



Building a Better World for All of Us®



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Landscape Architect: Short Elliott Hendrickson, Inc., 10901 Reed Circle Drive, Suite 300, Minnetonka, MN 55343, 952.912.2600
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NEW HORIZON ACADEMY - DOUGLAS 234 FILING, NO. 6 PARKER, CO

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SEH Project Checked By: DRH Drawn By: AMP

Project Status: CONSTRUCTION SET Issue Date: 6/25/2021

Revision Issue: Rev. # Description Date

COVER SHEET

U0.0

DOUGLAS 234, FILING NO. 6

A PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 29, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO 1.65 ACRES

WATER & SEWER CONSTRUCTION PLANS FOR NEW HORIZON ACADEMY

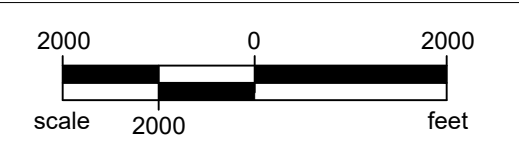
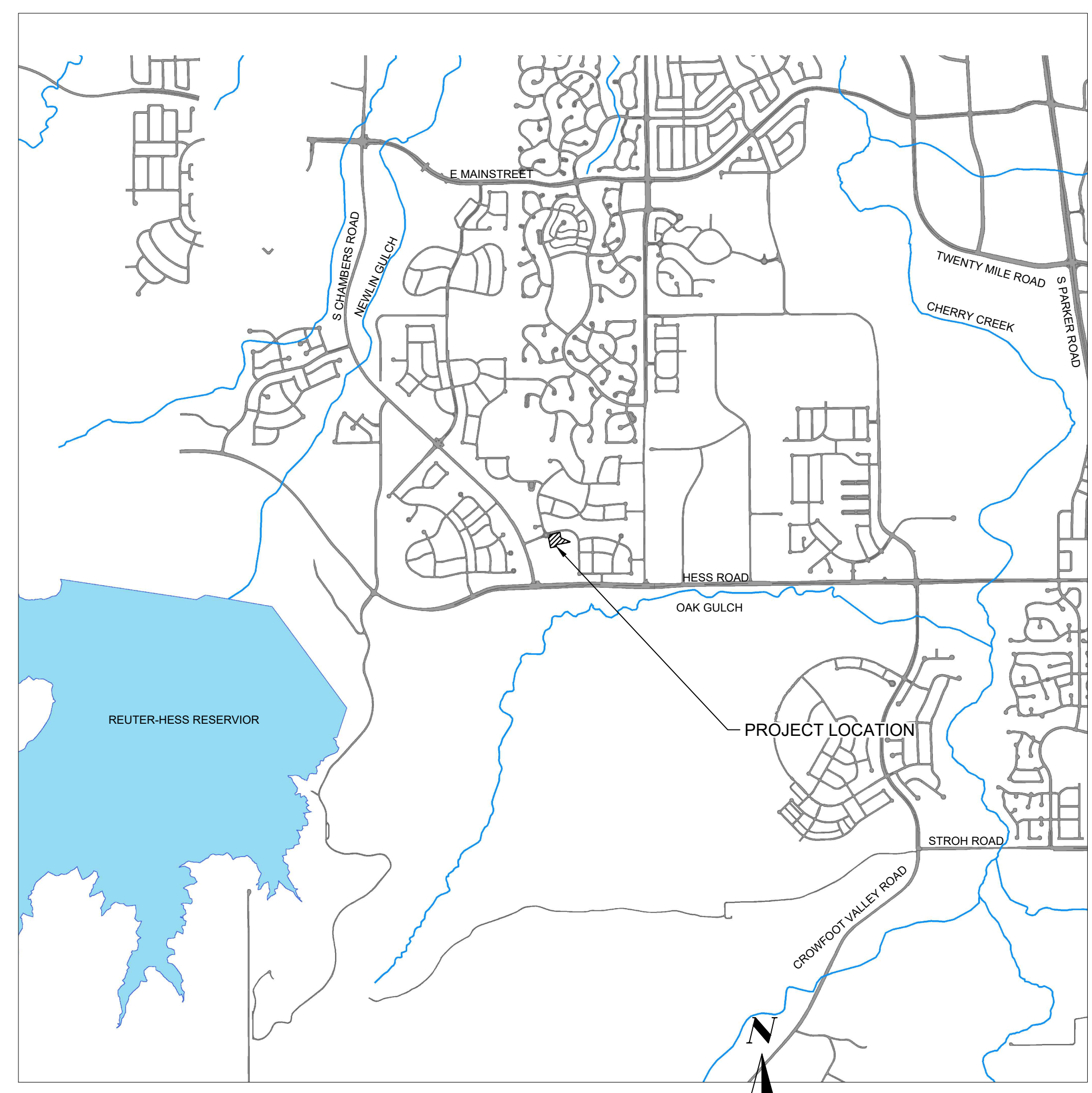


Table with 3 columns: Description, Unit, Qty. Lists materials like 6" SDR 35 Sanitary Sewer Service Pipe, Grease Interceptor, Manholes, Pipes, Valves, Hydrants, etc.

Table with 2 columns: Sheet Number, Sheet Title. Lists sheets U0.0 to U1.7 including Cover Sheet, General Notes, Overall Utility Plan, Sanitary Sewer Details, Water Service Plan & Profile, and Water Details.

EXISTING

- RIGHT OF WAY, PERMANENT EASEMENT, PROPERTY LINE, HORIZONTAL CONTROL POINT, BENCHMARK, SURVEY MARKER, SOIL BORING, SANITARY SEWER AND MANHOLE, FORCE MAIN AND LIFT STATION, SANITARY SEWER SERVICE & CLEANOUT, WATER MAIN, HYDRANT, VALVE AND MANHOLE, WATER SERVICE AND CURB STOP BOX, STORM SEWER, MANHOLE AND CATCH BASIN, CULVERT AND APRON ENDWALL, GAS MAIN, VALVE, VENT AND METER, HANDHOLE, BURIED FIBER OPTIC CABLE AND MANHOLE, BURIED PHONE CABLE, PEDESTAL AND MANHOLE, BURIED TV CABLE, PEDESTAL AND MANHOLE, BURIED ELECTRIC CABLE, PEDESTAL, MANHOLE, TRANSFORMER AND METER, OVERHEAD WIRE, POLE AND GUY WIRE, LIGHT POLE, TRAFFIC SIGNAL, STREET NAME SIGN, SIGN (NON STREET NAME), RAILROAD TRACKS, DECIDUOUS AND CONIFEROUS TREE, BUSH / SHRUB AND STUMP, EDGE OF WOODED AREA, WETLAND, BUILDING, FENCE (UNIDENTIFIED), BARBED WIRE FENCE, CHAIN LINK FENCE, ELECTRIC WIRE FENCE, WOOD FENCE, WOVEN WIRE FENCE, PLATE BEAM GUARDRAIL, CABLE GUARDRAIL, POST / BOLLARD, RETAINING WALL.

PROPOSED

- STREET CENTERLINE, RIGHT-OF-WAY, PERMANENT EASEMENT, TEMPORARY EASEMENT, CONSTRUCTION LIMITS, SANITARY SEWER, BULKHEAD AND MANHOLE, FORCE MAIN, SANITARY SERVICE AND CLEANOUT, WATER MAIN, TEE, HYDRANT, BULKHEAD AND VALVE, WATER VALVE MANHOLE, REDUCER, BEND AND CROSS, WATER SERVICE AND CURB STOP BOX, STORM SEWER, MANHOLE AND CATCH BASIN, CULVERT AND APRON ENDWALL, DRAIN TILE, DITCH / SWALE, RIPRAP, STREET NAME SIGN, SIGN (NON STREET NAME), RETAINING WALL.

SOIL PREPARATION AND PAVEMENT DESIGN NOTE: SOIL PREPARATION AND PAVEMENT DESIGN SHALL BE PER RECOMMENDATIONS FROM A GEOTECHNICAL REPORT PREPARED FOR THIS SITE AS FOLLOWS.

GEOTECHNICAL ENGINEER: ROCKY MOUNTAIN GROUP. PROJECT NO. 167366

THE CONTRACTOR MUST FULLY REVIEW THIS REPORT AND BRING ANY CONFLICTS BETWEEN IT AND THE CONSTRUCTION PLANS AND SPECIFICATIONS TO THE ENGINEER'S ATTENTION PRIOR TO BEGINNING WORK.

BASIS OF BEARINGS:

THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 29 TOWNSHIP 6 SOUTH, RANGE 66 WEST, 6TH P.M. BEARING SOUTH 89°15'13" WEST AS SHOWN ON FINAL PLAT DOUGLAS 234 FILING NO. 1.

BENCHMARK

BENCHMARK IS BY GPS OBSERVATION NAVD 88. SET SITE BENCHMARK AT NORTHWEST CORNER OF INLET ON CHAMBERS RD. APPROXIMATELY 200'+/- NORTH OF HESS RD.



Know what's below. Call before you dig.

CONTACT LIST

PARKER PUBLIC WORKS: 20120 E MAINSTREET, PARKER, CO 80138. STREETS - MIKE WAUGH. STORM WATER - JACOB JAMES. 303-840-9546

TOWN OF PARKER POLICE DEPARTMENT: 196000 E PARKER SQUARE DR., PARKER, CO 80134. 303-841-9800

PARKER WATER AND SANITATION DISTRICT: 18100 E. WOODMAN DR., PARKER, CO 80134. 303-841-4627

FIRE & LIFE SAFETY: RANDALL CAPRA, 20120 E. MAINSTREET, CENTENNIAL, CO 80138. 303-205-3169

UTILITY NOTIFICATION COMPANY OF COLORADO: 2801 S. YOUNGFIELD ST. SUITE 301, GOLDEN, CO 80401. LOCAL CALLS. 800-922-1987 (811)

XCEL ENERGY: MICHELLE O'NAN, 5909 E. 38TH AVE., DENVER, CO 80207. 303-329-1618

COMCAST: KEVIN YOUNG, 6859 S. TUCSON WAY, ENGLEWOOD, CO 80112. 720-490-3867

CENTURY LINK: WILLIAM BENSON, 9750 E. COSTILLA AVE., ENGLEWOOD, CO 80220. 303-792-6069

COLORADO DEPARTMENT OF HEALTH: 4210 E. 11TH AVE., DENVER, CO. 303-320-8333

INTERMOUNTAIN RURAL ELECTRIC ASSOCIATION: JASON JENKS, 5496 NORTH US HWY 85, P.O. BOX DRAWER A, SEDALIA, CO 80135. 303-688-3100

MILE HIGH FLOOD DISTRICT (MHFD): MIKE SARMENTO, 2480 W 26TH AVE. SUITE 156-B, DENVER, CO 80211. 303-455-6277

SHORT ELLIOTT HENDRICKSON, INC: TIM NUETZEL, 2000 SOUTH COLORADO BOULEVARD, TOWER ONE, SUITE 60000, DENVER, CO 80222. 720-540-6800

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 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 NFPA 24 WHEN SUBMITTING FOR REVIEW.)

WATER/SANITARY SEWER APPROVAL

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 SCHEDULING 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 \_\_\_\_\_

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**PARKER WATER & SANITATION DISTRICT GENERAL NOTES**

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST VERSION.
2. THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES AND THE TOWN OF PARKER, DOUGLAS COUNTY AND OTHER NEIGHBORING CITIES AND TOWNS 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 THE CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS CONTACT THE PWSD IMMEDIATELY.
4. PWSD ENGINEER AND OTHER APPROVING AGENCIES ARE TO BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS 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 "AS-BUILT" DRAWINGS AND ELECTRONIC FILES TO THE DISTRICT ENGINEER FOR APPROVAL BY DISTRICT. AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT ENGINEER, FULL SIZE PRINTS SHALL BE TRANSMITTED TO THE PWSD OFFICE.
8. 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. 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. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SERVICE SEWERS  
"V" FOR WATER SERVICES
13. NO TREES ALLOWED IN EASEMENTS OR WITHIN 8' OF WATER OR SANITARY SEWER MAINS IN RIGHT OF WAY.
14. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PWSD AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSD SPECIFICATION MANUAL.

**PARKER WATER & SANITATION DISTRICT WATER NOTES**

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISION.
2. ALL WATER MAINS SHALL BE PER PWSD MATERIALS SPECIFICATIONS. ALL MATERIALS IN CONTACT WITH POTABLE WATER SHALL BE SUITABLE FOR CHLORINATED AND CHLORAMINATED WATER.
3. ALL BENDS, PLUGS, REDUCERS, AND FIRE HYDRANTS TO BE RODDED OR MEGA-LUGGED. ALL FITTINGS SHALL BE WRAPPED PER PWSD 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 PER PWSD SPECIFICATIONS.
6. ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFFS, AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST WITH 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.
8. VALVES IN STREETS ARE TO BE LOCATED AT PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES; WHERE AN ADDITIONAL VALVE SHALL BE PLACED ON THE TAPPING TEE. OTHER LOCATIONS SHOWN ON THE PLANS.
9. WHEN NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSING, A MINIMUM CLEARANCE OF 1.5 FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES.
10. THE CONTRACTOR SHALL NOTIFY THE PWSD 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.
11. PIPE BEDDING SHALL BE A CLEAN, WELL-GRADED SAND OR SQUEEGEE SAND IN ACCORDANCE WITH PWSD STANDARDS AND SPECIFICATIONS, LATEST REVISION.
12. THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINE 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.
13. 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.
14. 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, DESIGN ENGINEER, AND REPRESENTATIVE OF OTHER APPROVING AGENCIES.
15. CHLORINATION AND FLUSHING: ALL WATER MAINS SHALL BE INSTALLED AND CHLORINATED PER PWSD SPECIFICATIONS. CHLORINATION OF FINISHED PIPELINE COMPLETED BEFORE HYDROSTATIC TESTING.
16. HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE PWSD SPECIFICATIONS UP TO MINIMUM OF 150 PSI IN THE PRESENCE OF A PWSD INSPECTOR/ENGINEER.

**PARKER WATER & SANITATION DISTRICT SANITARY SEWER NOTES**

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST VERSION.
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 PWSD 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. ALL MANHOLES SHALL HAVE SHAPED INVERTS.
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. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PWSD AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSD SPECIFICATION MANUAL.
12. ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE PWSD STANDARDS AND SPECIFICATIONS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
13. PRIOR TO STARTING WORK WHERE SEWER MAIN IS TO BE CONNECTED TO EXISTING PWSD 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 PROBATIONARY ACCEPTANCE BY PWSD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN INSTRUCTED BY THE DISTRICT.
14. PRIOR TO PROBATIONARY ACCEPTANCE WALK-THROUGH, THE CONTRACTOR SHALL JET CLEAN THE ENTIRE SANITARY SEWER SYSTEM AND PUMP OUT AT THE PLUGGED MANHOLE.



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NEW HORIZON ACADEMY -  
DOUGLAS 234 FILING, NO. 6  
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SEH Project: NHOC 156217  
Checked By: DRH  
Drawn By: AMP

Project Status: CONSTRUCTION SET  
Issue Date: 6/25/2021

Rev. #	Description	Date

GENERAL NOTES

U0.1

**GENERAL UTILITY NOTES**

- ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE PARKER WATER & SANITATION DISTRICT STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS THROUGH THE COLORADO ONE CALL SERVICE PRIOR TO CONSTRUCTION.
- CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.
- ANY DEVIATIONS FROM THE LOCATIONS SHOWN ON THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- COMPLETE WORK UNDER SLICEROO DRIVE PRIOR TO ROAD IMPROVEMENTS BEING CONSTRUCTED. OTHERWISE LIMIT DISTURBANCE AND REPLACE ALL DAMAGED IMPROVEMENTS TO MATCH EXISTING.
- CONTRACTOR TO COORDINATE WITH PRIVATE UTILITY PROVIDERS (CABLE TELEVISION, TELEPHONE, GAS, ELECTRIC) REGARDING ROUTING AND SLEEVE REQUIREMENTS PRIOR TO CONSTRUCTION.
- REFER TO ELECTRICAL DRAWINGS FOR ALL ON-SITE ELECTRICAL LINE ROUTING.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO SUBSTANTIAL COMPLETION.
- ALL NEW UNDERGROUND FACILITIES, INCLUDING LATERALS UP TO THE BUILDING BEING SERVED, MUST BE ELECTRONICALLY LOCATABLE WHEN INSTALLED.

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**TOWN OF PARKER APPROVAL**  
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.

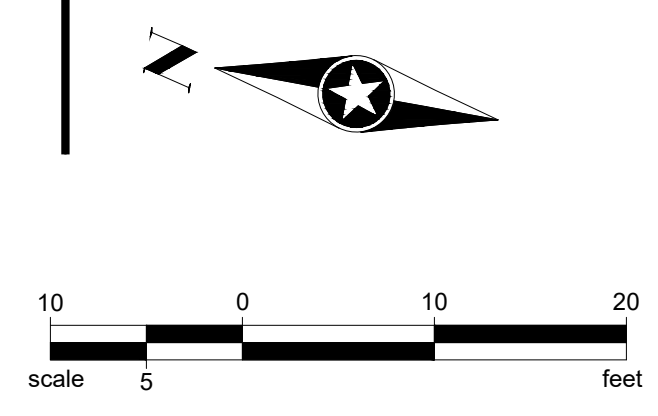
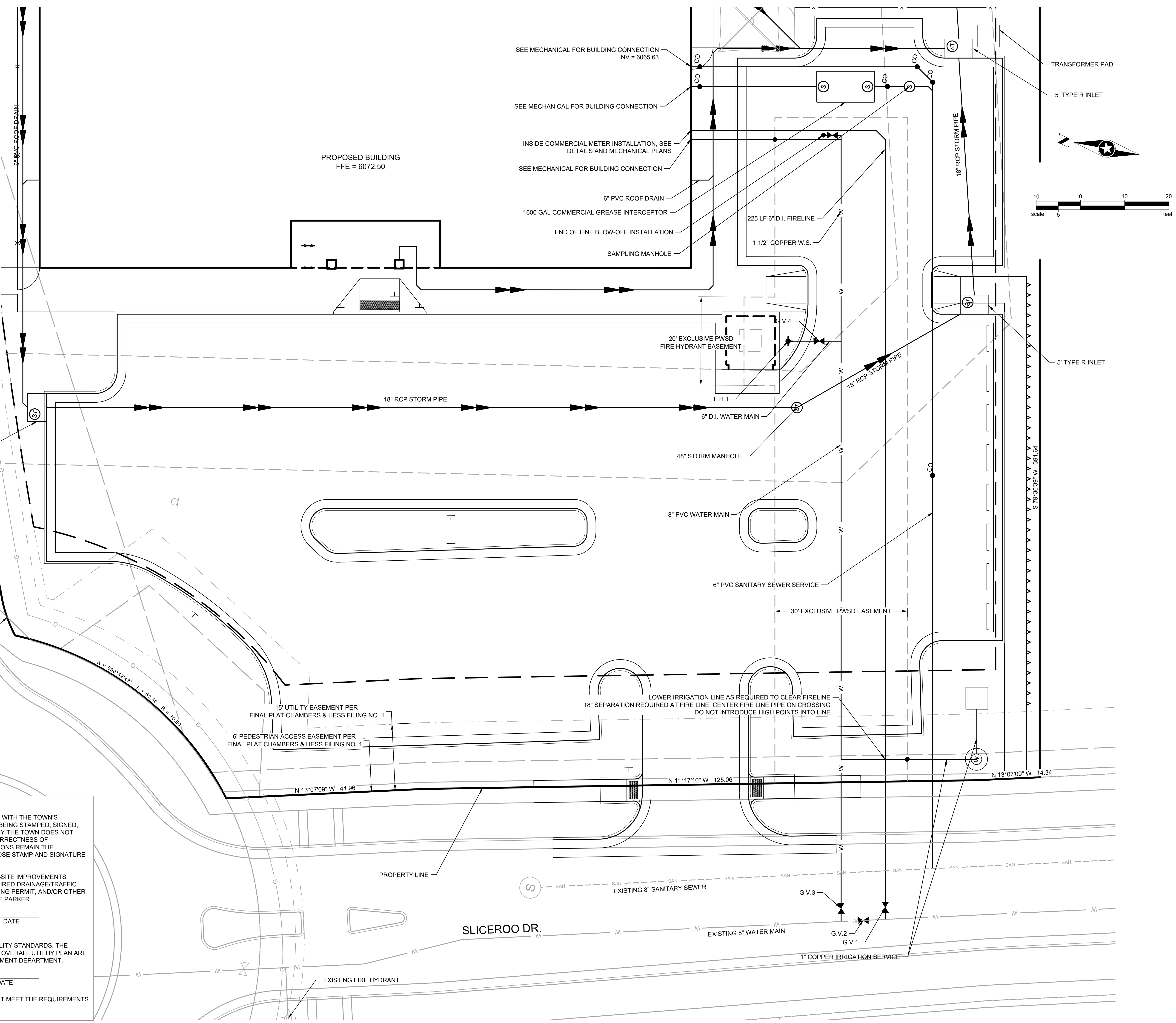
THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF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

TOWN OF PARKER, DIRECTOR OF ENGINEERING/PUBLIC WORKS	DATE

**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 TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

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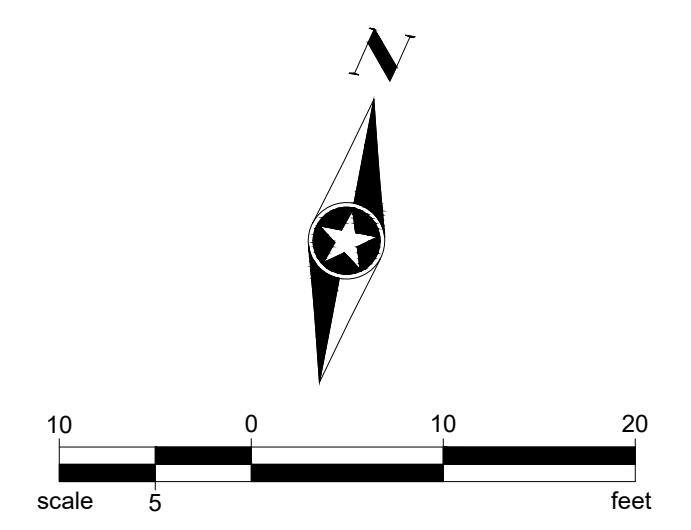
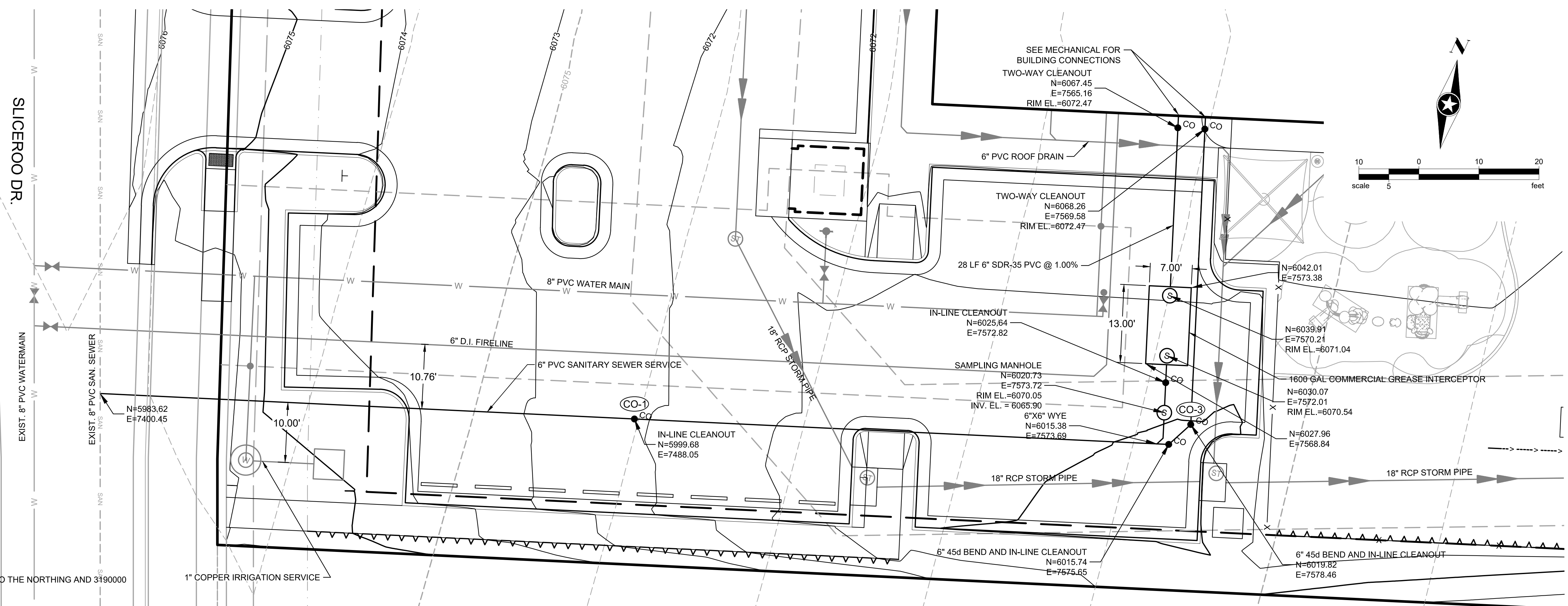
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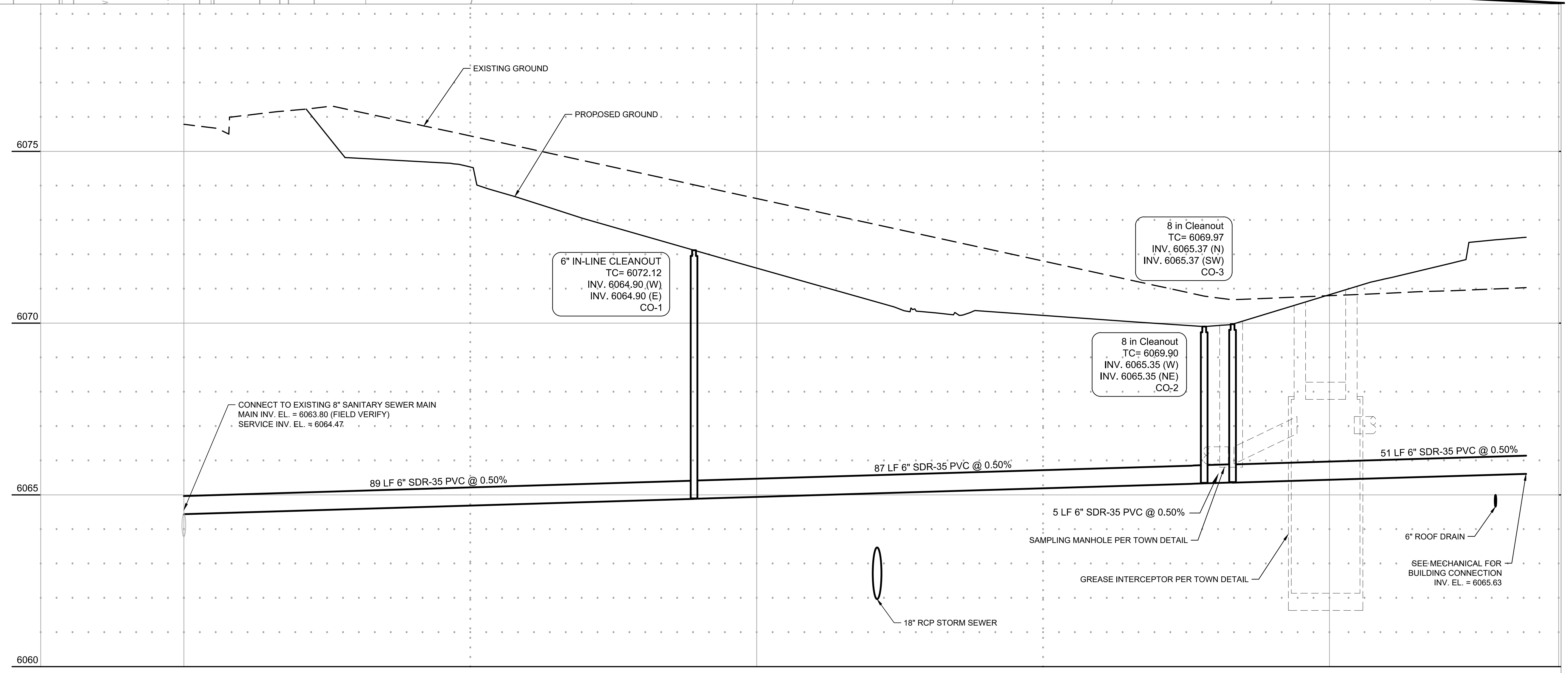
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NOTE:  
COORDINATES HAVE BEEN TRUNCATED. ADD 1600000 TO THE NORthing AND 3190000 TO THE EASTING TO OBTAIN TRUE VALUE.



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**NEW HORIZON ACADEMY - DOUGLAS 234 FILING, NO. 6**  
PARKER, CO

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SEH Project: NHOC 156217  
Checked By: DRH  
Drawn By: AMP

Project Status: CONSTRUCTION SET  
Issue Date: 6/25/2021

Rev. #	Description	Date

SANITARY SERVICE PLAN & PROFILE

U1.1



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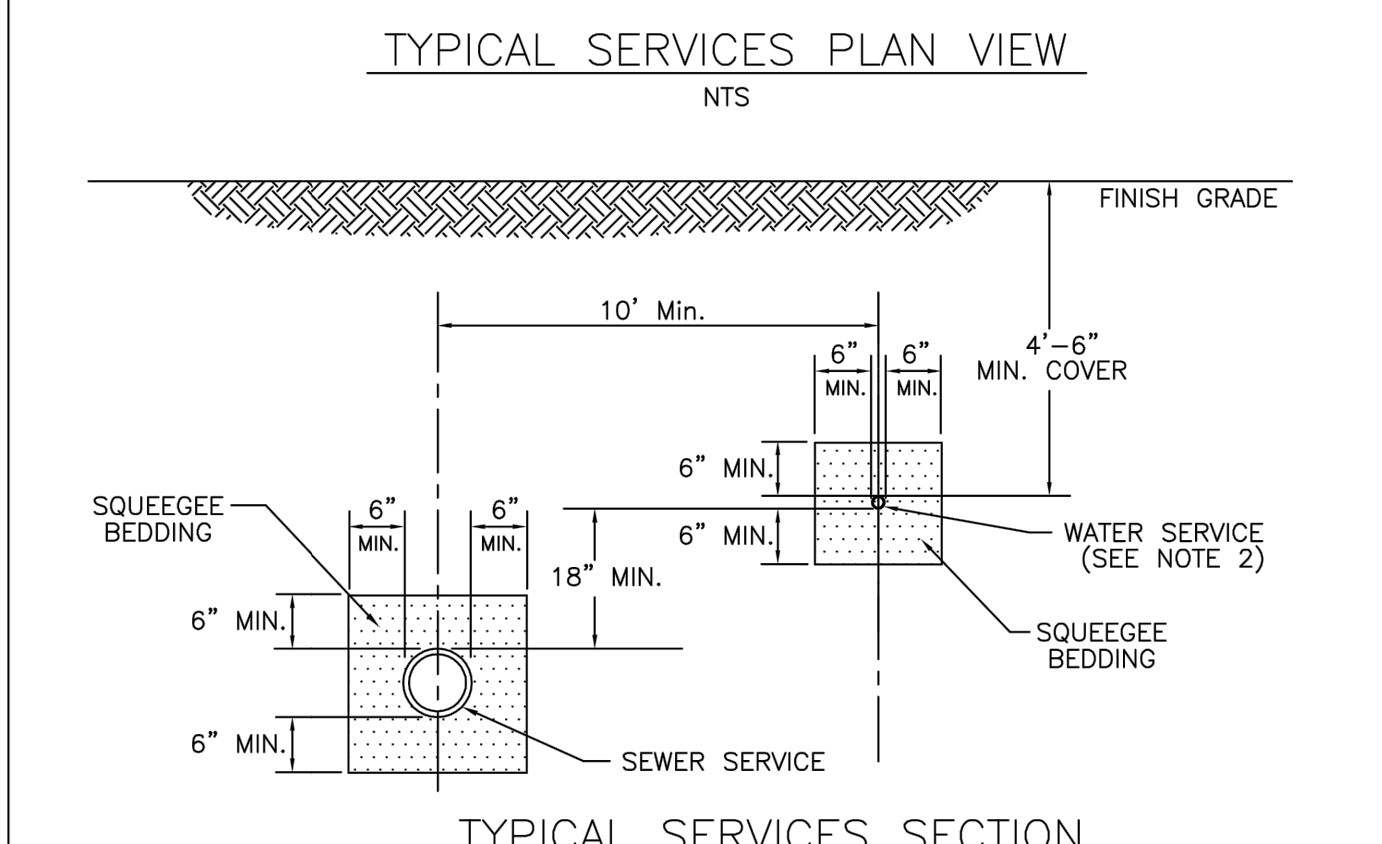
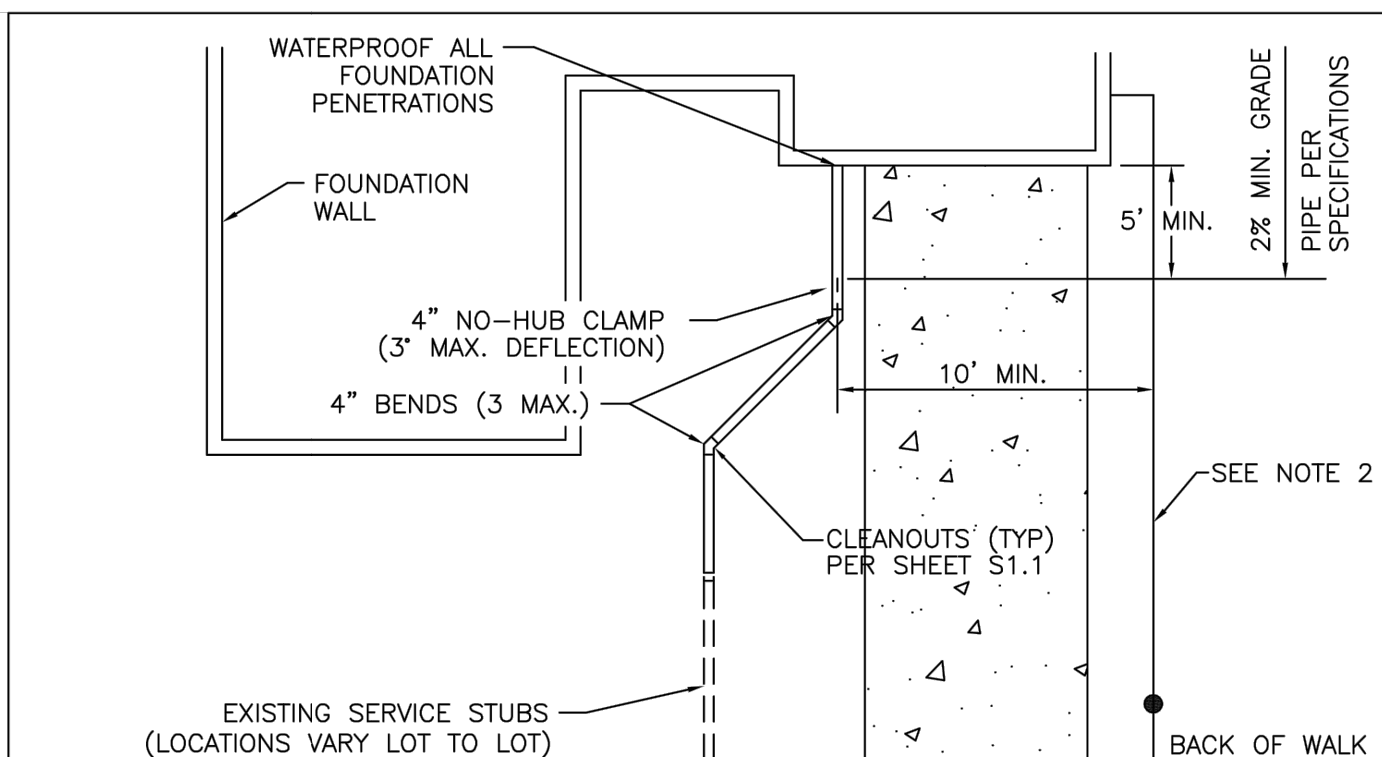
**INSPECTION POLICY:**

- ALL SERVICE INSPECTIONS MUST BE SCHEDULED WITH THE DISTRICT OFFICE AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
- IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTE 1 ABOVE AND A RE-INSPECTION FEE CHARGED.
- 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.
- 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.
- ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
- LOTS WITHOUT BUILDING ADDRESSES OR LOT AND BLOCK NUMBERS BEFORE DISTRICT INSPECTION OR METER SET WILL FAIL AUTOMATICALLY.
- CONTRACTOR MUST BE PRESENT AT TIME OF INSPECTION UNLESS COORDINATED WITH DISTRICT INSPECTOR.

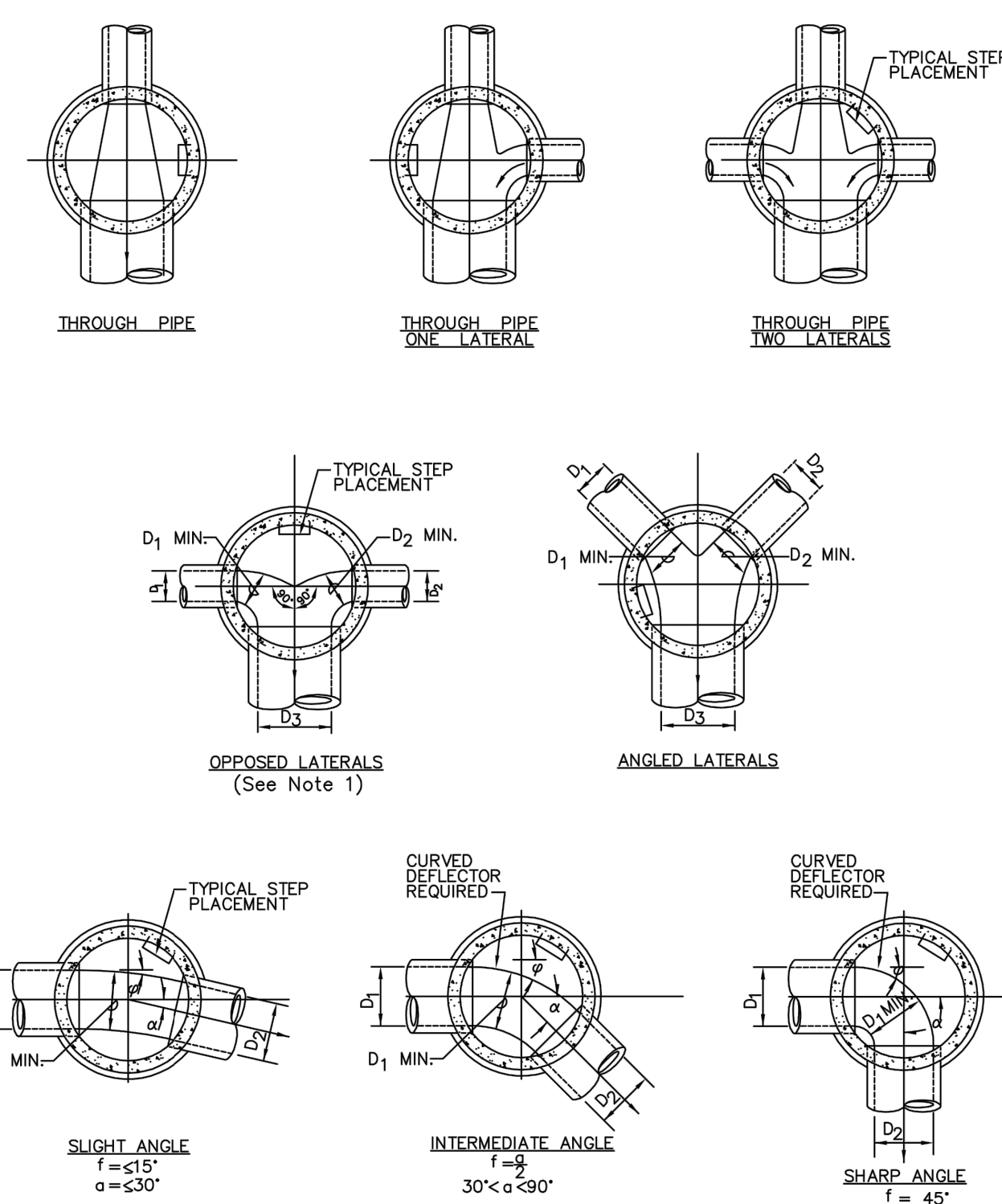
**INSTALLATION NOTES:**

- SEWER**
- ACCEPTABLE PIPE MATERIALS ARE TO BE SDR 35 PVC PIPE, ABS PIPE AND PVC SCHD 40 PIPE. APPROVED BEDDING IS TO BE SQUEEGEE.
  - NO-HUB CLAMPS SHALL BE USED TO JOIN 2 MALE PIPE ENDS WITH A MAXIMUM DEFLECTION OF 3".
  - MINIMUM GRADE SHALL BE 2%.
  - INSTALLATION SHALL INCLUDE NO MORE THAN 3 BENDS. 90° BENDS ARE NOT ALLOWED. SOLVENT WELDED PIPE WILL NOT BE ALLOWED.
  - CLEAN-OUTS SHALL BE INSTALLED AT 100' INTERVALS AND EVERY CHANGE IN DIRECTION. CLEAN-OUTS ARE NOT REQUIRED FOR SERVICES LESS THAN 100' UNLESS THERE ARE CHANGES IN DIRECTION. PROVIDE DUAL CLEAN-OUT WITHIN 5 FEET OF FOUNDATION.
  - STRESSING OF THE PIPE BETWEEN FITTINGS WILL NOT BE ALLOWED.
  - SEWER SERVICE LINE SHALL NOT BE LOCATED UNDER CONCRETE SURFACE.
  - ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SEWER SERVICE  
"V" FOR WATER SERVICES

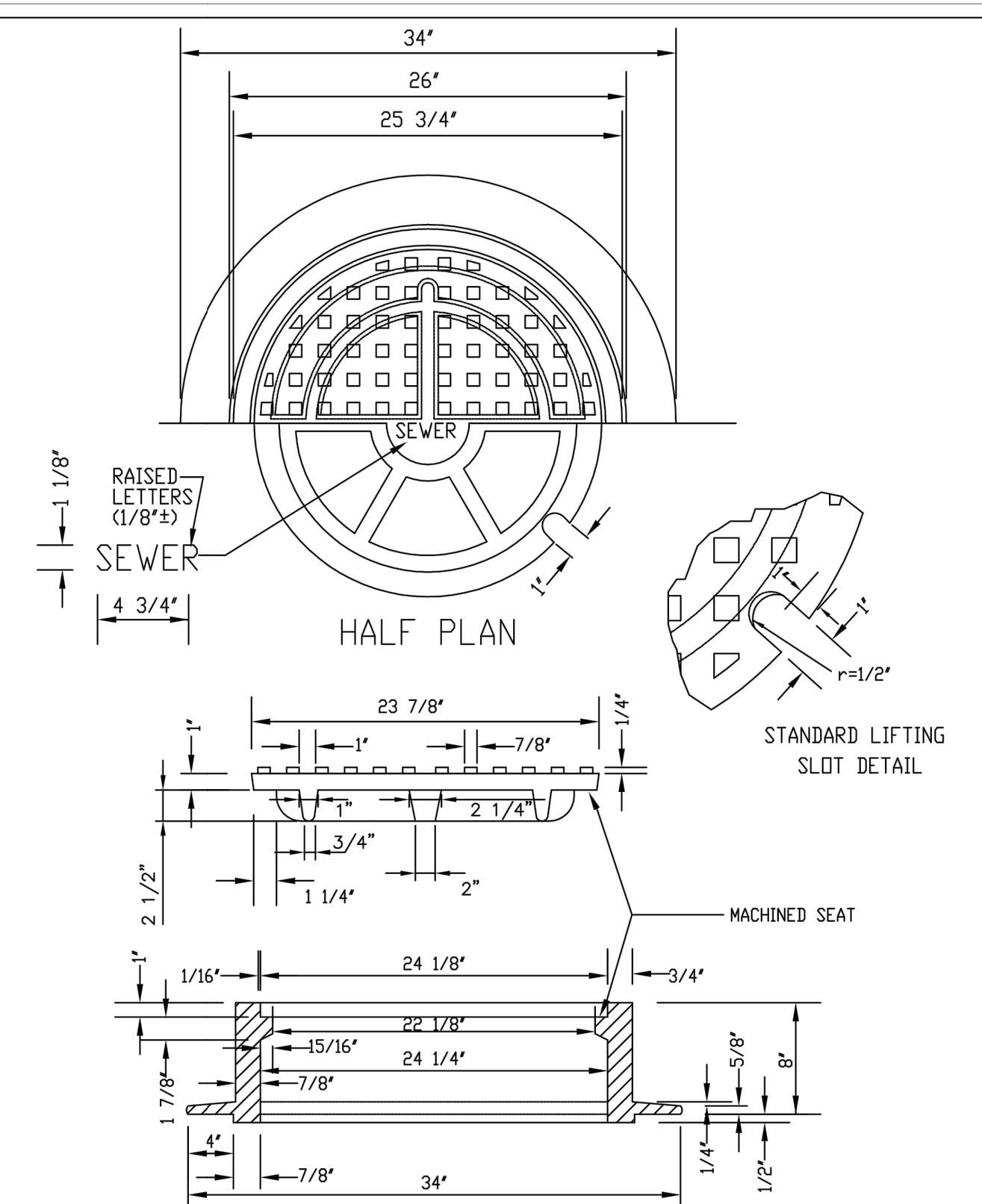
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>DISTRICT POLICIES &amp; INSTALLATION NOTES FOR SEWER SERVICES</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	01/02 10/16 1/08 1/16
DIRECTOR OF ENGINEERING	



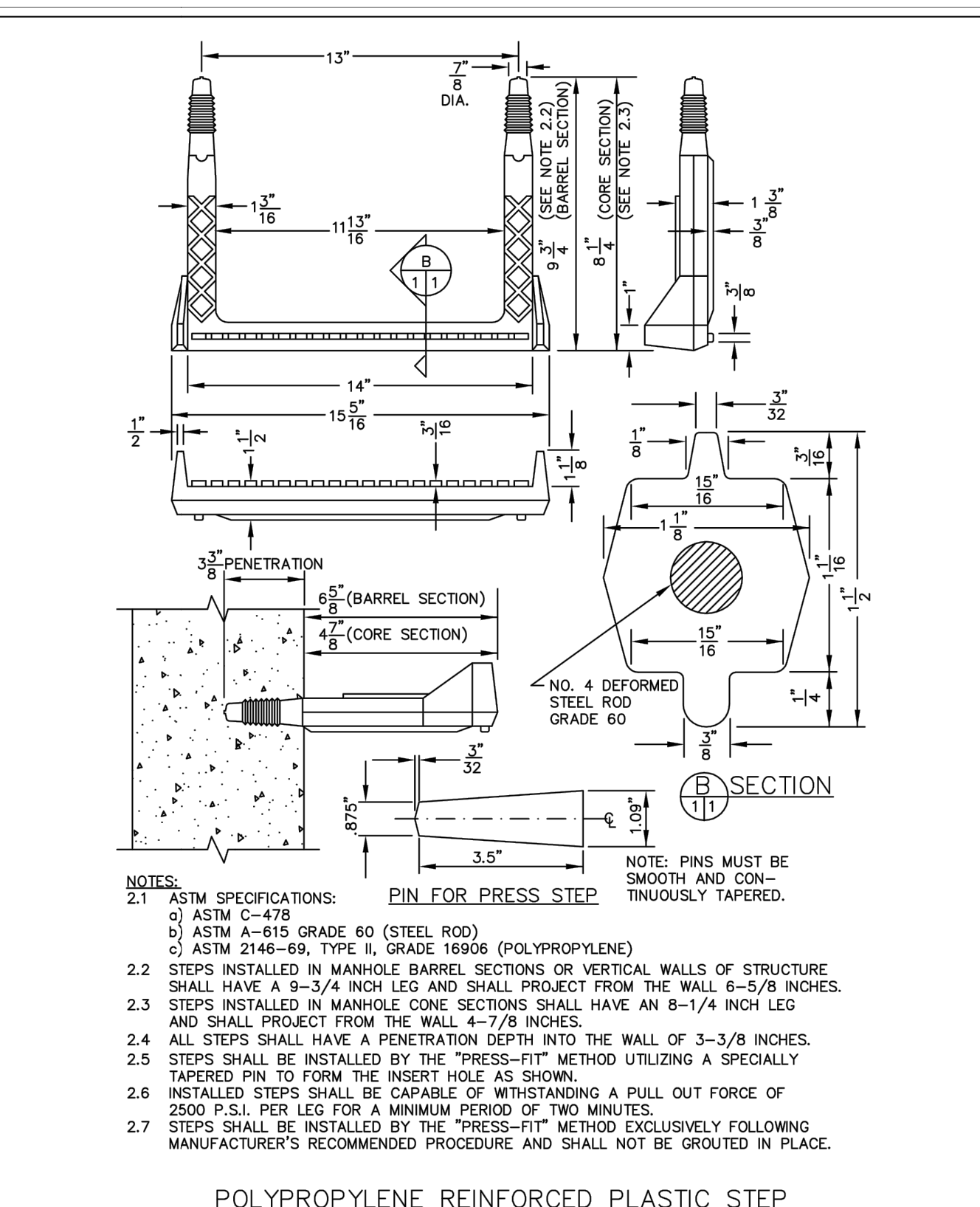
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>TYPICAL SEWER SERVICES</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	2/00 01/02 01/16 10/16
DIRECTOR OF ENGINEERING	



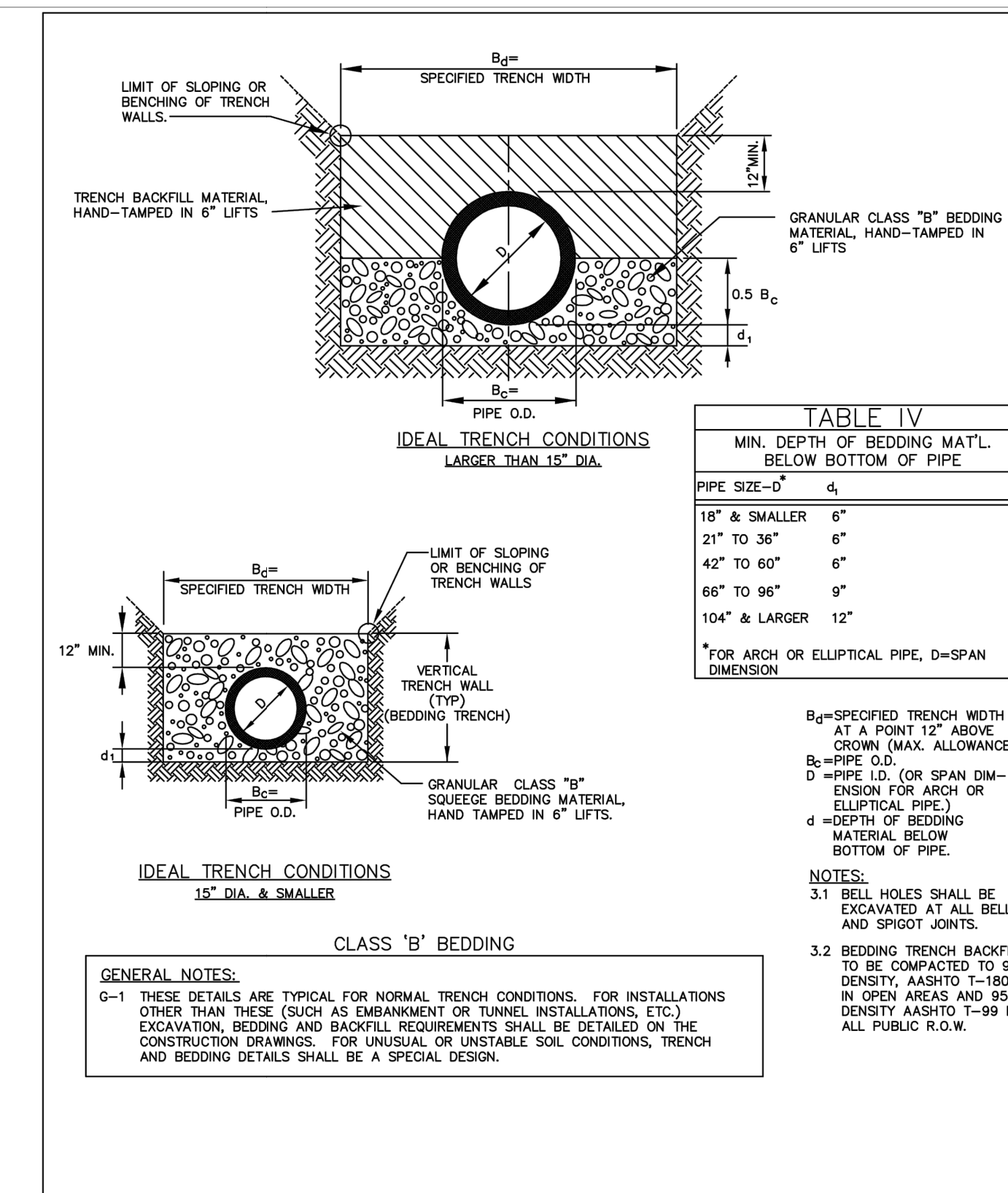
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<b>TYPICAL BASE CHANNELIZATION DETAILS</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	01/16 10/16
DIRECTOR OF ENGINEERING	



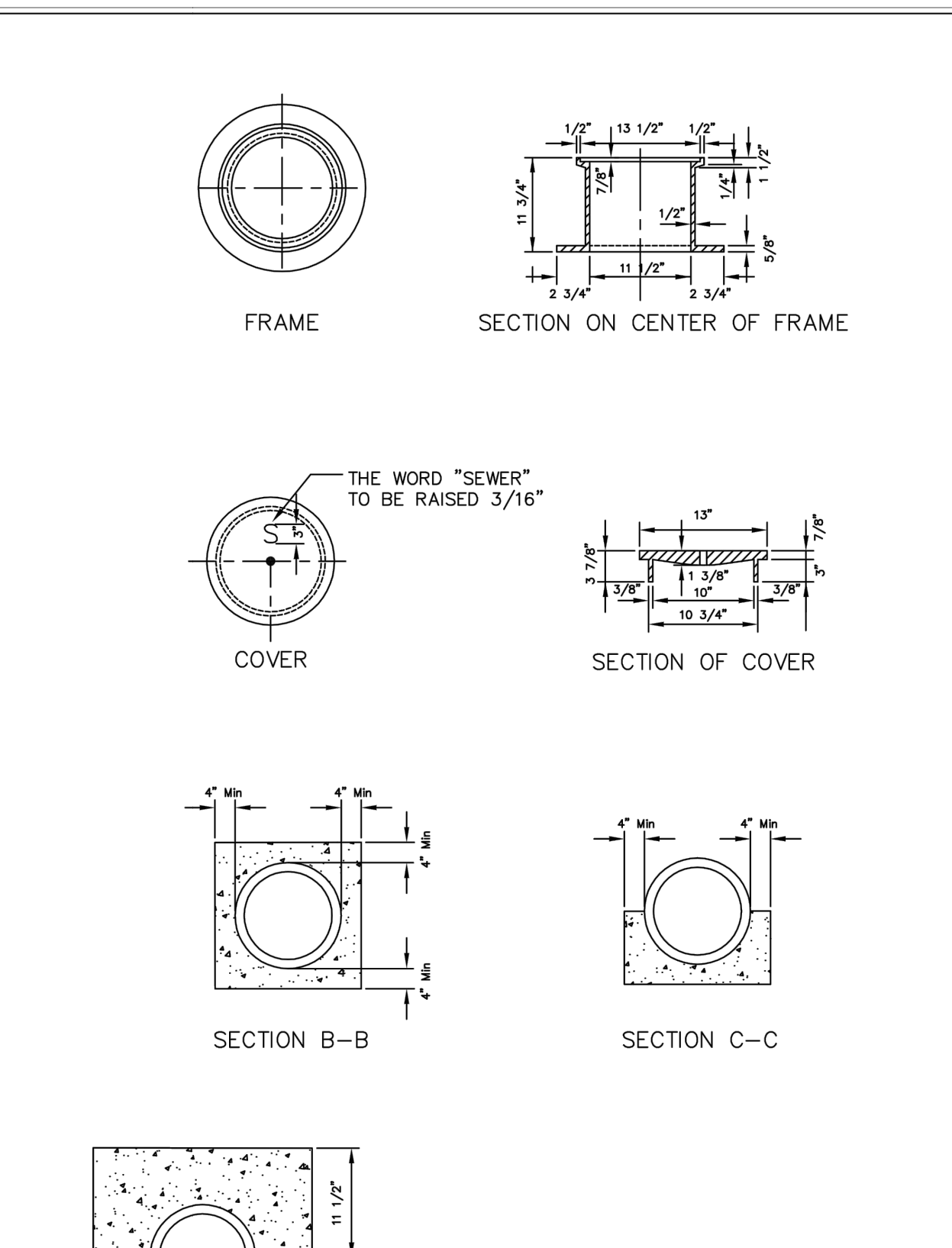
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>24\"/&gt; </b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	01/16 10/16
DIRECTOR OF ENGINEERING	



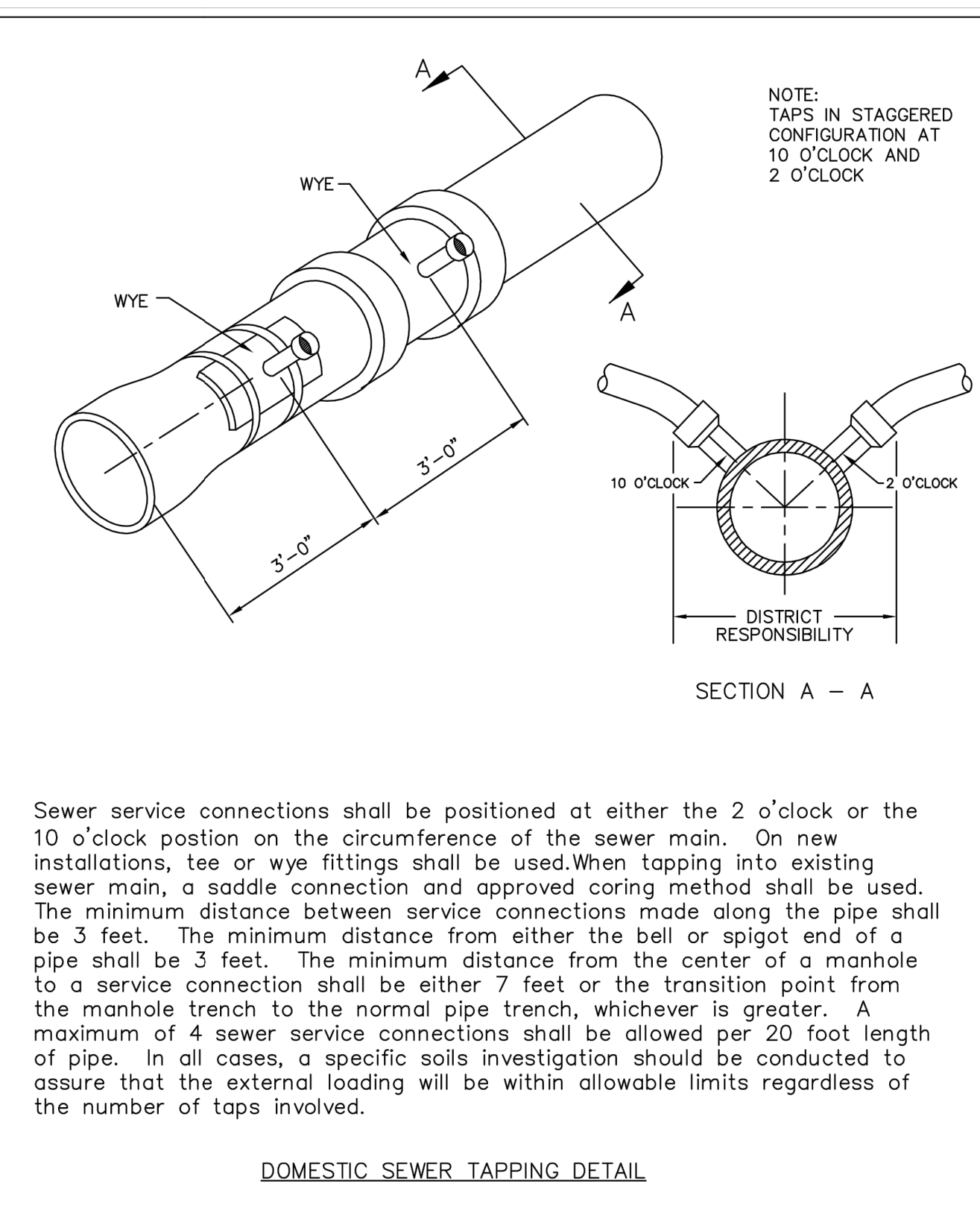
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>POLYPROPYLENE REINFORCED PLASTIC MANHOLE STEP</b>	
SCALE: NONE	DATE: 2/00
APPROVED: PVR	01/16 10/16
DIRECTOR OF ENGINEERING	



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>TRENCHING AND BEDDING CLASS \"/&gt; </b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	5/98 2/00 1/16 10/16
DIRECTOR OF ENGINEERING	



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>IN-LINE CLEANOUT SECTIONS</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	2/00 1/08 1/16 10/16
DIRECTOR OF ENGINEERING	



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>DOMESTIC SEWER TAPPING DETAIL</b>	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	4/01 1/08 1/16 10/16
DIRECTOR OF ENGINEERING	

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NEW HORIZON ACADEMY - DOUGLAS 234 FILING, NO. 6 PARKER, CO

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SEH Project: NHOAC 156217  
Checked By: DRH  
Drawn By: AMP

Project Status: CONSTRUCTION SET  
Issue Date: 6/25/2021

Revision Issue

Rev. # Description Date

Revision Issue

Rev. # Description Date

SANITARY SEWER DETAILS

Revision Issue

Rev. # Description Date

Revision Issue

Rev. # Description Date

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**NEW HORIZON ACADEMY -  
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PARKER, CO**

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SEH Project Checked By Drawn By

Project Status Construction Set

Issue Date 6/25/2021

Revision Issue

Rev. # Description Date

**SANITARY DETAILS**

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**SADDLE CONNECTION**

**SIDE VIEW**

**SECTION QUADRANT 1 SHOWN**

**Y - SADDLE DETAIL**

**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 1/16 10/16

DIRECTOR OF ENGINEERING SHEET S4.14

**PLAN**

**SECTION**

**CAPACITY CHART**

TOTAL WATER CAP. APPROX. (GALLONS)	GREASE CAP. APPROX. (CU. FT.)	DIMENSIONS (INCHES)				
		W	L	A	B	C
1190	61	72	96	64	32	40
1600	84	72	144	96	48	40
1840	103	72	144	96	48	46
2080	117	72	144	96	48	52
2560	150	72	144	96	48	64
3040	183	72	144	96	48	76
3280	202	72	144	96	48	82
3520	216	72	144	96	48	88

**PARKER WATER & SANITATION DISTRICT**  
**COMMERCIAL GREASE INTERCEPTOR**

SHEET 1 OF 2

SCALE: NONE DATE: 2/98

APPROVED: PVR 2/00 01/02 01/16 10/16

DIRECTOR OF ENGINEERING SHEET S5.1

**PLAN**

**SECTION**

**CAPACITY CHART**

TOTAL WATER CAP. APPROX. (GALLONS)	GREASE CAP. APPROX. (CU. FT.)	DIMENSIONS (INCHES)				
		W	L	A	B	C
1190	61	72	96	64	32	40
1600	84	72	144	96	48	40
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3040	183	72	144	96	48	76
3280	202	72	144	96	48	82
3520	216	72	144	96	48	88

**PARKER WATER & SANITATION DISTRICT**  
**COMMERCIAL GREASE INTERCEPTOR**

SHEET 2 OF 2

SCALE: NONE DATE: 2/98

APPROVED: PVR 01/02 01/16 10/16

DIRECTOR OF ENGINEERING SHEET S5.2

**SECTION**

**PARKER WATER & SANITATION DISTRICT**  
**SAMPLING MANHOLE**

SCALE: NONE DATE: 2/98

APPROVED: PVR 2/00 10/16 4/01 1/08 1/16

DIRECTOR OF ENGINEERING SHEET S5.3

**NOTES:**

- RING/COVER AND CHIMNEY SHALL BE FULLY CENTERED ON CONCRETE RINGS W/RAMNECK.
- FLAT TOP SECTIONS MAY BE USED IN LIEU OF ECCENTRIC MANHOLES WHEN SPECIALLY APPROVED BY DISTRICT ENGINEER.
- FOR MANHOLE DEPTHS LESS THAN 4' FROM RIM TO TOP OF BENCH, VERTICAL MANHOLE BARRELS WITH PRECAST FLAT TOP SECTIONS ARE REQUIRED.
- ALL PRECAST MANHOLE SECTIONS, FLAT TOPS, BARRELS, REDUCERS, ETC. SHALL CONFORM TO ASTM C-478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE SECTIONS.
- FLAT TOPS SHALL BE CAPABLE OF WITHSTANDING H-20 LIVE LOADS.
- ALL INTERIOR SEAMS AND PIN HOLES SHALL BE GROUTED WITH TYPE II CEMENT MIX.
- SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING OR SHAPING CONCRETE BASE.
- MANHOLE STEPS SHALL NOT BE INSTALLED OVER THE FLOW CHANNEL. THEY SHALL BE PLACED 12" MINIMUM OR 16" MAXIMUM IN STRAIGHT VERTICAL ALIGNMENT WITH THE BOTTOM STEP 8" ABOVE THE BENCH MINIMUM.
- FLEXIBLE ASPHALTIC SEALANT (RAMNECK ETC.) IS REQUIRED IN SHRAPLAP JOINTS AND IN JOINTS BETWEEN BASE, BARREL SECTIONS, CONE SECTIONS, FLAT TOPS, ETC.
- DESIGN ENGINEER OR DISTRICT ENGINEER MAY INCREASE MANHOLE SIZE FOR SPECIAL DESIGN CONSIDERATIONS.
- SLIP-RING FRAME RISERS MAY NOT BE USED.
- STEPS TO DESCEND TO BENCH NOT CHANNEL.



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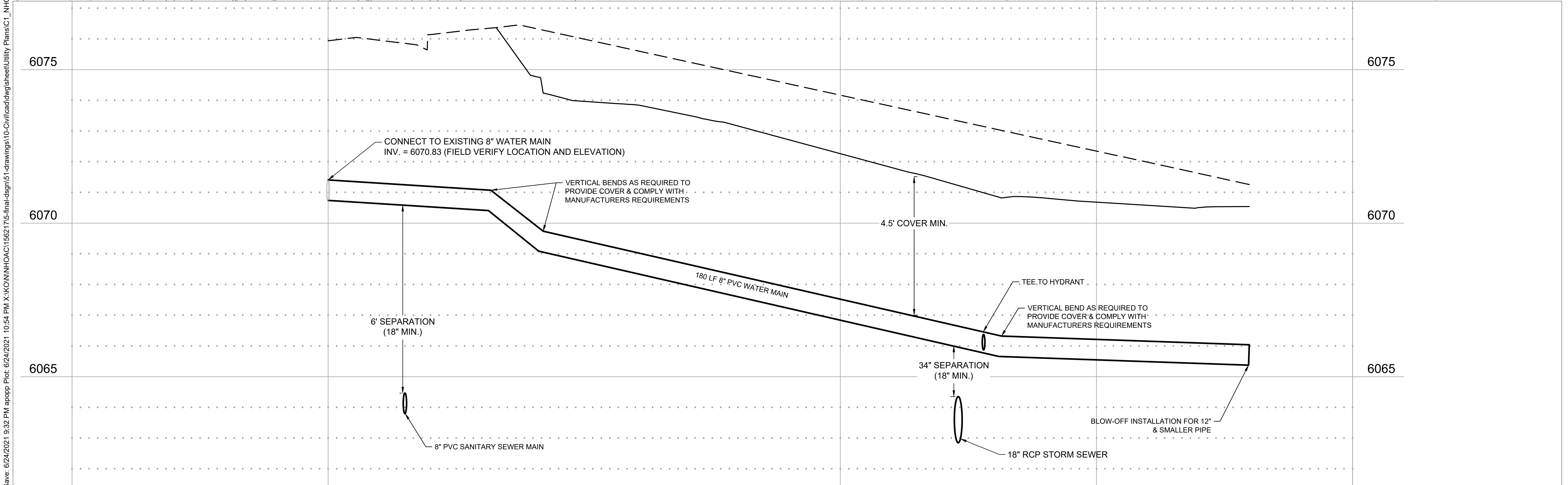
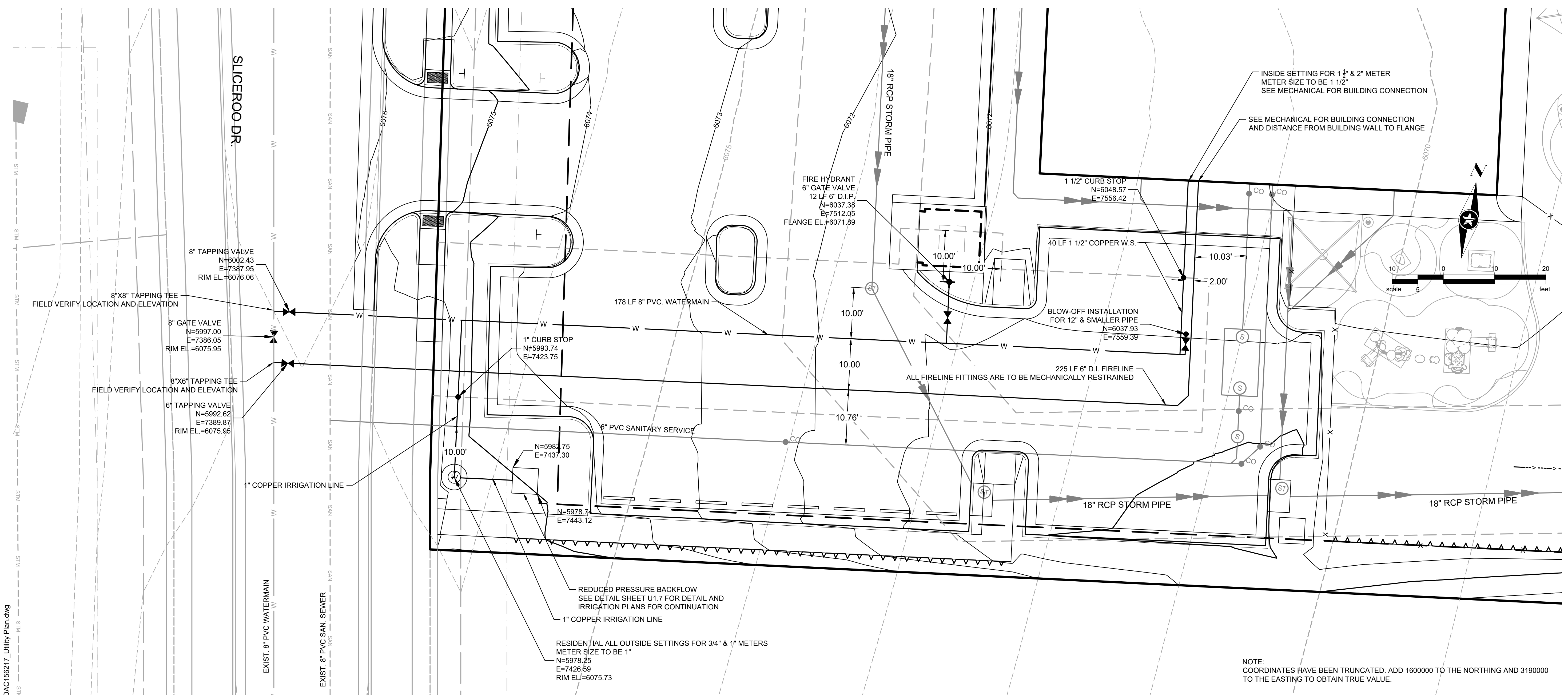
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**NEW HORIZON ACADEMY -  
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SEH Project: NHOAC 156217  
Checked By: DRH  
Drawn By: AMP

Project Status: CONSTRUCTION SET  
Issue Date: 6/25/2021

Rev. #	Description	Date

**WATER SERVICE PLAN &  
PROFILE**

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**INSPECTION POLICY:**

- ALL SERVICE INSPECTIONS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
- SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
- 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.
- 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.
- 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.
- ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
- LOTS WITHOUT BUILDING ADDRESSES BEFORE DISTRICT INSPECTION OR METER SET WILL FAIL AUTOMATICALLY.
- CONTRACTOR MUST BE PRESENT AT TIME OF INSPECTION, UNLESS COORDINATED WITH DISTRICT INSPECTOR.

**INSTALLATION NOTES:**

**WATER**

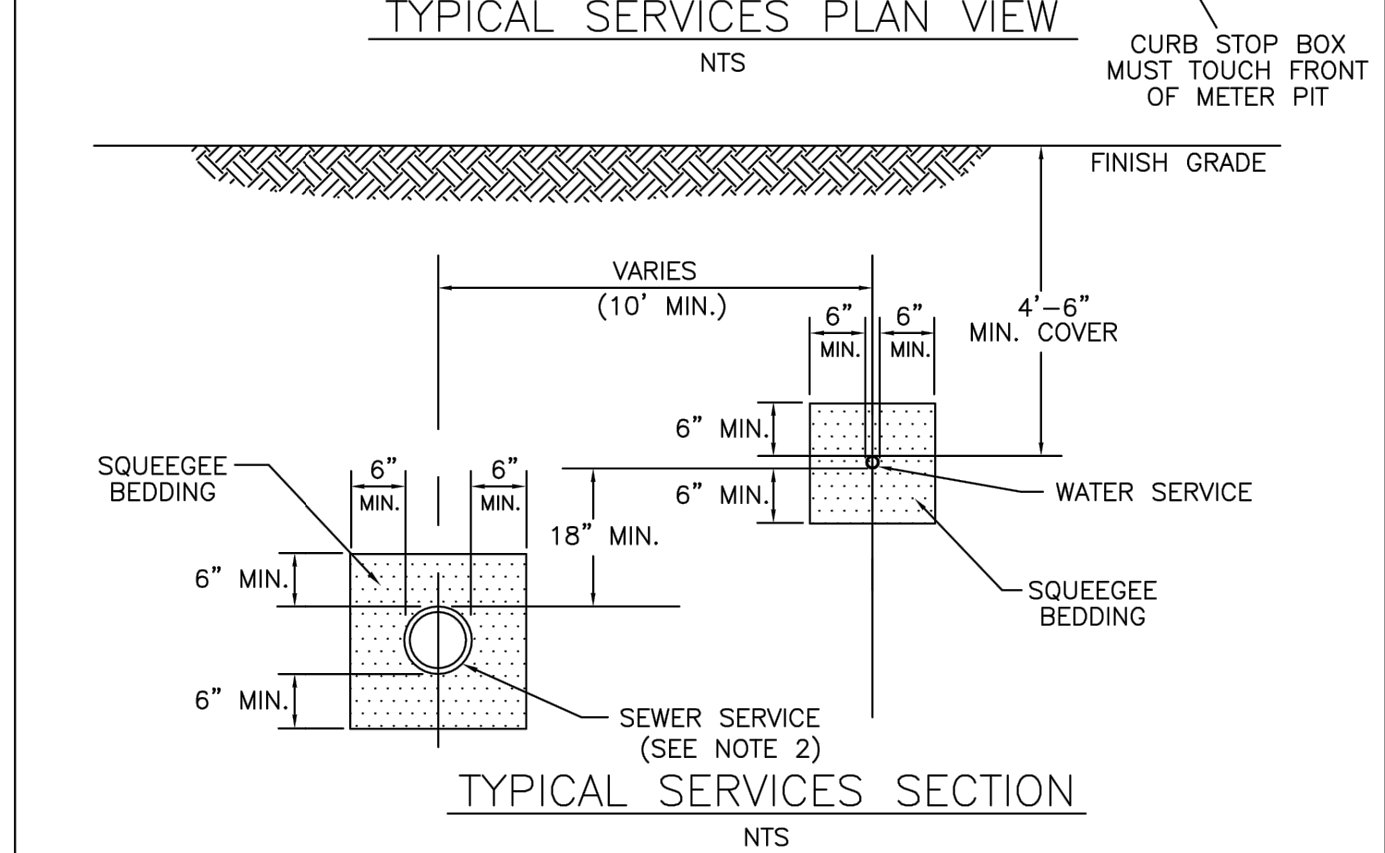
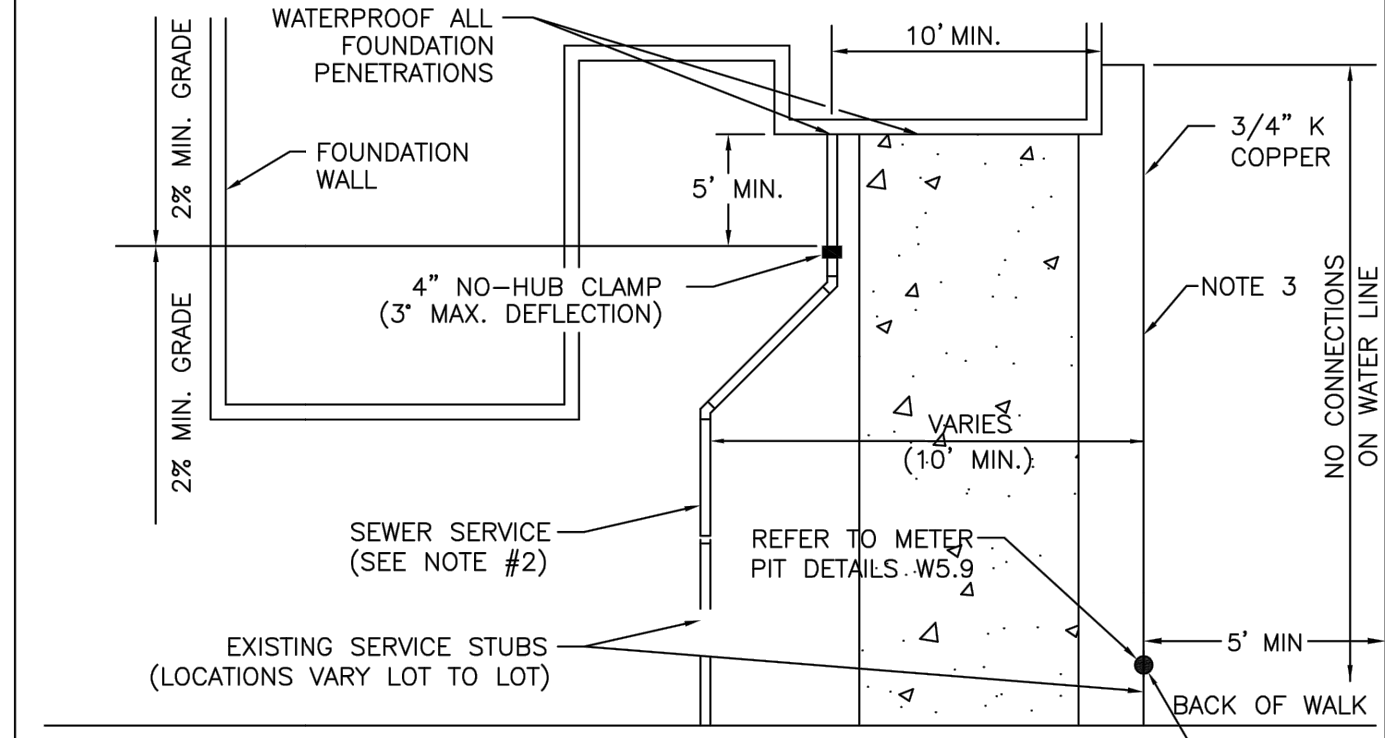
- ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING. (3/4" MIN.)
- APPROVED BEDDING TO BE SQUEEGEE.
- ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE SUB-IN AND BUILDING. COMPRESSION COUPLINGS WILL NOT BE ALLOWED ON NEW CONSTRUCTION. SILVER SOLDERED JOINTS MUST BE USED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PWS BEFORE BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.
- 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.
- WATER SERVICE FOUNDATION PENETRATIONS SHALL BE WATERPROOFED USING MASTIC OR OTHER APPROVED METHOD, CRAWL SPACE REQUIRES CONTINUOUS COPPER WITH A 1" BURY.
- 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.
- MOVED CURB BOXES MUST BE INSPECTED BY PWS BEFORE BURIAL.
- WATERLINE MUST BE ATTACHED TO A SUPPORT BOARD THAT IS MOUNTED TO THE WALL.
- NO VOIDS ALLOWED UNDER WATERLINES FROM STOP BOX TO FOUNDATION.
- CURBSTOP BOXES AND METER PITS CANNOT BE IN DRIVEWAYS.
- ONLY 3/4" (JUMPER) PIPES (RESIDENCES) ARE ALLOWED. (JUMPER) PIPES WILL BE REMOVED PRIOR TO METER SET DATE.
- ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SEWER SERVICE  
"V" FOR WATER SERVICES
- 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 PWS BEFORE BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.

**PARKER WATER & SANITATION DISTRICT**

**DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES**

SCALE: NONE	DATE: 2/96
APPROVED: PVR	1/04 1/16 10/16
DIRECTOR OF ENGINEERING	

SHEET W1.1

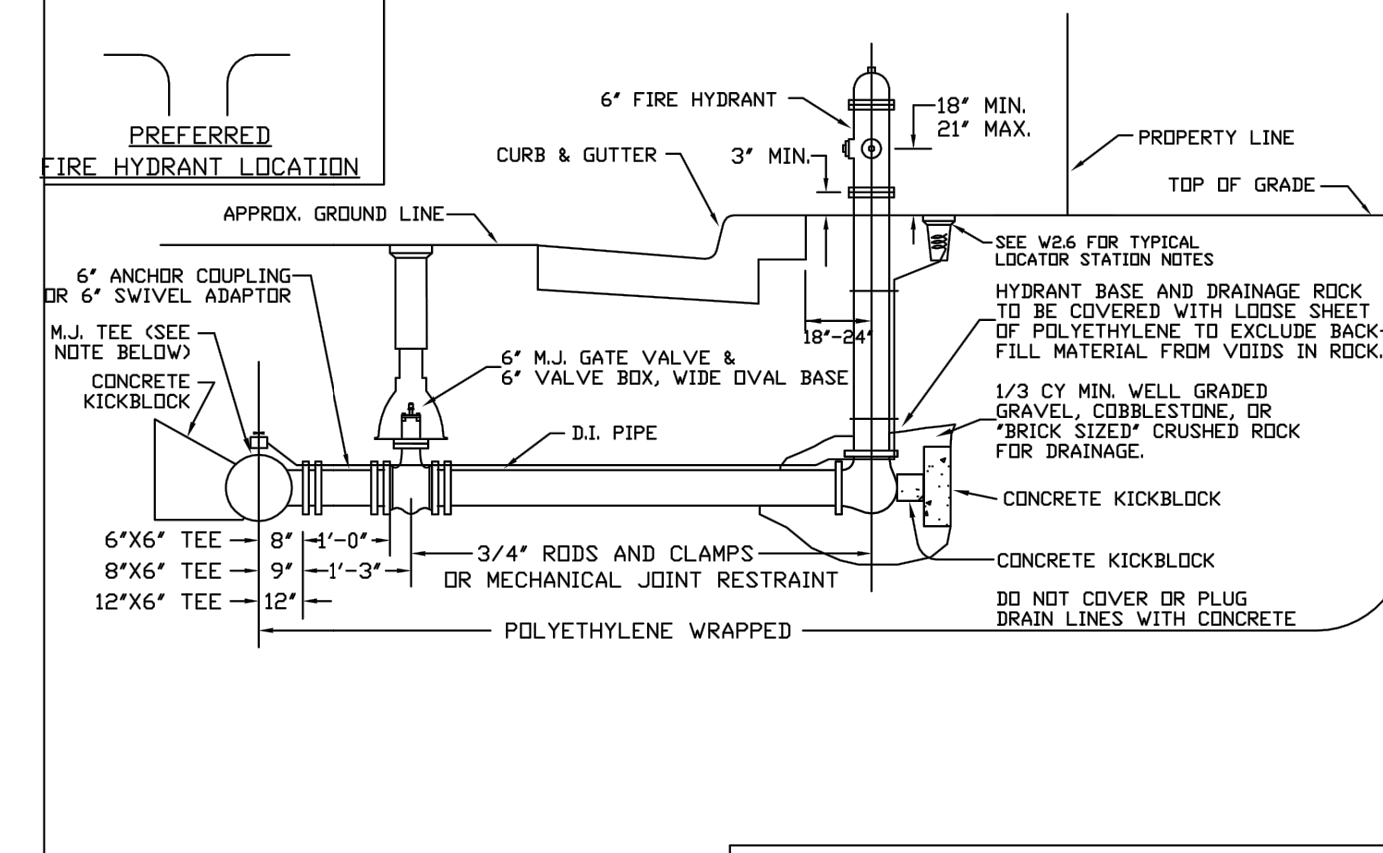
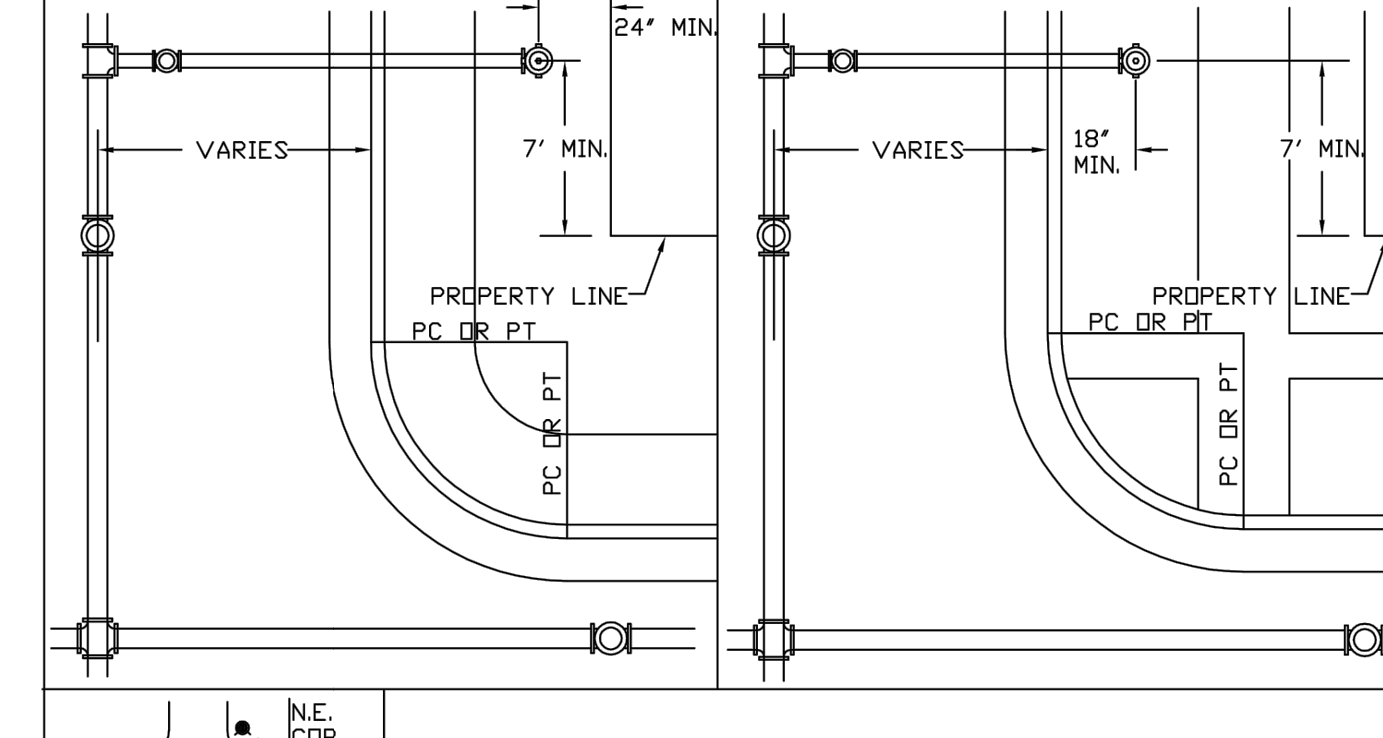


**PARKER WATER & SANITATION DISTRICT**

**TYPICAL WATER SERVICES**

SCALE: NONE	DATE: 2/96
APPROVED: PVR	1/04 10/16 06/05 12/07 1/16
DIRECTOR OF ENGINEERING	

SHEET W1.2

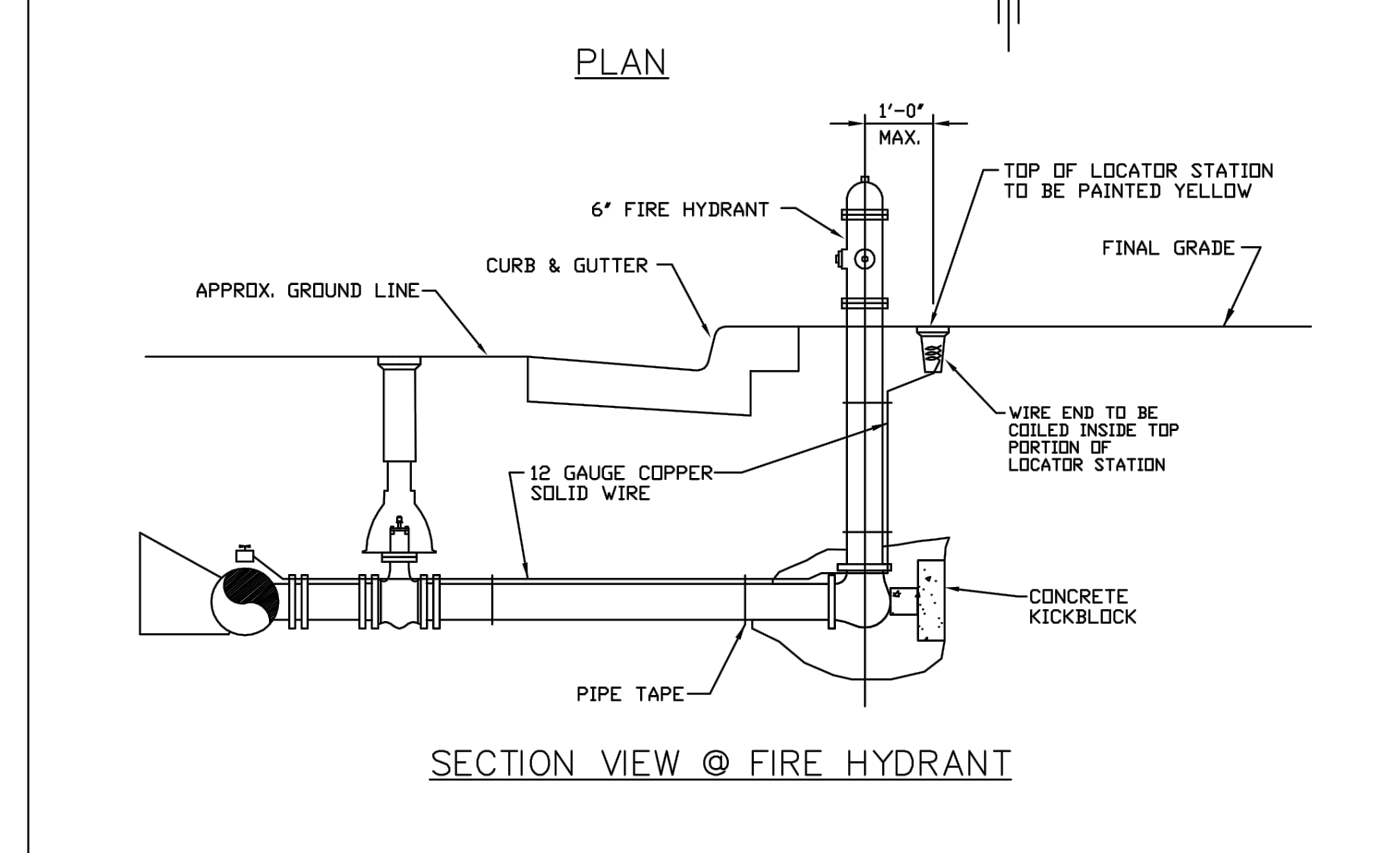
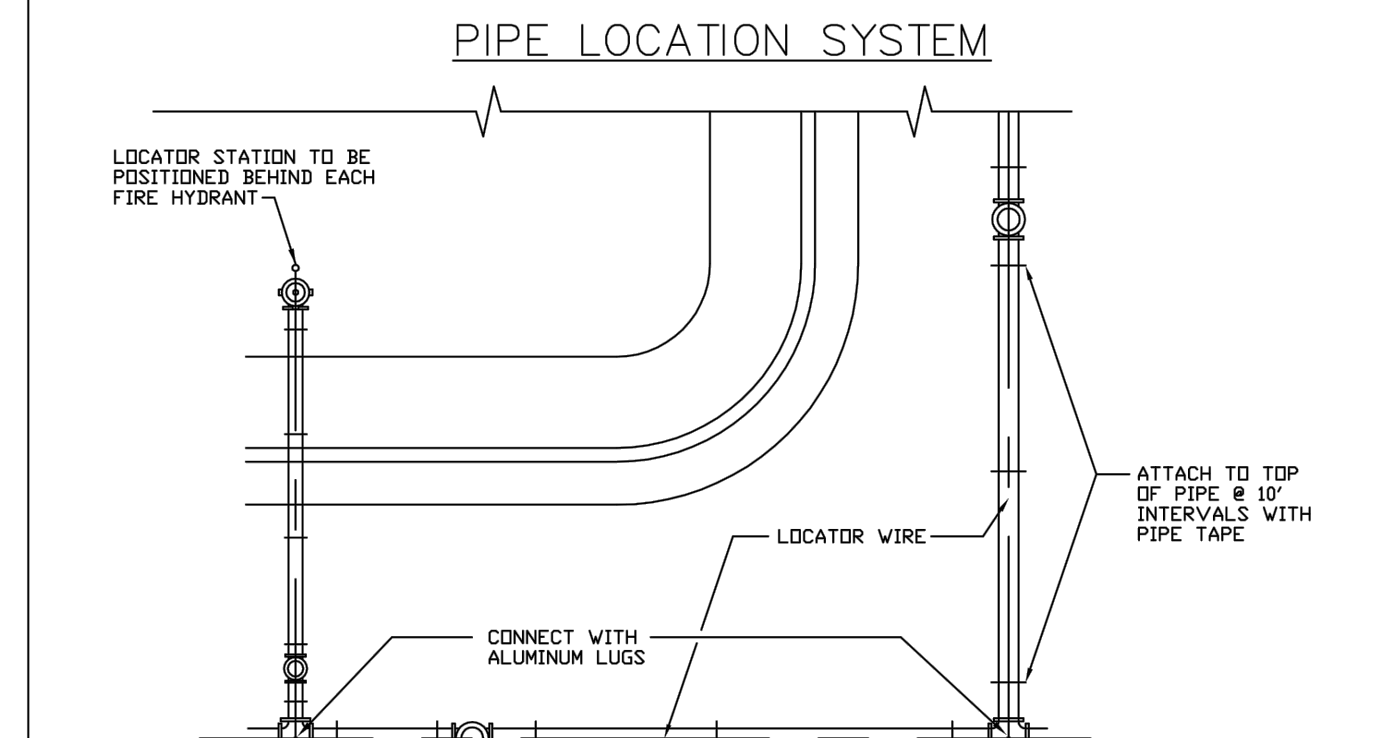


**PARKER WATER & SANITATION DISTRICT**

**FIRE HYDRANTS LOCATION & INSTALLATION**

SCALE: NONE	DATE: 2/96
APPROVED: PVR	4/01 10/16 01/02 12/07 1/16
DIRECTOR OF ENGINEERING	

SHEET W2.5

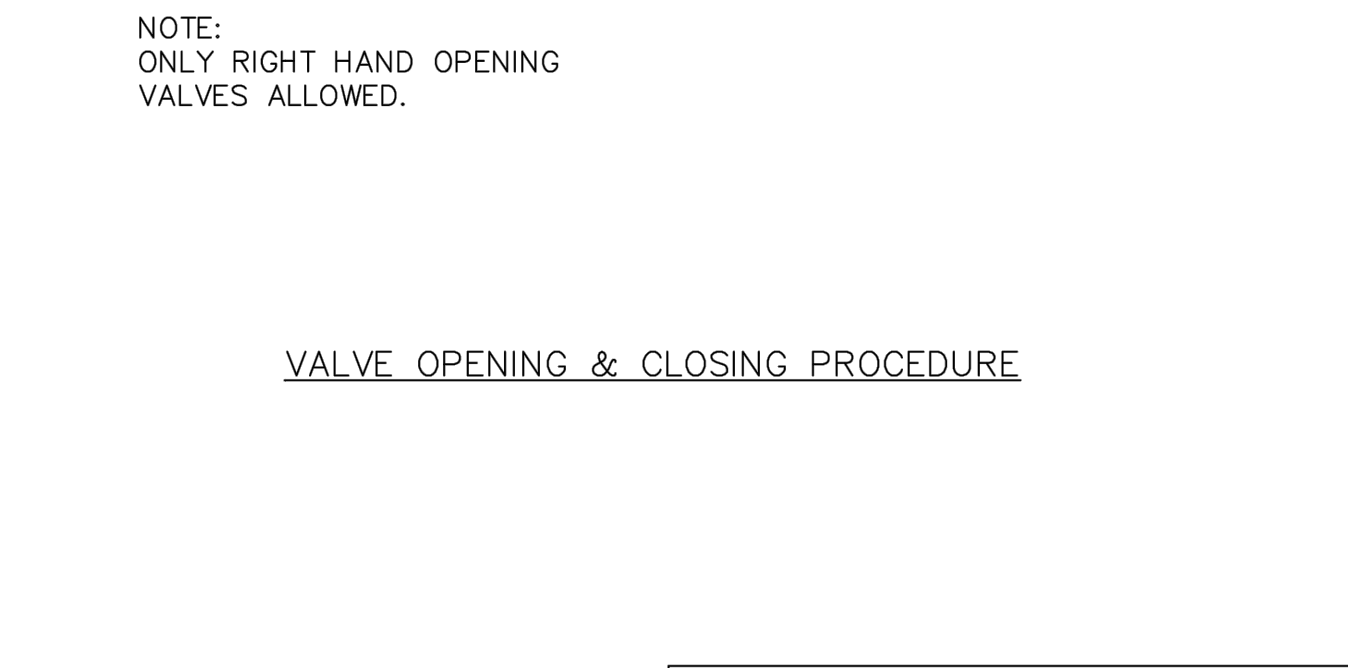
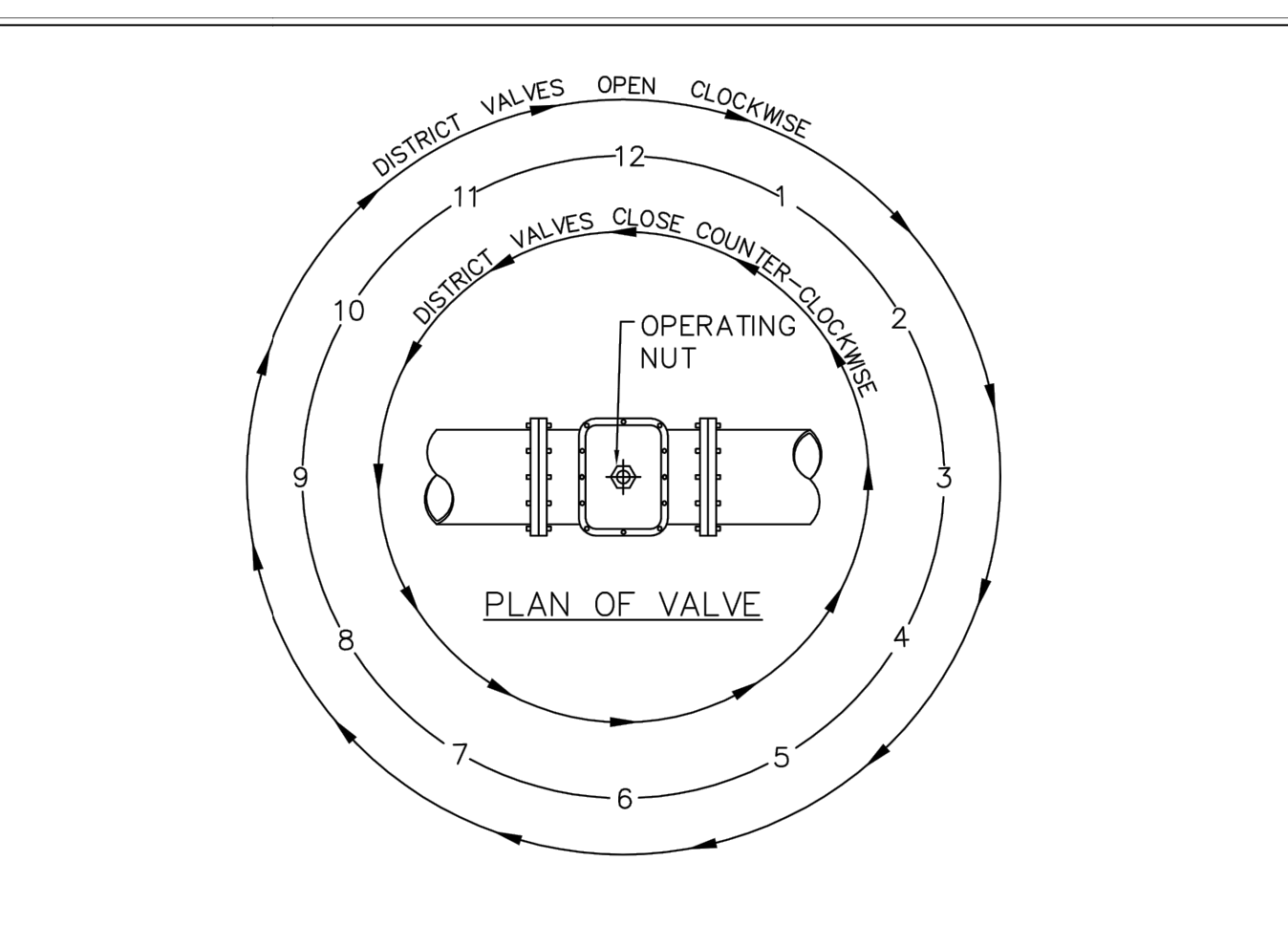


**PARKER WATER & SANITATION DISTRICT**

**LOCATOR WIRE DETAILS**

SCALE: NONE	DATE: 2/96
APPROVED: PVR	4/01 01/02 01/16 10/16
DIRECTOR OF ENGINEERING	

SHEET W2.6

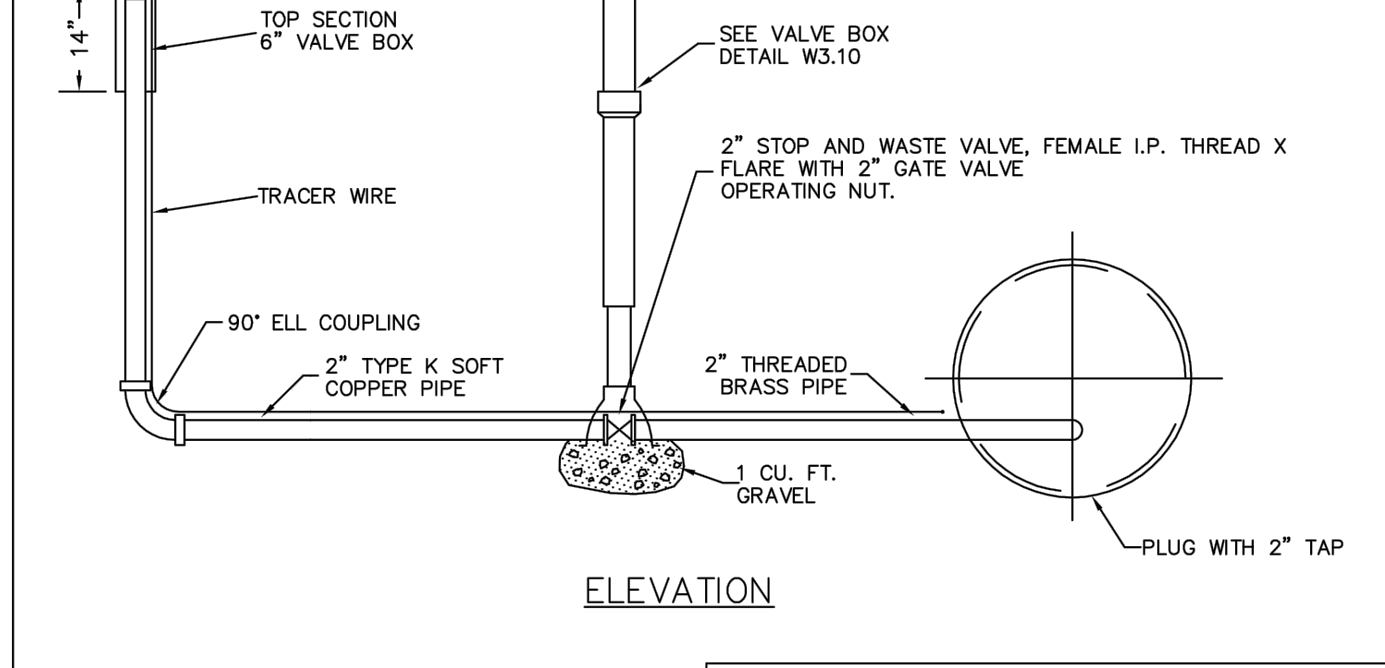
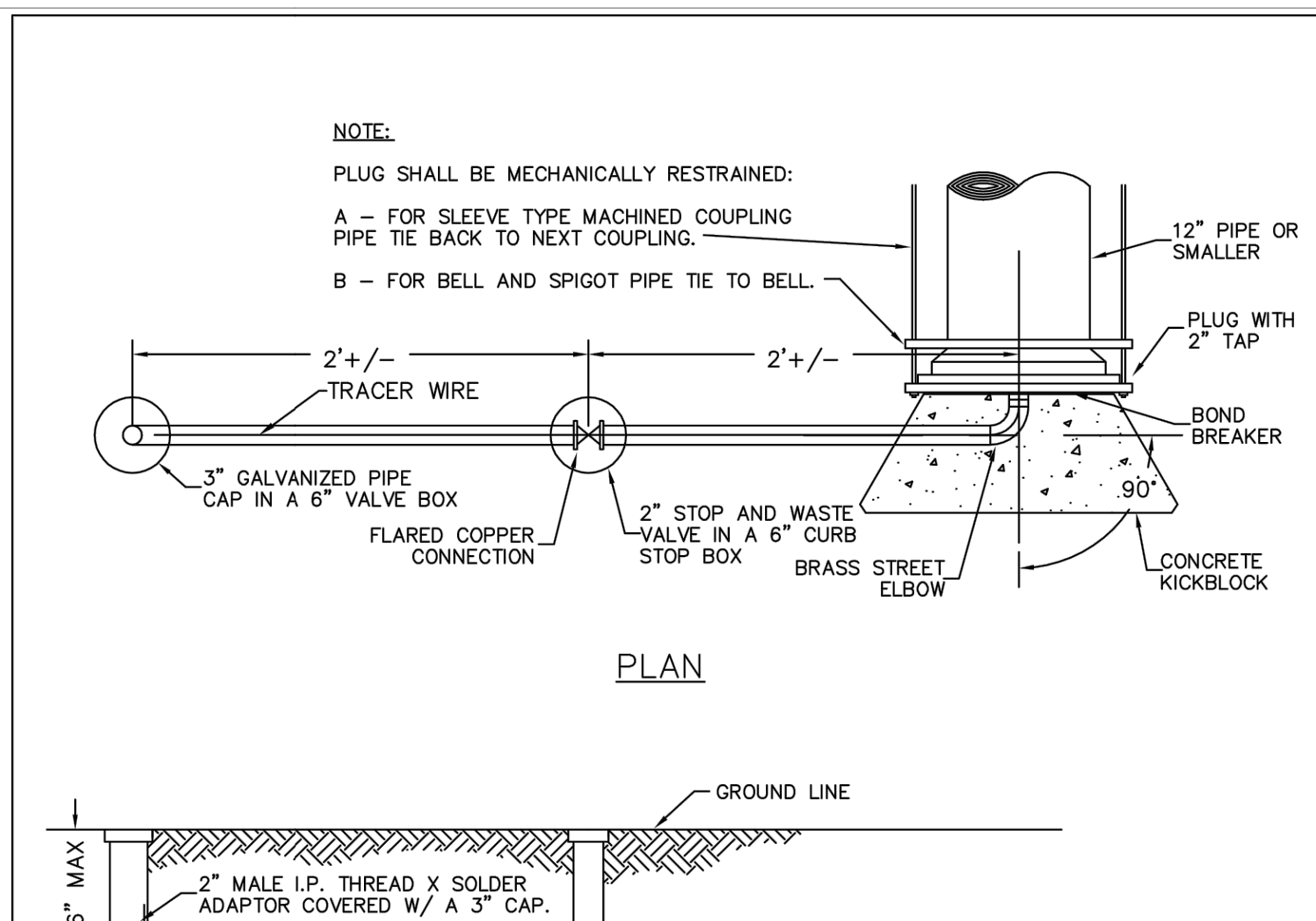


**PARKER WATER & SANITATION DISTRICT**

**VALVE OPERATION**

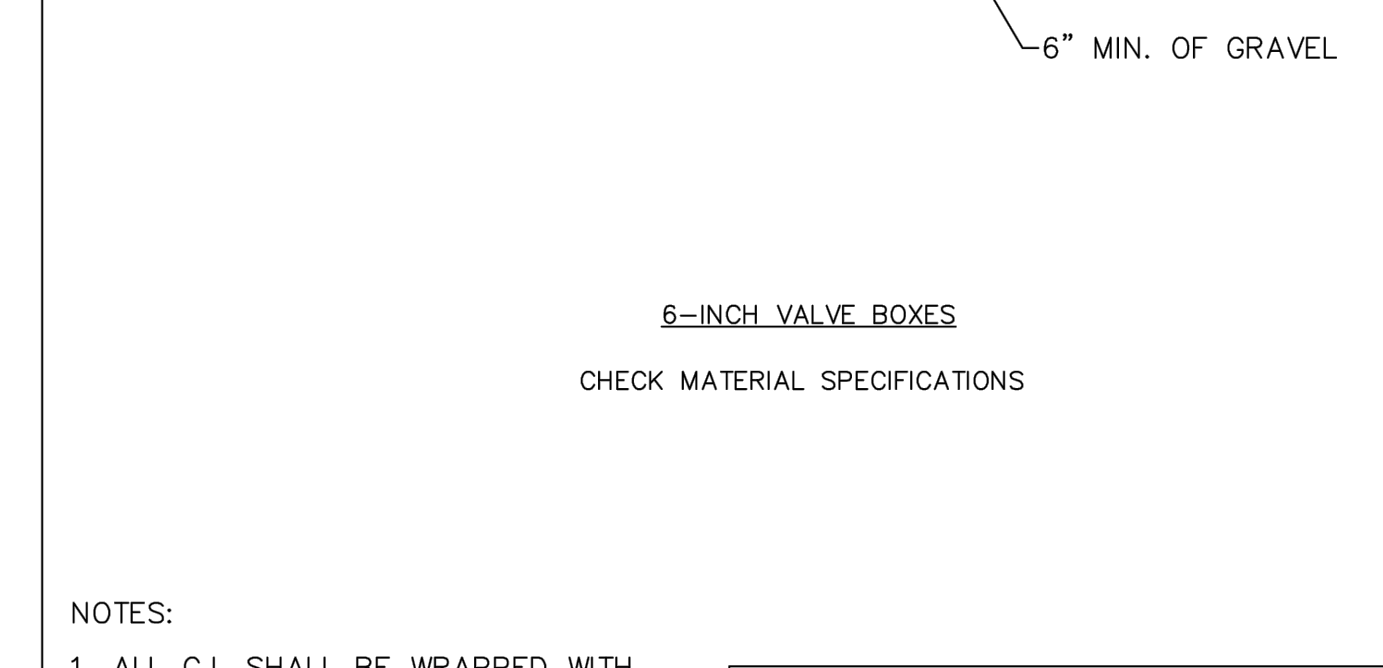
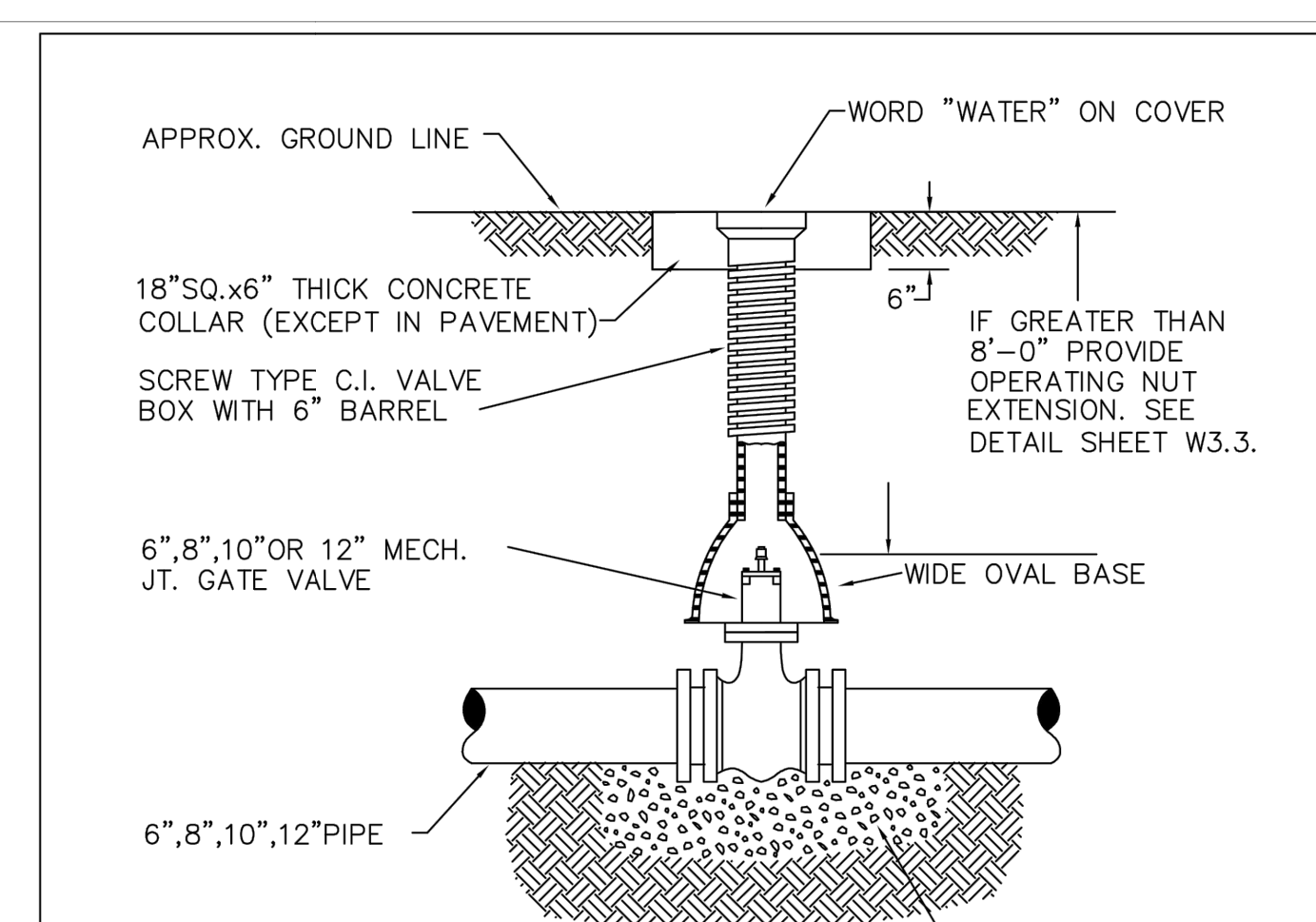
SCALE: NONE	DATE: 2/96
APPROVED: PVR	1/16 10/16
DIRECTOR OF ENGINEERING	

SHEET W3.4



**PARKER WATER & SANITATION DISTRICT**

**BLOW-OFF INSTALLATION FOR 12\"/>**



**PARKER WATER & SANITATION DISTRICT**

**VALVE BOX DETAIL**

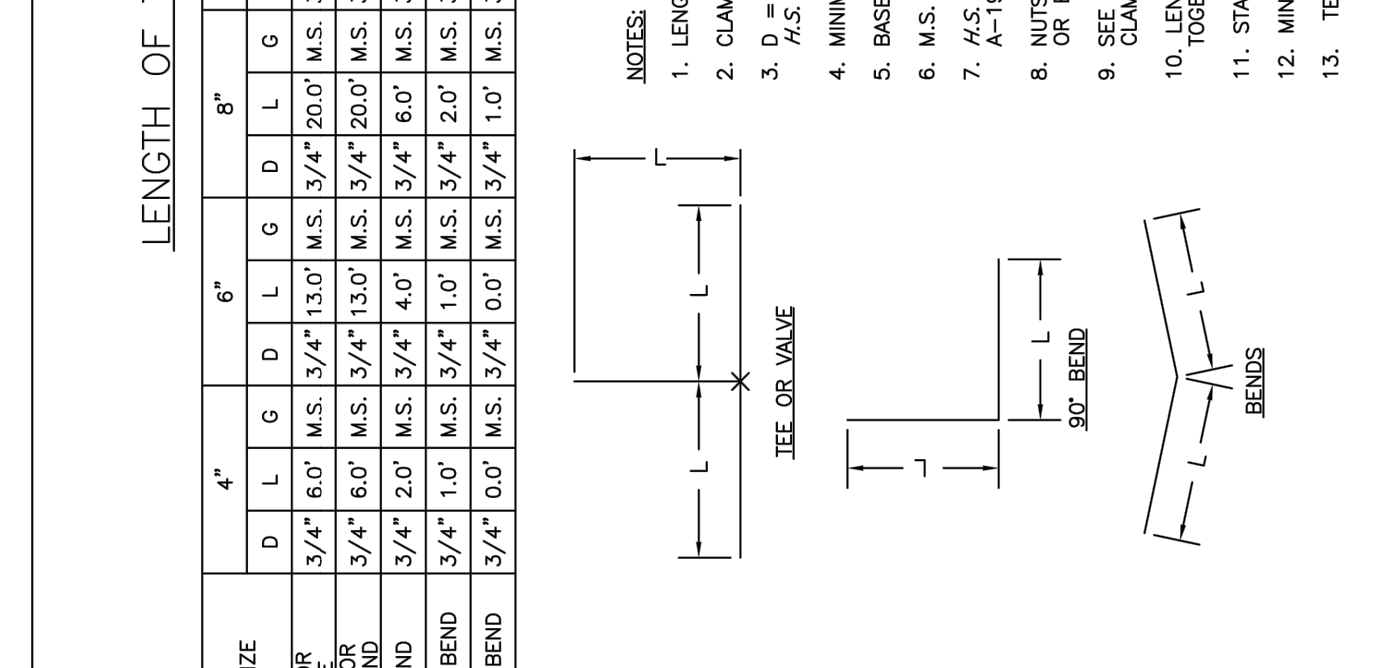
SCALE: NONE	DATE: 2/96
APPROVED: PVR	5/98 10/16 6/99 12/07 1/16
DIRECTOR OF ENGINEERING	

SHEET W3.10

**PARKER WATER & SANITATION DISTRICT**

**LENGTH OF TIED PIPE**

PIPE SIZE	4"	6"	8"	12"	16"	20"	24"
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0
D	1.0	1.0	1.0	1.0	1.0	1.0	1.0
L	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G	1.0	1.0	1.0	1.0	1.0	1.0	1.0



**PARKER WATER & SANITATION DISTRICT**

**LENGTH OF TIED PIPE**

SCALE: NONE	DATE: 2/96
APPROVED: PVR	4/01 1/16 10/16
DIRECTOR OF ENGINEERING	

SHEET W3.11

**NEW HORIZON ACADEMY - DOUGLAS 234 FILING, NO. 6**

PARKER, CO

**WATER DETAILS**

**U1.5**

Save: 6/22/2021 6:56 PM appop Plot: 624/2021 10:56 PM X:\KON\NHOAC\156217\Final-dgn\15-drawings\10-Civil\cardwg\sheet\Utility Plans\CL\_NHOAC156217\_UTILITY DETAILS.dwg

**MECHANICAL JOINT RESTRAINT**

**WEDGE DETAIL**

**BOLT HOLE DETAIL**

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	2	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25
4"	4	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25

**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: PVR 12/07, 1/16, 10/16  
DIRECTOR OF ENGINEERING

**FLANGE LUG DETAIL**

PIPE DIA.	N	O	P	Q	R	S	U	V	PIPE DIA.	
4	1-7/16	2-1/4	1-7/8	3/4	1-7/8	3/4	7/8	3/4	2-7/8	4
6	1-11/16	2-7/4	1-7/8	3/4	1-7/8	3/4	7/8	3/4	2-7/8	6
8	2-1/4	2-3/4	1-7/8	3/4	1-7/4	1-7/8	1-1/8	7/8	3-1/4	8
10	2-7/8	2-3/4	1-7/8	3/4	1-7/4	1-7/8	1-1/4	1-1/8	3-7/8	10
12	2-7/8	2-3/4	1-7/8	3/4	1-7/4	1-7/8	1-1/4	1-1/8	3-7/8	12
16	2-7/8	2-3/4	1-7/8	3/4	1-7/4	1-7/8	1-1/4	1-1/8	3-7/8	16
20	2-7/8	2-3/4	1-7/8	3/4	1-7/4	1-7/8	1-1/4	1-1/8	3-7/8	20

**NOTES:**  
1. M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36. (NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEXAGON HEAVY SERIES).  
2. H.S. MEANS HIGH STRENGTH STEEL ROD A.S.T.M. STANDARD DESIGNATION A-193 GRADE B7. (NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-194 GRADE 2H).  
3. FLANGE LUGS SHALL NOT BE USED ON VALVES.

**PARKER WATER & SANITATION DISTRICT  
FLANGE LUG DETAIL**

SCALE: NONE DATE: 2/96  
APPROVED: PVR 1/16, 10/16  
DIRECTOR OF ENGINEERING

**TIE ROD COUPLING DETAIL**

**SECTION "A-A"**

ROD SIZE	PIPE DIAMETER
3/4"	1"
1"	1-1/4"
1-1/4"	1-1/2"

**NOTE:**  
BLACK IRON PIPE = SCHEDULE 40.

**PARKER WATER & SANITATION DISTRICT  
TIE ROD COUPLING**

SCALE: NONE DATE: 2/96  
APPROVED: PVR 1/16, 10/16  
DIRECTOR OF ENGINEERING

**TIE ROD DETAIL**

**WASHER DETAIL**

A	B	C
ROD DIAMETER	THREAD LENGTH	ROD LENGTH
3/4"	8"	1' 10 11" & 20
1-1/4"	ALL THREAD	1' 10 11" & 20

D	E	F
WIDTH	HOLE DIAMETER	LENGTH
3"	3/8"	7"
4"	1-1/8"	7"

**NOTE:**  
1. SEE TIED JOINTS ROD DIMENSIONS SHEET.  
2. SEE CLAMP DETAILS AND DIMENSIONS (SHEET W3.15) FOR PROPER PLACEMENT OF WASHERS.

**PARKER WATER & SANITATION DISTRICT  
TIE ROD AND WASHER DETAILS**

SCALE: NONE DATE: 2/96  
APPROVED: PVR 1/16, 10/16  
DIRECTOR OF ENGINEERING

**PIPE BEDDING:**

(a) Installation of Bedding and Pipe: 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. Bell holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the bell 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 bell holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, bell holes, and sling 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 backfill may then be installed to the groundline. See Chapter 2 of these Standards for backfill and compaction of backfill.

Compaction 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.

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

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	70-100
No. 8	36-93
No. 16	20-80
No. 30	8-65
No. 50	2-50
No. 100	1-10
No. 200	0-3

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

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

**Squeegee 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 substance, shall be placed closer to the pipe than six inches (6"). Approved bedding material 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  
APPROVED: PVR 5/98, 2/00, 1/16, 10/16  
DIRECTOR OF ENGINEERING

**STANDARD TRENCH SECTION**

**STREET CUT PATCH**

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

SCALE: NONE DATE: 2/96  
APPROVED: PVR 1/16, 10/16  
DIRECTOR OF ENGINEERING

**HALF PLAN**

**STANDARD LIFTING SLOT DETAIL**

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

SCALE: NONE DATE: 6/05  
APPROVED: PVR 12/07, 1/16, 10/16  
DIRECTOR OF ENGINEERING

**TEE**

**TYPICAL CROSS SECTION**

SIZE OF PIPE	BENDS			TEE OR DEAD END
	11-1/4"	22-1/2"	90°	
4"	1.00	1.00	1.00	1.50
6"	1.00	1.25	2.25	3.00
8"	1.00	2.00	4.00	5.25
10"	2.00	4.25	8.25	11.00
12"	3.50	6.50	12.50	16.50
16"	6.00	10.00	18.50	25.00
24"	6.50	13.00	26.00	33.00

**MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)**

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

SCALE: NONE DATE: 2/96  
APPROVED: PVR 4/01, 1/16, 10/16  
DIRECTOR OF ENGINEERING

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2016 REVISION SHEET W3.12

2016 REVISION SHEET W3.13

2016 REVISION SHEET W3.14

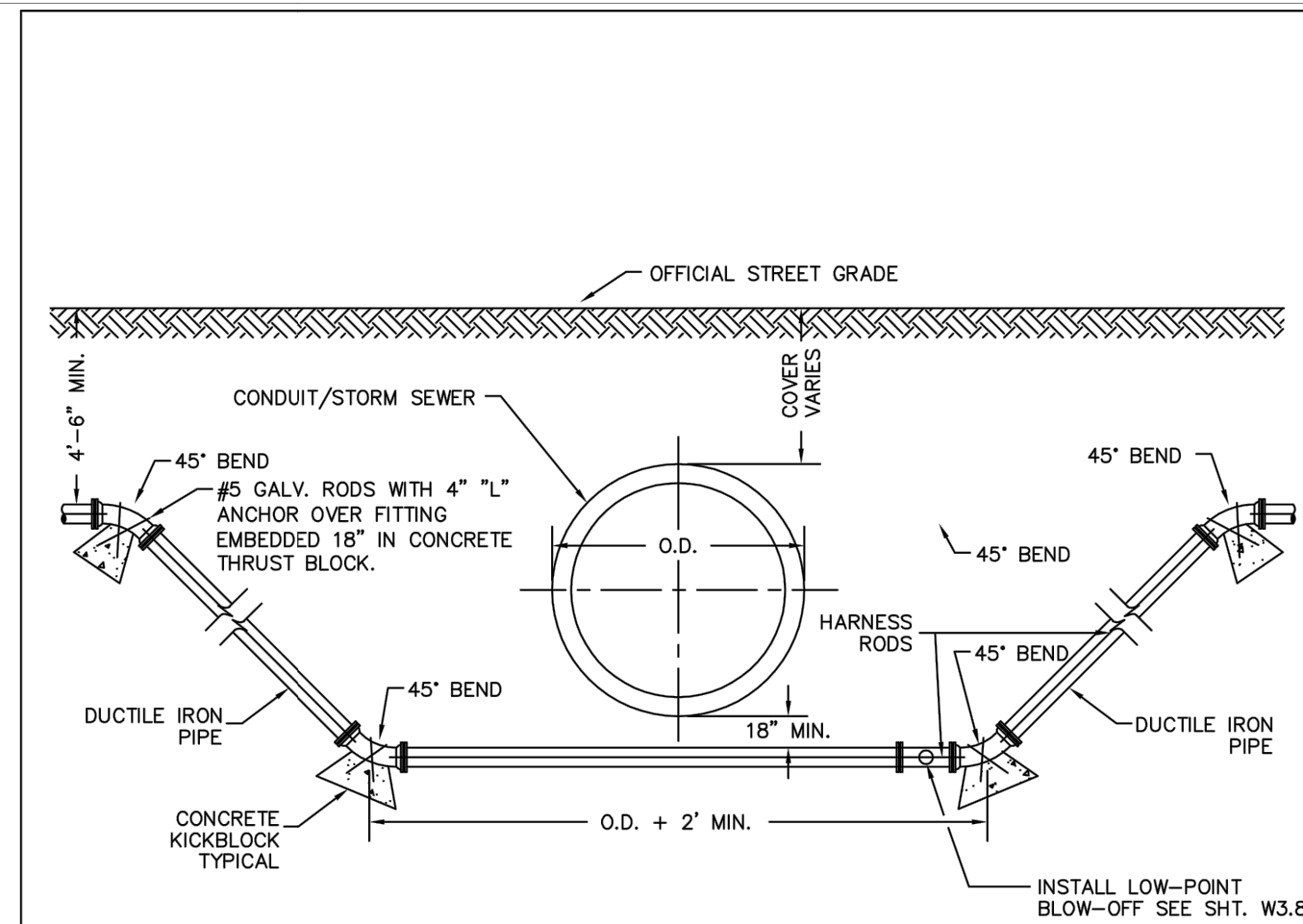
2016 REVISION SHEET W3.17

2016 REVISION SHEET W3.18

2016 REVISION SHEET W3.19

2016 REVISION SHEET W4.1

2016 REVISION SHEET W4.2



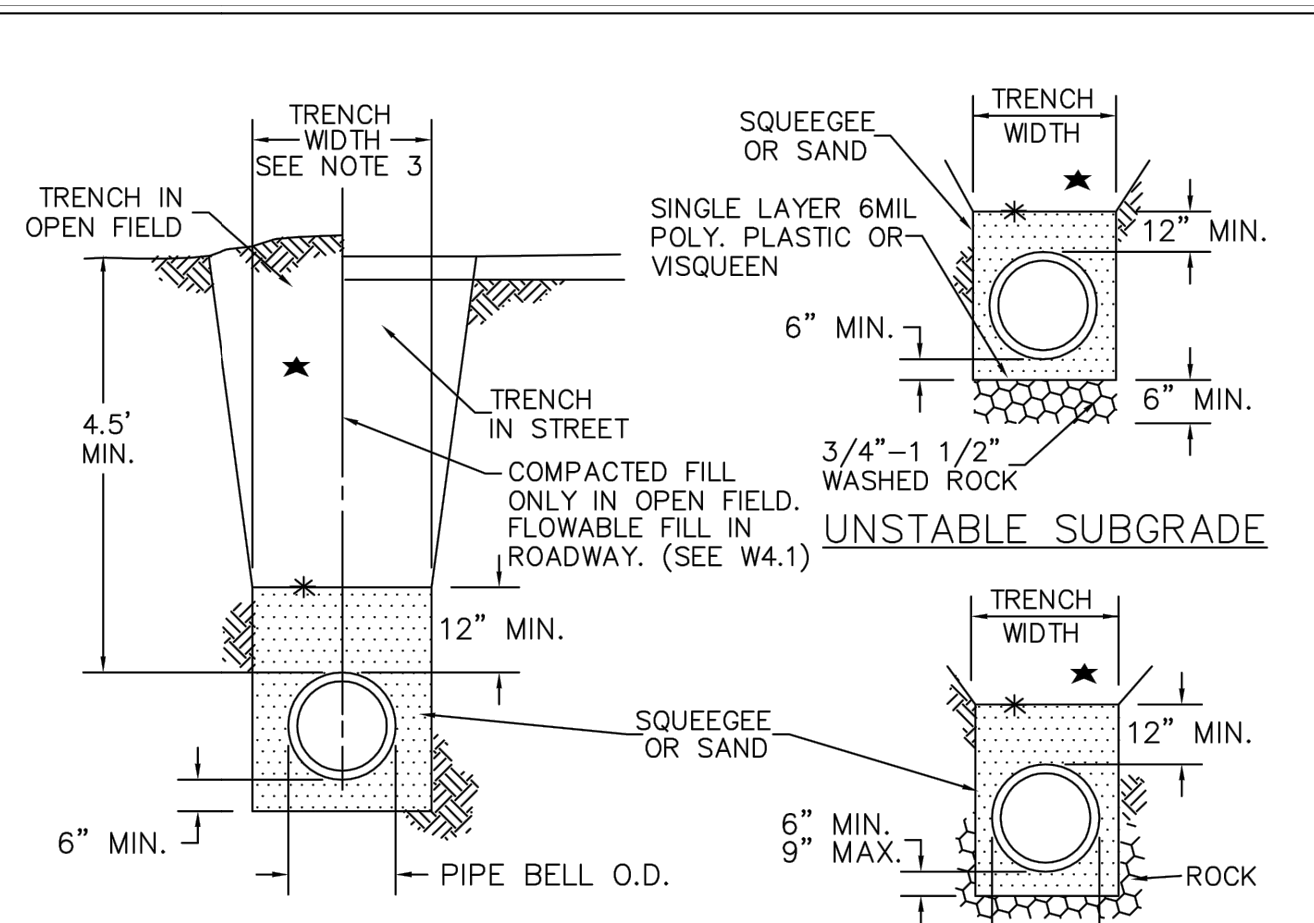
- NOTES:
1. LENGTH OF EXTENSION OF PIPE AND HARNESS RODS SHALL BE IN ACCORDANCE WITH THESE ENGINEERING STANDARDS.
  2. ALL WATER MAINS TWELVE (12") INCHES OR SMALLER, WHICH CROSS UNDER CONDUITS/STORM SEWER SHALL BE DUCTILE IRON OR PVC PER SPECIFICATIONS.
  3. A BORED CROSSING MAY BE REQUIRED BY THE ENGINEER.
  4. CONCRETE KICKBLOCKS PER SHEET W3.18.

PARKER WATER & SANITATION DISTRICT  
CONDUIT OR STORM SEWER CROSSING

SCALE: NONE DATE: 2/96

APPROVED: 5/98 10/16  
2/00 2/00  
PVR 12/07 1/16  
DIRECTOR OF ENGINEERING

SHEET W4.6



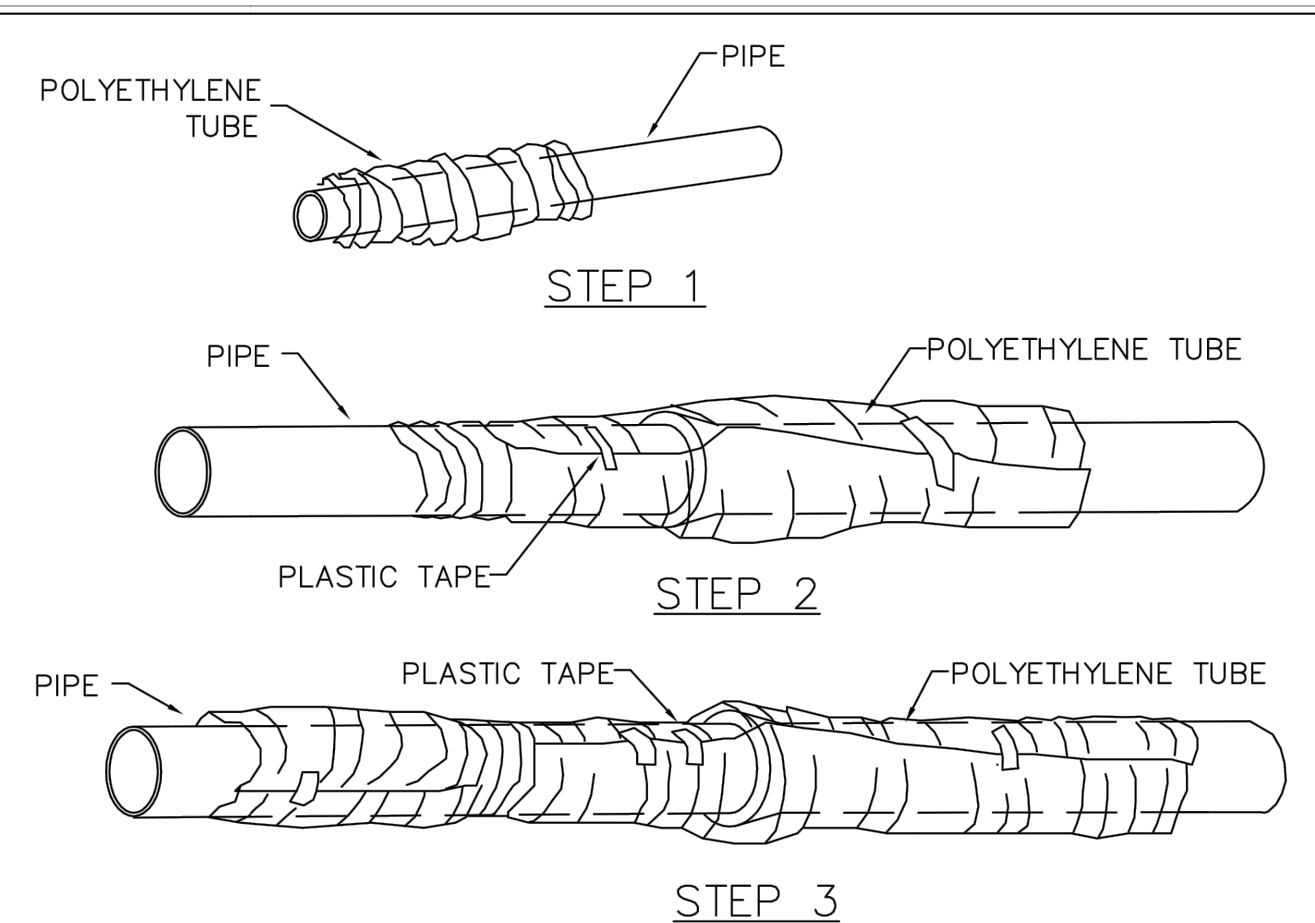
- STANDARD PIPE BEDDING
- \* MACHINE COMPACTED TRENCH BACKFILL
  - \* LIMIT OF SLOPING OR BENCHING OF TRENCH WALLS
  - UNDISTURBED GROUND
- PIPE BEDDING IN ROCK
- NOTES:
1. MIN. COVER TO BE BELOW FINAL STREET GRADE. CONSTRUCTION OF WATER MAIN MAY NOT START UNTIL FINAL GRADE WITHIN 1 FOOT.
  2. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE PROTECTION OF OTHER UTILITIES AND TO MEET OSHA SAFETY REQUIREMENT.
  3. TRENCH WIDTH SHALL NOT BE MORE THAN 16" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE LAID THEREIN (BELL OR COUPLING O.D. IF APPLICABLE). REFER TO SHEET W4.1 FOR DIMENSIONS.

PARKER WATER & SANITATION DISTRICT  
BEDDING DETAILS

SCALE: NONE DATE: 2/96

APPROVED: 1/16 10/16  
PVR  
DIRECTOR OF ENGINEERING

SHEET W4.8



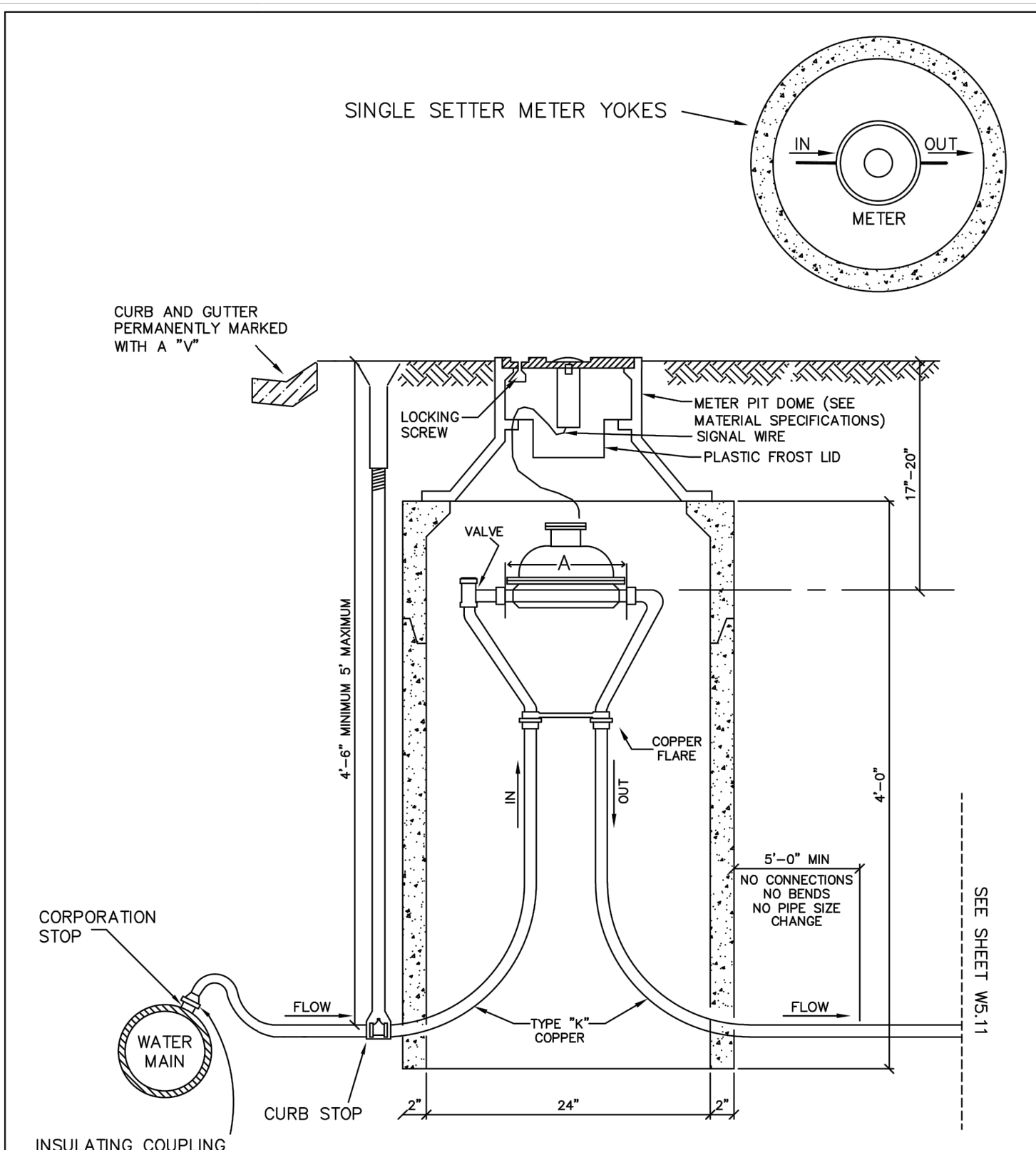
- FIELD INSTALLATION - POLYETHYLENE WRAP
- STEP 1 - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.
- STEP 2 - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.
- STEP 3 - OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

PARKER WATER & SANITATION DISTRICT  
POLYETHYLENE WRAP

SCALE: NONE DATE: 2/96

APPROVED: 1/16 10/16  
PVR  
DIRECTOR OF ENGINEERING

SHEET W4.11

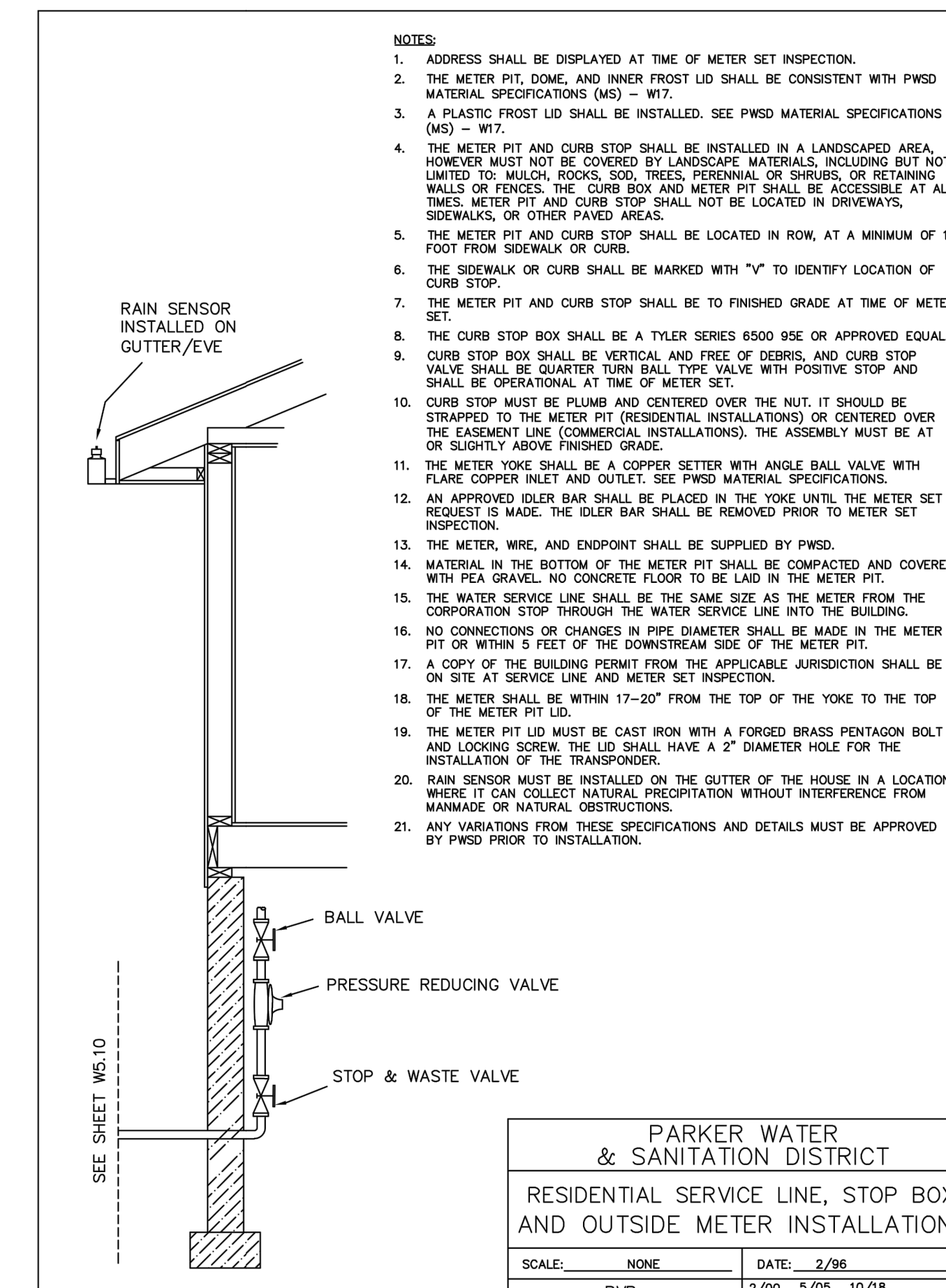


PARKER WATER & SANITATION DISTRICT  
RESIDENTIAL ALL OUTSIDE SETTINGS FOR 3/4" & 1" METERS

SCALE: NONE DATE: 2/96

APPROVED: 01/04 01/16  
06/05 06/05  
PVR 01/08 10/18  
DIRECTOR OF ENGINEERING 01/12

SHEET W5.10



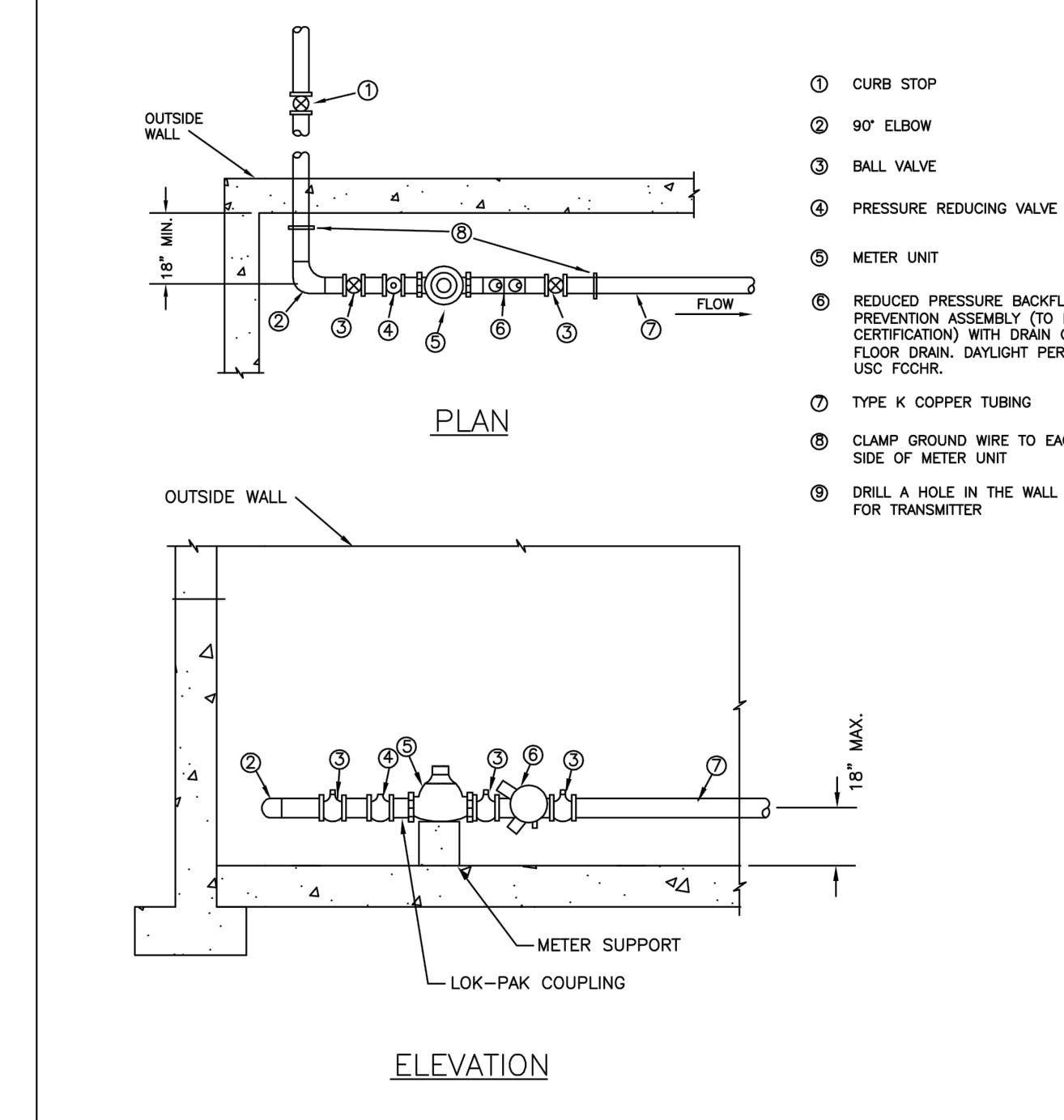
- NOTES:
1. ADDRESS SHALL BE DISPLAYED AT TIME OF METER SET INSPECTION.
  2. THE METER PIT, DOME, AND INNER FROST LID SHALL BE CONSISTENT WITH PWS MATERIAL SPECIFICATIONS (MS) - W17.
  3. A PLASTIC FROST LID SHALL BE INSTALLED. SEE PWS MATERIAL SPECIFICATIONS (MS) - W17.
  4. THE METER PIT AND CURB STOP SHALL BE INSTALLED IN A LANDSCAPED AREA. HOWEVER, MUST NOT BE COVERED BY LANDSCAPE MATERIALS, INCLUDING BUT NOT LIMITED TO: MULCH, ROCKS, SOIL, TREES, PERENNIAL OR SHRUBS, OR RETAINING WALLS OR FENCES. THE CURB STOP AND METER PIT SHALL BE ACCESSIBLE AT ALL TIMES. METER PIT AND CURB STOP SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS, OR OTHER PAVED AREAS.
  5. THE METER PIT AND CURB STOP SHALL BE LOCATED IN ROW, AT A MINIMUM OF 1 FOOT FROM SIDEWALK OR CURB.
  6. THE SIDEWALK OR CURB SHALL BE MARKED WITH "V" TO IDENTIFY LOCATION OF CURB STOP.
  7. THE METER PIT AND CURB STOP SHALL BE TO FINISHED GRADE AT TIME OF METER SET.
  8. THE CURB STOP BOX SHALL BE A TYLER SERIES 8500 95E OR APPROVED EQUAL. CURB STOP BOX SHALL BE VERTICAL AND FREE OF DEBRIS, AND CURB STOP VALVE SHALL BE QUARTER TURN BALL TYPE VALVE WITH POSITIVE STOP AND SHALL BE OPERATIONAL AT TIME OF METER SET.
  9. 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.
  10. THE METER YOKE SHALL BE A COPPER SETTER WITH ANGLE BALL VALVE WITH FLARE COPPER INLET AND OUTLET. SEE PWS MATERIAL SPECIFICATIONS.
  11. AN APPROVED OILER BAR SHALL BE PLACED IN THE YOKE UNTIL THE METER SET REQUEST IS MADE. THE OILER BAR SHALL BE REMOVED PRIOR TO METER SET INSPECTION.
  12. THE METER, WIRE, AND ENDPOINT SHALL BE SUPPLIED BY PWS.
  13. MATERIAL IN THE BOTTOM OF THE METER PIT SHALL BE COMPACTED AND COVERED WITH PEA GRAVEL. NO CONCRETE FLOOR TO BE LAID IN THE METER PIT.
  14. THE WATER SERVICE LINE SHALL BE THE SAME SIZE AS THE METER FROM THE CORPORATION STOP THROUGH THE WATER SERVICE LINE INTO THE BUILDING.
  15. NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR WITHIN 5 FEET OF THE DOWNSTREAM SIDE OF THE METER PIT.
  16. A COPY OF THE BUILDING PERMIT FROM THE APPLICABLE JURISDICTION SHALL BE ON SITE AT SERVICE LINE AND METER SET INSPECTION.
  17. THE METER SHALL BE WITHIN 17'-20" FROM THE TOP OF THE YOKE TO THE TOP OF THE METER PIT LID.
  18. THE METER PIT LID MUST BE CAST IRON WITH A FORGED BRASS PENTAGON BOLT AND LOCKING SCREW. THE LID SHALL HAVE A 2" DIAMETER HOLE FOR THE INSTALLATION OF THE TRANSDUCER.
  19. RAIN SENSOR MUST BE INSTALLED ON THE GUTTER OF THE HOUSE IN A LOCATION WHERE IT CAN COLLECT NATURAL PRECIPITATION WITHOUT INTERFERENCE FROM MANMADE OR NATURAL OBSTRUCTIONS.
  20. ANY VARIATIONS FROM THESE SPECIFICATIONS AND DETAILS MUST BE APPROVED BY PWS PRIOR TO INSTALLATION.

PARKER WATER & SANITATION DISTRICT  
RESIDENTIAL SERVICE LINE, STOP BOX AND OUTSIDE METER INSTALLATION

SCALE: NONE DATE: 2/96

APPROVED: 2/00 5/05 10/18  
4/01 1/12  
PVR 01/02 1/16  
DIRECTOR OF ENGINEERING 12/03 10/18

SHEET W5.11



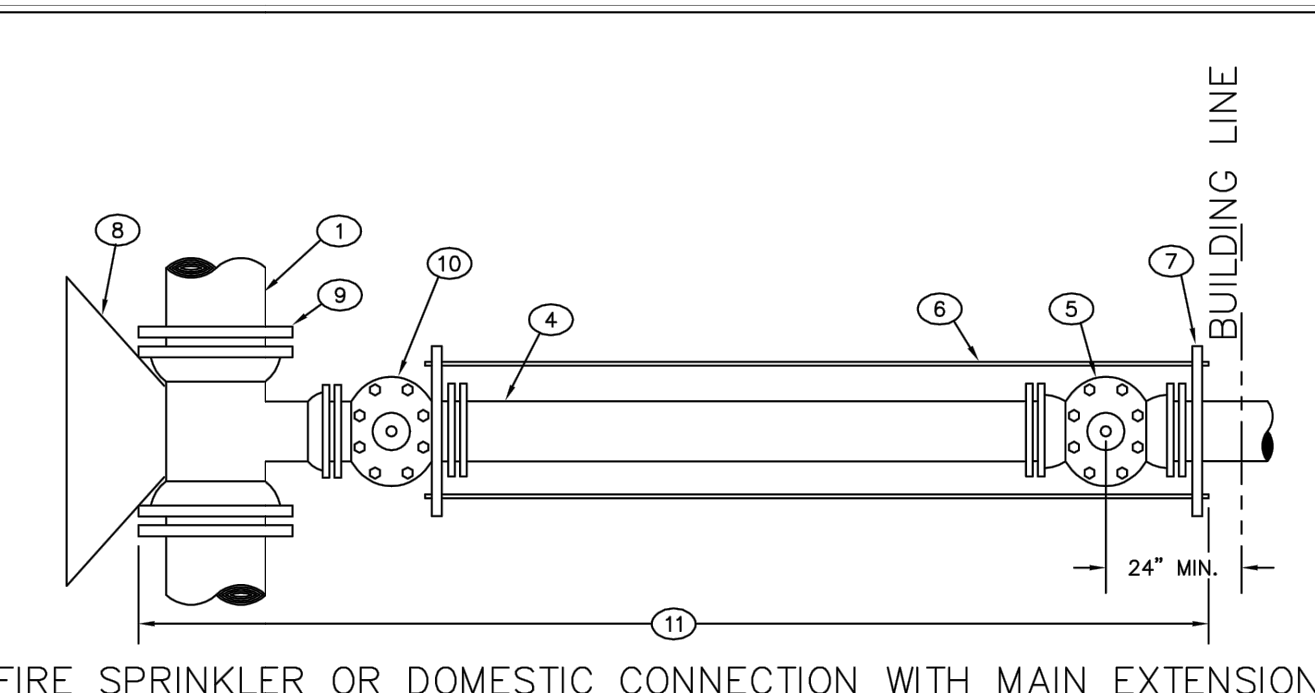
- NOTES:
- 1 - PIPE JOINT SHALL BE THREADED OR SOLDERED WITH SILVER SOLDER.
  - 2 - INSTALLATION MUST ALLOW ACCESS FOR MAINTENANCE AND BE PROTECTED FROM FREEZING.
  - 3 - SEE WATER SYSTEM SPECIFICATIONS FOR GENERAL METER NOTES.
  - 4 - COMPANION FLANGES SHALL BE BRASS.
  - 5 - METER SUPPORT SHALL BE EITHER CONCRETE OR ADA STEEL PIPE (SEE SHEET W3.10)
  - 6 - 1.0' MINIMUM CLEARANCE AROUND BACKFLOW DEVICE
  - 7 - FLOOR DRAIN TO BE 2X PIPE SIZE
  - 8 - FOR IRRIGATION USES, ADD RAIN SENSOR AND SMART E.T. CONTROLLER
- METER YOKE DISTANCE
- |      |  |
|------|--|
| 1.5" | 13.25" WITH ADJUSTABLE FLANGE FOR GASKET |
| 2"   | 17.25" WITH ADJUSTABLE FLANGE FOR GASKET |

PARKER WATER & SANITATION DISTRICT  
INSIDE SETTING FOR 1/2" & 2" METER

SCALE: NONE DATE: 2/96

APPROVED: 8/99 01/02 01/16  
2/00 06/05 10/16  
PVR 4/01 07/06  
DIRECTOR OF ENGINEERING

SHEET W5.14



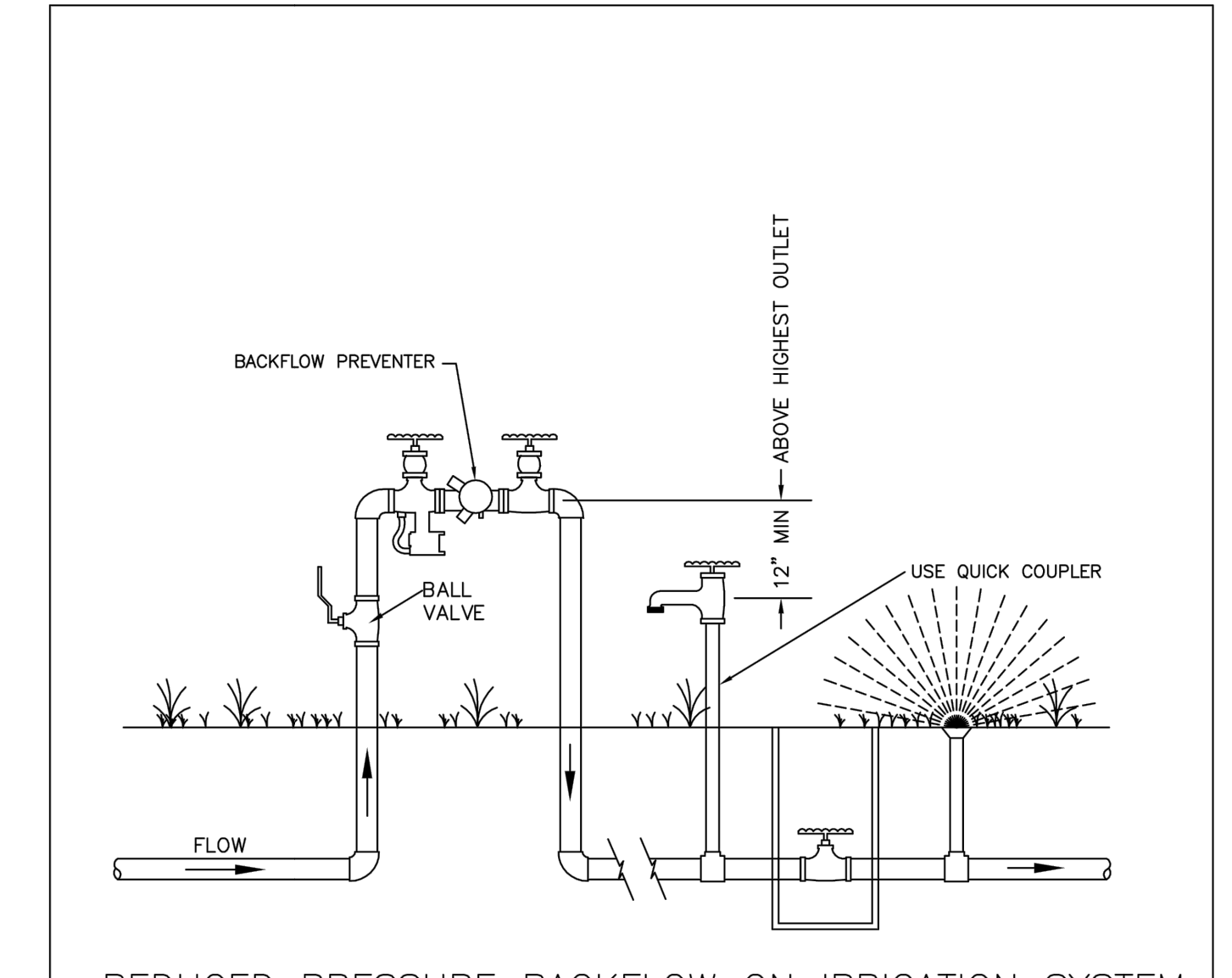
- FIRE SPRINKLER OR DOMESTIC CONNECTION WITH MAIN EXTENSION
- NOTES:
- 1 CURB STOP
  - 2 90° ELBOW
  - 3 BALL VALVE
  - 4 PRESSURE REDUCING VALVE
  - 5 METER UNIT
  - 6 REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (TO HAVE CERTIFICATION) WITH DRAIN CUP TO FLOOR DRAIN. DAYLIGHT PER USC FCHCR.
  - 7 TYPE K COPPER TUBING
  - 8 CLAMP GROUND WIRE TO EACH SIDE OF METER UNIT
  - 9 DRILL A HOLE IN THE WALL FOR TRANSMITTER

PARKER WATER & SANITATION DISTRICT  
3" AND LARGER DOMESTIC AND FIRE SPRINKLER CONNECTIONS

SCALE: NONE DATE: 2/96

APPROVED: 1/16 10/16  
PVR  
DIRECTOR OF ENGINEERING

SHEET W5.18



- REDUCED PRESSURE BACKFLOW ON IRRIGATION SYSTEM
- NOTE:
1. ALL IRRIGATION SYSTEMS MUST BE CONNECTED DOWN STREAM OF METER.
  2. PROVIDE ENCLOSURE.

PARKER WATER & SANITATION DISTRICT  
REDUCED PRESSURE BACKFLOW

SCALE: NONE DATE: 2/96

APPROVED: 2004 06/05  
PVR 1/16 10/16  
DIRECTOR OF ENGINEERING

SHEET W6.1

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NEW HORIZON ACADEMY - DOUGLAS 234 FILING, NO. 6 PARKER, CO

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Project Status: CONSTRUCTION SET  
Issue Date: 6/25/2021

Revision Issue

Rev. #	Description	Date
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WATER DETAILS