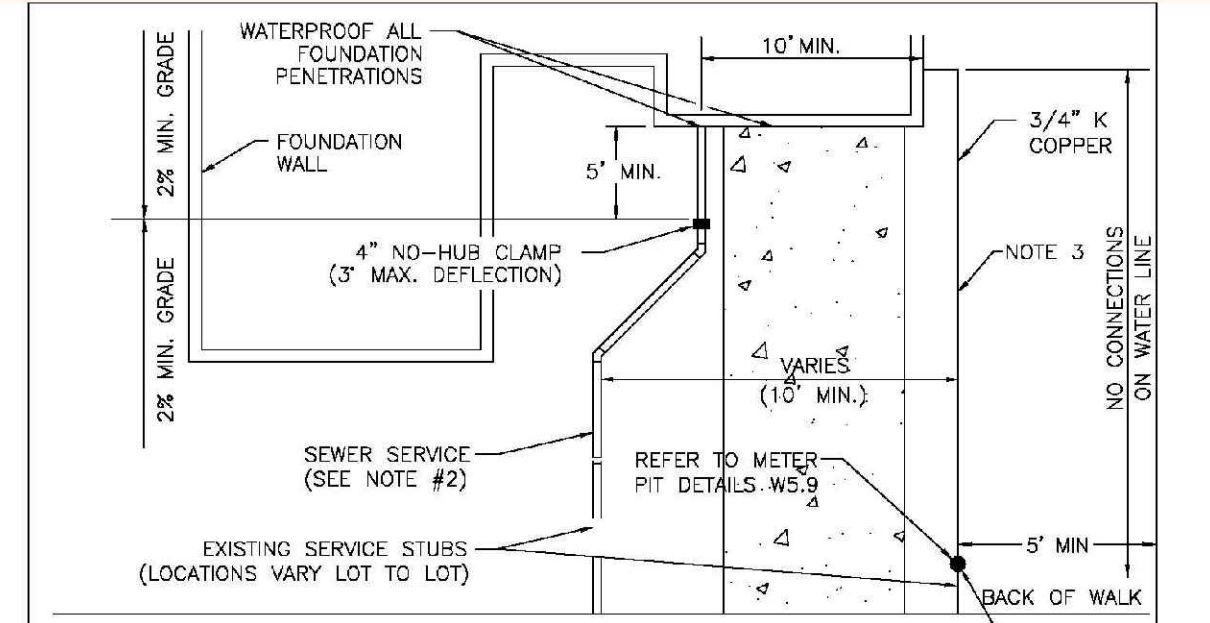
**INSTALLATION NOTES:**

- WATER**
1. ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING, (3/4" MIN.)
  2. APPROVED BEDDING TO BE SQUEEGEE.
  3. ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE STUB-IN AND BUILDING. COMPRESSION COUPLINGS WILL NOT BE ALLOWED ON NEW CONSTRUCTION. SILVER SOLDERED JOINTS MUST BE USED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PMSD PRIOR TO BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.
  4. A WATER SERVICE WHICH CROSSES A SEWER SERVICE CAN DO SO ONLY AT A 45-90° ANGLE. WATER SERVICES SHALL BE LOCATED A MINIMUM OF 18" ABOVE SEWER SERVICE.
  5. WATER SERVICE FOUNDATION PENETRATIONS SHALL BE WATERPROOFED USING MASTIC OR OTHER APPROVED METHOD. GROUND SPACE REQUIRES CONTINUOUS COPPER WITH A 1" BURY.
  6. CURB STOP MUST BE PLUMB AND CENTERED OVER THE NUT. IT SHOULD BE STRAPPED TO THE METER PIT (RESIDENTIAL INSTALLATIONS) OR CENTERED OVER THE EASEMENT LINE (COMMERCIAL INSTALLATIONS). THE ASSEMBLY MUST BE AT OR SLIGHTLY ABOVE FINISHED GRADE.
  7. MOVED CURB BOXES MUST BE INSPECTED BY PMSD PRIOR TO BURIAL.
  8. WATERLINE MUST BE ATTACHED TO A SUPPORT BOARD THAT IS MOUNTED TO THE WALL.
  9. NO VOIDS ALLOWED UNDER WATERLINES FROM STOP BOX TO FOUNDATION.
  10. CURBSTOP BOXES AND METER PITS CANNOT BE IN DRIVEWAYS.
  11. ONLY 3/4" (JUMPER) PIPES (RESIDENCES) ARE ALLOWED. (JUMPER) PIPES WILL BE REMOVED PRIOR TO METER SET DATE.
  12. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SEWER SERVICE  
"Y" FOR WATER SERVICES
  13. NO SPLICES OR FLARED COUPLINGS ALLOWED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE USED IN MOVING STOPBOXES ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PMSD PRIOR TO BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.

DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES	
ROAD / MINE	DATE
APPROVED:	1/04
PVR	1/16
DIRECTOR OF ENGINEERING	10/16

2016 REVISION

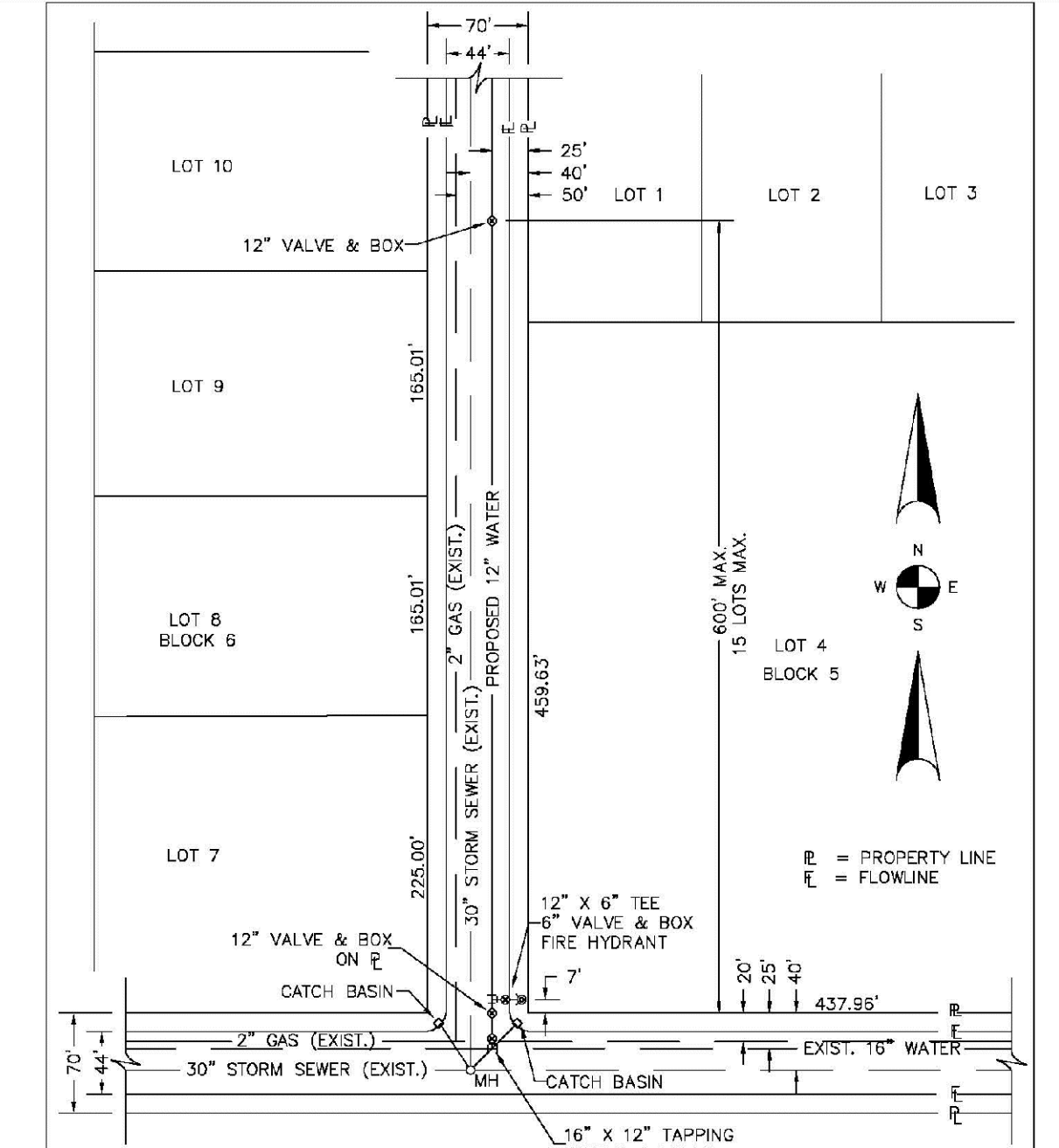
SHEET W1.1



TYPICAL WATER SERVICES	
SCALE	DATE
APPROVED:	1/04 10/16
PVR	08/08 12/07
DIRECTOR OF ENGINEERING	1/16

2016 REVISION

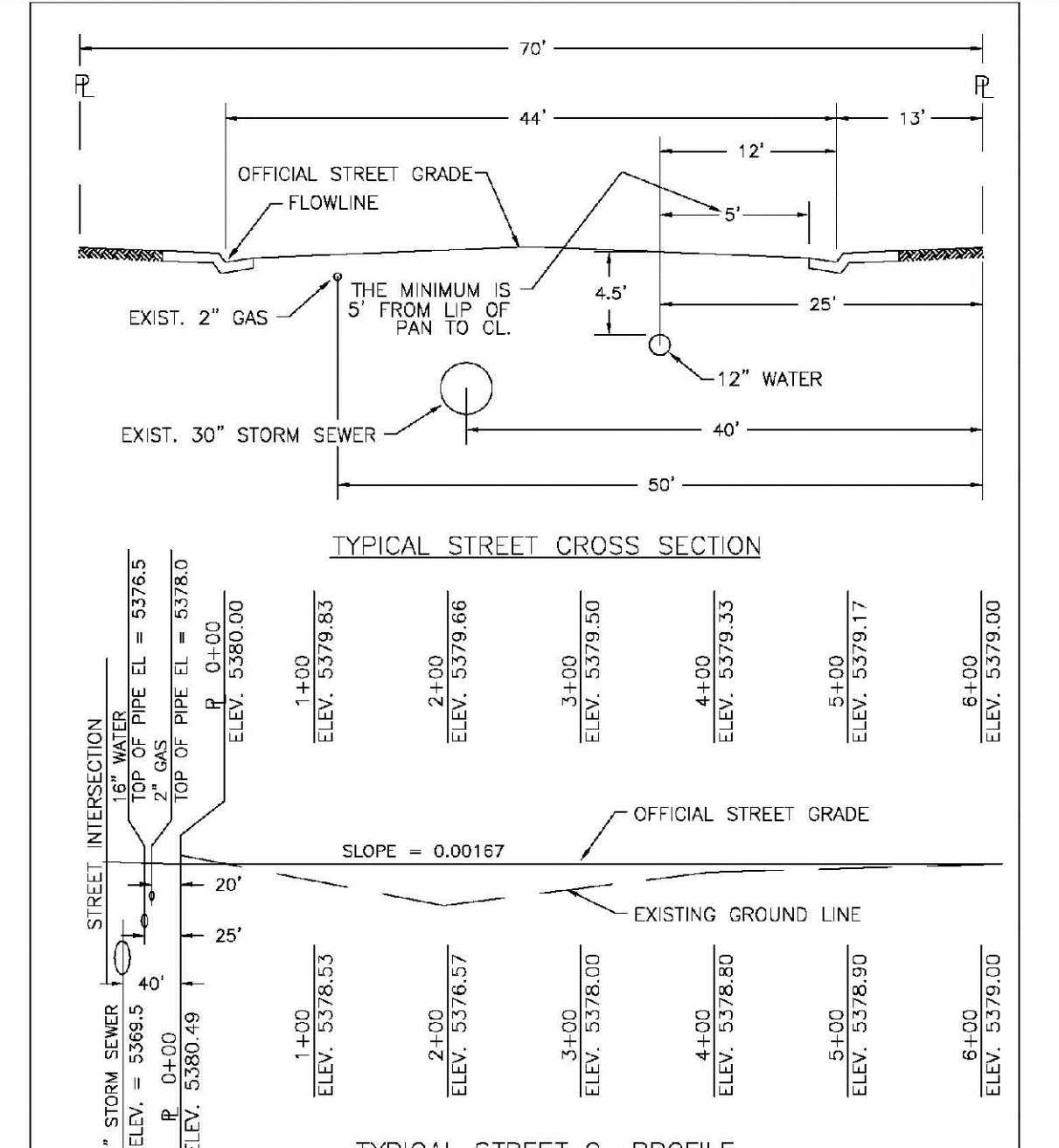
SHEET W1.2



TYPICAL STREET CROSS SECTION - TYPICAL STREET Q & PROFILE	
SCALE	DATE
APPROVED:	1/16 10/16
PVR	10/16
DIRECTOR OF ENGINEERING	10/16

2016 REVISION

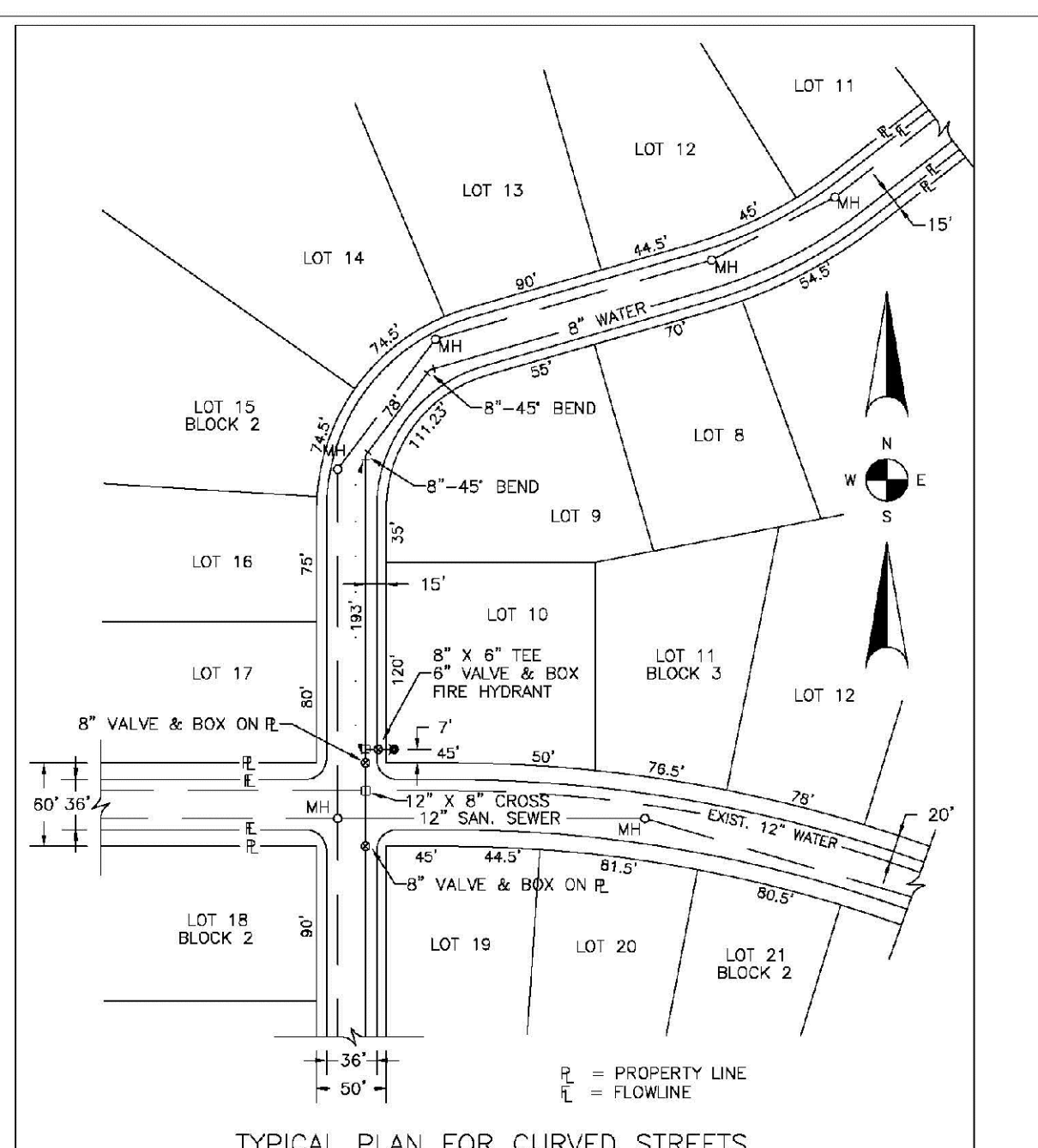
SHEET W2.1



TYPICAL STREET CROSS SECTION - TYPICAL STREET Q & PROFILE	
SCALE	DATE
APPROVED:	1/16 10/16
PVR	10/16
DIRECTOR OF ENGINEERING	10/16

2016 REVISION

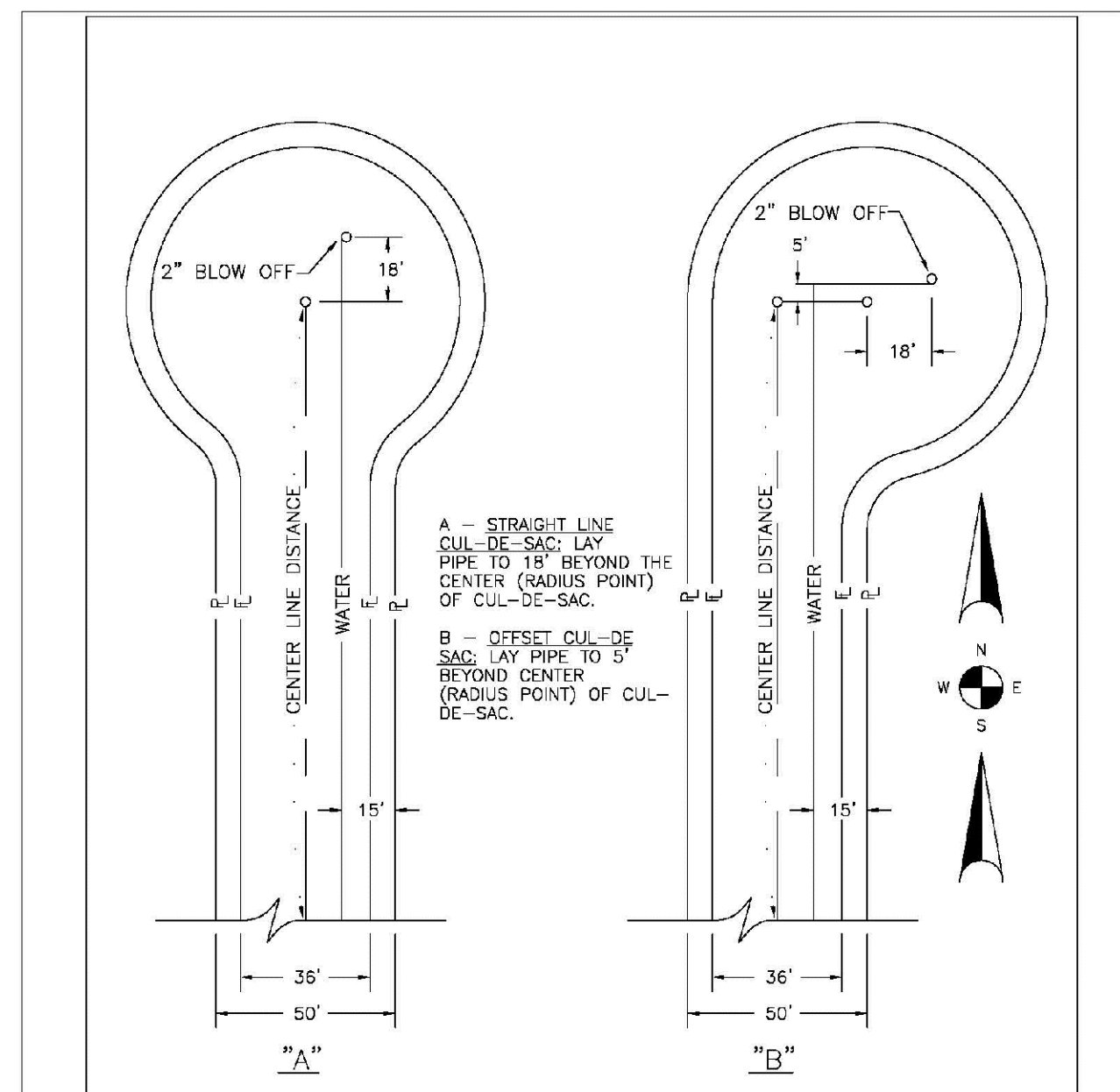
SHEET W2.2



TYPICAL PLAN FOR CURVED STREETS	
SCALE	DATE
APPROVED:	1/16 10/16
PVR	10/16
DIRECTOR OF ENGINEERING	10/16

2016 REVISION

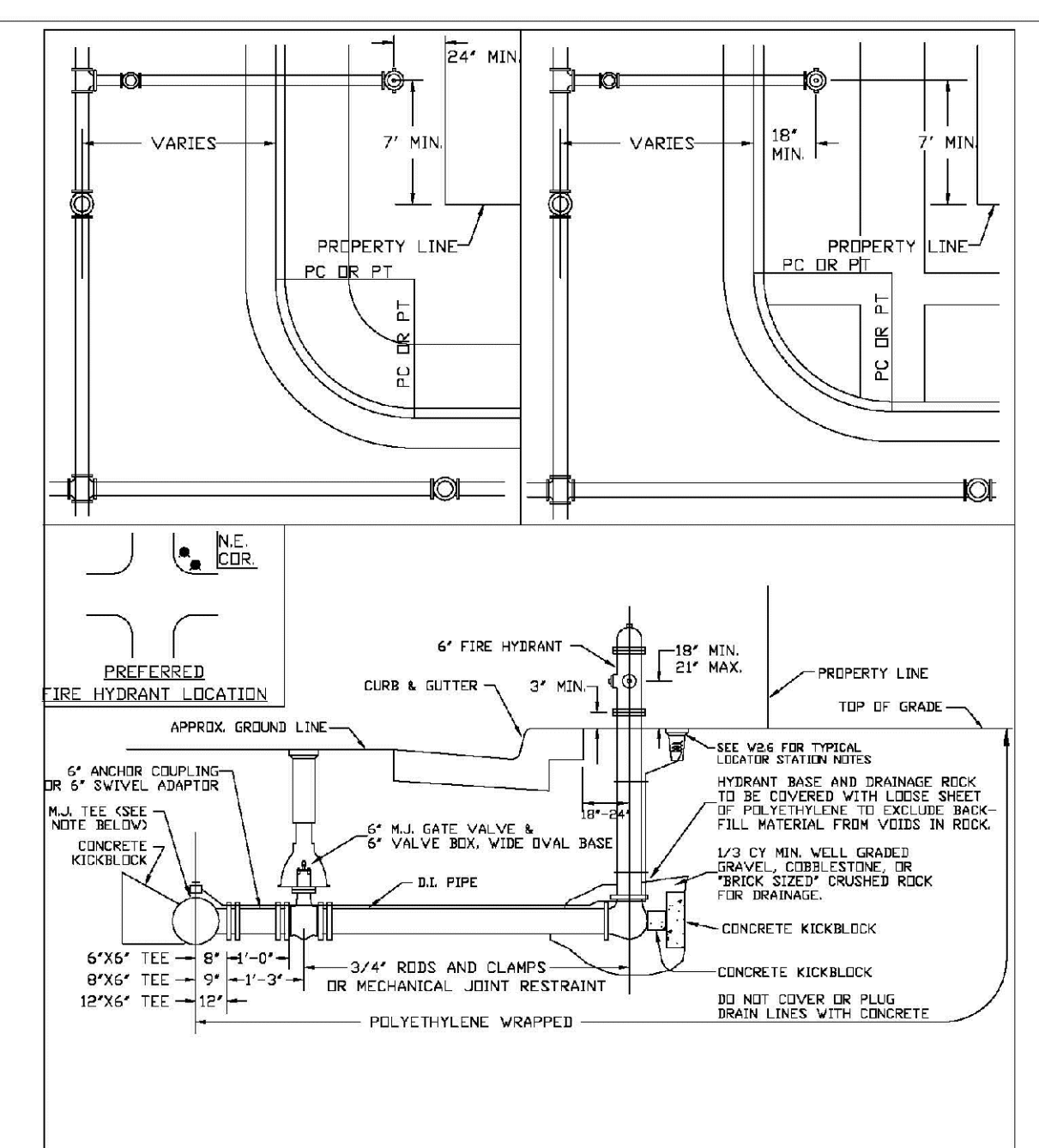
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TYPICAL PLAN FOR CUL-DE-SACS	
SCALE	DATE
APPROVED:	1/16 12/18
PVR	12/18
DIRECTOR OF ENGINEERING	12/18

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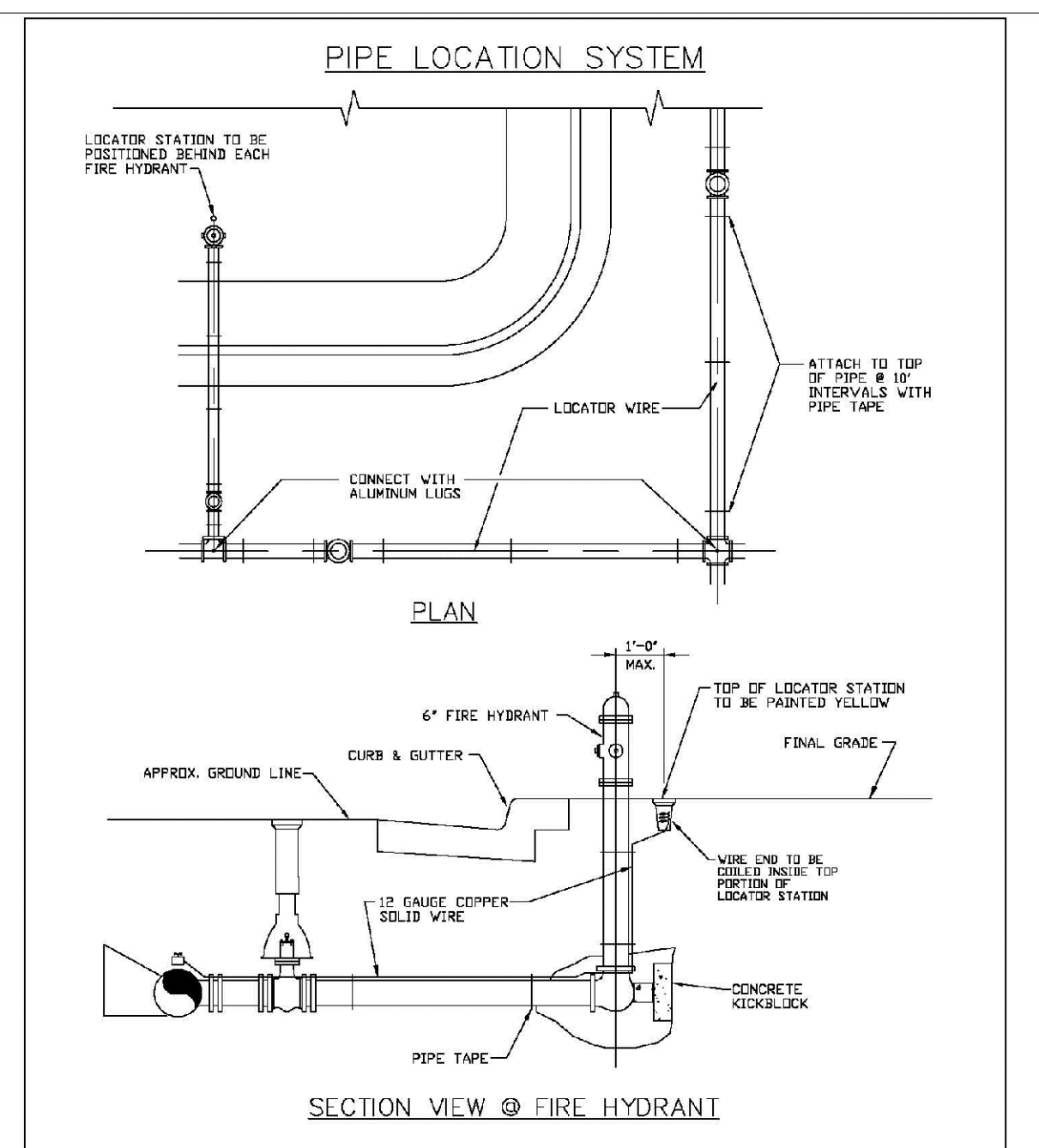
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FIRE HYDRANTS LOCATION & INSTALLATION	
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APPROVED:	4/01 10/16
PVR	01/02 12/07
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SHEET W2.5



LOCATOR WIRE DETAILS	
SCALE	DATE
APPROVED:	4/01 01/02
PVR	01/02 01/06
DIRECTOR OF ENGINEERING	10/16

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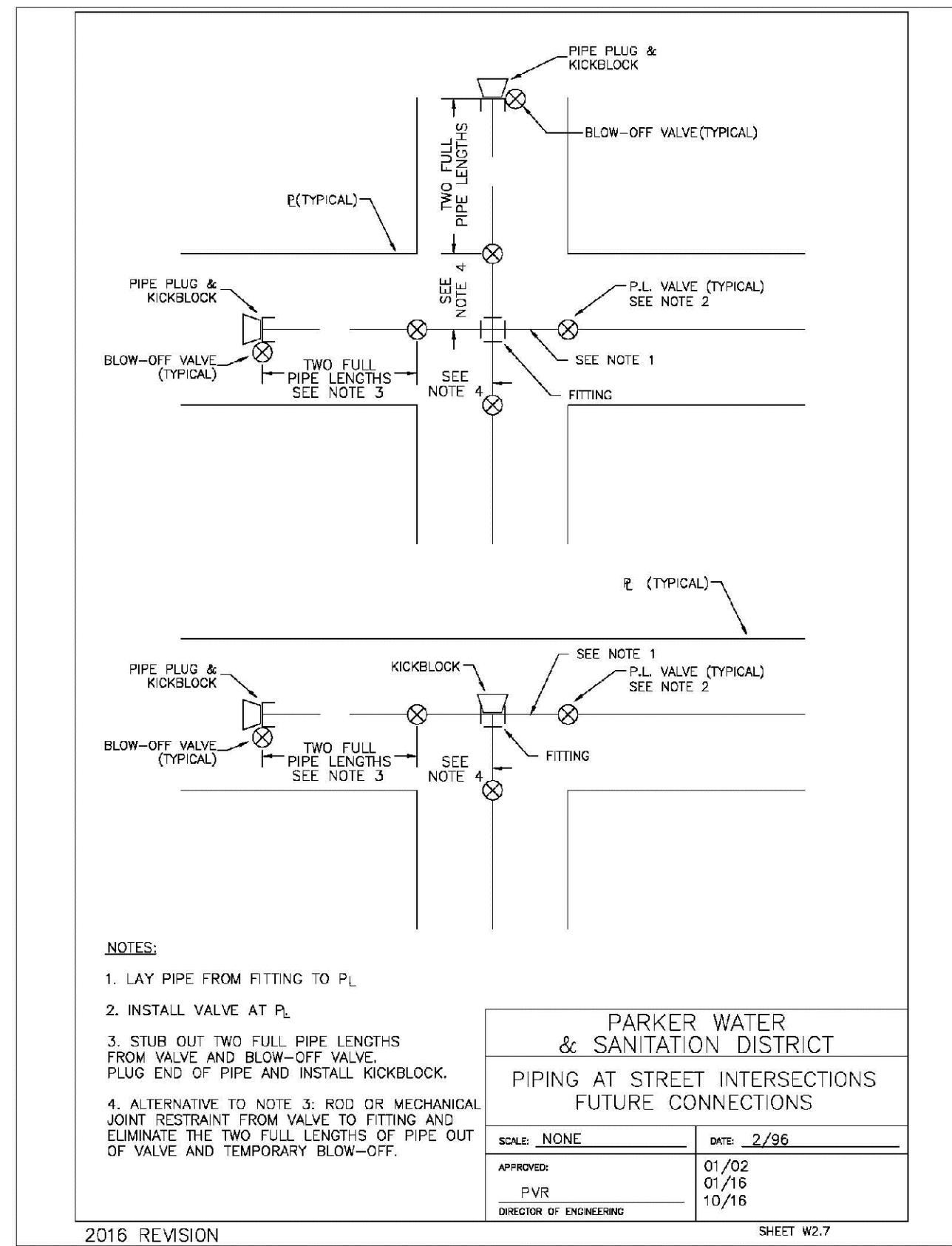
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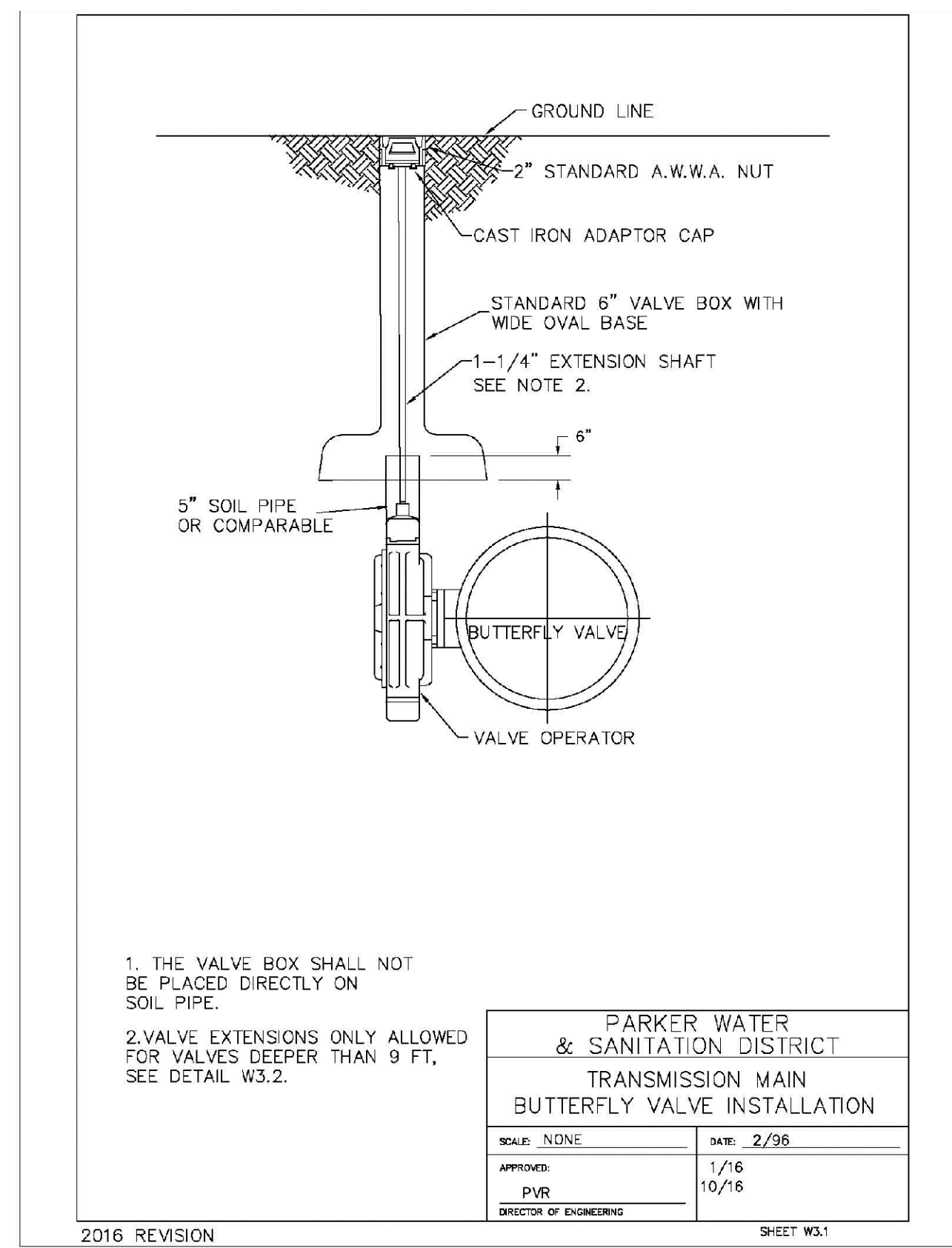
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10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80112 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	No.	Date	Appr.	Date
<b>CVL</b> CONSULTANTS	NO.	NO.	NO.	NO.	NO.
	DATE	DATE	DATE	DATE	DATE
DRAWN BY: RRR CHECKED BY: BPW DATE: SEPTEMBER 2018	SCALE: AS SHOWN	FILE NO: 8130283701	TRAILS AT CROWFOOT FILING 14 CONSTRUCTION DRAWINGS WATER DETAILS	HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112	SHEET NUMBER <b>22</b>



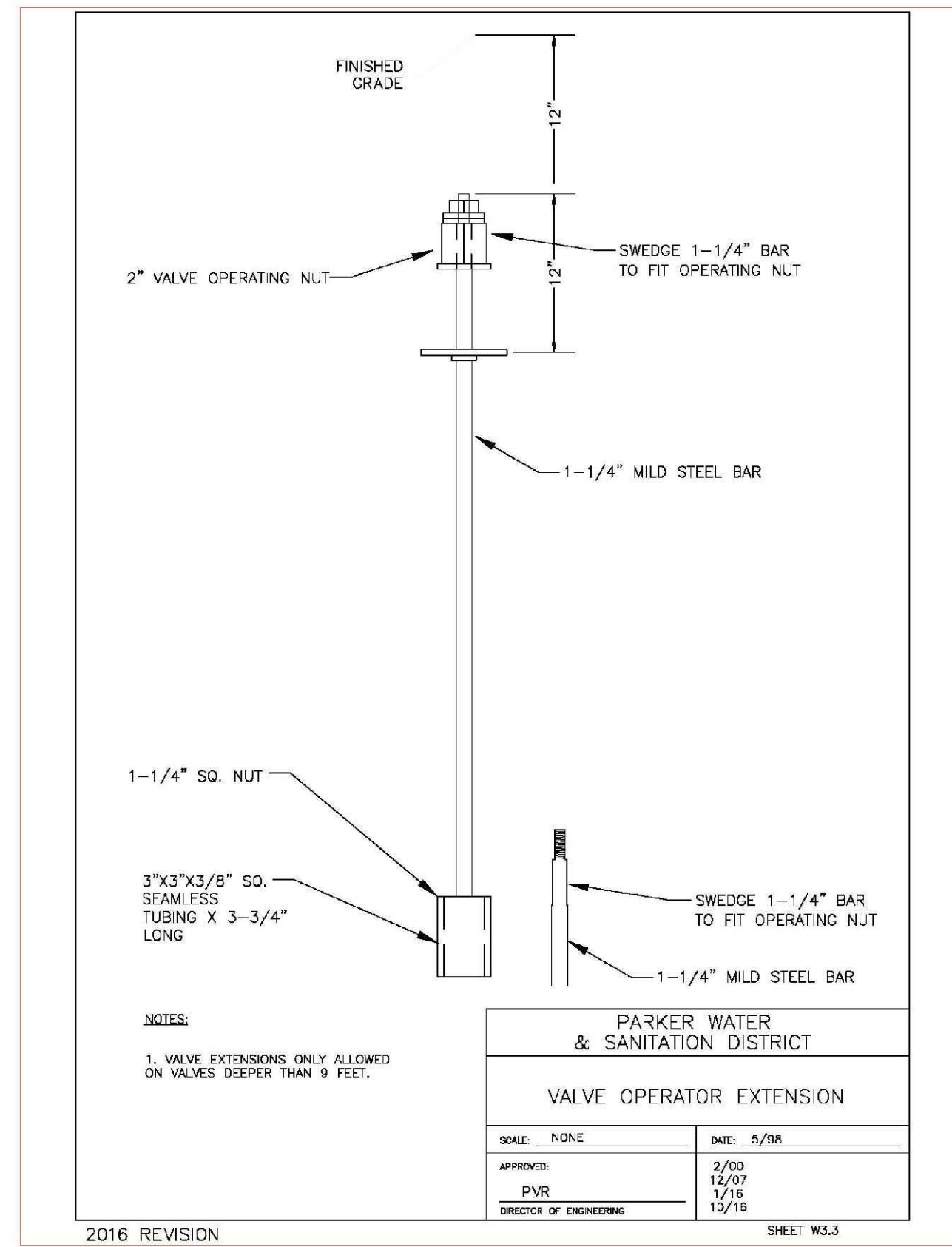
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>PIPING AT STREET INTERSECTIONS</b>	
<b>FUTURE CONNECTIONS</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 1/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.7



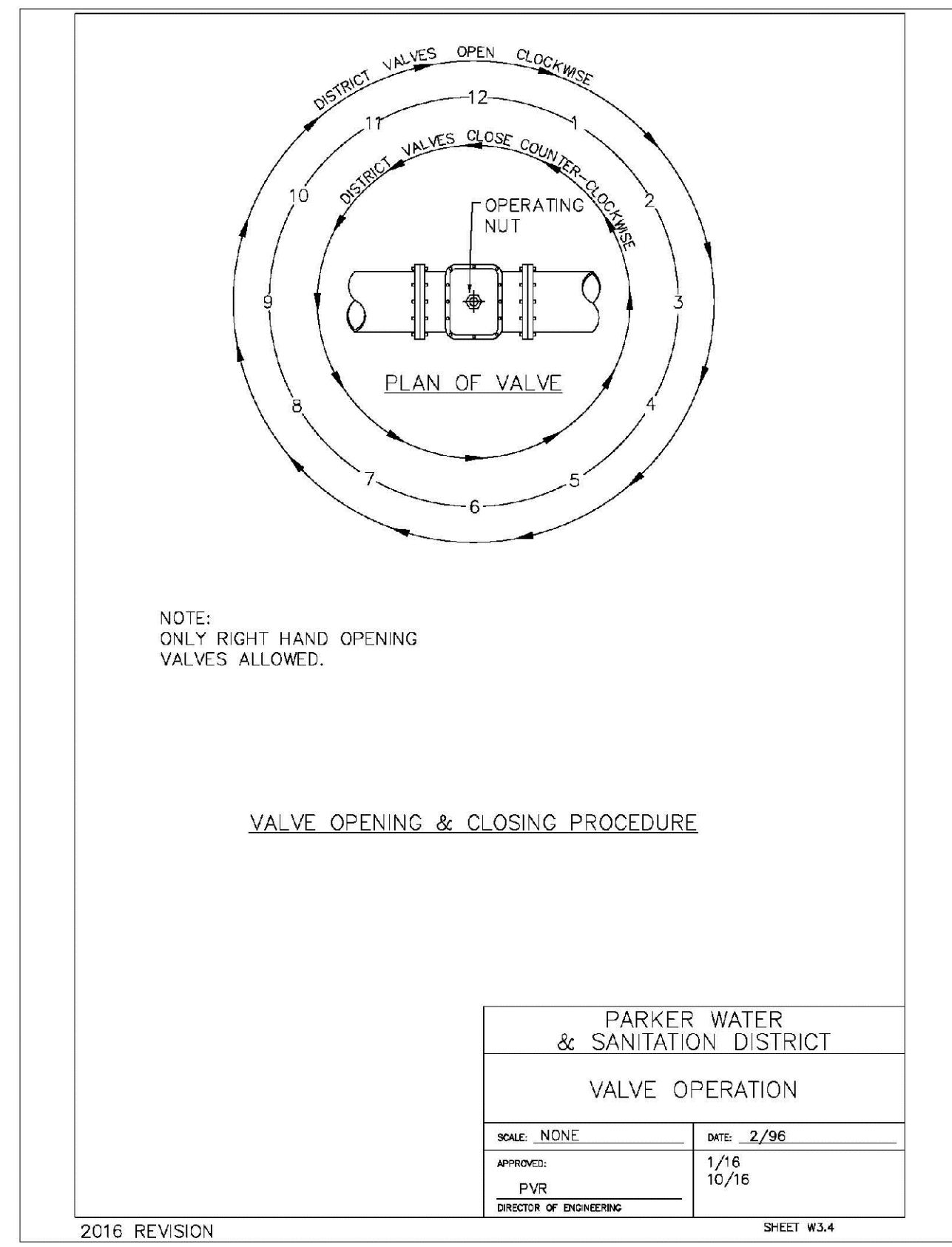
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<b>TRANSMISSION MAIN</b>	
<b>BUTTERFLY VALVE INSTALLATION</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 1/16
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2016 REVISION SHEET W3.1



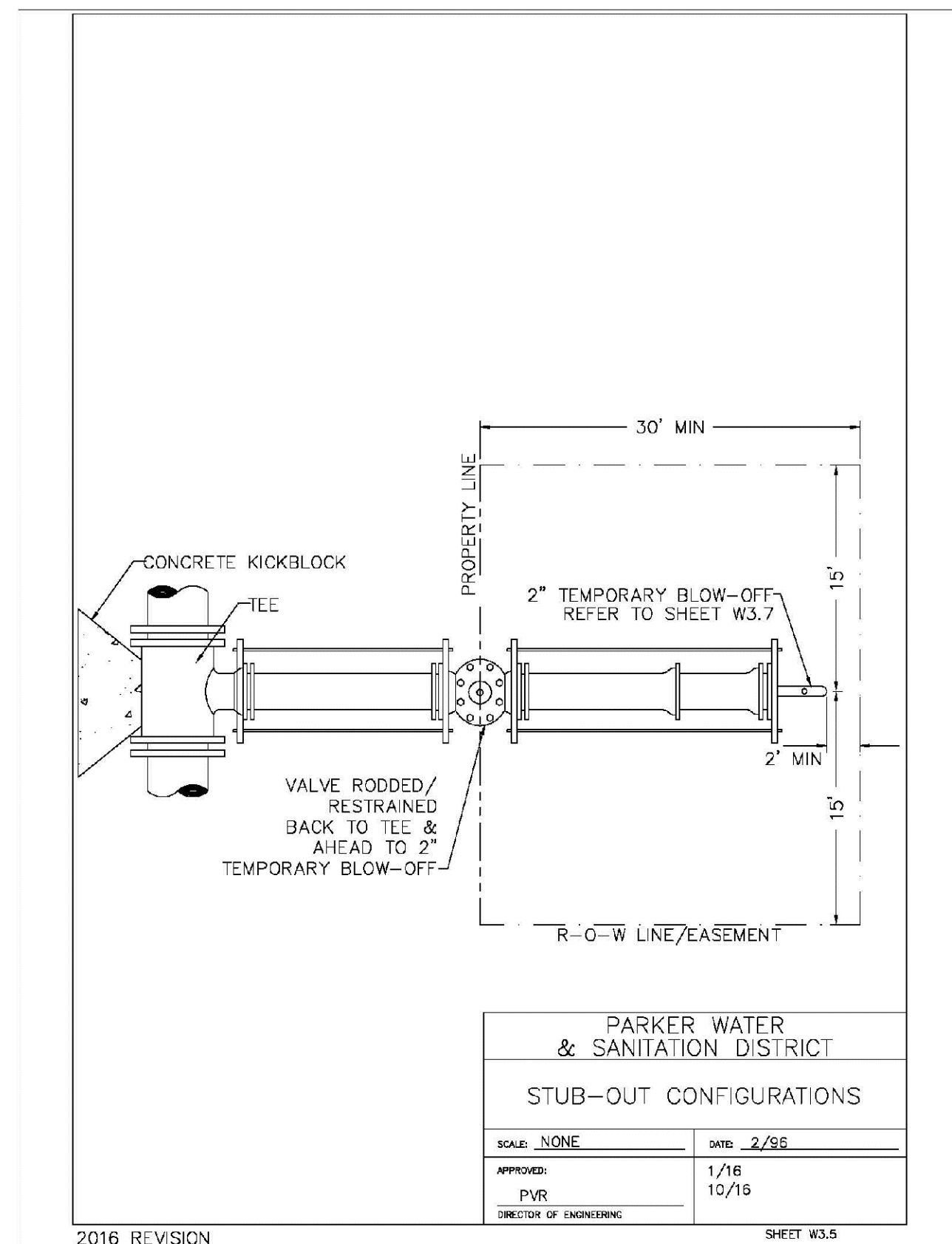
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<b>VALVE OPERATOR EXTENSION</b>	
SCALE: NONE	DATE: 5/08
APPROVED: PVR	DATE: 2/03
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2016 REVISION SHEET W3.3



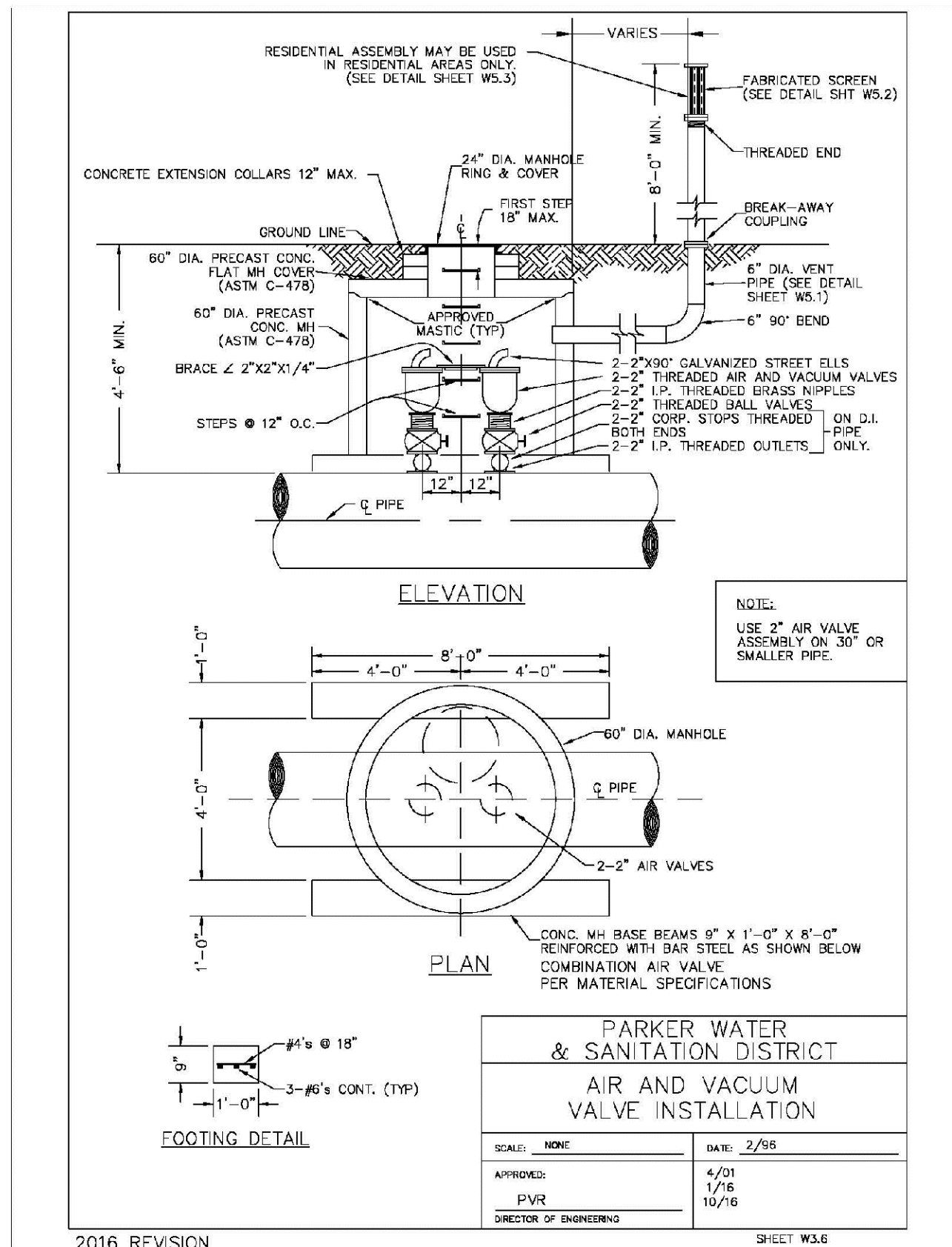
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<b>VALVE OPERATION</b>	
SCALE: NONE	DATE: 2/96
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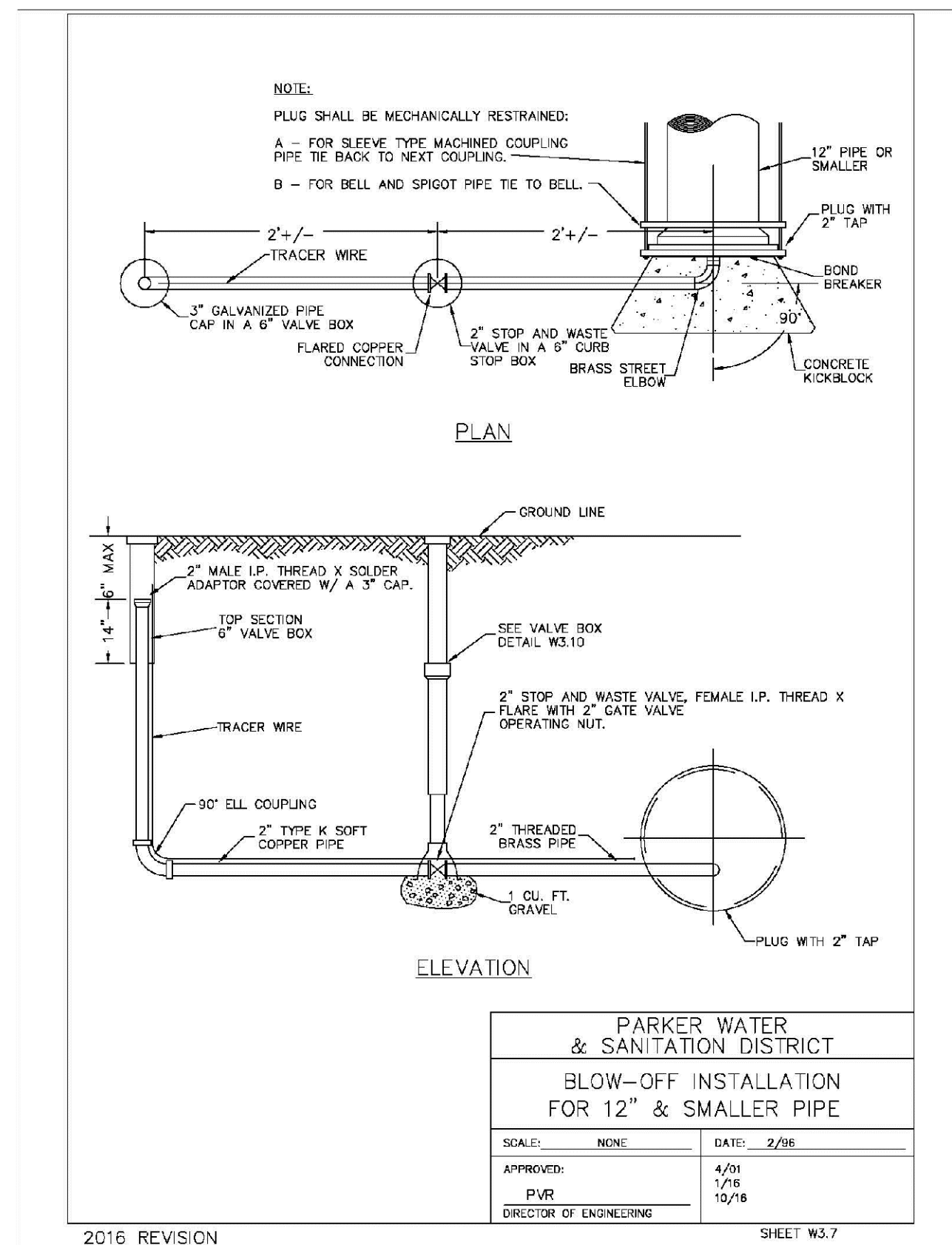
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>STUB-OUT CONFIGURATIONS</b>	
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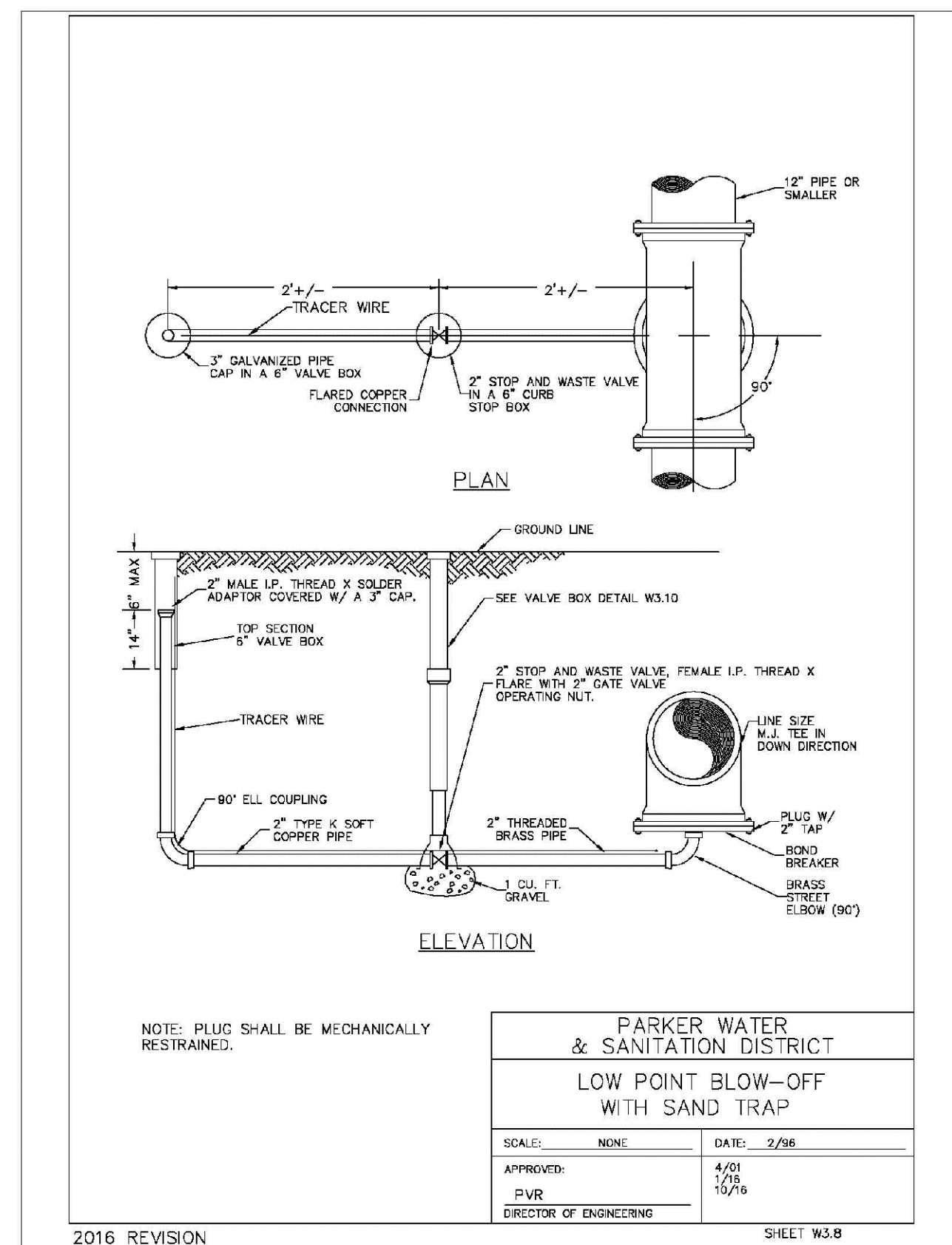
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<b>AIR AND VACUUM VALVE INSTALLATION</b>	
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2016 REVISION SHEET W3.6



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>BLOW-OFF INSTALLATION FOR 12\"/&gt; </b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 4/01
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.7



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>LOW POINT BLOW-OFF WITH SAND TRAP</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 4/01
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2016 REVISION SHEET W3.8

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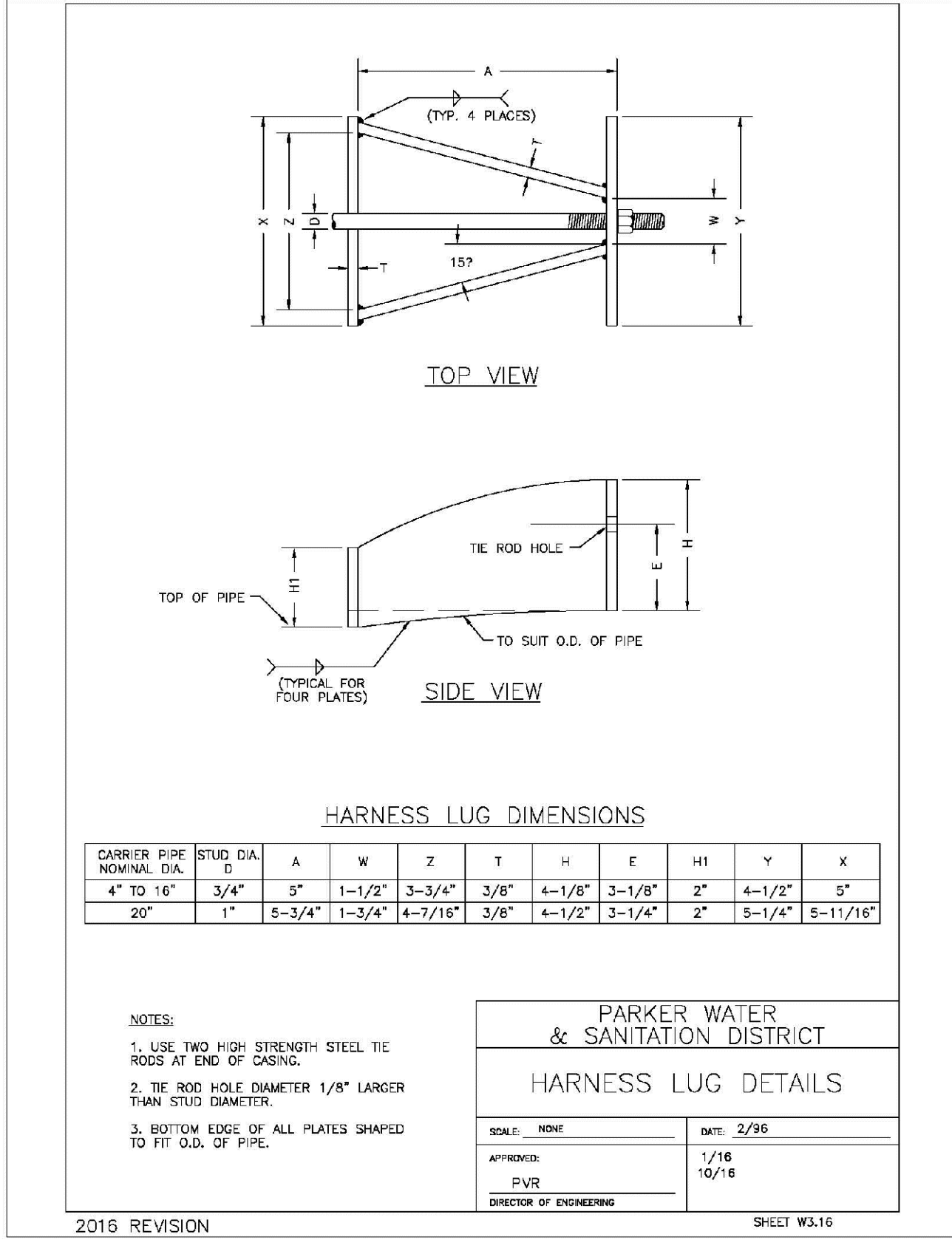
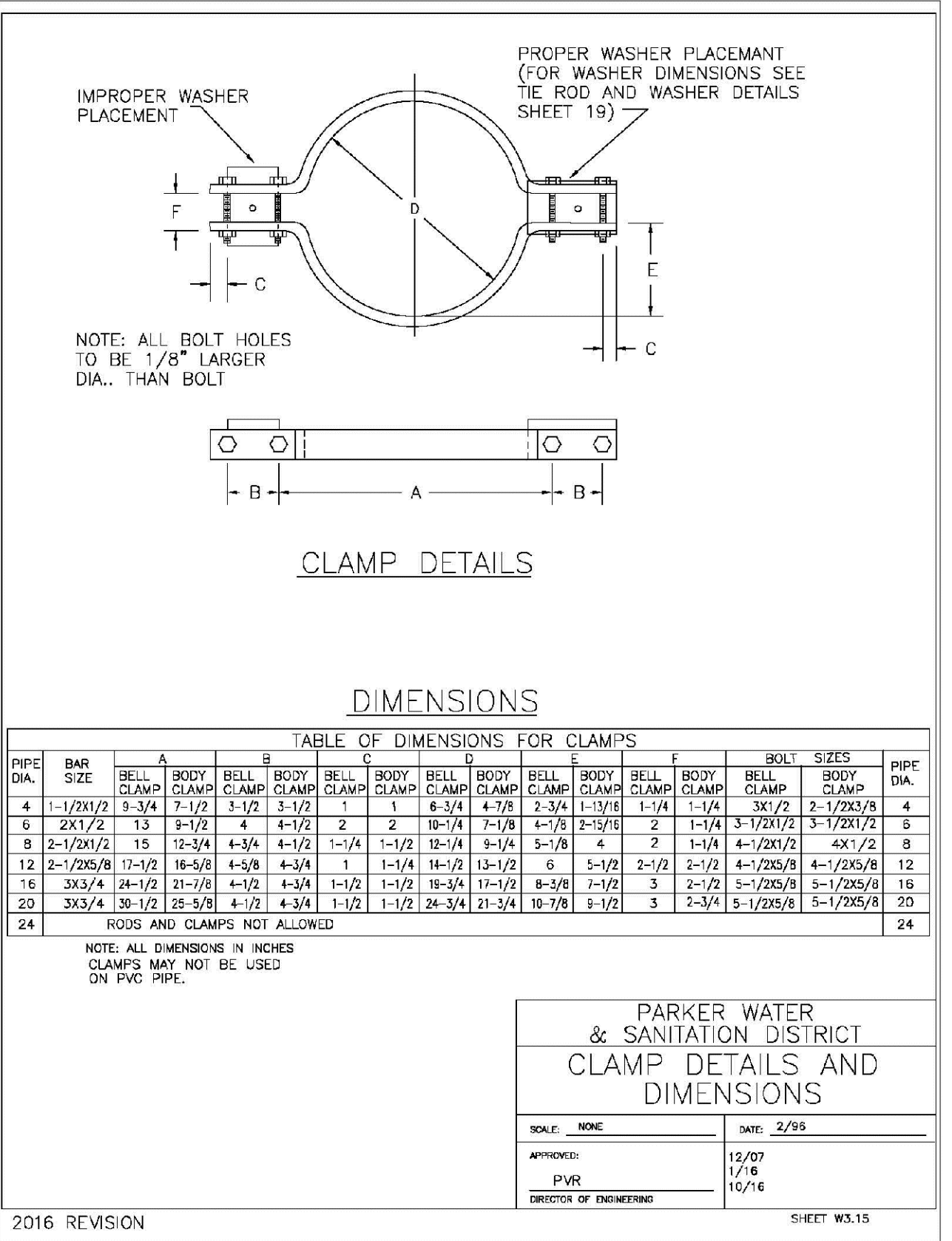
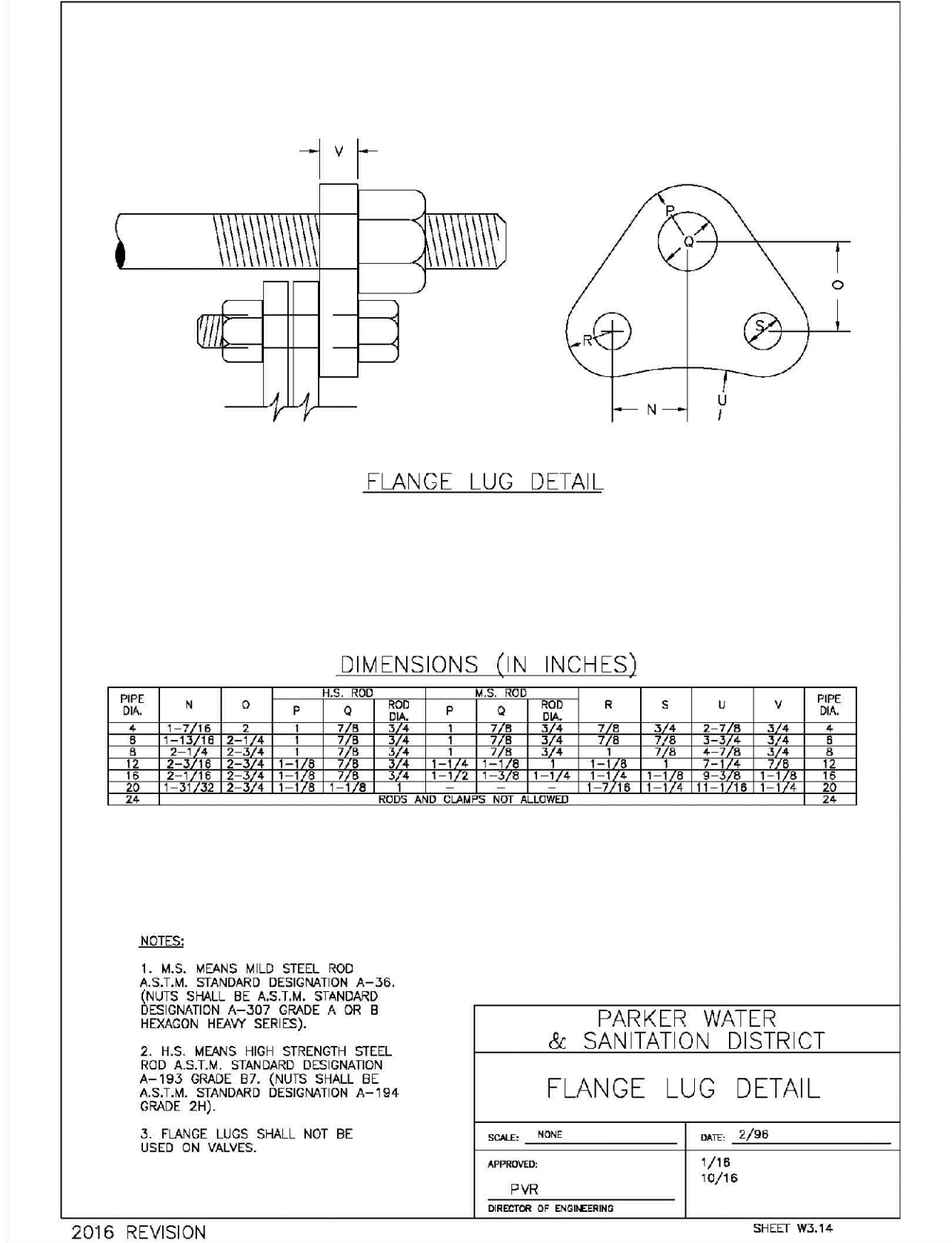
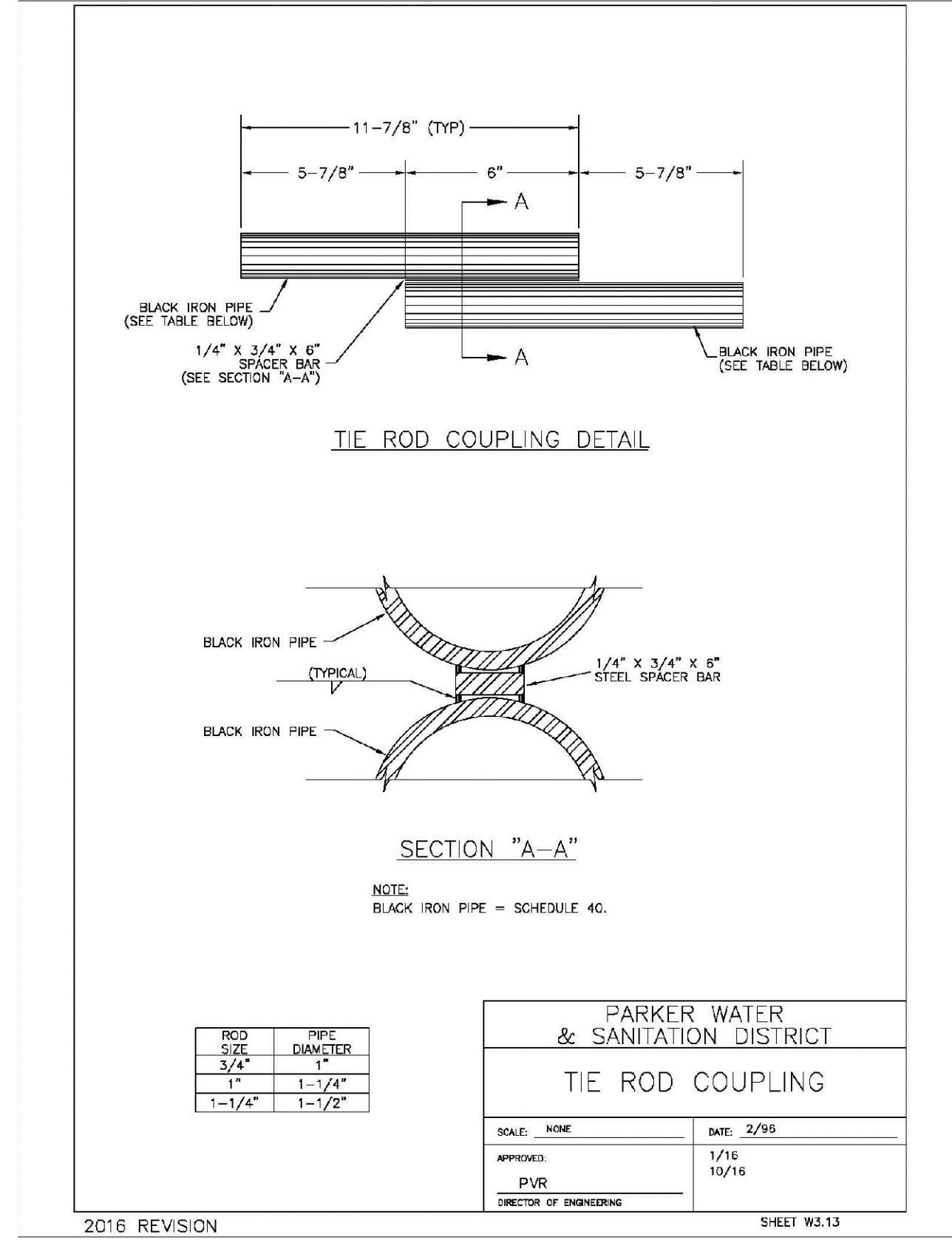
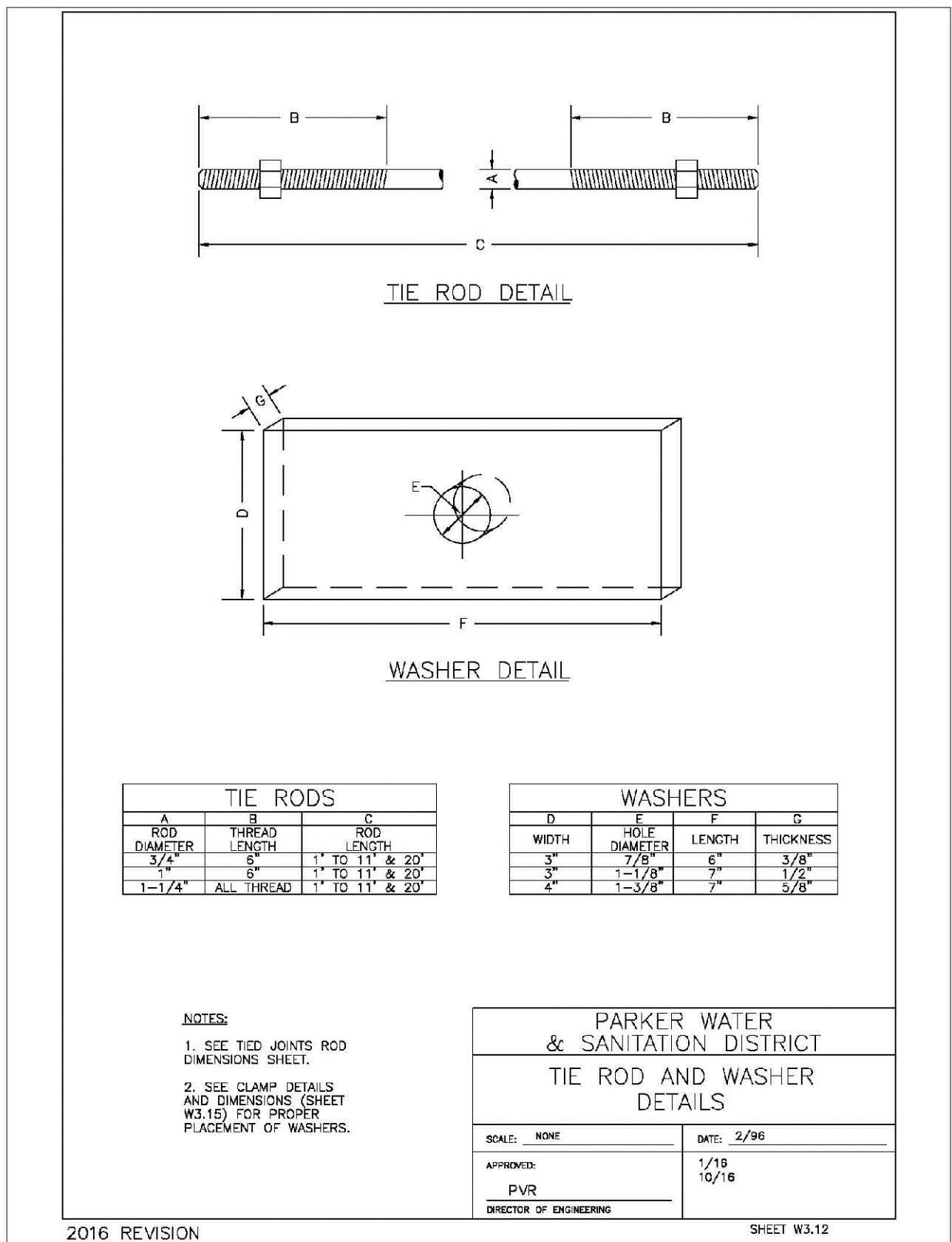
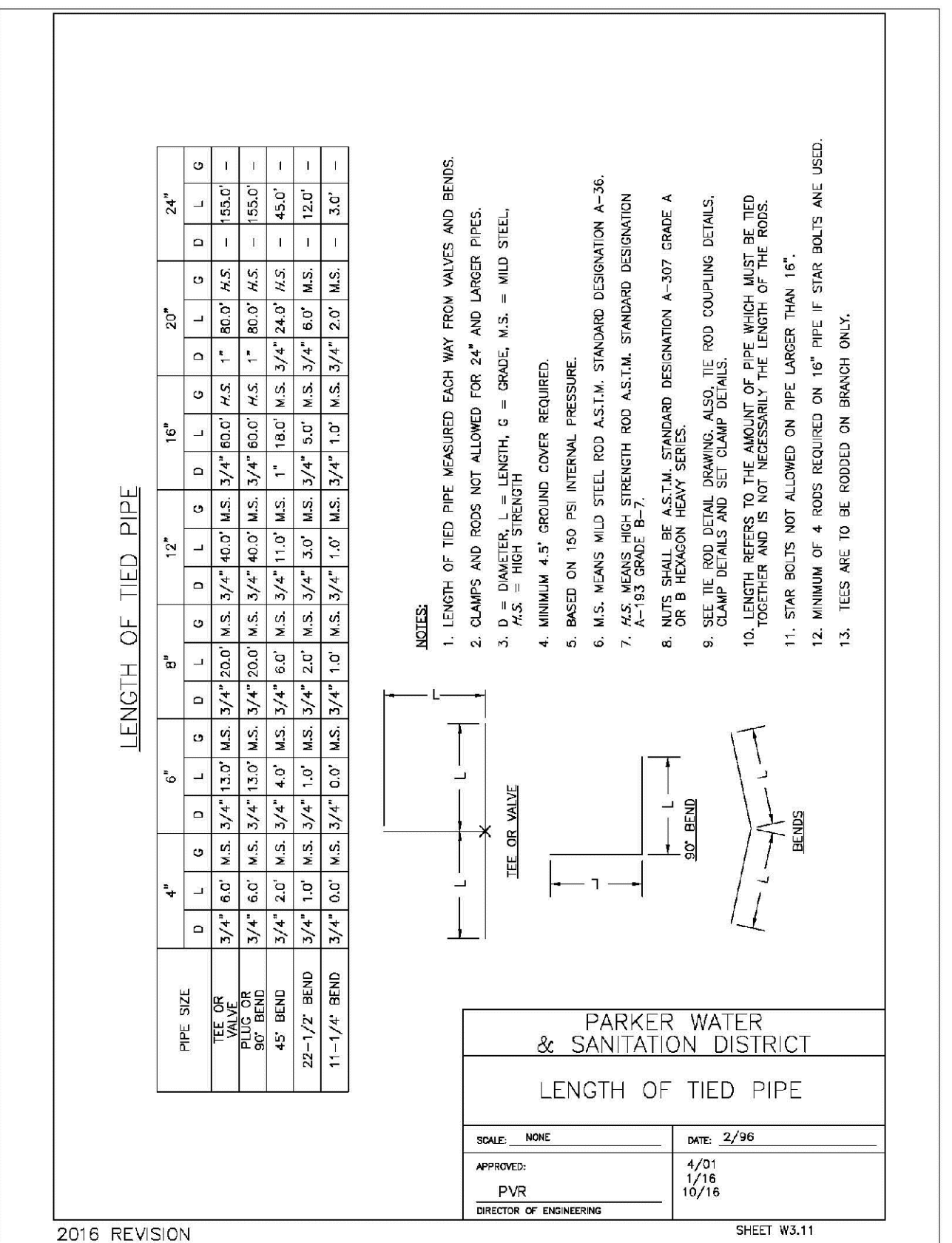
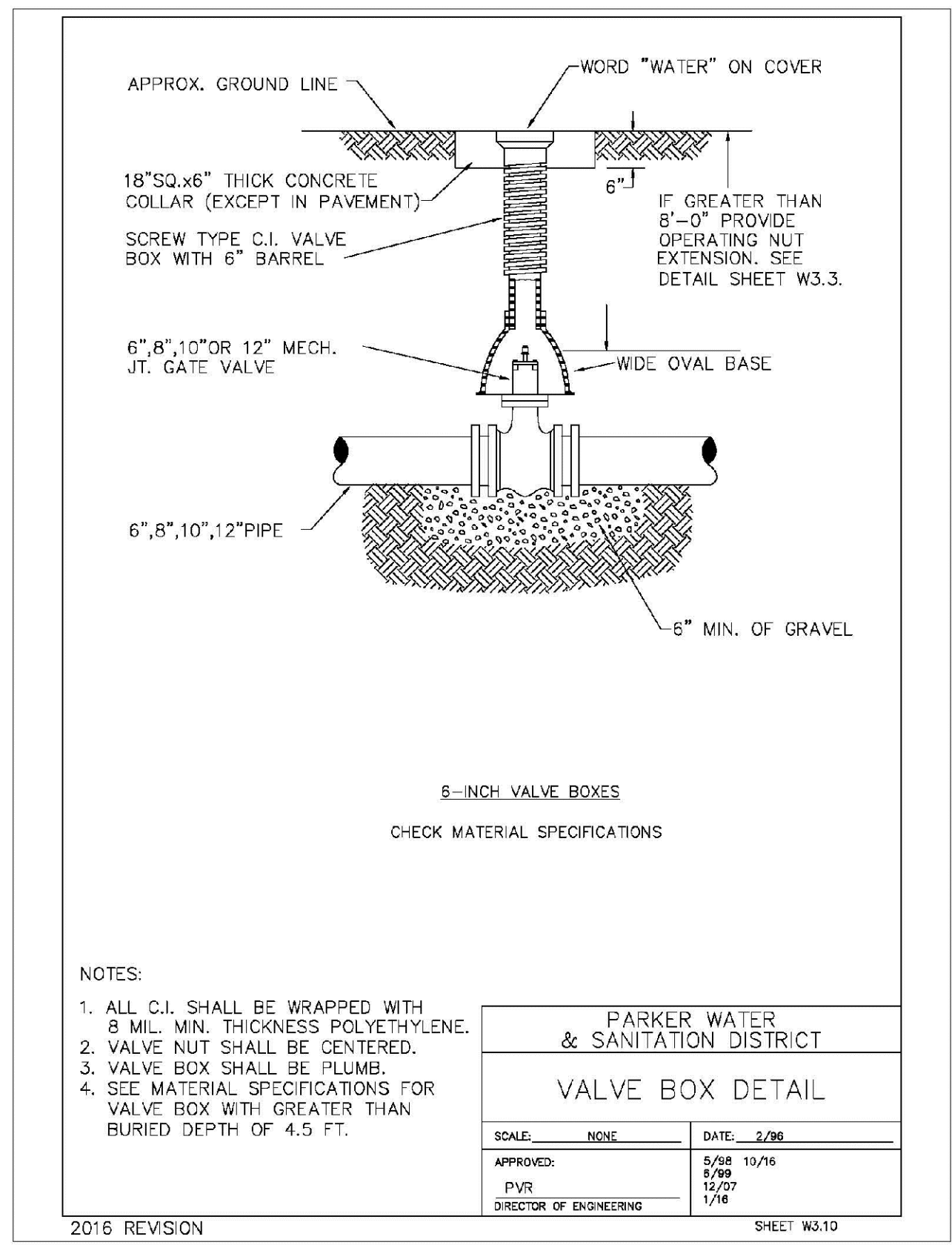
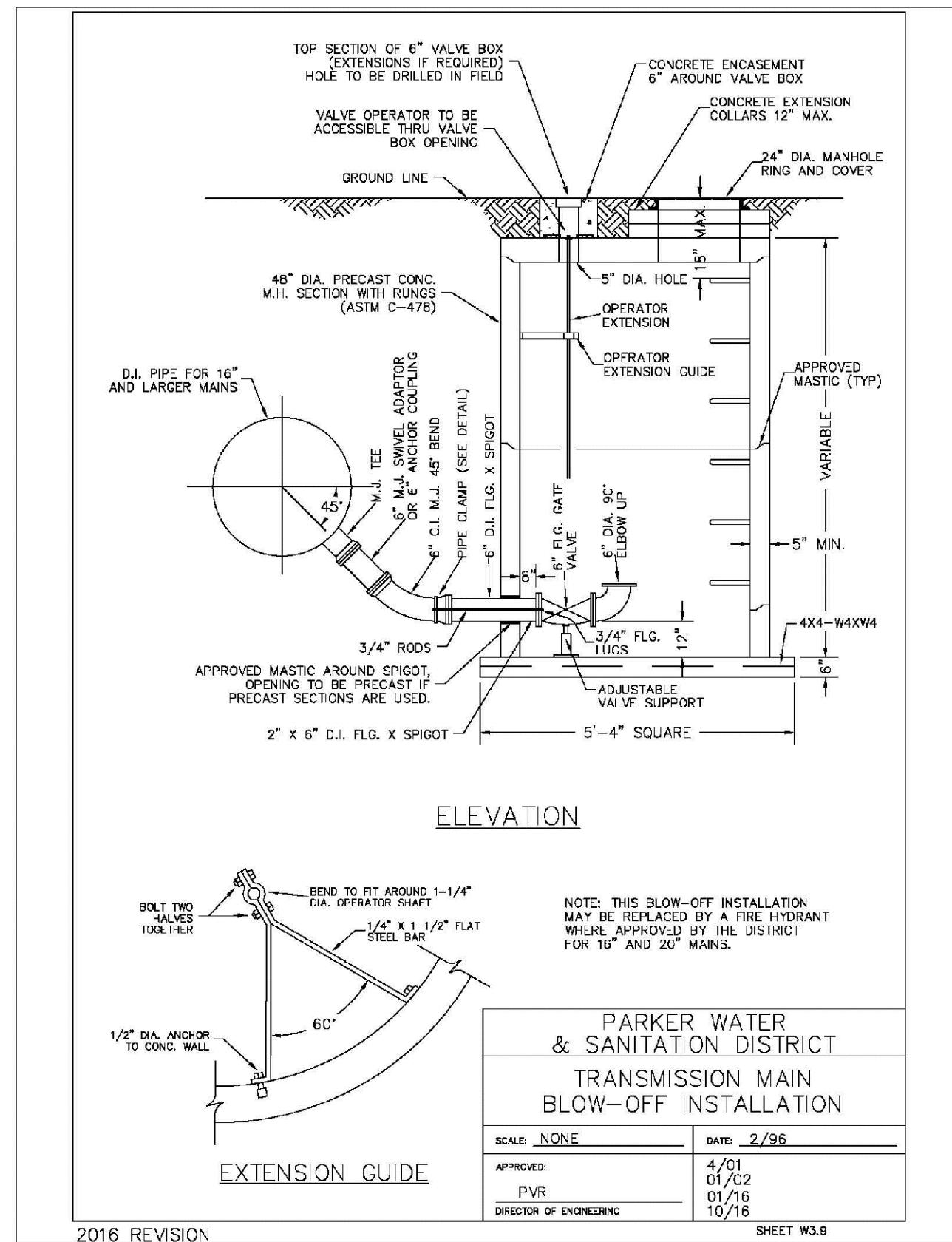
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Revisions	No.	Date	Appr.	Date



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SHEET NUMBER: 24

No.	Revisions	Date	Init.	Appr.	Date

**MECHANICAL JOINT RESTRAINT**

WEDGE DETAIL BOLT HOLE DETAIL

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	W INCHES	J INCHES	F INCHES	M INCHES	P
4"	2	2					P
6"	4	4	11.12	9.5	7.00	0.88	V
8"	6	6	13.37	11.75	9.15	1.00	V
10"	8	8	15.62	14.00	11.20	1.00	C
12"	8	8	17.88	16.25	13.30	1.25	C
4"	4	2					D
6"	6	3	11.12	9.5	7.00	0.88	D
8"	8	4	13.37	11.75	9.15	1.00	I
10"	8	6	15.62	14.00	11.20	1.00	I
12"	8	8	17.88	16.25	13.30	1.25	I

NOTES:  
1. DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

**PARKER WATER & SANITATION DISTRICT  
MECHANICAL JOINT RESTRAINT DETAILS**

SCALE: NONE DATE: 2/96  
APPROVED: 2/00 12/07 1/18 10/16  
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2016 REVISION SHEET W3.17

**11-1/4", 22-1/2", 45" & 90" BENDS**

DEAD END

TYPICAL CROSS SECTION

TEE

MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)

SIZE OF	BENDS				TEE OR DEAD END
	11-1/4"	22-1/2"	45"	90"	
4"	1.00	1.00	1.00	1.00	1.50
6"	1.00	1.25	2.25	4.00	3.00
8"	1.00	2.00	4.00	7.00	5.00
10"	1.50	3.50	7.50	13.00	10.00
12"	2.00	5.00	10.00	18.00	14.00
24"	3.50	10.00	20.00	47.00	33.00

NOTES:  
1. ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKBLOCKED.  
2. BEARING SURFACES SHOWN IN CHART ARE MINIMUM.  
3. BASED ON 150 PSI PIPE PRESSURE PLUS WATER HAMMER:  
4. 6" AND 8" WATER HAMMER = 120 PSI  
12" WATER HAMMER = 110 PSI  
16", 20" AND 24" WATER HAMMER = 70 PSI  
4. SOIL BEARING CAPACITY = 3,000 LBS./SQ. FT.

**PARKER WATER & SANITATION DISTRICT  
CONCRETE KICKBLOCKS BEARING SURFACES AND INSTALLATION**

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2016 REVISION SHEET W3.18

**24" DIAMETER RING AND COVER**

HALF PLAN

STANDARD LIFTING SLOT DETAIL

MACHINED SEAT

NOTE:  
1. Coating Specifications: ASTM A-48 With A Minimum Tenate Strength Of 25 KSI (Class 25)  
2. All Casting To Be Done In Anhydrous Base (Or Approved Equivalent)

**PARKER WATER & SANITATION DISTRICT  
24" DIAMETER RING AND COVER**

SCALE: NONE DATE: 6/05  
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2016 REVISION SHEET W3.19

**ACCESS MANHOLE AND AIR VALVE ASSEMBLY**

ACCESS MANHOLE

ACCESS MANHOLE AND AIR VALVE ASSEMBLY

NOTE:  
USE 2" AIR VALVE ASSEMBLY ON 30" OR SMALLER PIPE  
RESIDENTIAL ASSEMBLY MAY BE USED IN RESIDENTIAL AREAS ONLY (SEE DETAIL SHEET W3.3)  
SEE SHEET W3.6 FOR CONCRETE MANHOLE BASE BEAMS AND AIR/VACUUM VALVE DETAILS.

**PARKER WATER & SANITATION DISTRICT  
ACCESS MANHOLE ASSEMBLY**

SCALE: NONE DATE: 2/96  
APPROVED: 4/01 12/07 1/18 10/16  
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2016 REVISION SHEET W3.20

**STANDARD TRENCH SECTION**

STREET CUT PATCH

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	2'-4"
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
10"	2'-0"	3'-0"
12"	2'-2"	3'-2"
18"	3'-0"	4'-0"
24"	4'-0"	5'-0"

**PARKER WATER & SANITATION DISTRICT  
TYPICAL TRENCH SECTION PIPE PROTECTION**

SCALE: NONE DATE: 2/96  
APPROVED: 1/18 10/16  
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2016 REVISION SHEET W4.1

**PIPE BEDDING**

(c) Installation of Bedding and Pipes After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bedding shall be dug deep enough to provide a minimum of two inches (2") of clearance between the bed and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug ball holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, ball holes and silt holes. The purpose of tamping is to ensure uniform support for the pipe.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved bedding may then be installed to the groundline. See Chapter 2 of these Standards for details for a typical trench cross section.

Composition of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet W4.1 of the Standard Details for a typical trench cross section.

(d) Bedding Material: the bedding material shall be a clean well-graded sand or silt-sand and shall conform to the following limits when tested by means of laboratory tests:

**Well-Graded Sand for (24-inch or larger diameter)**

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	70-100
No. 6	35-65
No. 10	20-50
No. 20	5-25
No. 40	0-10
No. 100	0-3

**Silt-sand**  
for use with 20-inch or smaller

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 200	0-3

If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental materials, shall be placed closer to the pipe than six inches (6"). Approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.

**PARKER WATER & SANITATION DISTRICT  
PIPE BEDDING**

SCALE: NONE DATE: 2/96  
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2016 REVISION SHEET W4.2

**WATERLINE ENCASEMENT**

PLAN VIEW PROFILE

TYPICAL SECTION

NOTES:  
1. ALL CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3,000 PSI USING TYPE 1 PORTLAND CEMENT AND 3/4" AGGREGATE. ALL CONCRETE SHALL HAVE 5-7% ENTRAINED AIR CONTENT AND A MAXIMUM SLUMP OF 4".  
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60.  
3. ALL REINFORCEMENT SHALL HAVE 2" MIN. CONCRETE COVER.  
4. THE SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY PRIOR TO FORMING THE STRUCTURE.  
5. PIPE SHALL BE WRAPPED WITH FELT LAYER BEFORE ENCASEMENT.

**PARKER WATER & SANITATION DISTRICT  
WATERLINE ENCASEMENT**

SCALE: NONE DATE: 5/08  
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2016 REVISION SHEET W4.3

**BORED CROSSINGS BENEATH CONDUITS**

PLAN FOR PERPENDICULAR CROSSING PLAN FOR ANGLE CROSSING

PROFILE

FORMULA FOR FINDING C:  
 $C = B + (2)(1.5) \left[ \frac{B}{2} + A + F \right]$

FORMULA FOR FINDING L:  
 $L = \frac{C}{\sin \phi}$

**PARKER WATER & SANITATION DISTRICT  
BORED CROSSINGS BENEATH CONDUITS**

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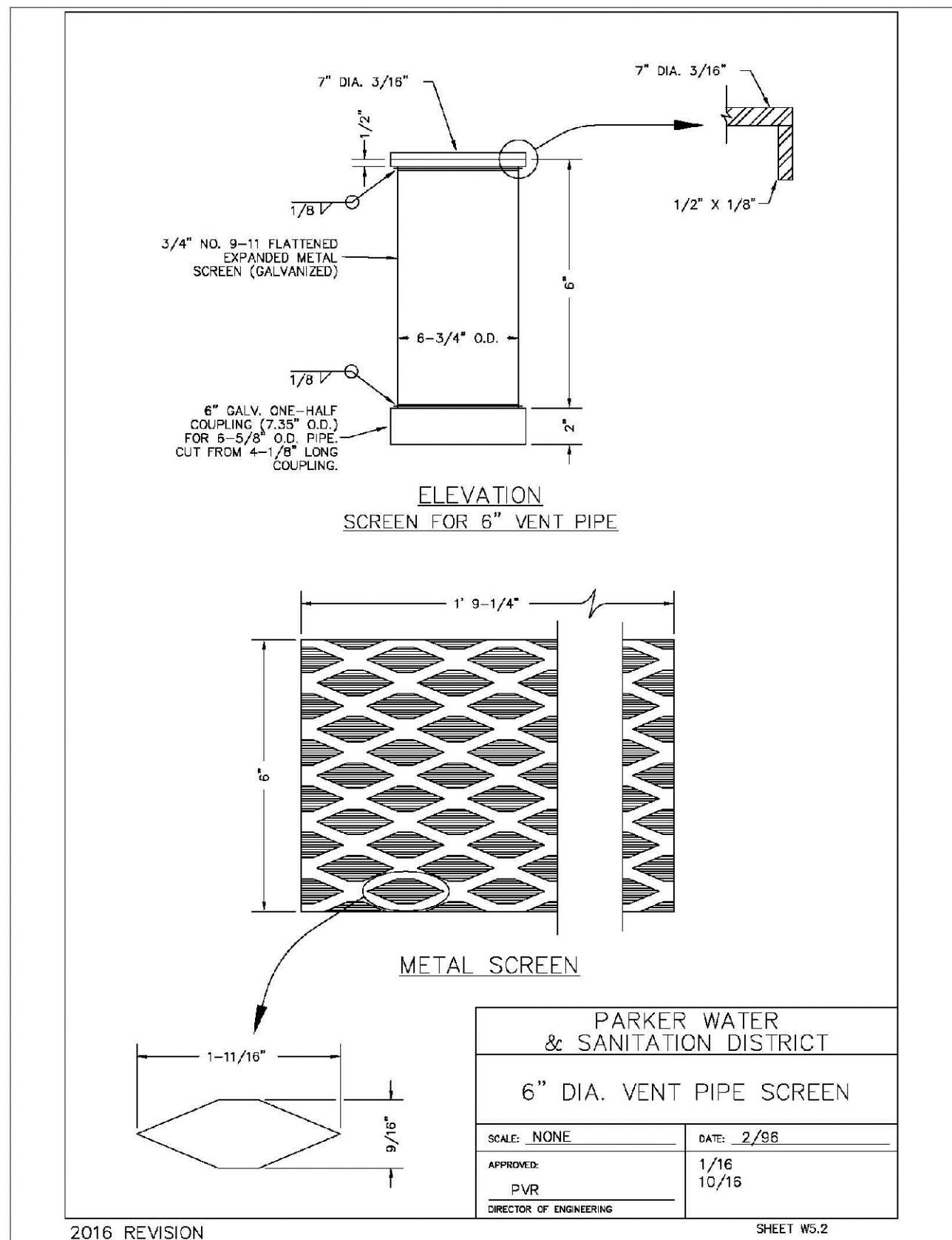
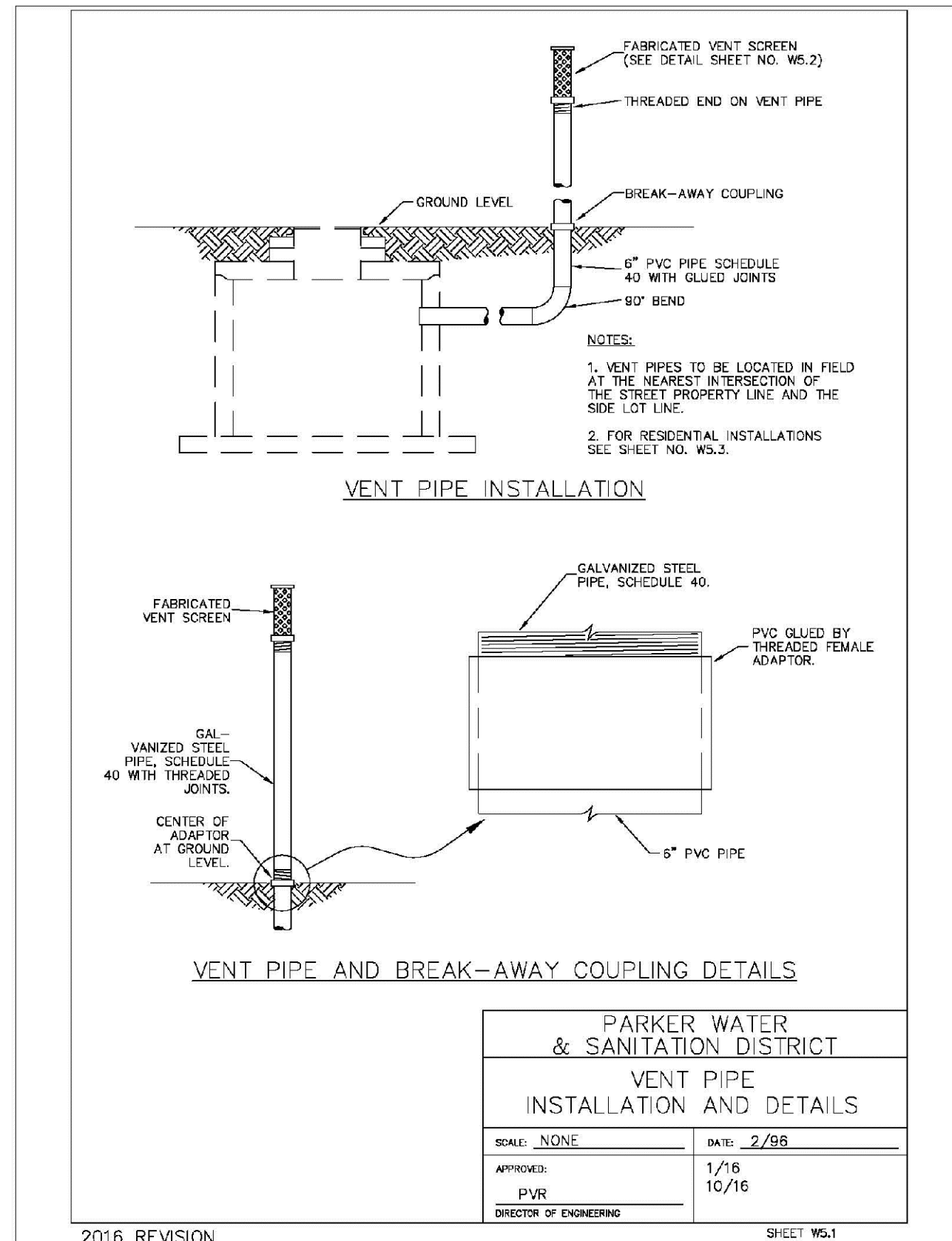
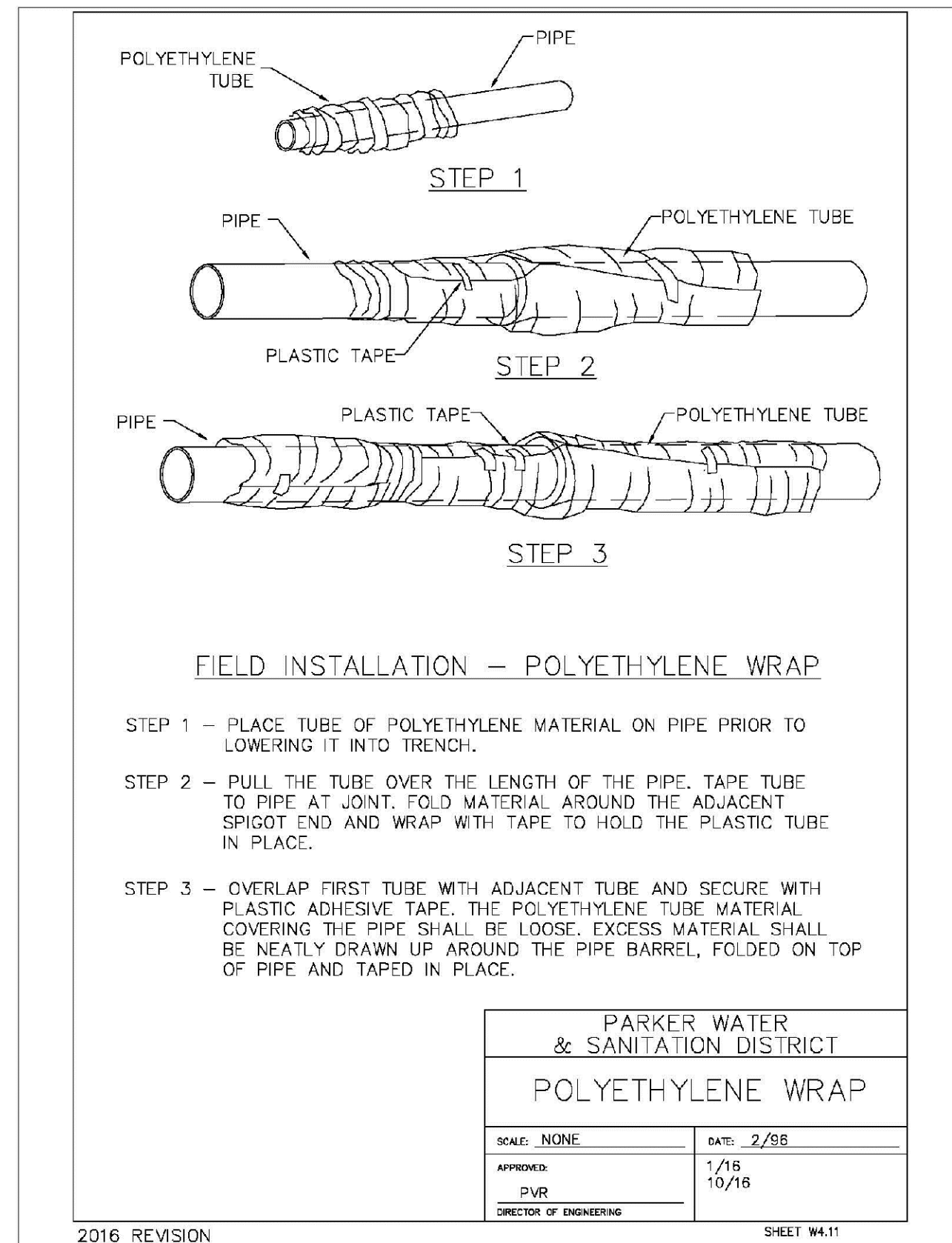
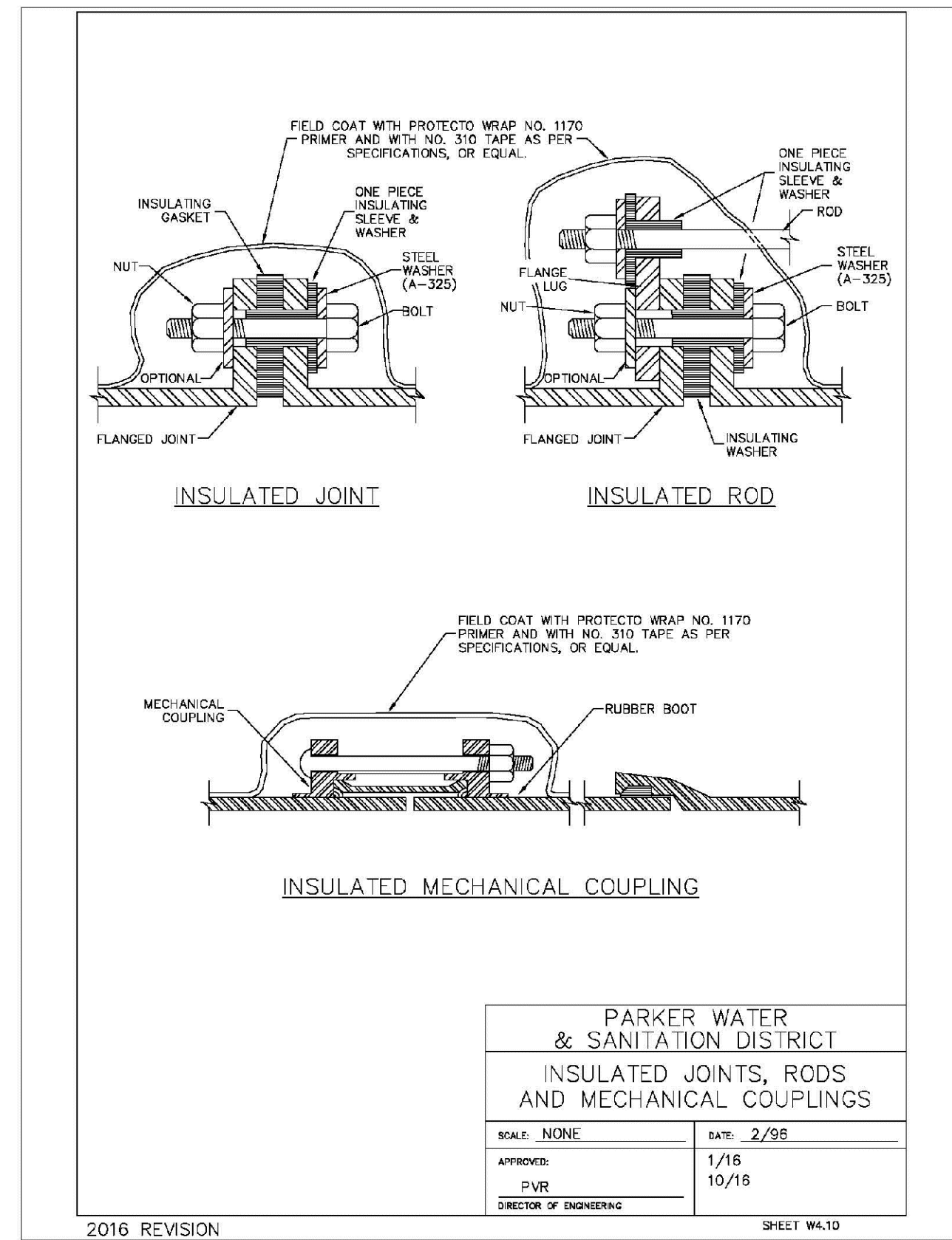
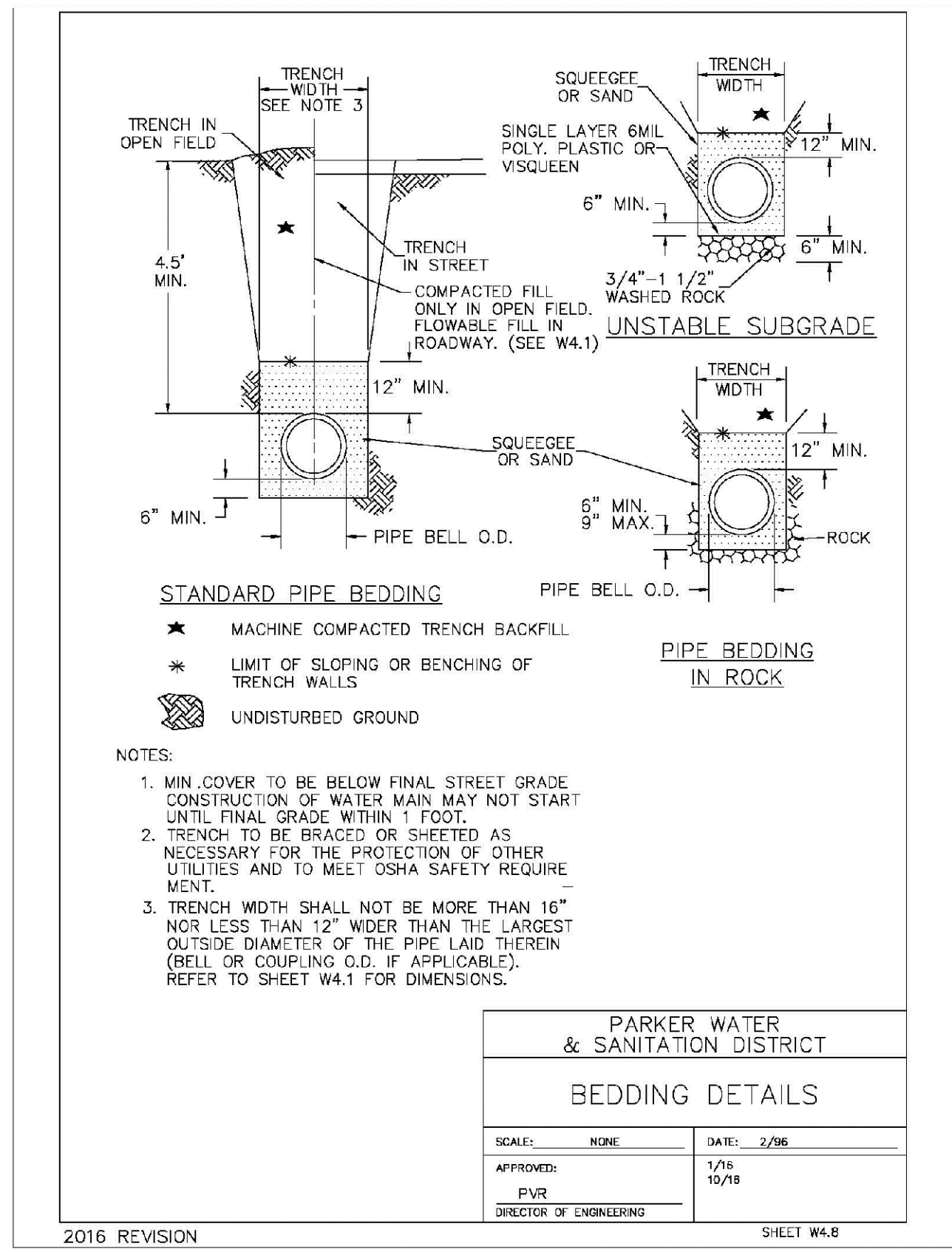
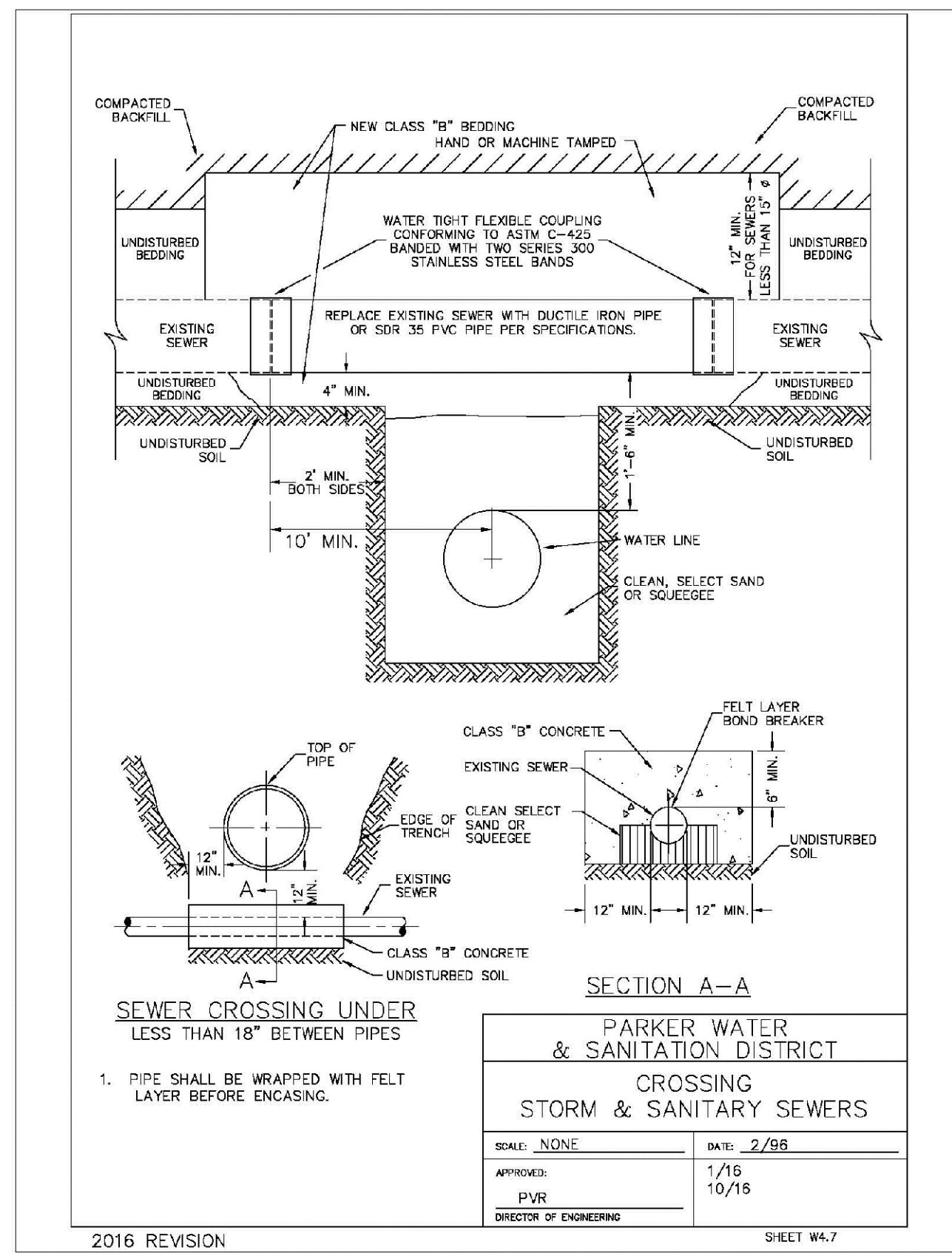
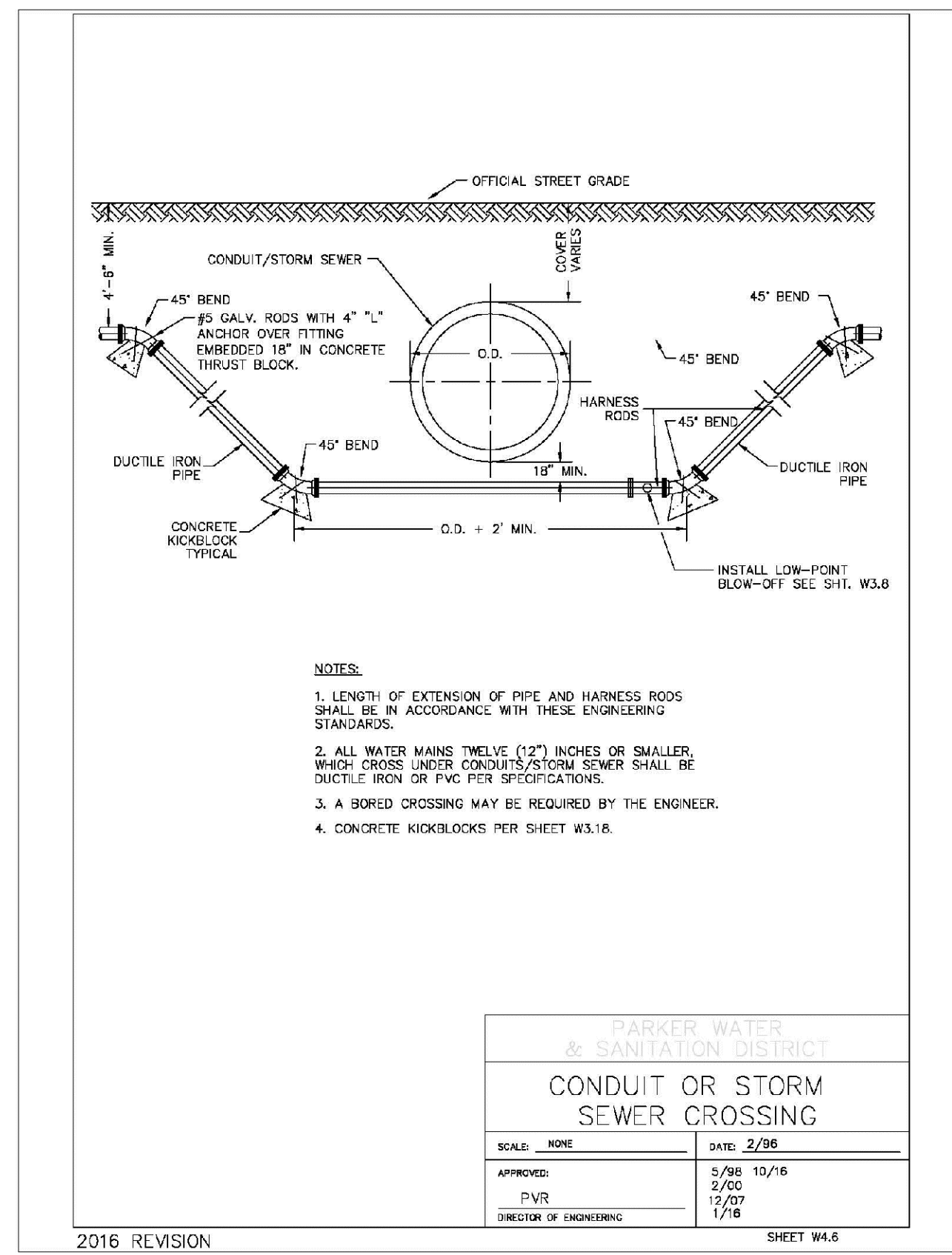
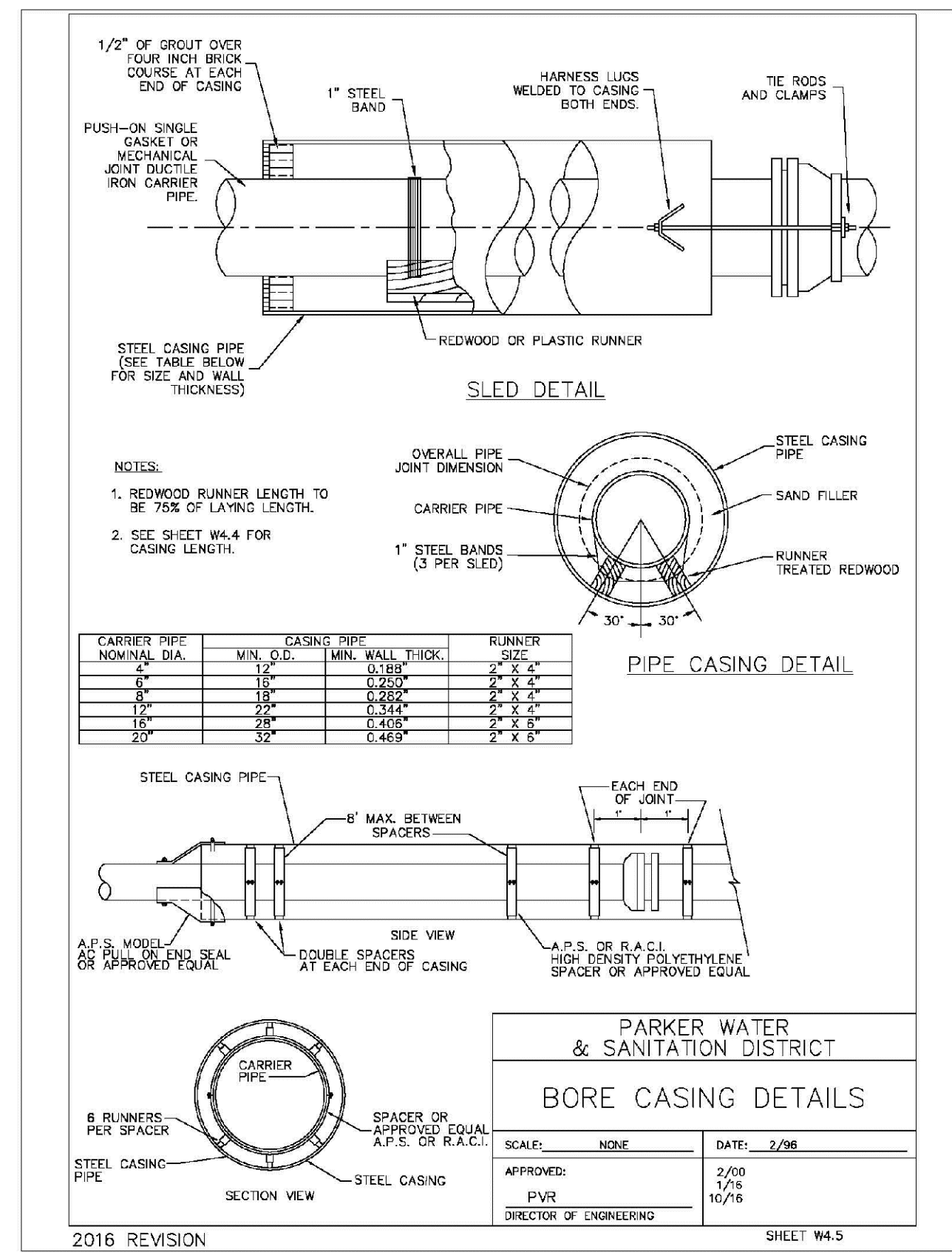
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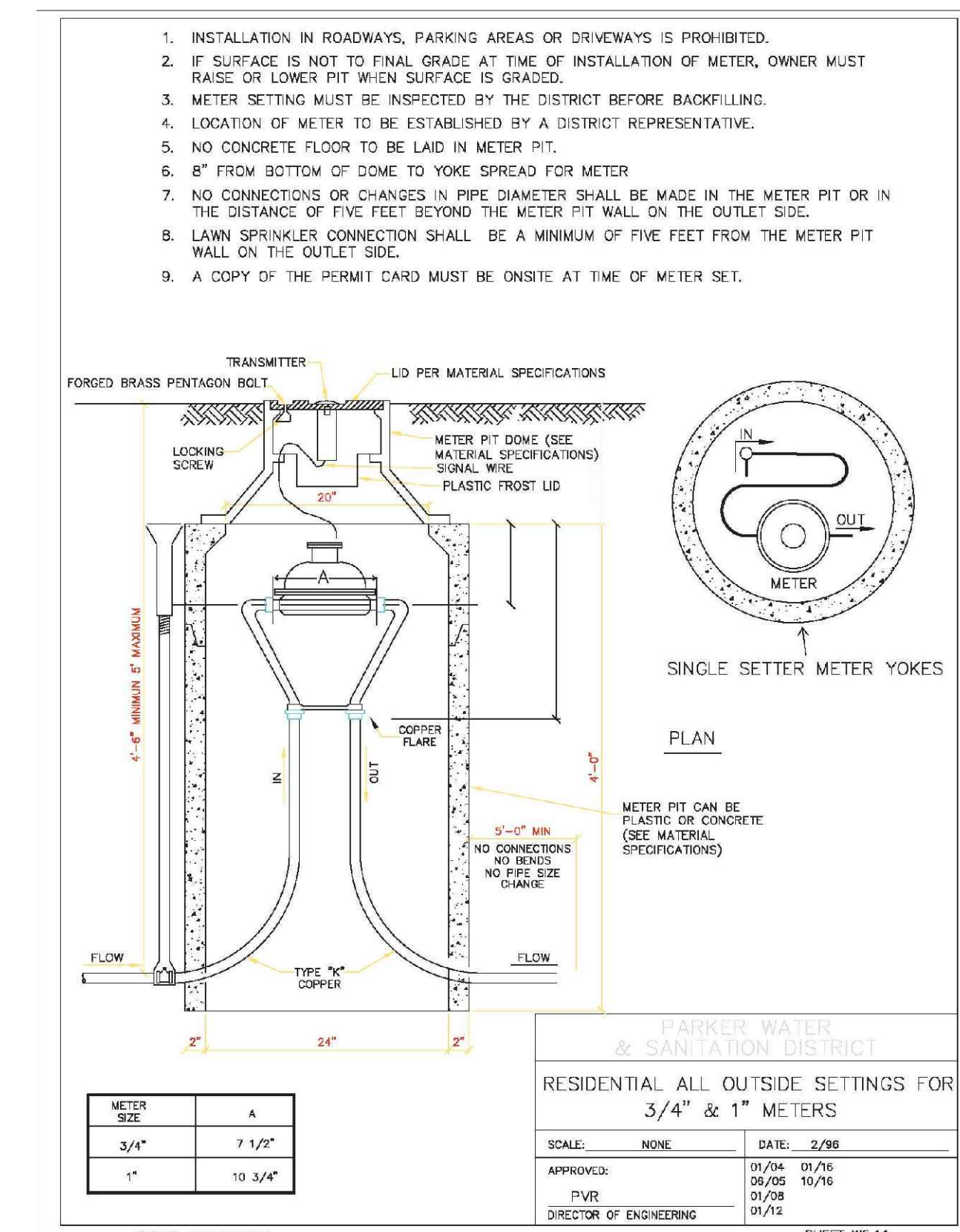
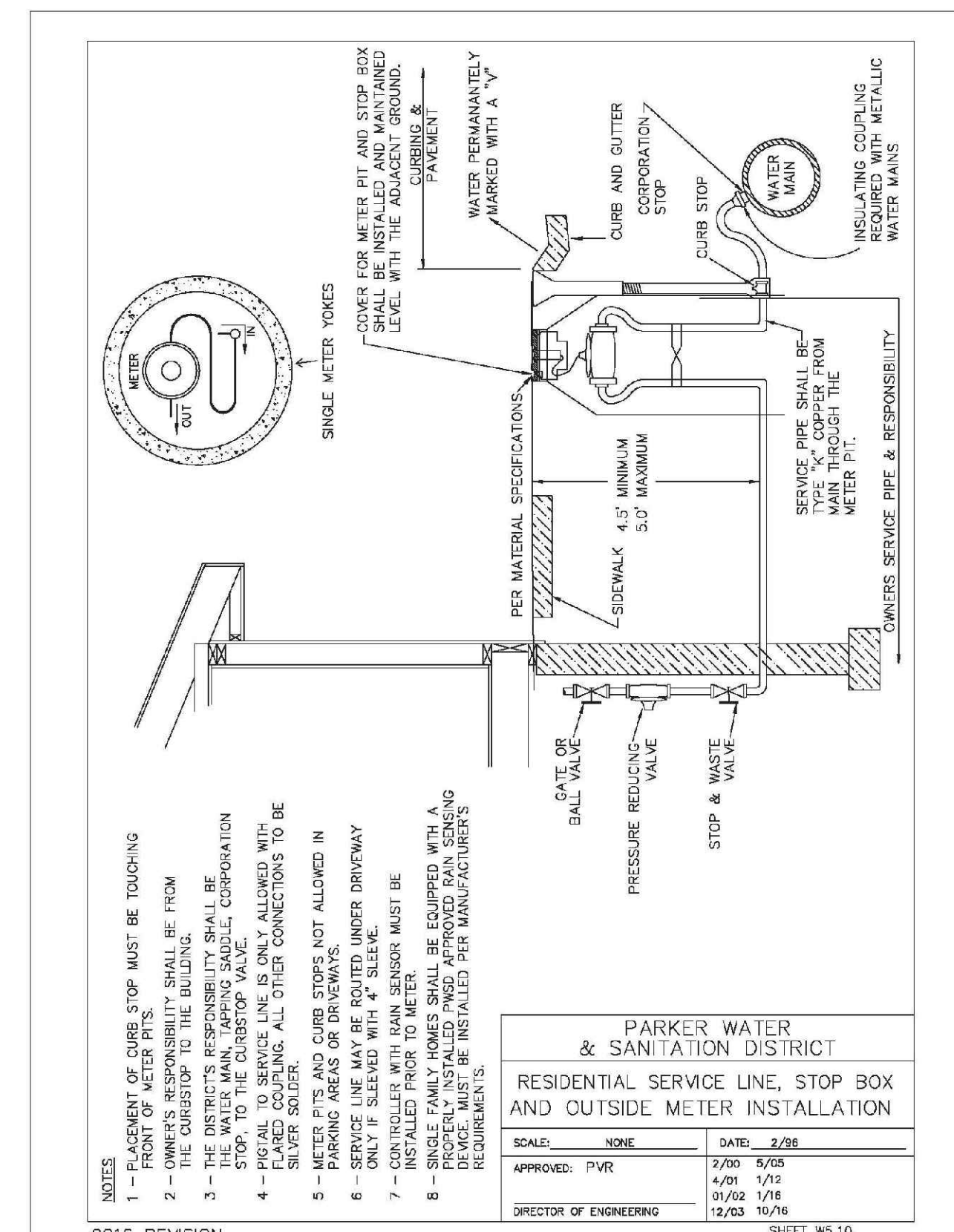
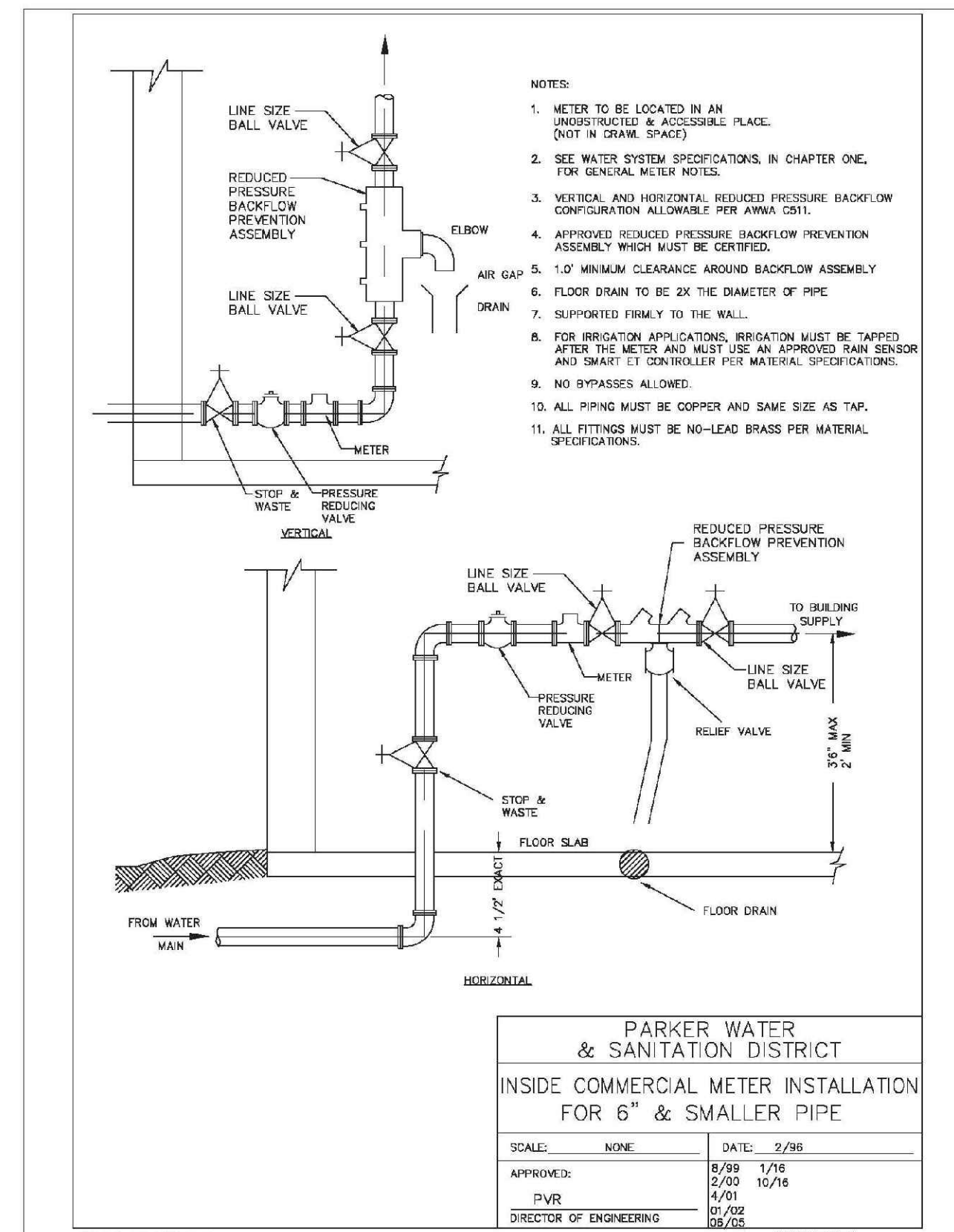
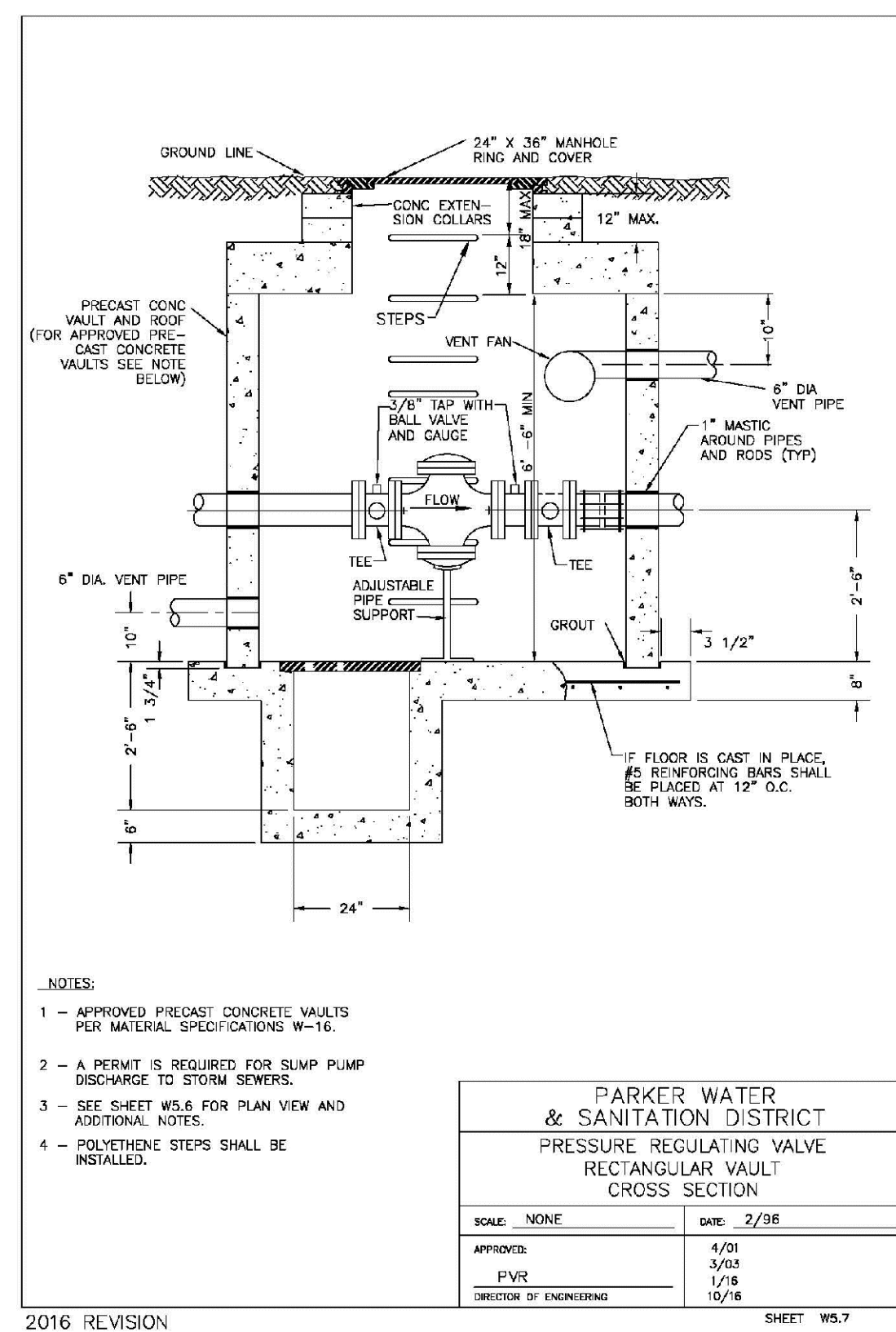
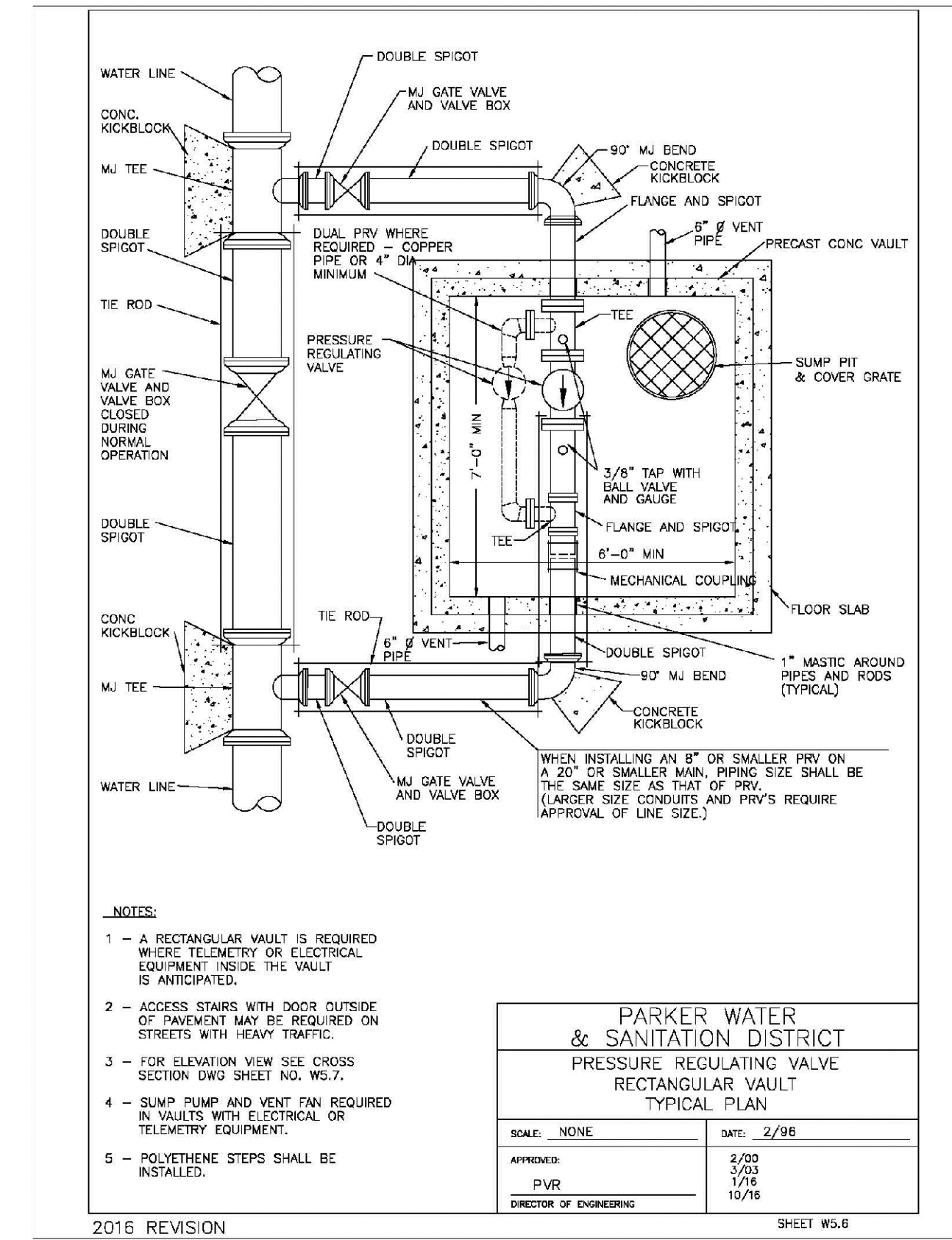
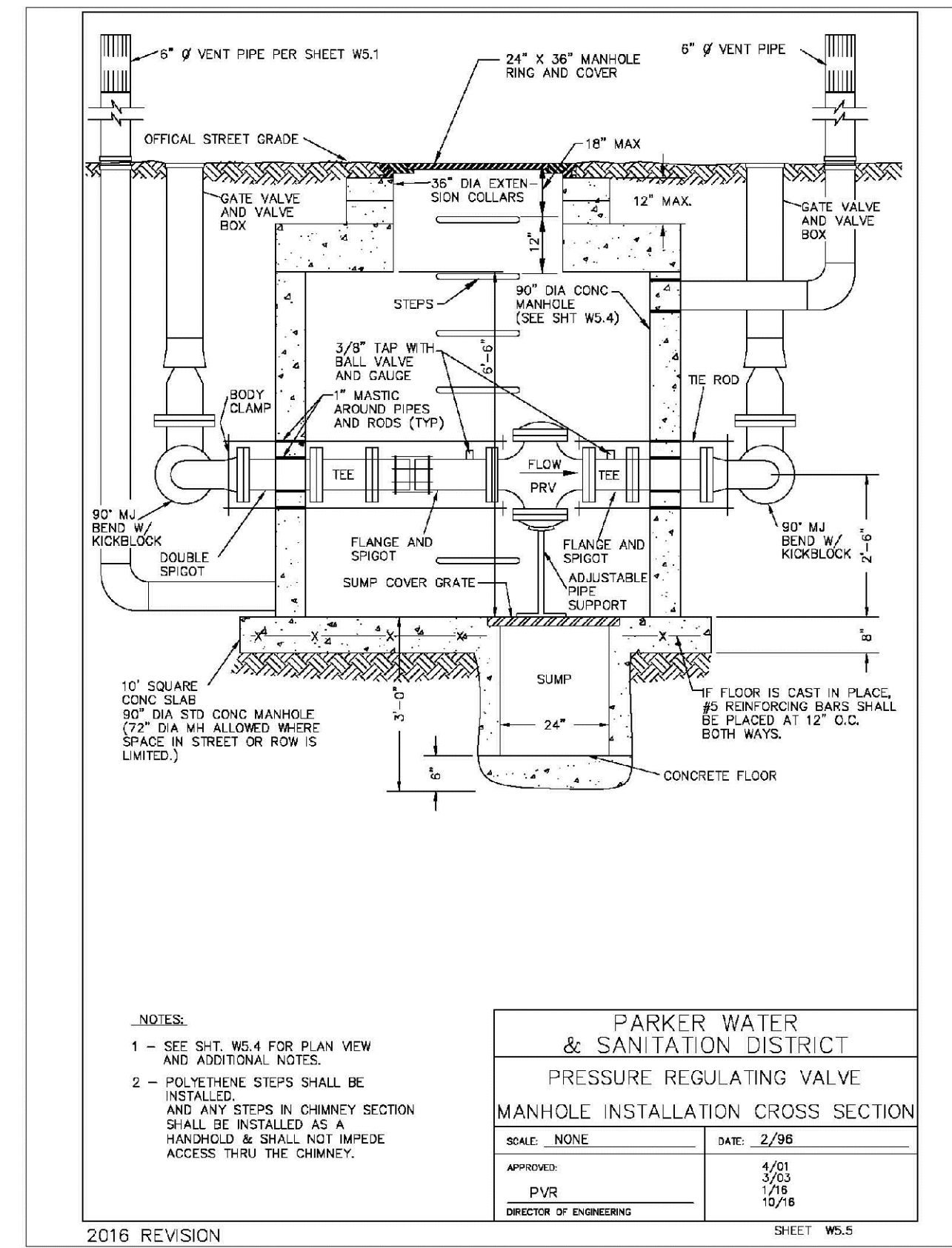
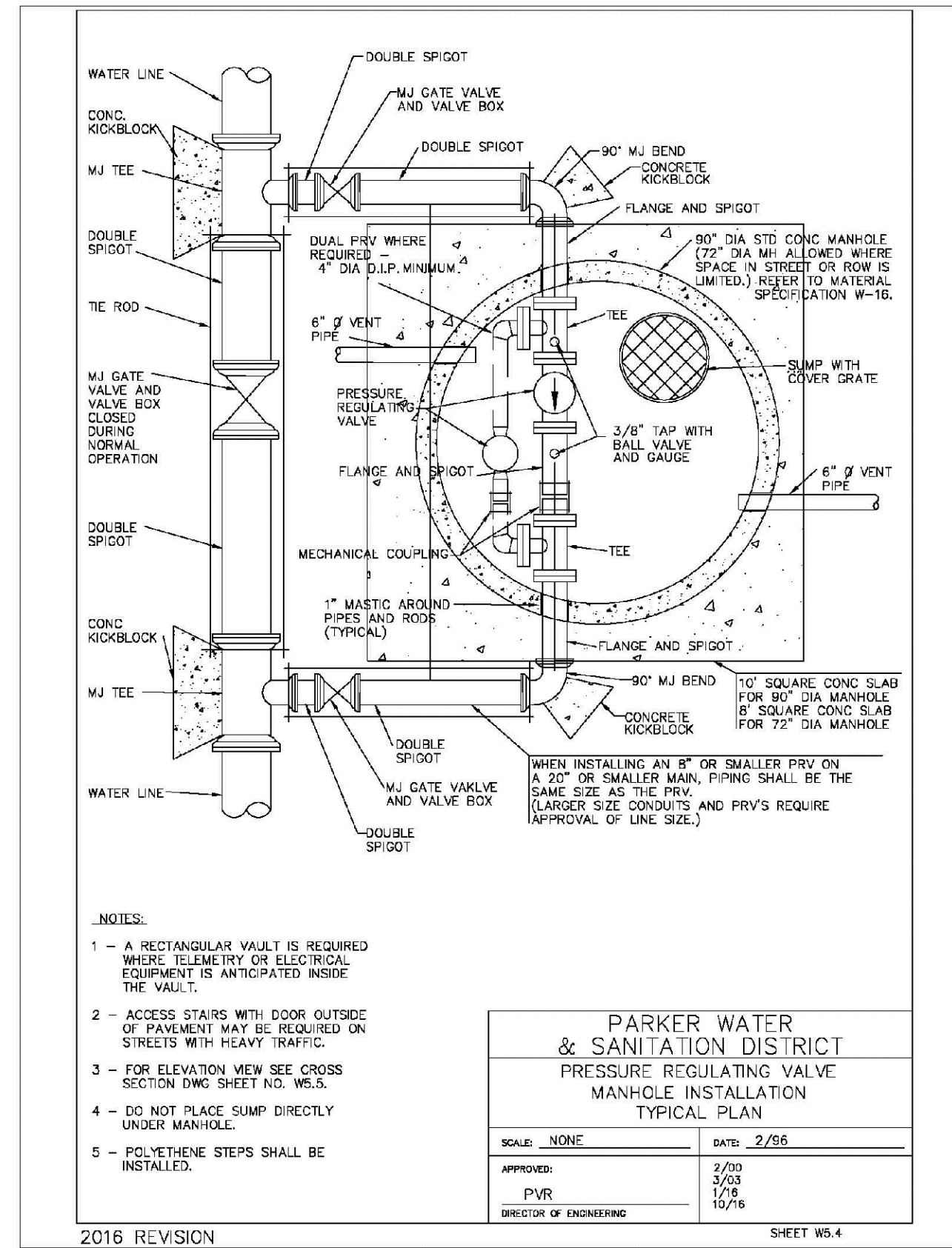
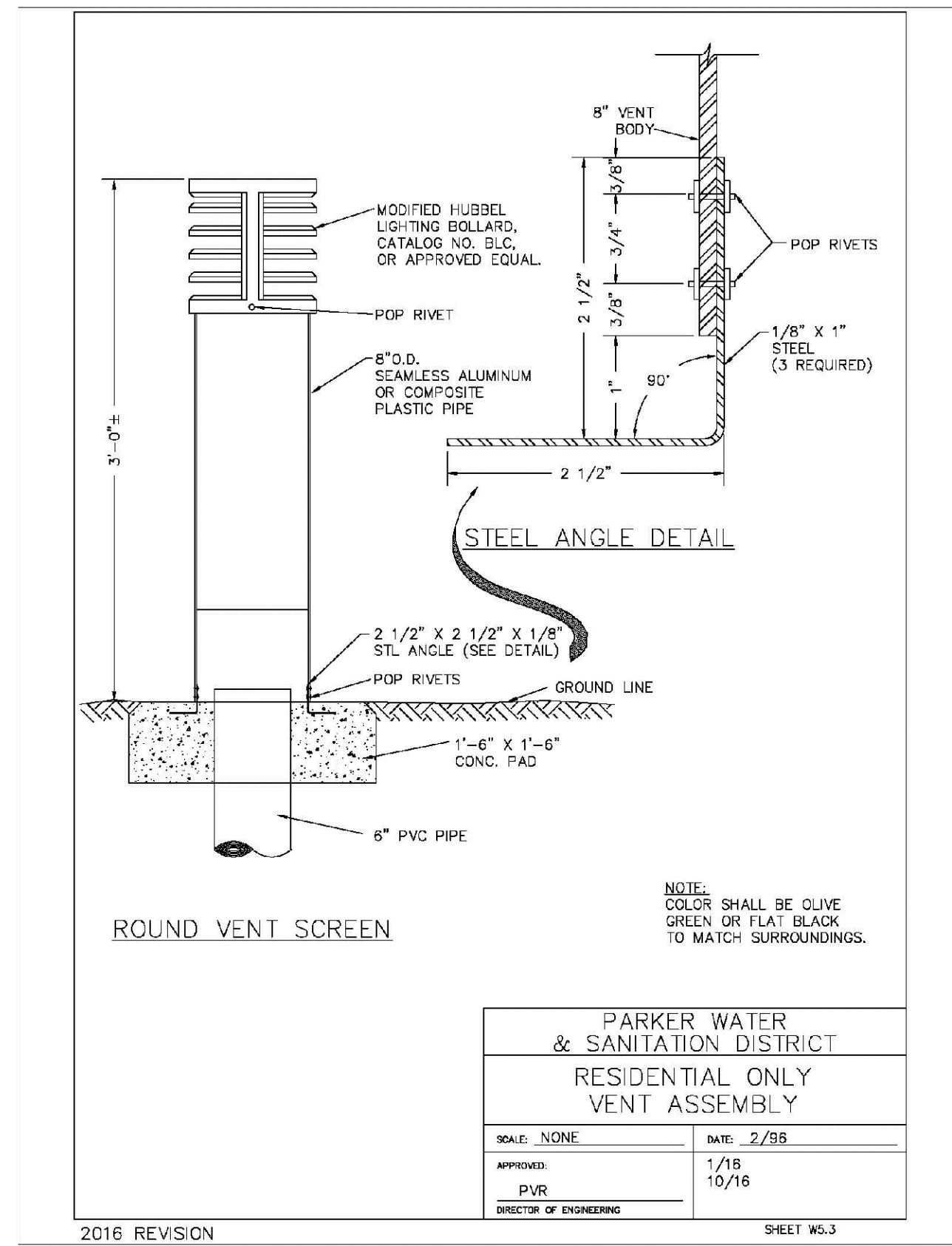
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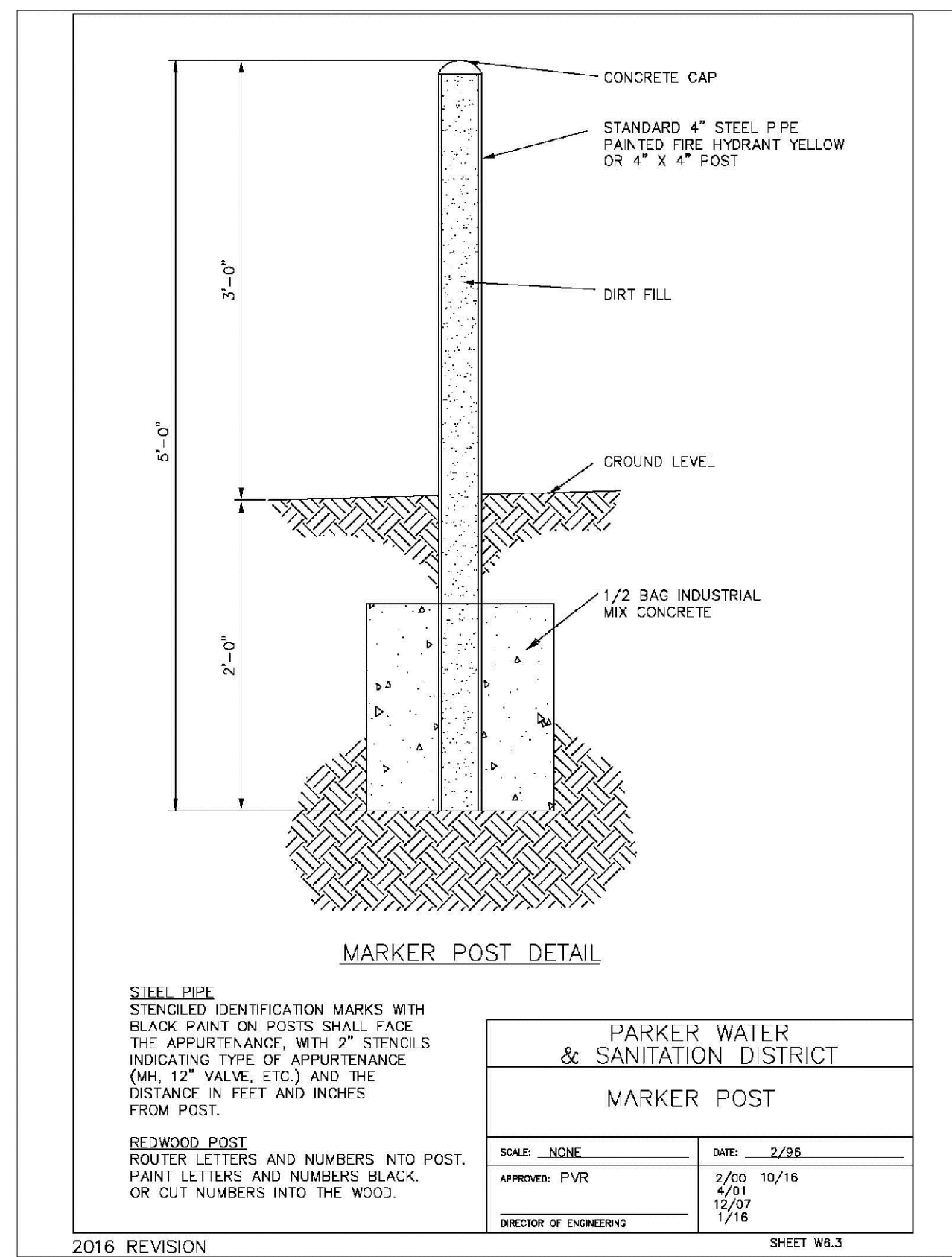
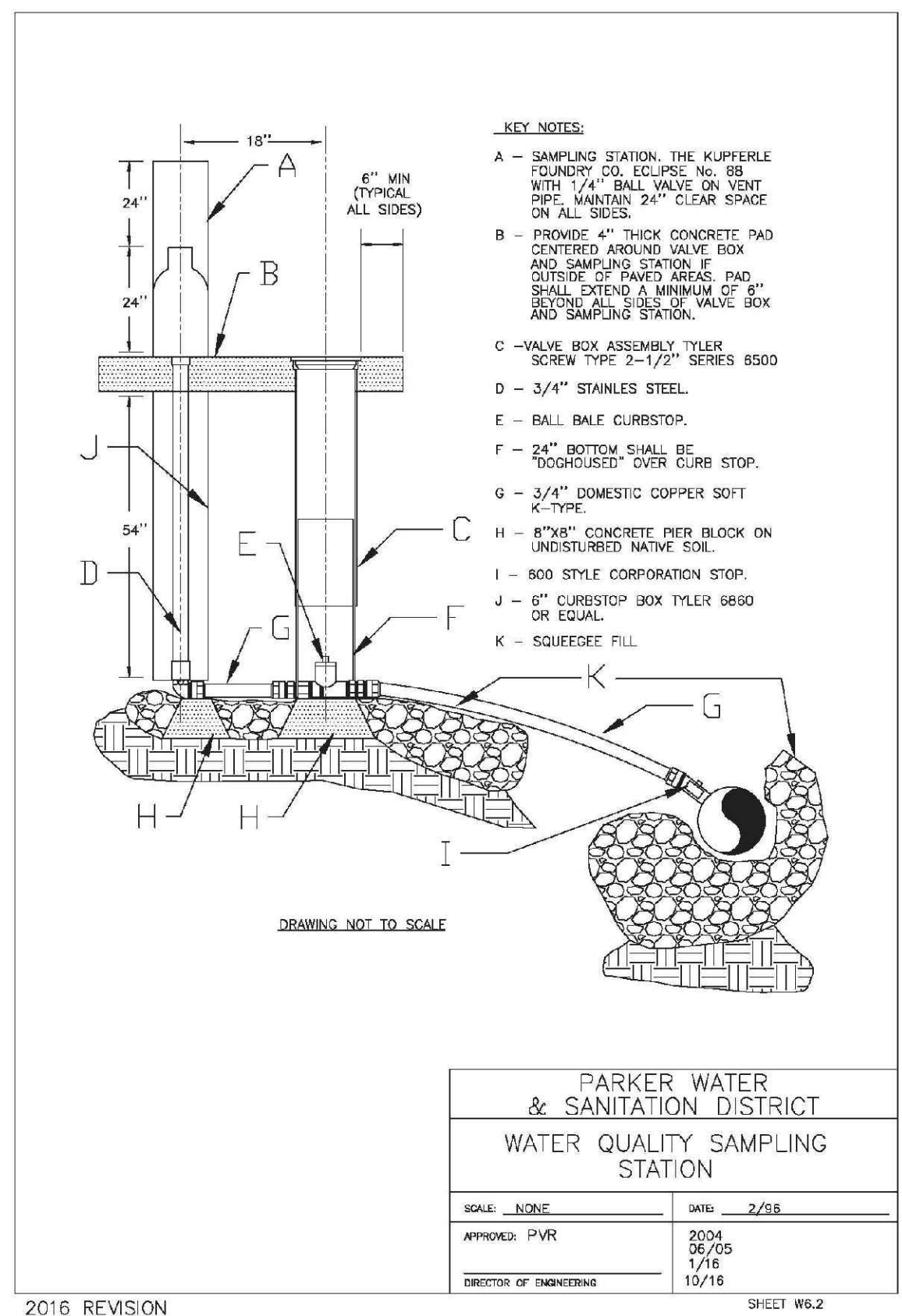
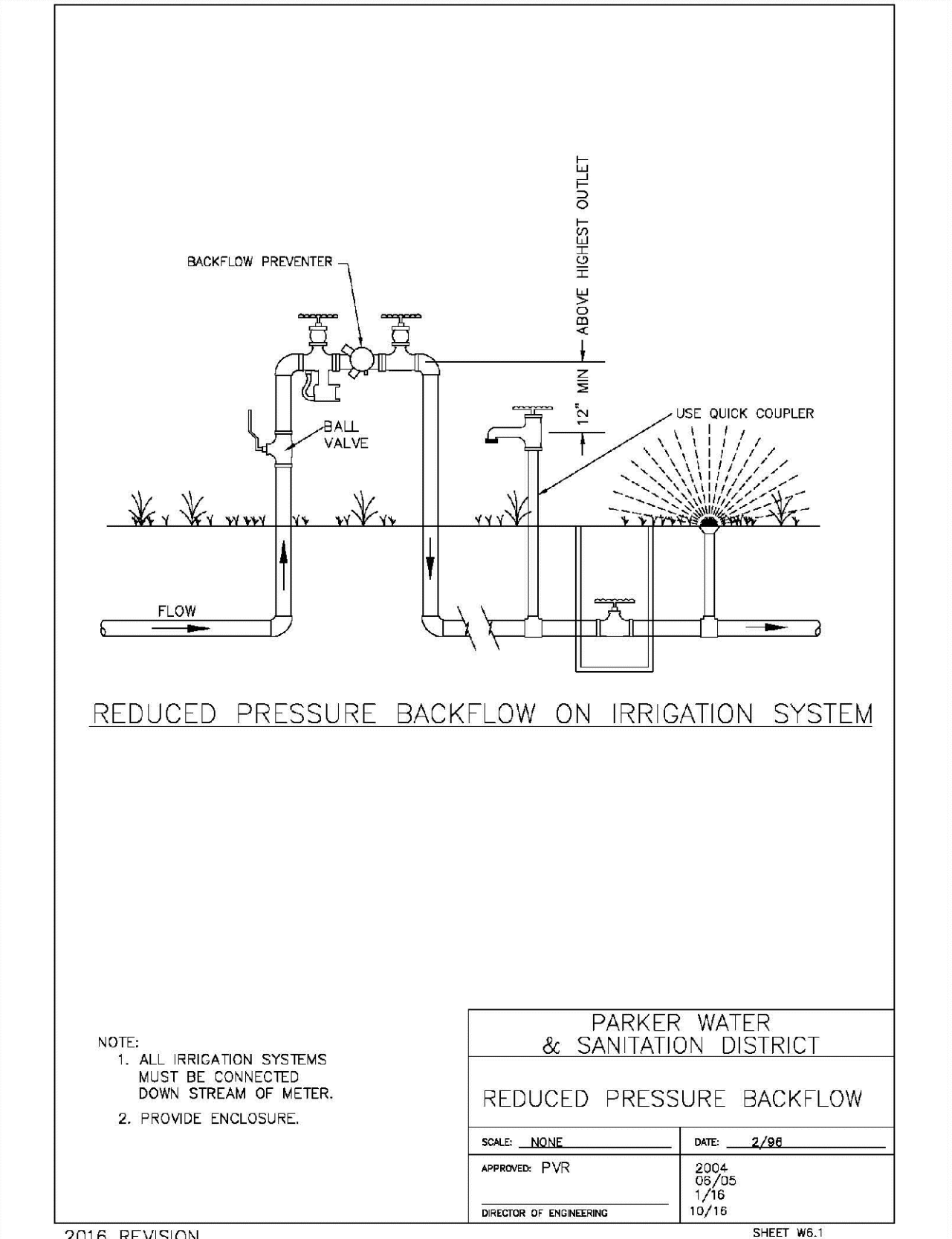
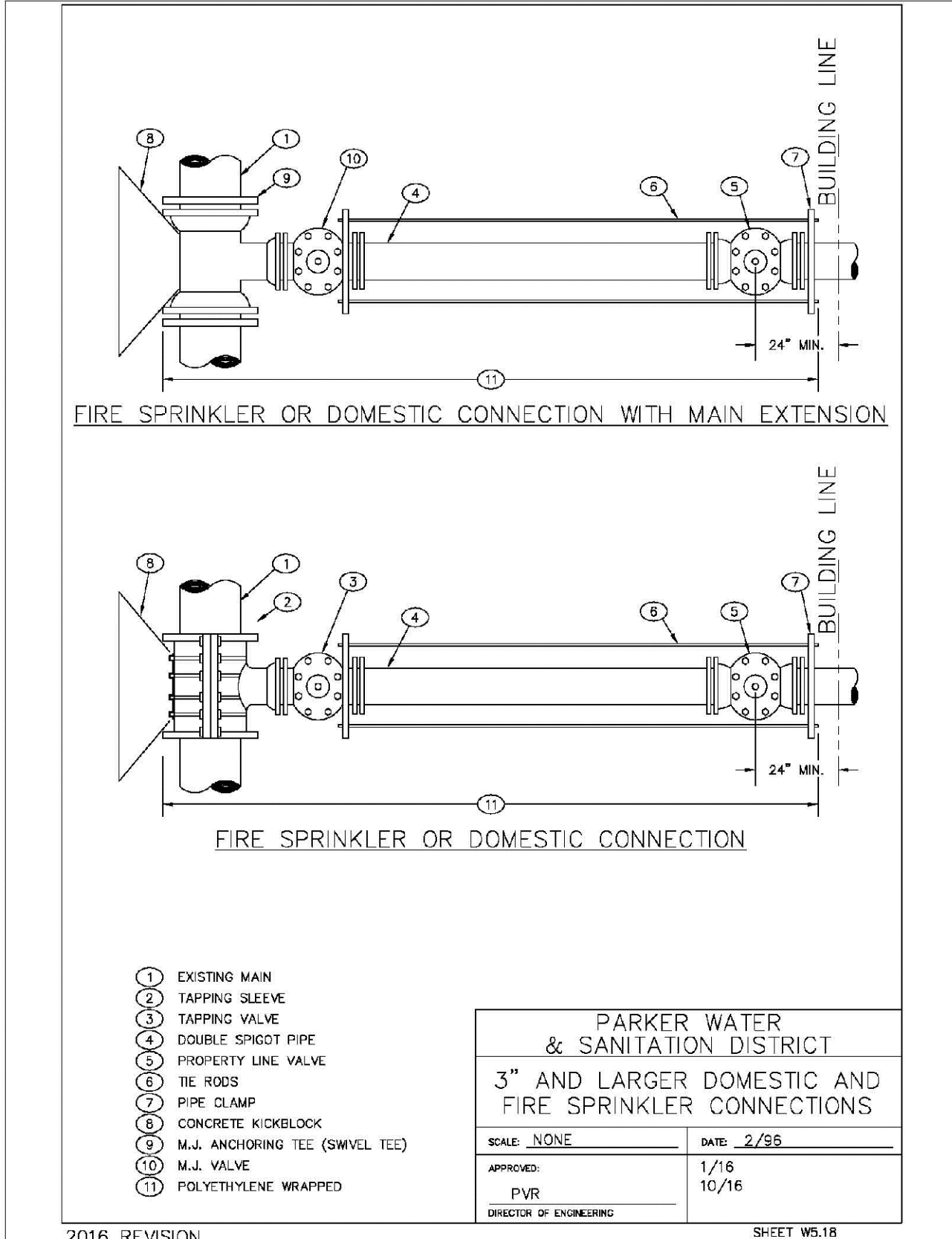
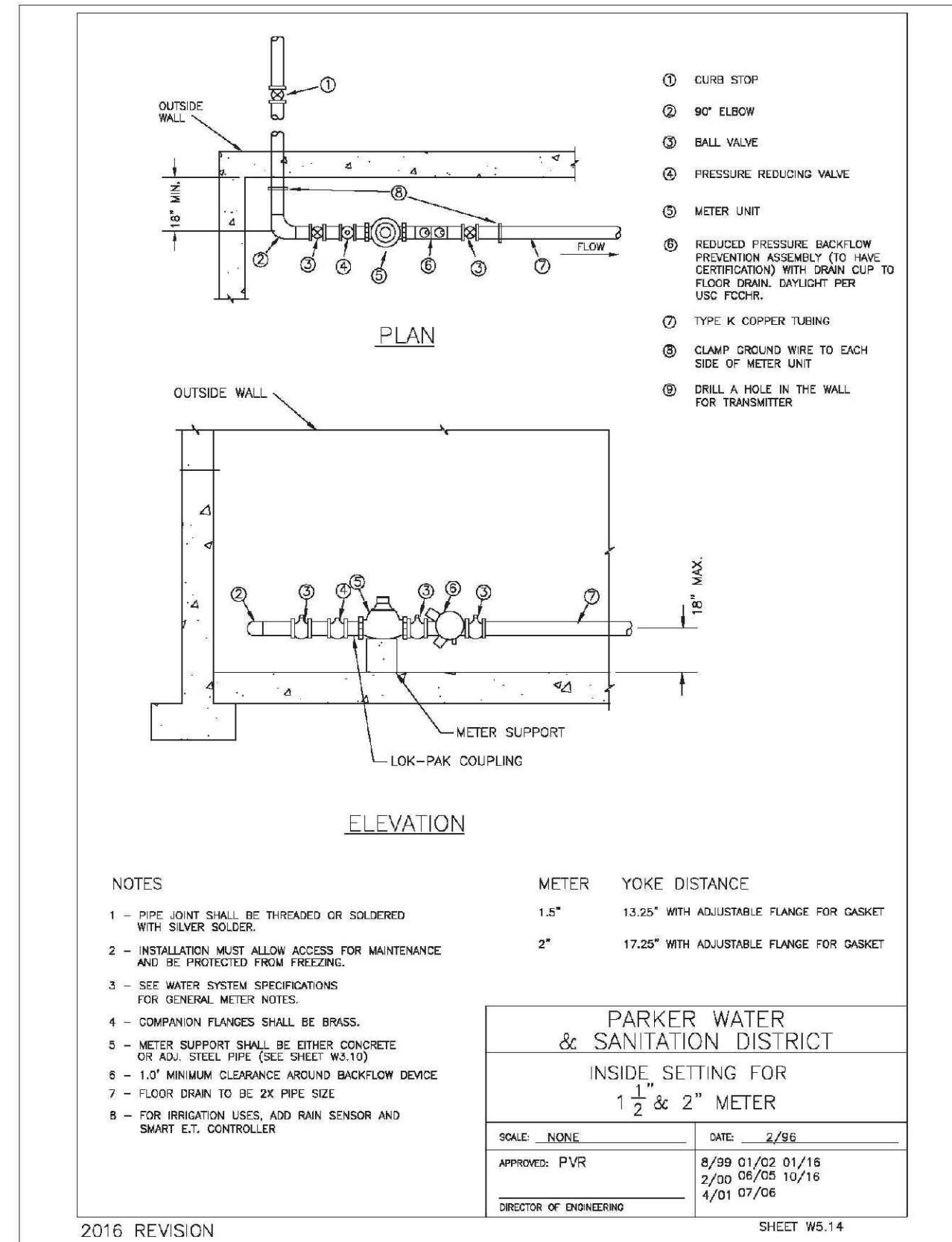
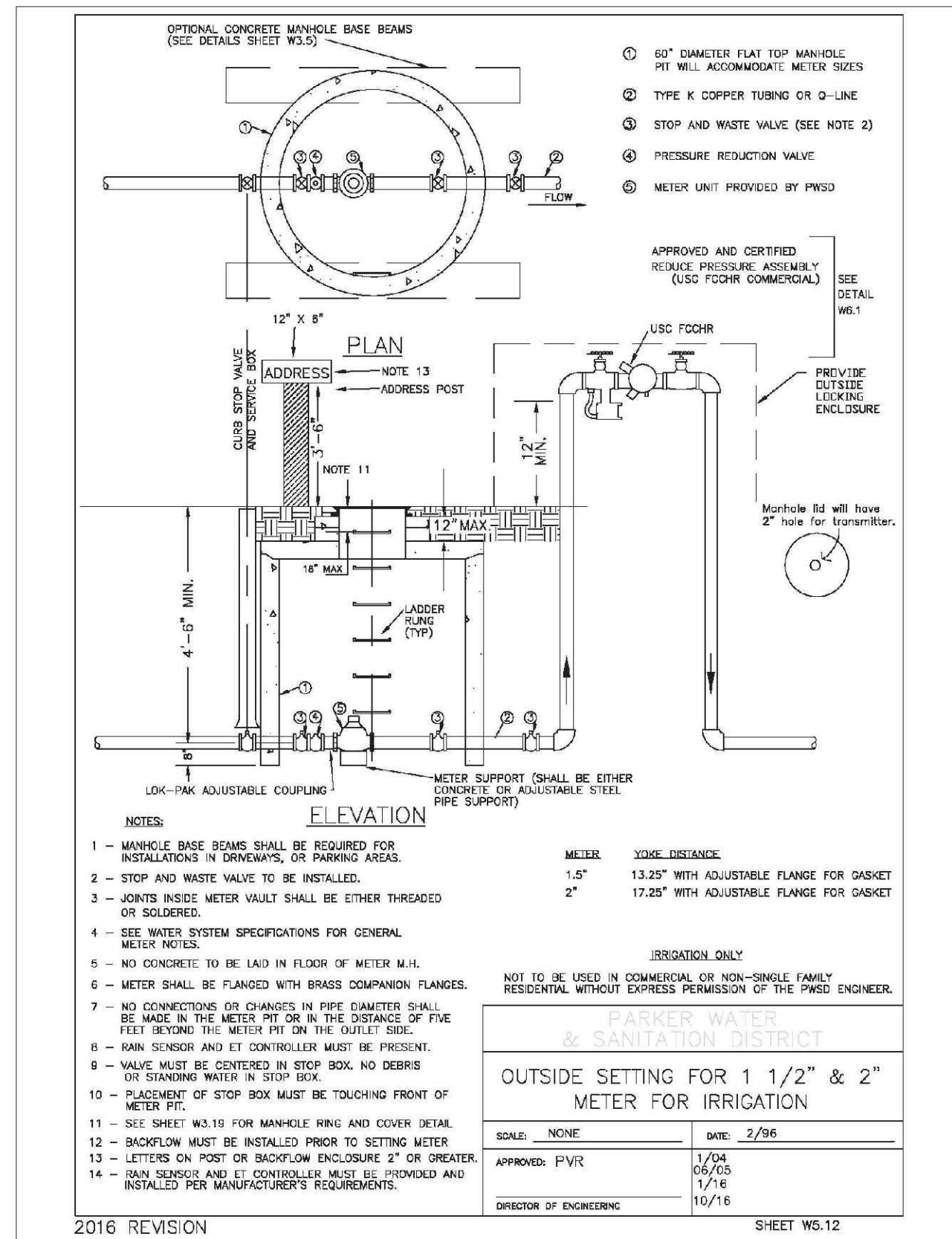
TRAILS AT CROWFOOT  
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WATER DETAILS

SCALE: AS SHOWN  
DRAWN BY: RRR  
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FILE NO: 8130283701

SHEET NUMBER: 27

No.	Revisions	Date	Init.	Appr.	Date



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 Suite 240  
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 Tel: (720) 482-9529  
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**CVL**  
 CONSULTANTS

HR 935 LLC  
 7352 South Alton Way  
 CENTENNIAL, CO 80112